Improving the Students Reading Comprehension Skills Using Specific Reading Strategies

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Abstract

Reading is an important tool for accessing information that provides a base for learning. Reading strategies are important and help the learners improve their reading comprehension and enhance their reading efficiency. Reading strategies can be observed, for example, teachers can observe their students' reading strategies by looking at the notes they take during listening to academic lectures. The goal of using reading strategies is to facilitate the learners' reading and to improve the learners' comprehension ability. Comprehension is a basic prerequisite to be meaningful. The current experimental study conducted in the Pakistani context for improving the reading comprehension skills using specific reading strategies. Quasi experimental research design was adopted to conduct the study. The sample consisted of 50 BS hons students in the third semester at the University of Okara, Pakistan. Findings indicate that reading strategies positively impact the reading comprehension of students at the university level. The study has important implications for teachers, students, curriculum planners and policymakers in the field of education.

Keywords: Reading Comprehension Skills, Reading Strategies

1. Introduction

Referring to (Erguvan, 2016) and (Mirza, 2021), "reading is a part of life, not a pleasure when necessary". To read, readers follow various strategies to understand the content of the text. In order to understand the meaning well, there is a need for some information that explains it broadly. A strategy is a systematic, deliberate review and vision plan to improve learning. Students use a variety of strategies to understand, evaluate and appreciate the text.

Students learn from experience, compare their knowledge of word concepts, and interact with other readers and authors to understand the meanings and spellings of words (e.g. phonetics, sentences, content and pictures). In psychology, the concept became a popular term with the introduction of data modeling. The practice of storing information in the short term for the long term is a strategy that can transform short-term memory into long-term storage (Atkinson, 1968).

Strategies is a term often used to describe both mental and physical activities that students use to improve their memory and thinking skills. In the 1970s, information processing techniques were developed by analyzing the strategies students use to process information. These ideas are often defined by examples such as practice, break apart, and reflection rather than the precise meaning of action, exercise of will, or reflection. There are no notifications for ideas used by experienced or new readers.

Alexander, Graham and Harris focusing on Strategies represents the narrative. Strategic readers plan and use strategies to achieve their goals. However, purpose does not explain what behaviors are, how to learn or how to teach. This suggests that students learning to read strategies can use their knowledge to be more confident and intelligent. It has been shown that students who have acquired literacy skills are able to share such ideas with others. This understanding and thinking about the use of these strategies will also be motivating for students (Alexander, 2003). Motivations for reading are knowledge, comfort, and truth, and they create satisfaction in one's ability rather than one's effort. The motivations for reading strategies are management and decision making. Students develop self-efficacy based on their skills and efforts. Strategic readers believe they can evaluate and improve their own reading to have the knowledge and confidence to succeed.

While (Rosli, 2018) says that reading is an effort to understand the thoughts of the author. Reading is access to all the information that will guide us through what we think outside of the patterns and understanding the world through text (Alnahdi, 2020). (Bhan, 2010) and (Baron, 2017) says that reading is a skill that helps to identify and interpret information from other written materials such as books, newspapers, magazines, nature, dictionaries, notebooks and guides. Reading behavior that affects reading materials, activities, time, place and motivation for readers (Hassan, 2021).

According to Reading Guide for K12 (Readers, 2018), reading comprehension is the process by which a person understands written content or passages. While the definition is simple, it is not the practice of teaching, learning, and reading comprehension. It is an intentional, active, interactive process that takes place before, during, and after reading. Reading comprehension is an important part of reading because the reading process itself depends on it. People use cognitive processes while reading. These processes include the recognition and understanding of phonemes (individual sounds in a language), phonics (the connection between letters, sounds and words), and the ability to understand and assign the meanings of words from text. Reading comprehension is the end of reading and cannot be independent of two concepts.

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Reading comprehension depends on specific concepts and language processes. Verhoeven and Perfetti (2008) distinguish between processes at the letter and language level and comprehension processes above the language level. At the letter and language level, students should be able to read accurately and clearly. In addition, knowing the meaning of the text is necessary to understand the text (Hoover, 1990). At the level above the language, it is necessary to store the information in the text and combine this information with the previous information. This process includes working memory (Daneman, 1996) . According to Pressley, readers will be successful if they can guess what the text is about, relate the information in the text with their previous knowledge, ask questions while reading, check their understanding of the text, and ensure reading comprehension. Metacognitive knowledge about reading is primarily important for the metacognitive process or reading strategies used in the process of understanding the text (Pressley, 2006). Reading comprehension by using strategies is an underlying skill which every student need for progress in their academic period (Clarke, 2013). Most of the students face reading problems during their academic career. Reading problems negatively affect their academic progress in various aspects. It is reality that without improving reading skills and comprehension the academic success can never be achieved. Thus, the importance of this research is, to find out main problems that causes negative impact on reading comprehension. So, this study will investigate for improving the reading comprehension skills using specific reading strategies.

1.1. Objectives of the Study

1. Compare the achievement scores regarding overall reading strategies between control and experimental groups of university students.
2. Compare the achievement scores regarding asking questions as a reading strategy between control and experimental groups of university students.
3. Compare the achievement scores regarding analyzing text as a reading strategy between control and experimental groups of university students.
4. Compare the achievement scores regarding visualizing as a reading strategy between control and experimental groups of university students.
5. Compare the achievement scores regarding summarizing as a reading strategy between control and experimental groups of university students.
6. Compare the achievement scores regarding activating background knowledge as a reading strategy between control and experimental groups of university students.

2. Hypothesis

Ho1. There is no significant difference in the achievement scores regarding overall reading strategies between experimental and control groups of university students in the pretest.

Ho2. There is no significant difference in the achievement scores of asking questions as a reading strategy between experimental and control groups of university students in the posttest.

Ho3. There is no significant difference in the achievement scores of analyzing text as a reading strategy between experimental and control groups of university students in the posttest.

Ho4. There is no significant difference in the achievement scores of visualizing as a reading strategy between experimental and control groups of university students in the posttest.

Ho5. There is no significant difference in the achievement scores of a summarizing as a reading strategy between experimental and control groups of university students in the posttest.

Ho6. There is no significant difference in the achievement scores of brainstorming as a reading strategy between experimental and control groups of university students in the posttest.

2.1. Research Design

The pretest-posttest design is an experiment in which individuals are measured before and after participating in a treatment. Pretest-posttest designs can be used in experimental and quasi-experimental research and may or may not include a control group. The flow of each work is as follows:
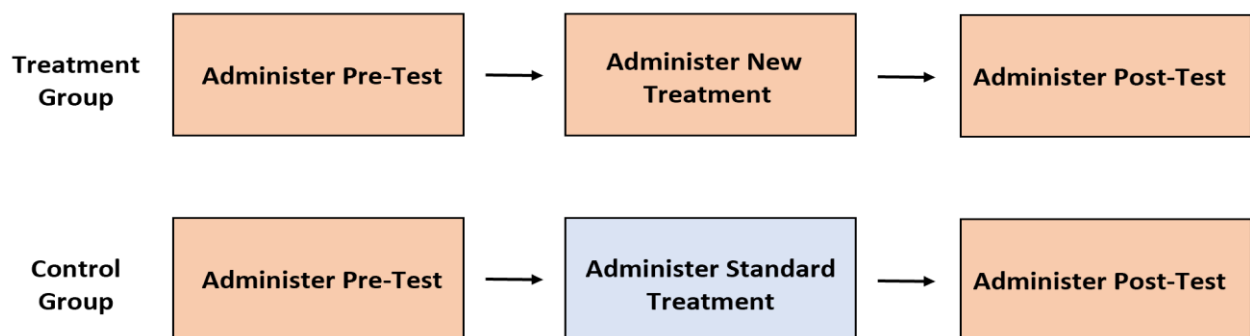
Experimental Research

Figure 1: Experimental Research

2.2. Intervention

1. The duration of intervention was six weeks.
2. Randomly assign individuals to the experimental or control group.
3. Give everyone a pre-test and write down their scores.
4. Specific reading strategies with treatment of cooperative method were applied to the individuals in the experimental group, and traditional method of teaching were performed to the individuals in the control group.
5. Perform the same posttest for individuals in both groups.
6. Examine the difference in test scores before and after the experimental group and the control group.

2.3. Population

The population of this study comprised of students from the university of Okara during the academic year 2021-2022.

2.4. Sample of the study

This study includes students enrolled at Okara University. However, due to limitations, it is not possible for researcher to examine the entire populations. The target population includes university students studying in the BS third semester, Department of Educational Planning and Management. Sample was randomly selected, resulting in two complete groups: a control group and an experimental group, each comprising 25 students. First, a pre-test was applied to measure the reading comprehension levels of the participants. Based on preliminary results, specific reading strategies were used for each group. After the application, post-tests were applied to evaluate the effect of five different reading strategies on reading comprehension. By selecting these students, the researcher aims to collect representative data for the study.

Table 1: Summary of the selected students enrolled at University of Okara

Sr. No	No. of students approached	No. of respondent	students'Response rate (%)
1	50	50	100 %

Table 2: gender wise classification of respondent

	Boys	Girls	Total
Control	10	15	25
Experimental	8	17	25

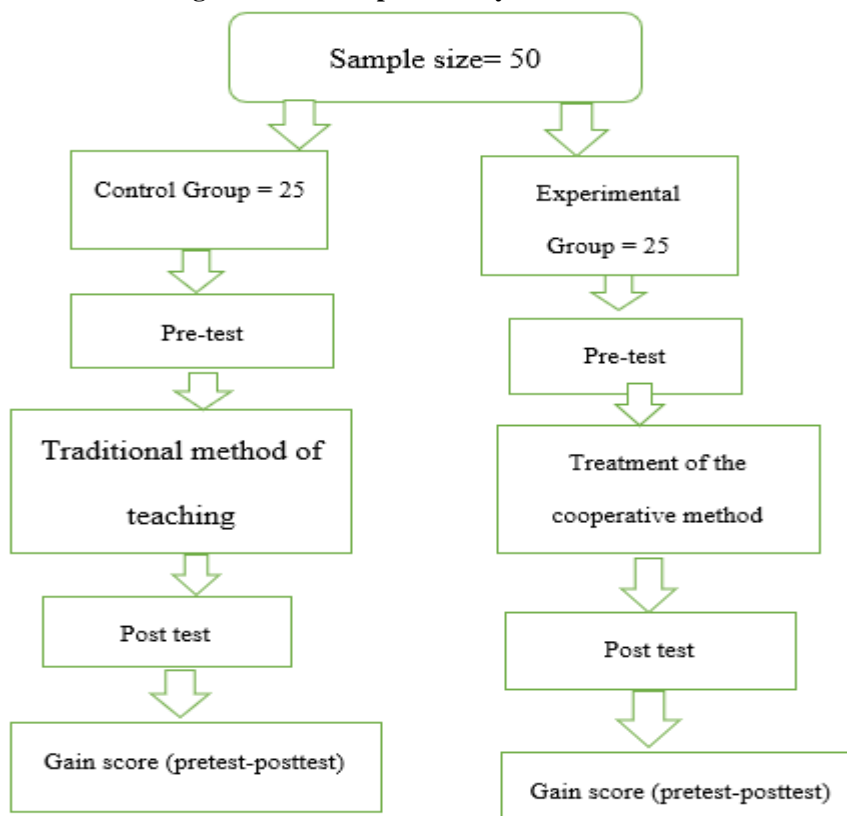### 2.5. Pictorial diagram of the sample of study

Figure 2: Pictorial diagram of the sample of the study

3. Data collection procedure

For this study data was collected from certain samples while using two methods: questionnaire and classroom test. The researcher adopted questionnaire from Mokhtari and Reichered (2002) after making few changes in the context of current study. The questionnaire was administered to the participants, while classroom test involved directly observing the participant's achievements within the classroom setting. These data collection methods provide relevant information for analysis.

Table 3: Objective and corresponding hypothesis to be tested

Sr. No.	Objectives	Hypothesis
1	1	Ho1
2	2	Ho2
3	3	Ho3
4	4	Ho4
5	5	Ho5
6	6	Ho6

Table 4: Hypothesis wise description of statistics

Sr. No.	Hypothesis	Appropriate statistics
1	1, 2, 3, 4, 5, 6	T-test

4. Data Analysis and Interpretation

Ho1. There is no significant difference in the achievement scores regarding overall reading strategies between Experimental and control groups of university students in the pretest.

Table 5: Comparison in the Achievement Scores Regarding Reading Strategies between Experimental

Test	Groups	N	M	SD	t value	P value	Eta S.
Pre-Test	Control	25	5.30	1.160	-.844	.410	
Achievement	Experimental	25	5.70	.949			

The main purpose of this study is to evaluate the effect of new reading strategies on the achievement score between experimental and control groups of university students in the pre-test as shown in Table 5. There were 50 students in both groups and they were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). The experimental group received new reading instruction and the control group received treatment as usual. The mean score for the control group was 5.30, with value of the standard deviation of 1.160. The mean score for the experimental group was 5.70 with the value of standard deviation of 0.949. An independent sample t-test was used to compare the mean scores between the two groups, t-statistic -0.844, df=18 (p > 0.05). The results of the analysis did not show a significant difference between the mean achievement scores of the experimental and control groups. Therefore, the null hypothesis that there is a significant difference in the achievement total scores of overall reading strategies between experimental and control groups of university students in the pre-test was accepted. The results of the study show that both the both groups had the same test performance in the pre-test scores.

Ho2. There is no significant difference in the achievement scores of asking questions as a reading strategy between Experimental and control groups of university students in the posttest.

Table 6: Comparison in the Achievement Scores Regarding Asking Questions as a Reading Strategy between Experimental and Control Groups

Test	Groups	N	M	SD	t value	p value	Eta S.
Post-Test	AskingControl	25	5.10	.876	-6.841	.000**	0.85
Questions	Experimental	25	7.70	.823			

**significant at 0.000

The basic purpose of this study was to evaluate the effect of newly applied asking questions as a reading strategy on the achievement score between experimental and control groups of university students in the post-test as shown in Table 6. There were 50 students in both groups and they were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). The experimental group received new reading strategy 'asking questions' and the control group received treatment as usual. The mean score for the control group was 5.10, with value of the standard deviation of 0.876. The mean score for the experimental group was 7.70 with the value of standard deviation of 0.823. An independent sample t-test was used to compare the mean scores between the two groups. t-statistic was -6.841, df=18 (p < 0.05).

The results of the analysis of post-test show a significant difference between the mean achievement scores of the experimental and control groups. Therefore, the null hypothesis that there is a significant difference in the achievement total scores of asking questions as a reading strategy between experimental and control groups of university students in the post-test was rejected. The results of the study show that both groups had different test

performances in the post-test scores. These findings suggest that asking questions as a new reading strategy effectively improved the test performance of the students, with a large effect size of 0.85 through Eta squared. The most useful stats are Cohen's d and Eta squares, but there are other stats as well. The Eta square measures the percentage of variance in the variable of interest that can be explained by the independent (group) variable on a scale of 0 to 1. For t-tests, SPSS does not provide the values of Eta squares. However, t-tests can be calculated using data provided in Research (Cohen, 1988).

The formula for eta squared is as follows:

$$\text{Eta squared} = \frac{t^2}{t^2 + (N1 + N2 - 2)}$$

Ho3. There is no significant difference in the achievement scores of analyzing text as a reading strategy between Experimental and control groups of university students in the posttest.

Table 7: Comparison in the Achievement Scores Regarding Analyzing Text as a Reading Strategy between Experimental and Control Groups

Test	Groups	N	M	SD	t value	p value	Eta S.
Post-Test Analyzing Text	Control	25	5.10	1.101	-5.657	.000**	0.63
	Experimental	25	7.80	1.033			

**significant at 0.000

The basic purpose of this study was to evaluate the effect of newly applied analyzing text as a reading strategy on the achievement score between experimental and control groups of university students in the post-test as shown in Table 7. There were 50 students in both groups and they were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). The experimental group received new reading strategy 'analyzing text structure' and the control group received treatment as usual. The mean score for the control group was 5.10, with value of the standard deviation of 1.101. The mean score for the experimental group was 7.80 with the value of standard deviation of 1.033. An independent sample t-test was used to compare the mean scores between the two groups. t-statistic was -5.657, df=18 (p < 0.05).

The results of the analysis of post-test show a significant difference between the mean achievement scores of the experimental and control groups. Therefore, the null hypothesis that there is a significant difference in the achievement total scores of analyzing text as a reading strategy between experimental and control groups of university students in the post-test was rejected. The results of the study show that both groups had different test performances in the post-test scores. These findings suggest that analyzing text as a new reading strategy effectively improved the test performance of the students, with a large effect size of 0.63 through Eta squared.

Ho4. There is no significant difference in the achievement scores of visualizing as a reading strategy between Experimental and control groups of university students in the posttest.

Table 8: Comparison in the Achievement Scores Regarding Visualizing as a Reading Strategy between Experimental and Control Groups

Test	Groups	N	M	SD	t value	p value	Eta S.
Post-Test Visualizing	Control	25	4.80	1.033	-5.713	.000**	0.63
	Experimental	25	7.50	1.080			

**significant at 0.000

The basic purpose of this study was to evaluate the effect of newly applied visualizing as a reading strategy on the achievement score between experimental and control groups of university students in the post-test as shown in Table 4.4. There were 50 students in both groups and they were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). The experimental group received new reading strategy 'visualizing' and the control group received treatment as usual. The mean score for the control group was 4.80, with value of the standard deviation of 1.033. The mean score for the experimental group was 7.50 with the value of standard deviation of 1.080. An independent sample t-test was used to compare the mean scores between the two groups. t-statistic was -5.713, df=18 (p < 0.05).

The results of the analysis of post-test show a significant difference between the mean achievement scores of the experimental and control groups. Therefore, the null hypothesis that there is a significant difference in the achievement total scores of visualizing as a reading strategy between experimental and control groups of university students in the post-test was rejected. The results of the study show that both groups had different test performances in the post-test scores. These findings suggest that visualizing as a new reading strategy effectively improved the test performance of the students, with a large effect size of 0.63 through Eta squared.

Ho5. There is no significant difference in the achievement scores of a summarizing as a reading strategy between Experimental and control groups of university students in the posttest.

Table 9: Comparison in the Achievement Scores Regarding Summarizing as a Reading Strategy between Experimental and Control Groups

Test	Groups	N	M	SD	t value	p value	Eta S.
Post-Test Summarizing	Control	25	4.90	.994	-5.797	.000**	0.65
	Experimental	25	7.70	1.160			

**significant at 0.000

The basic purpose of this study was to evaluate the effect of newly applied summarizing as a reading strategy on the achievement score between experimental and control groups of university students in the post-test as shown in Table 9. There were 50 students in both groups and they were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). The experimental group received new reading strategy 'summarizing' and the control group received treatment as usual. The mean score for the control group was 4.90, with value of the standard deviation of 0.994. The mean score for the experimental group was 7.70 with the value of standard deviation of 1.160. An independent sample t-test was used to compare the mean scores between the two groups. t-statistic was -5.797, df=18 ($p < 0.05$).

The results of the analysis of post-test show a significant difference between the mean achievement scores of the experimental and control groups. Therefore, the null hypothesis that there is a significant difference in the achievement total scores of summarizing as a reading strategy between experimental and control groups of university students in the post-test was rejected. The results of the study show that both groups had different test performances in the post-test scores. These findings suggest that summarizing as a new reading strategy effectively improved the test performance of the students, with a large effect size of 0.65 through Eta squared.

Ho6. There is no significant difference in the achievement scores of activating background knowledge as a reading strategy between Experimental and control groups of university students in the posttest.

Table 10: Comparison in the Achievement Scores Regarding activating background knowledge as a Reading Strategy between Experimental and Control Groups

Test	Groups	N	M	SD	t value	p value	Eta S.
Post-Test Activating background knowledge	Control	25	4.50	1.080	-5.713	.000**	0.64
	Experimental	25	7.20	1.033			

**significant at 0.000

The basic purpose of this study was to evaluate the effect of newly applied activating background knowledge as a reading strategy on the achievement score between experimental and control groups of university students in the post-test as shown in Table 10. There were 50 students in both groups and they were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). The experimental group received new reading strategy activating background knowledge and the control group received treatment as usual. The mean score for the control group was 4.50, with value of the standard deviation of 1.080. The mean score for the experimental group was 7.20 with the value of standard deviation of 1.033. An independent sample t-test was used to compare the mean scores between the two groups. t-statistic was -5.713, df=18 ($p < 0.05$).

The results of the analysis of post-test show a significant difference between the mean achievement scores of the experimental and control groups. Therefore, the null hypothesis that there is a significant difference in the achievement total scores of activating background knowledge as a reading strategy between experimental and control groups of university students in the post-test was rejected. The results of the study show that both groups had different test performances in the post-test scores. These findings suggest that activating background knowledge as a new reading strategy effectively improved the test performance of the students, with a large effect size of 0.64 through Eta squared.

5. Discussion

The main purpose of the current study was to investigate for improving the students reading comprehension skills using specific reading strategies. Improving the students reading comprehension skills has been documented in the literature. To accomplish this objective, an experimental approach was adopted, utilizing two comparable groups: an experimental group and a control group. The study's target population consisted of university students enrolled in the third semester of their BS Hons program from department of educational planning and Management. The sample for the study was selected using a random sampling technique, resulting in two intact groups: the control group and the experimental group, each comprising twenty-five students. The researcher employed two data collection instruments: a questionnaire and an achievement test, consisting of pretest and posttest measures.

Findings of the research showed that the null hypothesis regarding the significant difference in the achievement scores of overall reading strategies between experiment and control groups of university students in the pretest was accepted. Result suggests that both groups had the same test performance in the pretest scores. The finding

shows that the null hypothesis regarding the significant difference in the achievement scores of asking questions as a reading strategy between experiment and control groups of university students in the post-test was rejected. These findings suggest that asking questions as a new reading strategy effectively improved the test performance of students. The finding reveals that the null hypothesis regarding the significant difference in the achievement scores of analyzing text structure as a reading strategy between experiment and control groups of university students in the post-test was rejected. These findings suggest that analyzing text structure as a new reading strategy effectively improved the test performance of students. The result reveals that the null hypothesis regarding the significant difference in the achievement scores of visualizing as a reading strategy between experiment and control groups of university students in the post-test was rejected. These results suggest that visualizing as a new reading strategy effectively improved the test performance of students. The finding shows that the null hypothesis regarding the significant difference in the achievement scores of summarizing as a reading strategy between experiment and control groups of university students in the post-test was rejected. These findings suggest that summarizing as a new reading strategy effectively improved the test performance of students. The finding reveals that the null hypothesis regarding the significant difference in the achievement scores of brainstorming as a reading strategy between experiment and control groups of university students in the post-test was rejected. These findings suggest that activating background knowledge as a new reading strategy effectively improved the test performance of students.

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