

Effects of think pair share Technique on Reading Comprehension of Elementary Students in District Peshawar

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Abstract

The study was designed to find out how think pair share effects English reading comprehension among elementary level students in Peshawar district. The study is true experimental pretest posttest equivalent group design. Simple random sampling was used for the selection of eighty students. Think pair share technique was applied on forty students in experimental group and 40 of them were taught through traditional way in control group. The intervention lasted for 2 weeks. The experimental group that was taught by think pair share technique outperformed the control group because significant improvement was observed in post- test scores of students with the level significance 0.05. The group taught by think pair share (experimental group) surpassed the control group by 2.65. T-test was 4.17, larger than 1.99 table value P-value was 0.00016 smaller than 0.05 significance level (0.05). The (Cohen's $d = 0.88$) effect size was large effect, showing statistically significant results difference between the control and experimental groups in post-test. The pretest mean score of experimental group was 3.15, and post-test mean score of experimental group was 9.8. The post experimental group exceeded pre-experimental group by 6.65. T-test value was 12.15 it was larger than the table value (1.99). P-value (<0.0001). (Cohen's $d = 2.78$) showed very large effect. The treatment effect on the group that was taught by think pair share is much significant and showed better performance in reading comprehension level than traditional control group students. The findings have fundamental implications for the teachers of English subject to teach reading comprehension through Think pair share technique.

Keywords: Reading Comprehension; Collaborative Learning; Think Pair Share Technique

Introduction

An international language that is used worldwide for communication is English. Basically, four skills i.e listening, speaking, reading and writing would be taught for language learning. Reading is among the most vital skills students should acquire not only for understanding the written material but also for language learning (Mahu, 2012). This study aims to look at a feasible technique for improving English subject students' reading comprehension ability. Think pair share technique was used to enhance reading comprehension of students Reading skill not only broadens students experiences but also increases their vocabulary and stimulates their imagination (Tanapanyaworakul, & Koowuttayakorn, 2020). Students face many problems in comprehending the text they are reading, as English is a second language for Pakistani students, they are unaware

of reading techniques (Jarrah & Ismail, 2018). This technique (Think pair share) is a valuable collaborative learning technique that boosts comprehension of written material by encouraging students to work in pairs to complete assigned texts. It also facilitates peer teaching, allowing students to share thoughts to the class which built confidence in them and followed by creating classroom environment conducive. (Kardaleska, 2013).

Review of Literature

Think-pair-share is a collaborative learning technique in which students work in pairs to solve a problem or answer a question of the material given for comprehension. Through think pair share technique students think individually about a topic or answering a question, they can share ideas with their partners and it also allows them to build confidence, to communicate orally and engage them in comprehending the reading material (Lyman, 1981). This collaborative learning technique involves three phases. First, teachers pose a specific question, prompting students to reflect on their knowledge (Think). Next, students are paired to discuss their thoughts (Pair). Finally, pairs share their insights with the class, facilitating a whole-class discussion (Share)(Marashi & Khatami, 2017).

Problem statement

Students in Pakistan, who are non-native English speakers, frequently face challenges in understanding texts, as they prioritize reading over comprehension (Shakoor et al., 2019).

Reading comprehension is a fundamental skill that plays a critical role in learners' intellectual development, particularly their ability to read and understand texts with clarity. (Lismayanti, 2014). Elementary school students' struggles with reading comprehension can potentially affect their academic performance (Willingham, 2017). In Pakistan, teacher-dominated classrooms are common, leaving little room for student participation and group work. (Rauf & Saeed, 2020). Collaborative learning techniques, such as think-pair-share, is effective technique for teaching reading comprehension, promoting student-centered learning, increasing student engagement, motivation, interest and love for reading (Johnson & Johnson, 1987). The proposed study will examine the effects of think-pair-share technique on reading comprehension of 8th-grade students of government sector girl's schools in Peshawar.

Objectives

- To find out the effect of Think pair share on reading comprehension of students in English subject.

Hypothesis

Ho1: There is no significant difference between post-test mean scores of experimental and control groups on reading comprehension taught by think pair share on students in the subject of English

Ho2: There is no significant difference between the mean scores of pre-test and post-test of the experimental group on reading comprehension taught by think-pair-share on students in the subject of English.

Significance of the study

The research findings have practical implications for instructors and curriculum designers, providing insights into the effective use of collaborative learning techniques like think pair share to enhance reading comprehension for English classes at the elementary level. This study may be helpful for future researchers by applying think pair share technique in different subjects, levels,

and fields. It may develop curiosity among students to read in pairs, improve their English language competency, develop social skills, build trust, improve reading habits, and become self-directed. The study may also be beneficial to acquire competencies in working in pairs to improve reading comprehension and meet the standards of the 21st century.

Delimitation of the Research

The research was delimited to grade 8th student's sample of GGHS Islamia Collegiate Peshawar Khyber Pakhtunkhwa. Only one collaborative learning techniques think pair share was used on 2 units from English textbook of class 8th for two weeks

Research design

The researcher adopted a true experimental design, considered the most robust and accurate type of experimental research, to find out the effects of CL techniques on reading comprehension in English at the elementary level (Dooley, 2001). The researcher used Pretest-posttest equivalent-groups. Experimental research investigates and analyze possible relationship between variables (Gay & Airasian, 2003). Two groups were formed, experimental and controlled through random assignment. Specific variables were manipulated to investigate effects of manipulated variable (independent) on the dependent ones. The experimental group received the treatment while controlled group was kept the same to see the effects of treatment on dependent variables (Zikmund et al., 2003).

RSE	O1	T	O2
RSC	O3	O4	

Figure: Diagrammatical illustration of study is as follows:

Where,

RSE = Experimental group that was selected randomly

RSC = Control group that was selected randomly

O1 & O3 = Observations of test before treatment (pre-test)

O2 & O4 = Observations of test after the treatment (post-test)

T = Treatment

Population of the study

All girls of the government elementary schools in Khyber Pakhtunkhwa comprised of 28 districts were the population. There were 1188 girls in Elementary schools in district Peshawar and there were 106061 students studying in girls' elementary schools of Khyber Pakhtunkhwa (Government of Khyber Pakhtunkhwa (2021). All girls' students, i.e., 8679 studying in 80 government Elementary schools in district Peshawar were the accessible population. The school was selected through simple random sampling. As the experimental nature of the research, it was restricted to a single government girls' high school i.e. Government Girls High School Islamia Collegiate Peshawar.

Sample and Sampling Technique

Simple random sampling technique were used participant's selection of the research. 80 students out of 254 of grade 8th were included as a sample size through simple random sampling. Only one school that is Government Girls high School Islamia Collegiate was chosen through simple random sampling technique out of 80 government girls' Elementary Schools in the district of Peshawar. Eighth grade of this school approximately of same age between thirteen to fourteen years were the

participants. They were split into two groups (experimental and control) based on a pretest using paired random sampling technique. Both groups were homogenous. By using paired random sampling, the study achieved a representative sample of students in both the experimental and control groups, enabling result generalization to a larger population with minimal error. (Farooq, 2001). Each group was consisted of 40 students, i-e total 80.

Research Instrument

Pre-test and post-test were used to determine the student's reading comprehension level because this study was experimental. A pre-test based on the dependent variable reading comprehension was administered to the students to divide the participant's controlled and experimental groups through a paired random sampling technique. Both the tests i.e. pretest and posttest covered paragraph comprehension questions (multiple choice) items from the subject of "English". The researcher worked with think pair share technique before running a post-test. Lesson plans from two units of English textbook of eighth class were designed and conducted in order to apply think pair share technique in the classroom. To prevent any outside influence from affecting the test's outcome, the pre-test was applied on both groups simultaneously.

Validity and Reliability

The test items were validated by experts in educational research to ensure their validity. Three experts reviewed the pretest, posttest, and questionnaire, providing feedback that was incorporated into the final version. The test was piloted with 40 eighth-grade students, and internal consistency reliability was assessed using the split-half method. The pretest reliability was 0.81, and the posttest reliability was 0.83, indicating high reliability.

Data Analysis Technique

The most important part of the research was the analysis / interpretation of the data. To perform Statistical Package for Social Sciences (SPSS) version 20 was used to analyze the gathered data and recommendations were provided accordingly.

Following statistics was applied for analyzing data:

1. Descriptive Statistics.

The researcher used Standard deviation (SD) and mean for analyzing the data collected through pretest and posttest.

2. Inferential Statistics.

Dependent t-test was used for comparing both groups, while the same group comparison at different points was done by independent t-test for analyzing the data of pre-test and post-test. Prior to treatment, the investigator used paired random sampling to arrange the scores of pre test in ascending order and designed two groups (experimental and control). The groups were compared based on standard deviation, mean, and t-value. After the intervention, post-tests were administered, and scores were analyzed to determine the effect size, mean, standard deviation, and t-value.

Effect Size Calculation (Cohen's *d*)

The degree of difference between the groups was determined by the effect size (Cohen's *d*) and was computed in writing the significant differences in the value of their means between experimental and control groups. Although the existence of a difference is shown by statistical

significance, the effect size computation provided a better picture of size of that difference. Effect size values is shown as under.

Table 3.5: Effect Size Interpretations and Values

Cohen's <i>d</i> Effect Size	Interpretation
0.00-0.20	Ignored
0.21-0.50	Small
0.51-0.80	Moderate
0.80-1.30	Large
1.31 and above	Very Large

(Yelpaze & Yakar, 2020).

Treatment

Pretest (1st week)

The researcher conducted a pretest in English for two randomly selected 8th-grade sections, comprising 254 students in total. Using the matched pair method, the students were placed into experimental and control groups, each consisting of 40 students. The pretest aimed to evaluate reading comprehension levels. The test consisted of 50 marks and objective-type questions, adhering to a hierarchical structure based on difficulty level. The test items were developed from the study's content and objectives.

Intervention in Experimental group

After the pre-test, traditional method was applied on the control group and think pair share was used on experimental group for 2 weeks. The experimental group, consists of 40 participants. The researcher personally teaches both the experimental and control groups. The experimental group was divided into five subgroups, each consisting of eight students. Each group received 6 periods of 40 minutes per week. Permission letter was obtained from selected school principal for data collection from the study participants. In order to eliminate any possible dangers to the research's internal validity, the researcher ensured that the same time was spent on teaching with the same reading materials, on the same day, same tests were administered, and the classroom environment remained the same but in two different periods.

Data analysis and interpretations

Ho1: There is no significant difference between post-test mean scores of experimental and control groups on reading comprehension taught by think-pair-share technique on students in the subject of English

Table 4.1: Experimental and control groups mean score (Think pair share)

Groups	N	Mean	df	Effect Size (Cohen's <i>d</i>)	Dependent t-test value	p-value
Exp	40	9.8	78	0.88 (Large)	4.17	0.00016
Con	40	7.15				

(Significant)

t Value at 0.05 = 1.99

Table 4.1 shows post-test marks of experimental group and control group. 7.15 mean scores of experimental groups and 9.8 was the Con group mean scores. The experimental group surpassed the control group by 2.65. T-test was 4.17, larger than 1.99 table value. P-value was 0.00016 smaller than 0.05 significance level (0.05). The (Cohen's $d = 0.88$) effect size was large effect, showing statistically significant results difference between the control and experimental groups in post-test was.

Ho2: There is no significant difference between the mean scores of pretest and posttest of the experimental group on reading comprehension taught by think-pair-share technique of students in the subject of English.

Table 4.2: Experimental group mean scores of pre-test and post-test (Think pair share).

Groups	N	Mean	df	Effect Size (Cohen's d)	Independent t-test value	p-value
Pre-test Experimental	40	3.15	78	2.78 (Very Large)	12.15	< 0.0001
Post-test Experimental	40	9.8				

t Value at 0.05 = 1.99

Table 4.2 pinpoints the mean score difference between experimental group on pre-test and post-test. The pretest mean scores of experimental group was 3.15, and posttest mean score was 9.8. The post experimental group exceeded pre-experimental group by 6.65. T-test value was 12.15 it was larger than the table value (1.99). P-value (<0.0001). (Cohen's $d = 2.78$) showed very large effect. The experimental group showed much significant effect.

Finding

- (Table 4.1) revealed the results of post-test between both the groups (control and experimental) were statistically significant. Experimental group was taught by think pair share showed better performance than the group taught by traditional method.
- (Table 4.2) pinpoints the difference between experimental group on pre-test and post-test mean score was found "significant". The effect size suggested a very large effect. The experimental group showed much better scores than the group taught by traditional method

Discussion

Think-Pair-Share technique also produced significant gains in reading comprehension. The post-test results revealed statistically significant differences in the mean scores of experimental and control groups, leading to the rejection of the null hypothesis. The findings align with Handayani's (2014), study, which established think pair share effect in improving reading comprehension. Similarly, Dwigustini and Widiya (2020), emphasized the role of think pair share in fostering active engagement and motivation, findings further corroborated by Rodiah (2018), these studies collectively highlight the pedagogical value of this technique to improve both academic performance and learner engagement. Surbakti et al., (2022), carried out a study the results revealed that think pair share technique is better than the directed reading thinking activity on reading comprehension achievement. Similar results were also found by Sapsuha (2013), who

also observed think pair share in teaching reading enhanced the students' reading and students are interested to learn reading through think pair share technique. Mahdalena et al., (2017), conducted a study result revealed that think pair share technique can improve the students' reading skill. Post-test mean scores were higher than pre-test.

There is an ample amount of literature on English language teaching with studies demonstrating that collaborative learning technique think pair share is a proper option for students for teaching reading comprehension, in general, and in English in particular, due to the fact that this technique highlights active interaction among students of different levels Sapsuha and Bugis (2013) used think pair share technique to enhance reading comprehension.

The finding of the present study is aligned with that of Utama (2017) who explored the effects of think pair share on reading comprehension. While sharing with their thoughts with their partners, they freely discussed the topic within the short time allotted it deepened their interest in what they were taught. Students normally look forward to opportunities that allow them interact with their class fellows while in class. According to Chianson, Aligba and Jimin (2015) students prefer to work with their pair rather than work individually or with the teacher. Think pair share offers students to first present their thoughts to their partner before sharing to the class it will reduce the anxiety and fear of giving erroneous responses in class. Students shape their answers as they discuss with their partners before finally presenting the prepared answers.

Think-Pair-Share enhanced female students' achievement in sciences more than male students (Hamdan, 2017). Nevertheless, the finding contradicted the finding by Ofodu and Lawal, (2011) who found no significant difference in the performance of male and female students' achievement in reading comprehension using Think-Pair-Share. The finding also disagrees with the findings by Bamiro (2015) which indicated that there was no significant effect of gender on students' achievement in chemistry after using Think-Pair-Share to teach the students.

Conclusion

The findings and discussion lead to the following conclusions, which are supported by the statistical analysis and data interpretation.

Think pair share techniques can be easily employed in government schools, particularly for female students due to their minimal financial requirements .it built confidence among students and help alleviate shyness and hesitancy, commonly observed in female students, they can read the text and comprehend it and also share with their class.

Recommendations

1. Findings revealed think pair share is effective for teaching reading comprehension in English at elementary level than traditional method. Therefore, teachers of English subject at elementary level may use think pair share to improve students reading comprehension level.
2. It is recommended that teachers may use this technique not only to enhance reading comprehension in English but also in other subjects, because it is interested, less stressful, it strengthens communication, and students express their perspectives.

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