



RESEARCH PAPER

Effect of Cooperative Learning on Elementary Students' Reading Comprehension in English

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ABSTRACT

The present study was aimed to investigate the effect of cooperative learning on elementary school students' reading comprehension in English. Quasi-experimental non-equivalent control group pretest-posttest research design was employed. The study was conducted on 8th grade students in a Government Girls High School district, Faisalabad. Two sections as intact groups were taken to conduct the experiment which was lasted for 8 weeks. Each group was comprised of 35 students. The English Reading Comprehension test was developed following test construction principles. Experimental group students were taught by cooperative learning techniques Jigsaw and Think-Pair-Share in English reading comprehension, at the same time control group students were taught with the traditional method of teaching. Data were analyzed by using inferential statistics (independent samples t-test and paired samples t-test). Study findings revealed that a significant difference was found between experimental and control group students' reading comprehension in English. Experimental group students significantly performed better in post- test than the control group. It is recommended that cooperative learning might be applied on different school subjects at elementary level.

KEYWORDS

Cooperative Learning, English Reading Comprehension, Jigsaw, Think-Pair-Share, Lecture Method

Introduction

Teaching is not an automatic process. It is complicated and exciting at the same time. Teaching is a creative activity, and a good teacher becomes a master. This profession demands the ability to change oneself according to different situations, adopting new ways to make students understand the topic. A teacher has to make students flexible. All these capabilities help teachers become artists (Parveen & Batool, 2012). A major problem that is disturbing when adopting English as a foreign language is that students find it difficult to improve their reading comprehension. Reading is the core process that makes their learning better. Reading gains more and more importance because it is a basic skill for acquiring knowledge. This is an important problem encountered by language teachers and students. Researchers are trying to look into new schemes to help students understand English as a foreign language (Al Haidari, 2006).

Different approaches like conventional instruction and cooperative learning have been mostly used in classrooms from time to time, and the outcomes have shown that many are well suited for teaching reading comprehension with a particular group of students but few are not (Al Hadri, 2006). However, it is essential to think out the means by which information is given to the students on the written page. Excellent students are capable of reading a passage at an average rate and interpreting it regardless of unfamiliar words and

without caring about the details (Alireza, 2010). Reading is normally done thoroughly for the function of overall and particular information in the classroom; nevertheless, from time to time, students at the school and college level experience difficulties making the implicit meanings from the passage. Deficiency to find meaning makes students confused. Here, cooperative learning aims to relieve the load in the interest of the single student by assembling them to read and resolve students reading comprehension difficulties beyond too much leaning on their teacher (Najmonnisa & Saad, 2017).

Review of Related Literature

Cooperative learning gained a lot of popularity a few decades ago because of its usefulness. These techniques gained popularity because of the activities used in them. These activities and procedures are quite helpful and useful for the students (Alireza, 2010). Instructions are given in small groups, and a target is given to them; afterwards, their performance is evaluated. It covers various teaching techniques, for example, student team division, team assisted individualization, team game tournaments, think-pair-share, jigsaw, group investigation, and cooperative integrated reading and composition (Salvin, 1982). The method of cooperative learning also supports students' ability to convey and interact with someone in their compatibility. This teaching method encourages values such as cooperation, respect, sincerity, responsibility, patience, and temperament to achieve a shared goal. In cooperative learning, the execution of various responsibilities can build self-confidence in students (Zakaria et al., 2013).

This method of cooperative learning is student-focused and employs different educational strategies and tactics that link up to different styles that help students think and learn (Bennet, 2010). This is a teaching approach whose purpose is to manage the activities of the class for social learning and academic experience (Gillies, 2016). Cooperation is the process of working together to complete a common goal. This means that individuals cooperatively work to increase the final results that profit them and some other group members. It exists when many students work in a small group to improve their own and their group mates' learning (Johnson & Johnson, 2018). Cooperative learning does not take place mechanically; it demands teacher support and monitoring. Many activities cannot change themselves if all group members are doing basically the same work (Cohen et al., 2004). Students are required to be involved in the process of learning by using different means; however, cooperative learning has been known as an essential quality for success in the current time period and a necessary element of deep structured learning (Palmer et al., 2017). The teacher plays a pivotal role in making the cooperative learning method successful in the classroom. This is related to how to make groups in cooperative learning, considering the constitution of groups and their size, the type of activity set, cooperative individual and group duties, expectations for students' behaviour, and the role of a teacher in observing the procedure and the result of the learning in groups (Palmer et al., 2017).

In Pakistan, unfortunately, teachers mostly use conventional teaching methods (Hussain et al., 2008; Jan, 2013). The lecture method encourages individual teaching in an environment of competition with each other, where students try to achieve good marks and teachers praise (Khan, 2008). The predominant conventional methods of teaching do not encourage the cooperation and participation of students (Parveen & Batool, 2012; Sultana & Zaki, 2015). Researchers from all around the world proposed that conventional methods of teaching promote independent learning. According to traditional methods of teaching, students are expected to learn individually and get good marks with teacher acknowledgment and approval (Salvin, 1996). This statement is recognised by many other studies (Gillies & Ashman, 2003). Different research studies have shown that teachers in

Pakistan do not accept new methods of teaching (Najmonisa & Saad, 2017). The majority of schools in Pakistan use traditional teaching methods, and as a result, rote learning is encouraged among students (Ali, 2011). Cooperative learning supports the principles of cognitive development, social interdependence, and behavioural theories (Johnson et al., 1998).

Cooperative Learning is a method of teaching that suggests small, mixed groups for learning to attain common learning goals. It assists the learning requirements of various students (Hosseini & Ahmad, 2013; Lirola, 2016; Rajab & Ibrahim, 2017). Inside a classroom, there are students of mixed abilities. When they are put together in a small group, they share knowledge and depend on each other to achieve a common academic goal. This group presentation helps to improve their overall understanding of the content and academic achievements (Hosseneni, 2017; Rajab & Ibrahim, 2017). Many writers defined five necessary elements of cooperative learning that were used to assist students in learning and improve their reading comprehension skills when using cooperative learning techniques in the classroom.

Positive interdependence: A basic and essential component of cooperative learning is optimistic interdependence. Teachers should pass on defined assignments and collective goals so students realize they swim or sink together. Positive interdependence continues when all members of the group understand that they are connected with one another and that individual students cannot succeed without group success; if one student fails, all fail. Students feel free to share their talent, ideas, and knowledge (Jonson & Johnson, 1989).

Face-to-face interaction: Cooperative learning is a teaching scheme in which small groups, all with learners of different levels of ability, use different activities of learning to modify their knowledge of a specific topic (Wichade, 2005).

Accountability: All group members have a responsibility to perform well, so they are capable to announce results and determining which person wants extra help and support. All members of a group are accountable not only for their individual learning but also for the learning of the whole group, which creates a sense of accomplishment (Suwantarathip & Wichadee, 2010).

Equivalent participation: It permits each member of the group to actively participate. All students get the opportunity to participate in classroom activities and thus achieve success using teamwork, which assists learners in enhancing their reading comprehension skills. Students get a chance to exercise language skills in cooperative learning (Gurk & Mall- Amiri, 2016).

Face to Face interaction: All members of group help everyone in the process of learning through face to face interaction; they also encourage students to perform their duties and do their work properly, they also depend on each other for the purpose of gaining success. They also evaluate the performance of each other so that they can achieve success (Wichadee & Orawiwatnakul, 2012).

Consistently composing these fundamental principles into cooperative learning situations assists in ensuring joint efforts and allows the correct execution of cooperative learning for continued success. In spite of the fact that the above fundamental elements of cooperative learning do not change, there are different variations and modifications of the model. The major founders of the method of cooperative learning include Spencer Kagan, Robert Slavin, Roger and David Johnson all of who have somewhat different emphases and approaches (Li & Lam, 2013).

The method of cooperative learning is relatively modern in its approach. It took off in the 1970s. In this method, students work in groups or pairs to share knowledge and information. This is how they support each other to become experts in the concepts and skills. Cooperative learning is different from group work. Group work means students working collectively; it does not mean collaboration. In the method of cooperative learning, students with mixed abilities work together in the process of learning and get praise and reward on the basis of group performance (Woolfolk, 2004).

The method of cooperative learning is known as the small group method, in which learners work in small groups and get honours depending on the achievement of the whole group (Sprinthall & Sprinthall, 2000). The activities of cooperative learning are very carefully organised, and every member is accountable for his learning, effort, and participation. Students are also awarded incentives so that they may perform well (Salvin, 2000). Cooperative learning is a teaching method wherein students perform learning activities with the cooperation and support of each other. Group performance is very important. Individual student performance is sometimes neglected for the interest of the group (Johnson et al., 1987).

Students perform better in small groups when they cooperate with each other. They enhance their cultural understanding towards each other; their interpersonal skills are also improved, and hence they are more prepared to perform in the modern world. This teaching method was remarkably used in the 1980s, and it is still used as an important tool in educational institutions (Barker & Clark, 2010). Cooperative learning is beneficial for both teachers and students (Johnson et al., 2007). Cooperative learning is the more fruitful and general form of research, theory, and practise in the department of education (Shimazoe & Aldrich, 2010). There is probably not a lot of research on cooperative learning methods in Pakistan. Hence, this is a basic requirement to carry out research studies in order to investigate the effectiveness of different forms of cooperative learning for many disciplines at different levels of teaching. Furthermore, the elementary level is a crucial level of education that demands modern methods of teaching to improve its standard (Parveen & Batool, 2012).

Theoretical Framework for Cooperative Learning

There are two main views related to cooperative learning: cognitive and motivational. The first view is that learners realise that their failure and achievement are based on their ability to work collectively; students are expected to support each other to do what the group needs to win. They are also more bound to help each other with the project at hand. Accordingly, cooperative learning builds students' motivation to accomplish academic work (Majoka et al., 2010). In order to attain a fruitful learning goal, Deltsh's effort regarding cooperative learning required useful social interdependence. The thought that students are accountable for making effort in the learning of groups Johnson and Johnson have diligently taken part in the theory of cooperation. Social interdependence theory furnishes a cornerstone on which cooperative learning is formed. Social Interdependence occurs when a person participates in collective goals, and every person's results are changed by the actions of others (Johnson & Johnson, 2008). The other concept is that cooperative learning supports students' critical approaches. The reason is that in cooperative learning, which creates a setting in which students must discuss and explain various perceptions; a significant understanding of the content is gained. Cooperative learning also assists students in justifying ideas and concepts through negotiation and discussion. The logic is that the status of conversation within groups is significantly superior to teacher-led discussion. Students get quick responses, which improves their level of discussion (Majoka, et al., 2010).

Cooperative learning is an important instrument for preparation of students to meet the challenges of life (Johnson & Johnson, 2014). In Pakistani classrooms the actual environment of classrooms does not help successful execution of cooperative learning method (Sultana & Zaki, 2015). The reason is that our teachers are not trained adequately to use different methods of teaching and conscious for the students' requirements (Veenman et al., 2002). Teachers take for granted that traditional teaching method is right for whole students irrespective of their diversity. Efficient teaching is settled on many elements including positive reinforcement, higher order questioning, positive classroom environment, advance organizer, cues, feedback, and cooperative learning (Walberg, 1988). Education is essential for continuous improvement and the cooperative learning insures future sustainable development (Agashe, 2012). Therefore, the present study was carried out to investigate the effect of cooperative learning on elementary school students' reading comprehension in English.

Hypotheses

The null hypotheses of the study were as following:

Ho1: There is no significant difference of pre-test scores between control and experiment group of 8th grade students' reading comprehension in English.

Ho2: There is no significant difference of post-test scores between control and experiment group of 8th grade students' reading comprehension in English.

Ho₃: There is no significant difference between pre-test and post-test scores of control group 8th grade students' reading comprehension in English.

Ho₄: There is no significant difference between pre-test and post-test scores of experimental group 8th grade students' reading comprehension in English.

Delimitation's of the Study

The study was delimited to public sector 8th grade female students.

Material and Methods

Present study was quantitative in nature and Quasi experimental non-equivalent control group pre-test post-test research design was used to conduct the experiment. The participants chosen for the experiment were 8th grade students studying at government sector school.

Population and Sample

All government elementary school students in district Faisalabad were the population of the study. The study sample was comprised of seventy female students studying English in 8th grade at Govt. Girls High School district Faisalabad. Two intact groups were chosen for non-equivalent control group pre-test post-test research design. Students of one section were chosen as an experimental group and at the same time the students of other section were chosen as control group. Thirty five students were in each group. The results of pre-test test were indicated that irrespective of groups, all students were basically equivalent with regard to knowledge of the course of study at the beginning of the research. Both control group and experimental groups were taught for the period of 8 weeks. The students of control group were taught by using lecture method and students of experimental group were taught by cooperative teaching method. Lesson plans were

developed by the researcher and different activities were planned in these lesson plans. In cooperative learning, the role of lesson plan is to formulate advanced activities, involving students in successful learning process, time management in the class and successfully use available A.V aids. As Singh (2004) represented, that "Lesson planning prevent wastage of energy and time of both the students and the teachers."

Instrument and Validation

In order to test the hypotheses of the study an English Reading Comprehension test was developed for grade 8th students to assess students' English reading comprehension skills. Students' performance was assessed by various items of test such as multiple-choice question (MCQs) and short answer questions from paragraphs. The test items were developed after critical reevaluation of Bloom's taxonomy and items of test were formulated by considering initial three cognitive levels that is remembering, understanding and practical application according to our national English curriculum (2006). The test items were chosen keeping in view the test item construction rules. A table of specification was developed at the first stage. The item analysis of English Reading Comprehension test was done to calculate the item difficulty and discrimination. Accordingly, the best test items were selected for the English Reading Comprehension test. After providing the treatment to the treatment group the same test was conducted as post-test to analyze the results of the pre and post tests.

Table 1
Table of Specification for English Reading Comprehension

Content	Weight age	Knowledge 40%	Comprehension 40%	Application 20%	No of items	Total Marks
Hazrat Umar	10%	2	2	1	5	5
Great Virtue	10%	2	2	1	5	5
Let's make our road safer	20%	5	4	1	10	10
Telephone	20%	4	4	2	10	10
Water is a lovely thing	10%	2	2	1	5	5
Unseen paragraphs	30%	5	6	4	15	15
Total	100%	20	20	10	50	50

Above table of specification shows the number of items and total marks included in the test developed by the researcher.

Table 2
Difficulty and Discrimination Indices of English Reading Comprehension Test

Item Numbers	Difficulty	Remarks	Discrimination	Remarks
Item Number 1	0.65	Easy	0.30	Good
Item Number 2	0.55	Average	0.30	Good
Item Number 3	0.70	Easy	0.40	Very Good
Item Number 4	0.55	Average	0.50	Very Good
Item Number 5	0.65	Easy	0.30	Good
Item Number 6	0.75	Easy	0.30	Good

Item Number 7	0.55	Average	0.30	Good
Item Number 8	0.45	Average	0.30	Good
Item Number 9	0.65	Easy	0.30	Good
Item Number 10	0.65	Easy	0.50	Very Good
Item Number 11	0.65	Easy	0.50	Very Good
Item Number 12	0.55	Average	0.30	Good
Item Number 13	0.45	Average	0.30	Good
Item Number 14	0.50	Average	0.20	Moderately
Item Number 15	0.60	Average	0.40	Very Good
Item Number 16	0.55	Average	0.30	Good
Item Number 17	0.45	Average	0.30	Good
Item Number 18	0.60	Easy	0.40	Very Good
Item Number 19	0.55	Average	0.50	Very Good
Item Number 20	0.50	Average	0.40	Very Good
Item Number 21	0.65	Easy	0.30	Good
Item Number 22	0.75	Easy	0.30	Good
Item Number 23	0.70	Easy	0.40	Very Good
Item Number 24	0.80	Easy	0.40	Very Good
Item Number 25	0.35	Difficult	0.30	Good
Item Number 26	0.40	Difficult	0.20	Moderately
Item Number 27	0.40	Difficult	0.20	Moderately
Item Number 28	0.65	Easy	0.50	Very Good

Intervention

Treatment was given to experimental group in the period from September to October, 2022. The intervention period consisted of approximately 8 weeks. Five chapters and some unseen paragraphs were completed by the researcher from the English text book of 8th grade. Experimental group was given treatment and the control group was taught by using lecture method. Course of study and learning material was same for the two groups. Lesson plans was prepared by the researcher according to the course content and objectives were included in the lesson plans. In cooperative learning, Jigsaw and Think-Pair-Share techniques were used for English reading comprehension for students of 8th grade.

Data Analysis

Inferential statistics were used to analyze the data (independent samples t-test and paired samples t-test). To find the difference between the scores of control and experimental groups, an independent samples t-test was used. Furthermore, in order to differentiate between the scores of pre-test and post-test of the experimental and control group, a paired samples t-test was used.

Results and Discussion

Table 3

Difference between Pre-test Scores of Experimental and Control Group of 8th Grade Students' English Reading Comprehension

Measures	Groups	N	M	SD	t-value	df	Sig.
Pre-Test (Reading Comprehension)	Control Group	35	26.97	4.63	-.342	68	.733
	Experimental Group	35	27.42	6.39			

The difference in pre-test scores of control and experimental groups with regard to effect of cooperative learning on students' reading comprehension an independent samples t-test was used. This table display insignificant difference between control ($M=26.97$, $SD=4.63$) and experimental group ($M=27.42$, $SD=6.39$) at $p \leq 0.05$ level of significance with ($t= -.342$, $p=.733$) value. The null hypothesis "there is no significant difference of pre-test scores between control and experiment group of 8th grade students' reading comprehension in English" is accepted.

Table 4
Difference between Post-test Scores of Experimental and Control Group of 8th Grade Students' English Reading Comprehension

Measures	Groups	N	M	SD	t-value	df	Sig.
Post-Test (Reading Comprehension)	Control Group	35	35.65	4.35	-5.721	68	.000
	Experimental Group	35	40.68	2.83			

The difference in post-test score between the control and experimental groups with regard to effect of cooperative learning on students' reading comprehension in English an independent samples t -test was used. This table 4 shows a significant difference between control ($M=35.65$, $SD=4.35$) and experimental group ($M=40.68$, $SD=2.83$) at $p \leq 0.05$ with significance level ($t= -5.721$, $p=.000$) value. The null hypothesis "there is no significant difference of post-test scores between control and experiment group of 8th grade students' reading comprehension in English" is rejected.

Table 5
Comparison of Pre-test- Post test Scores of 8th Grade Students of Control Group in English Reading Comprehension

Measures	Scores	N	M	SD	t-value	df	Sig
Control Group	Pre-test	35	26.97	4.63	-15.935	34	.000
	Post-test	35	35.65	4.35			

The difference between scores of pre-test and post- test of control group with regarding to effect of cooperative learning on students' English reading comprehension a paired samples t-test was applied. It is evident from the findings of the study that a significant difference was found between pre-test ($M=26.97$, $SD=4.63$) and post-test ($M=35.65$, $SD=4.35$) scores at $p \leq 0.05$ level of significance with ($t= -15.93$, $p=.000$). The null hypothesis "there is no significant difference between pre-test and post-test scores of control group 8th grade students' reading comprehension in English" is rejected.

Table 6
Comparison of Pre-test-Post-test Scores of Experimental Group of 8th Grade Students in English Reading Comprehension

Measures	Scores	N	M	SD	t-value	df	Sig.
Experimental Group	Pre-test	35	27.42	6.39	-17.351	34	.000
	Post-test	35	40.68	2.83			

The difference between pre-test and post-test scores of experimental group with regarding to effect of cooperative learning on 8th grade students' reading comprehension in English a paired samples t-test was applied. A significant difference is found between the scores of pre-test ($M=27.42$, $SD=6.39$) and post-test ($M=40.68$, $SD=2.83$) scores at $p \leq 0.05$ level of significance with ($t=-17.351$, $p=.000$). The null hypothesis "there is no significant difference between pre-test and post-test scores of experimental group 8th grade students' reading comprehension in English" is rejected.

Discussion

The findings of present study revealed a significant difference in post-test scores between control and experimental groups. The post-test about reading comprehension confirms the advantages of cooperative learning method. The mean scores of experimental group in the post-test reached relatively higher as compared with control group scores. The study findings support the method of cooperative learning in English reading comprehension such as vocabulary, spellings, main idea of paragraph and summaries. The findings based on this study are aligned with the results of previous studies. As numerous studies results shows a well known cooperative learning method help students to improve their academic achievements (Barrett, 2005; Garduno, 2001). Cooperative learning method is much better as compare to conventional method of teaching in the academic performance of students (Melihan & Sirri, 2011). A remarkable difference was found between cooperative learning method and conventional teaching method. Cooperative learning techniques support instructor to engage learners in the process of learning and help students to interact with one another because activities are planned in such manner that single student may not be capable to complete the work (Hosseini, 2017). Shimazoe and Aldrich (2010) expressed that students enjoy the process of teaching learning in cooperative learning and this activity motivates them to learn (Slavin, 1995; Zakaria et al., 2010). Students' academic achievement was improved by using cooperative learning methods. It supports teachers to use good learning material and help students to get best scores (Zakaria, et al., 2010). Cooperative learning goal includes equal and active involvement in the group work, leadership responsibilities, supportive interaction, enhanced learning and better self-respect. For the purpose of teaching language skills this is effective method of teaching and this is best as compared to traditional teacher centered teaching methods (Singh & Agrawal, 2011). Students who learned language skills by using cooperative learning techniques do best than those students who rely on traditional teaching methods (Marzban & Alinejad, 2014; Pan & Wu, 2013). Cooperative learning is a method that supports students to convey as well as interact among someone in compatibility. This teaching method encourages values for example cooperation, respect, sincerity, responsibility, patience and temperament to achieve shared goal. In cooperative learning execution of various responsibilities can build self-confidence in students (Zakaria, et al., 2013).

Conclusion

The current study was conducted to investigate the effect of cooperative learning method on elementary school students' reading comprehension in the subject of English. The study revealed that students changed the approach they recognized English when working in a cooperative environment that boost their self-confidence, status, communication abilities and problem solving experiences. Study results show that experimental group students who were taught English subject by using cooperative learning method has significantly better results than students of control group who were taught by using conventional lecture method. The jigsaw and think- pair- share techniques of cooperative learning are preferable to encourage interaction in the classroom rather than the conventional teaching method.

Recommendations

On the basis of above findings recommendations are made for further investigation.

1. Findings of the present study revealed a significant effect of cooperative learning on students' reading comprehension in English. Therefore, it is recommended that

teachers in the classroom may use cooperative learning techniques to enhance their students' reading comprehension in English.

2. This study was limited to only two techniques (think pair share and jigsaw). However, future studies can be done on using other techniques of cooperative learning to investigate their effect on students' learning at elementary, secondary and at university level.
3. The present study used method of cooperative learning on only one subject that is English reading comprehension. It is recommended that the method of cooperative learning can be applied on other subjects at elementary and secondary level as well as on various types of learners, such as slow learners and special students.
4. The sample of present study was limited to school girls only. It is recommended that such studies can be carried out on school boys to generalise the findings regarding the effect of cooperative learning on students' reading comprehension in English.

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