

Evaluation of the Effectiveness of Cooperative Learning Method versus Traditional Learning Method on the Writing Ability of the Students

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ABSTRACT

The study aimed at evaluating the effectiveness of cooperative learning method in the subject of English. This study focused to find the effect of cooperative learning and traditional learning on the writing skill of the students of large 8th class. It was an experimental study in which cooperative learning method was compared with traditional method. The aim of this cooperation is for learners to maximize their own and each other's learning. Three sections of 8th class of Government Comprehensive High School Rawalpindi, equally divided on the basis of teacher-made pretest scores, were taken as the sample of the study. Sample size was 128, Sixty-four students were included in experimental group and sixty-four students were placed in control group. Pretest, posttest equivalent group design was used. Treatment of planned cooperative learning (STAD) was provided to experimental group while control group was taught by using traditional method for a period of 56 days (eight weeks). At the end of treatment, a teacher made posttest was administered to measure the achievement of the students. Same teacher taught writing skill to both the groups' one with cooperative learning method and other with traditional learning method. For the purpose of writing skill, parts of speech (five) and tenses (two) were taken. To determine the effect of cooperative learning on the writing ability the significance of difference between the scores of groups at 0.05 level was tested by applying t-test and analysis of variance. Data analysis reveals that both the experimental and control groups were almost equal in writing ability at the beginning of the experiment. The experimental group outscored significantly the control group on posttest showing the supremacy of cooperative learning over traditional method of teaching. Hence, the ultimate result of the study indicated that cooperative learning was more effective instructional paradigm for English as compared to the traditional method of teaching. Furthermore, cooperative learning appeared to be more favorable for overcrowded class.

Keywords: Cooperative learning, Team Achievement Division (STAD), Academic Achievement, Traditional Learning, writing ability, Second Language (L2)

INTRODUCTION

English is taught as compulsory subject valued for its educational and cultural significance. Yet, there is more emphasis on teaching English as perceived to be more important for communication in the domains of science, trade, and technology. However, instruction of English in the context of the present study remains competitive in nature and does not provide opportunities for active learning and meaningful communication among learners because learners are expected to perform better than their classmates in order to attain higher grades and achieve approval and success. There is a need to examine cooperative learning as an instructional approach in a traditional school context such as this one based on the assumption that it would promote active learning and meaningful interaction among learners. There is no opportunity for a teacher in traditional learning methods to give individual

attention to all students. The result is that gap between weak and able students' increases. Cooperative learning claims to help the students in such a situation.

Cooperative learning has been proclaimed as an effective instructional method to tackle these difficulties. Cooperation means working together to accomplish shared goals. Within cooperative situations, individuals seek results that are beneficial for all members of a group. Students work together to maximize their own and each other's learning. It may be contrasted with competitive learning in which students work against each other to achieve an academic goal and individualistic learning in which students work by themselves to accomplish training goals unrelated to those of other students. Competitive and individualistic traditional learning methods are popular among Pakistani teachers. To use cooperative learning effectively, teacher must realize that not all groups are not cooperative groups. Placing students in the same room and calling them a cooperative group does not make them one. Study groups, project groups, reading groups are groups, but they are not necessarily cooperative. Some teachers use traditional learning group. In this instructional method, a group whose members are assigned to work together but they have no interest in doing so. The structure promotes competition at close quarters, on the other side in cooperative learning group; members of a cooperative group meet all reasonable expectations, which are given to them. Since learners are different in their intellectual capacity, their motivation and their linguistic skills. With a large class, or mixed class, cooperative learning group may particularly be useful for weak students. Activities which are not feasible in a lockstep situation such as using a picture or using games may become perfectly feasible when done in groups.

Cooperative learning also integrates language and content learning, and its varied applications are in harmony with the pedagogical implications of the input, socialization, and interactive theories of second language (L₂) acquisition. This is because CL enhances the motivation and psychosocial adjustment of second language learners (Dornyei, 1994).

English being a foreign language is a difficult subject to teach and learn in Pakistan. Most of the students do not attain the required competency. This problem is more acute in the government schools where English is taught only as a compulsory subject and it is not used as a medium of instruction. In most of the government schools, teacher has to teach large class in which sixty to seventy students learn together. Cooperative learning method may be used to improve the basic four language skills of the students. Majority of the teachers in government schools are using traditional competitive and individual learning method with lockstep or traditional learning group arrangements. So the existing instructional methods need improvement in schools particularly in government schools. The students of large class have to cover the syllabus in a limited period of time. There is no opportunity for a teacher in traditional learning method to give individual attention to all the students equally. There is severe curtailment of student grammatically correct writing in traditional learning methods. Many teachers use traditional learning method in Pakistan. This study focused to find the effect of cooperative learning and traditional learning on writing skills of the students of 8th class in the schools of Rawalpindi city and propose the strategy for the affective learning of English language.

The main objectives of the study were:

1. To assess the effects of cooperative learning and traditional learning methods on the achievement of students in the subject of English.
2. To assess the effects of cooperative learning and traditional learning methods on the writing ability of the students.

HYPOTHESIS OF THE STUDY

The following hypotheses were tested in this study:

1. There is no significant effect of cooperative learning on the writing ability of the sample students.
2. There is no significant effect of cooperative learning on the parts of speech of the sample students.
3. There is no significant effect of cooperative learning on the tenses of the sample students.

LITERATURE REVIEW

Researchers have defined cooperative learning in the different ways:

Johnson et al. (1999) state that “cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other’s learning. It may be contrasted with competitive and individualistic learning”. (p. 5)

According to Johnson and Johnson (1999, p.186), there are at least three general theoretical perspectives that have guided research on cooperative learning and these are under:

1. Social interdependence perspectives
2. Cognitive perspectives
3. Motivational perspectives.

According to Johnson and Johnson, the way social interdependence is structured determines the way persons interact with each other. Moreover, outcomes are the consequences of persons’ interactions. Therefore, one of the cooperative elements that have to be structured in the classroom is positive interdependence or cooperation. When this is done, cooperation results in primitive interaction as group members encourage and ease each other’s efforts to learn.

Vygotsky (1978) defines the zone of proximal development as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 47).

Bibi (2002) reported that teaching English grammar through group work activities played a positive role in improving the academic achievement, the four language skills of the students studying English at elementary as well as secondary stage (p. 101)

Davidheiser (1996) in his research paper explores a successful student-centered method of grammar instruction in second language classes. He finds that “by applying pair and group work teachers can increase the quality of grammar instruction that can help retention. By being responsible for practicing and integrating, students internalize, even at the elementary level, challenging grammatical points”.

Armstrong, (1999), conducted a study comparing the performance of homogeneously grouped, gifted students to heterogeneous ability groups that included gifted average and low performing learners. Both groups experienced a comparable increase in achievement after working together, with gifted group performing only slightly higher.

Johnson *et al.*, (1981) reviewed 122 studies conducted between 1924 and 1981 that yielded 286 findings. The three methods of meta-analyses were used which were voting method, effect-size method, and z-score method. The result indicated that cooperative learning

experiences tended “to promote higher achievement than did competitive and individualistic learning experiences. The average person working within a cooperative situation achieved at about the 80th percentile of the students working within a competitive or individualistic situation” (p. 104).

Slavin (1995) examined several ninety-nine studies that lasted four or more weeks and that used a variety of cooperative – learning methods. Sixty-three (63%) of the ninety-nine experimental-control comparison favored cooperative learning. Only five percent students significantly favored the control group. Overall, students in cooperative – learning groups scored about one – fourth of a standard deviation higher on achievement test than did students who were taught conventionally (p. 67).

Singhanayok and Hooper (1998) found that cooperative groups spent more time engaged in the task, checked their concept learning more often and scored higher on posttests than students working individually.

According to Siddiqui (2003), the available research on second language acquisition reveals that to develop and learn a language, learners must interact in the language. Increasing the frequency and variety of the verbal interaction in which learners participate is an important goal of any instruction based on the principles of second language acquisition. The teacher-fronted approach often ends up preventing students from having genuine interactions with the teacher and fellow students because the teacher initiates and controls the interaction. Collaborative learning encourages mutual interaction and, by increasing the number of opportunities available for verbal expression, provides opportunities for a wider range of communicative functions than those found in teacher fronted classrooms.

According to Hammond, Barron, Pearson, Schoenfeld, Stage, and Tilson (2008), “Students learn more deeply when they can apply classroom-gathered knowledge to real-world problems, and when they take part in projects that require sustained engagement and collaboration.”

According to Moenich (2000), when cooperative learning structure was used, it was observed that all students were engaged and all students were learned both content and the language of instruction.

Kagan & Kagan (2000) describes that language is used in real-life, functional interaction, reducing problems of transference. Students have the opportunity to adjust their language output to make sure they understand each other. Whereas it is frightening to speak out in front of the whole class, it is easy for students to talk with a supportive teammate. Students encourage and support each other in language use. Because the structures are engaging interaction sequences, and students need to understand each other there is high motivation to speak and listen for understanding.

In the light of above mentioned studies, it was concluded that cooperative learning is more effective as a teaching – learning technique. The present study aimed at evaluating the effectiveness of cooperative learning method in the subject of English in over-crowded class.

METHODOLOGY

In this study Pre-test Post-test equivalent group design was used (adopted from Watenable, Hare and Lomax, 1984). This design may be represented as (Best, Kahn, 1986, P.127). In this design, Pre-test was administered before the application of the experimental and control treatments and post-tests at the end of the treatment period. A technique of cooperative learning (STAD) (adopted from Slavin, 1995, P.131) was selected as the form of intervention

in this study because it encompasses all the cooperative learning elements of heterogeneous grouping, positive interdependence, individual accountability, social and collaborative skills, and group processing. The aim of this study was to evaluate the effectiveness of “cooperative learning method” versus “traditional learning method”. Therefore, students studying at elementary level constituted the population of study.

Sample

Sample of the study consisted of 128 students of 8th classes of Government Comprehensive High School Rawalpindi. Their ages ranged from 13 to 14 years. The participants were selected from that school which represents population of typical government schools in Pakistan i.e. large classes, spacious rooms, and students of different socio-economic status. The experimental group included 64 participants who studied together in sixteen teams of four members each according to the dynamics of cooperative learning. Meanwhile, 64 participants in the control group studied the same material with traditional learning method. All students were randomly selected from all three sections of 8th class of the school. These students were separated into two groups of experimental and control group on the basis of result of pre-test score. The score of the test was used to equate the groups i.e. each student of experimental group was equated with the corresponding student in the control group. Students were allotted randomly to control and experimental groups as under:

Table 1. Sample Distribution

<i>Subject</i>	<i>Experimental</i>	<i>Control</i>
Urdu medium section (Low achiever+ high achiever + Average)	64	64
	16+16+32	16+16+32

Above table 1 showed that total sample was 128, which was divided into two groups (i.e. experimental and control) of 64 students each. Experimental group had 64 students. In this group of 64 students, sixteen students were high achievers, sixteen were low achievers, and thirty-two students were average. Same criteria of selection of students were adopted to form control group. Thus two equivalent groups were formed in such a way that average score and average age of the students of two groups were almost equal.

Equal conditions for both the groups were established. All factors of the time of day and treatment length in time were equated. Subject of both groups was taught by the same teacher. Both groups were taught the same material. The study lasted for fifty six days with daily period of 40 minutes. Experimental group was taught by using cooperative learning and control group was taught by using traditional learning.

One teacher who agreed to teach experimental and control groups, was trained by researcher and experts of English subject. This teacher was trained to use cooperative learning method. This teacher was teaching class with traditional method. Same teacher was selected to teach both the groups to avoid the potential factor.

Instrument

In order to equate the control and experimental groups, a teacher made pre-test was administered before the allocation of students to experimental and control groups. Immediately after the treatment was over, a teacher-made posttest was administered to subjects of both the experimental and the control groups.

The purpose of this test was to measure the achievement of the students' constituting the sample. Pretest and posttest were constructed by the researcher after a review of the techniques of test construction. To make writing ability test researcher followed the work of author Haq (1983, pp. 47-118).

The numbers of items included in each test were double the number to be included in the final form of tests. These tests were first judged by experts of Faculty of Social Sciences, Education Department, International Islamic University Islamabad and Department of English, AIOU, Islamabad. About 23% items were dropped as a result of judgmental validity of experts. Then each test was administered to ten students of same level for which it was going to be used. At this stage 27% items were rejected. Thus the final form of the test was prepared.

Class teachers and experts were involved in the construction of tests. Both the pretest and posttest were same but their arrangements of items were changed in post test. Each test was composed of 50 items of writing ability. Writing ability test had the following items i.e. writing ability test consisted of 50 items:

- a. 25 items for usage of five parts of speech, i.e. Pronoun, Adverb, Adjective, Proposition, Conjunction.
- b. 25 items for tenses i.e. Present Indefinite, Present Continuous, Present Perfect, Present Perfect Continuous, Past Indefinite, Past Continuous, Past Perfect, Past Perfect Continuous

The split half method (odd-even) was used to test the reliability of posttest scores obtained by 30 students who did not form the sample of the study. Spearman – Brown prophecy formula was used to estimate the reliability for the whole test from the obtained correlation between the two half tests. Pre-test and post-test were same but arrangements of items were different. Validity of the tests was evaluated by a committee which consisted of experts in English subject and education subject. Cooperative learning method (STAD) was used. Training was provided to one teacher who was selected from Government Comprehensive High School Rawalpindi. He was elementary school teacher and was provided 10 days training in cooperative learning i.e. five days for theory and five days for practical teaching. Detailed instructions were given by researcher in three areas of class preparation, presentation, group formation and quiz.

STAD consists of six major components – preparation, presentation and practice in teams, quizzes, individual improvement scores, and team recognition.

Traditional learning focused on the same lessons and material according to the instructional procedures (activities) suggested on the textbook. These procedures were organized into three stages: opening instruction, participation, and closure. These stages provided opportunities for working on various objectives in reading writing skills, using a wide variety of instructional techniques such as whole class, discussion, lecture, question and answer, traditional groups.

Data Collection

During the experiment two different treatment patterns were applied. Lesson plans of both the groups addressed the same instructional objectives. However, the experimental plans provided opportunities for small-group interaction and sharing resources among team members. Conversely, students in control group worked individually and shared their answers with the class. Worksheets were provided to both the groups except for the control group which was provided with traditional routine situation in the classroom while

experimental group was provided with cooperative learning method (STAD) as treatment. The experiment continued for 56 days. Soon after the treatment was over, posttest was administered to measure the achievement of the sample subjects. Three students of the control group and one student of experimental group were the mortality cases and were excluded from the data of the study. Finally, there were 61 students in the control group and 63 students in the experimental group. Pretest scores of the sample served as data to equate the control and experimental groups, while posttest scores served as data to measure achievement of the students as a result of treatment.

In order to test the hypothesis, the relevant data was analyzed. Mean, Standard deviation and difference of means were computed for each group. t-test was applied to measure the significance of the difference between the mean of the two groups. Significance of difference between the means scores of both the experimental and control groups on the variable of pretest and posttest scores was tested at 0.05 level by applying t-test. To calculate the coefficient of correlation between the odd and even items of post test scores of the participants in the experiment was used. Raw scores obtained from pre-test and posttests were presented in tabulator form for the purpose of interpretation.

RESULTS

The results on post-test on experimental and control groups are as under:

Table 2. Significance of difference between mean scores of experimental group and control group with regard to writing ability on post-test

Group	N	M	SD	t-value	
				Calculated Value	Table Value at .05
Experimental	63	35.07	5.41	4.84	1.96
Control	61	30.08	6.07		

Table 2 indicates that mean score of experimental group was 35.07 and that of the control group was 30.08 on posttest. The difference between the two means was significant at 0.05 level in favor of experimental group. The significance level indicates that the experimental group showed better ability in writing on posttest than control group.

Table 3. Significance of difference between mean scores of experimental group and control group with regard to usage of parts of speech on posttest

Group	N	M	SD	t-value	
				Calculated Value	Table value at .05
Experimental	63	17.71	3.00	4.773	1.96
Control	61	14.95	3.97		

Table 3 indicates that mean score of experimental group was 17.71 and that of the control group was 14.95 on posttest. The difference between the two means was significant at 0.05 level in favor of experimental group. The significance level indicates that the experimental group showed better performance in usage of parts of speech on posttest than control group.

Table 4. Significance of difference between mean scores of experimental group and control group with regard to usage of tenses on posttest

Group	N	M	SD	t-value	
				Calculated Value	Table value at .05
Experimental	63	17.48	3.13	4.128	1.96
Control	61	15.15	3.15		

Table 4 indicates that mean score of experimental group was 17.48 and that of the control group was 15.15 on posttest. The difference between the two means was significant at 0.05 level in favor of experimental group. The significance level indicates that the experimental group showed better performance in usage of tenses on posttest than control group.

Above results indicate that students of experimental group who are taught by cooperative learning method show comparatively better results than that of students of control group who are taught with traditional method. So achievement level of students of experimental group is better than that of students of control group in the subject of English.

CONCLUSIONS

In the light of statistical analysis and the findings of the study, the following conclusions were drawn:

1. On the whole, cooperative learning is more effective as a teaching learning technique for overcrowded class of English at elementary level.
2. Students in cooperative groups have significant superiority in learning writing (parts of speech and tenses) over students learning writing by traditional method.

DISCUSSIONS

The following findings emerged as a result of the analysis of data. Comparison of pretest scores of both the experimental and control groups by applying statistical analysis reflected that there existed no significant differences between two groups and both the groups were almost equal with respect to achievement in English. Moreover, the comparison between mean pretest scores on writing ability usage of parts of speech and tenses of the experimental and control groups showed that difference between means pretest scores of students of the experimental and control groups was insignificant at 0.05 level.

H₀: 1 Table 2 indicated the significant difference between means at 0.05 level. Thus the null hypothesis, “there is no significant effect of cooperative learning on the writing ability of the students”, was rejected. The experimental group showed better writing ability than the control group. This result is supported by the study of (Gooden and Carrasquillo, 1998).

H₀: 2 Table 3 indicated the significant difference between means at 0.05 level. Thus the null hypothesis, “there is no significant effect of cooperative learning on usage of parts of speech of the students”, was rejected. This result was supported by the study of Gaith and Yaghi (1998) and Davidheiser (1996).

H₀: 3 Table 4 indicated that there is significant difference between means at 0.05 level. Thus the null hypothesis, “there is no significant effect of cooperative learning on usage of tenses of the sample students”, was rejected. The result that the experimental group performed better

than the control group in the usage of proper tenses is supported by the studies of Bibi (2002), Gaith and Yaghi (1998).

After applying statistically test Ho1, Ho2 and Ho3 were rejected. The theoretical relevance of cooperative learning in enhancing academic achievement is based on the assumption that the students in the cooperative learning may feel important because they perform roles that are essential to the completion of group work. Furthermore, the students studying in experimental group possess information and resources that are indispensable for their teams. Likewise, interaction among team members may promote their psychosocial adjustment as the individual efforts of every student are encouraged and supported in order to achieve group success. The findings of this study suggested one aspect of interest the assumed enhancing reading comprehension of the students. So the finding calls for using the dynamics of (STAD) a technique of cooperative learning method in the classroom because it engages learners in meaningful interactions in a supportive classroom environment that is conducive to enhance achievement of all the students. This study proves that cooperative learning method is better for English subject than traditional learning method. Therefore, teachers of English subject should use cooperative learning to improve the academic achievements of the students at elementary level. Teachers of English should be provided training in cooperative learning. Many studies conducted on cooperative learning in different cultures by different researchers as well as this study prove cooperative learning as more effective for large class as compared to traditional method of teaching. In Pakistan, mostly classrooms are overcrowded so it is very effective. English is used as a second language in Pakistan. Results show that a heavy number of students fail in examination conducted by Directorates. Results can be improved by using this cooperative learning method and in this way the education wastage can be decreased. This study examined only the academic achievement of students in English. Further studies can be conducted to investigate the effectiveness of cooperative learning for other variables such as attitude towards subjects, self-esteem, peer relation, social skills and academic motivation for different subjects. Studies on cooperative learning provide a field of research if we examine the relative effectiveness of different cooperative learning methods.

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