



A Study of Effectiveness of Co-operative Learning Method for Teaching English

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Abstract:

The principle of self activity is the great and fundamental principle of all education. Different methods and techniques are used for teaching different types of subject matter or lessons. The method selected for the present research the Jigsaw learning is the co-operative learning method, in comparison of Teacher's Manual Method. The main objectives of the study is the effectiveness of co-operative learning Method, achievement of co-operative learning method and Teacher's Manual Method on achievement in English subject of secondary school students. Experimental control group pre-test post-test design (quasi experimental design) is used. Random sampling method has been adapted. Total 96 sample in experimental and control group was taken. The investigator has used the mean S.D., t-test and coefficient of correlation as the statistical technique in the study. The investigator designated research tools as: 1.The pedagogy on English subject through the co-operative learning method in the pattern of Jigsaw technique. 2.The pedagogy on English subject through the Teacher's Manual Method (lecture method).3.The achievement test on English subject for the students in grade ninth (50 items). It was found from the study that there was the significant difference between the pre test and post test scores of learning achievement in English subject of ninth grade students taught by co-operative learning method. There was the significance difference between Pre-test score and post test score of learning achievement in English subject o ninth grade students taught by Teacher's Manual Method. The mean score (Post-test) of the learning achievement in English subject of ninth grade students taught by co-operative learning method obtained the greater value than that of the mean score of the learning achievement in English subject of ninth grade students taught by Teacher's Manual Method. This study aims to construct and Jigsaw learning materials for the ninth grade students.

Keywords: *Co-operative learning Method, Jigsaw learning, Teacher's Manual Method*

1. Introduction

It is the responsibilities of the teachers to enable the students to create the ambiance, environment, instructional media, and facilities of learners to learn and all round persons able to benefit from research as part of the learning process. The principle of self activity is the great and fundamental principle of all education, when a teacher motivates the students to learn through various media, self-learning may be achieved resulting in acquisition of more knowledge and understanding of a particular subject. Various methods and techniques are used for teaching different types of subject matter or lessons. As a co-operative or collaborative learning technique of instruction, Jigsaw learning has been a better than the teaching through Traditional teaching method. The process of Jigsaw learning encompasses a number of aspects like team building, group formation, to gatherers, climate setting, lesson formatting, role determination, time duration, poor tutoring etc. In the present study, the researcher as a teacher of English subject in secondary school intends to carry out the research for developing suitable of effective teaching learning methods for the students in science subject. The method selected for the present

research the Jigsaw learning is the co-operative learning method, in comparison of Teacher's Manual Method.

2. Objectives of the Study

1. To study the effectiveness of co-operative learning Method on achievement in English subject of secondary school students. (Ninth grade).
2. To study the effectiveness of Teacher's Manual Method on achievement in English subject of secondary school students (ninth grade).
3. To study the comparative effectiveness of co-operative learning Method and Teacher's Manual Method on achievement in English subject of secondary school students (ninth grade).
4. To study the effectiveness of achievement of co-operative learning method (Jigsaw learning technique) and Teacher's Manual Method in relation to the I.Q.

3. Hypotheses of the Study

1. There will be no significant difference between the pre-test and post-test mean score of learning achievement of secondary school students in English subject taught by co-operative learning method.
2. There will be no significant difference between the pre-test and post-test mean score of the learning achievement of secondary school students (ninth grade) in English subject taught by Teacher's Manual Method.
3. There will be no significant difference between the mean score of the post-test achievement of co operative learning method and Teaches Manual Method in English subject of secondary school students (ninth grade).
4. There will be no significant difference between the mean score of the high I.Q. of secondary school students (ninth grade) in English subject taught by co-operative learning method and Teacher's Manual Method.
5. There will be no significant difference between the mean score of the low I.Q. of secondary school students (ninth grade) in English subject taught by co-operative learning method and Teacher's Manual Method.

4. Theoretical Information

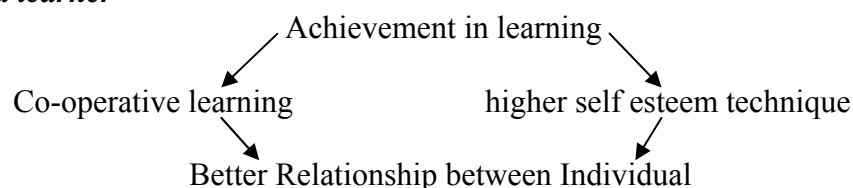
4.1 Co-operative learning method

Co operative learning method is a method of an organized learning technique by co operative working group, each group contains of four participants. Each working group has a clear structure by contains of different learning students abilities, such as high, medium and low.

Co-operative learning method has three major principles which are:

1. Group Reward
2. Individual accountability
3. Equal opportunities for success

4.2 Philosophy and the importance of co-operative learning can be best described by following diagram for a learner



4.3 Co-operative learning techniques

Robert E. Slavin (1995:71-128)¹⁷ had developed many interesting techniques. These are as follows.

1. Students Teams Achievement Divisions (STAD)
2. Teams Games Tournament (TGT)
3. Co-operative learning by jigsaw
4. Team Assisted individualization (TAI)
5. Co-operative Integrated Reading & composition (CIRC)
6. Co-op-co-op
7. Co-operative learning by Numbered Heads Together

4.4 Jigsaw Technique

Jigsaw technique is a teaching technique developed from the Teams Games Tournaments (TGT) and the Student Teams Achievement Division (STAD). Learners will be divided to a small group like the Team's Games Tournaments (TGT) and The Student Team's Achievement Division (STAD). Each group members will join with other group members who study the same topic. After that, the group member will return back to his/her own group and convey knowledge learn to other members in a groups. After a lesson, there will be a minor quiz. Quiz result from each member is a group's score. Group that has scores higher than base score will be rewarded in the same score will be rewarded in the same practice of the Student-Teams-Achievement Divisions (STAD).

5. The jigsaw technique has following stages

1. Preparation Stage

Prepare the readiness of learners in order to create learning motivation and also notify purpose of learning behavior which is a purpose of each teaching. The review background knowledge and imagination needed for a new knowledge. The students are advices how to learn as a group's role and duty of group members, assistance between members to success and achieve group target.

2. Teaching Stage

The Instructor present topic to learners by preparing contents and accessories media for learning and teaching. In order for learners acknowledgement of principles, concept of learning, discussion, demonstration questioning, case studies and an important events.

3. Small Group Learning Stage

Instruction divided the topic to be studied into 4 minor issues in order to let each learner knows what issue he/she will be assigned

Then each group member will separately study the issue with other group members who interested in the same issue. They will study until they clearly understand and capable to be an expertise. After that he/she will return to his/her group, explains the contents and experience studied to group members for their understanding. Then, rotate to another explainer.

4. Minor Quiz Stage

Learner will receive a minor quiz papers. Scores from quiz papers will be transformed to each group scores. During quiz, each learner will do it with oneself, without any help from each other. Group and individual development scores came from the comparison between the scores received and the base score. The outcome will show the learners progressiveness. Learners will pass or not depend on how more diligent they put in when compare with the previous time. All learners have a chance to gain highest scores for a groups or none, if the quiz scores are less than the base score.

In each quiz, learners will receive a development scores. Then combine each Lerner scores to overage scores and meets the set up criteria. Group’s achievement depends on all member scores.

5. Admiration to Achievement Group

Group will be rewarded if scores meet the set up standard which are a god groups, an excellent group and outstanding group.

Major principles to set up jigsaw learning activities are:

1. Set up learner groups for co operative learning.
2. Set up expertise in every assigned issue.
3. Presentation and develop expertise from others groups.
4. Exchange knowledge, understanding, expertise to each issue from each group.
5. Evaluate learning skills and keep scores set up each individual development.

Scores in a group and compare with each group achievement.

6. Teacher's Manual Method (Lecture Method)

Teacher's Manual Method is the present study is the pedagogy through lecturing is the learning process where the teacher conveys the knowledge to learners through speaking, narrating, and explaining on the content and the subject that the teacher had been well prepared, studied and searched.

7. Review of Related Literature

7.1 Research Design

This research was the Quasi Experimental Research, Experiment Control Group pre-test. Post-test Design. **Fax J. David** 1969, which is given in the following table.

Table 1. Experiment Control Group Pre-Test Post-Test Design (Quasi Experimental Design)

Group	Pre-test	Treatment	Post-test
E	T ₁	X ₁	T ₂
C	T ₁	X ₂	T ₂

- E = Experimental group
- C = Control group
- T₁ = Pre-test for experimental group
- T₁ = Pre-test for control group
- T₂ = Post-test for experimental group
- T₂ = Post-test for control group
- X₁ = Pedagogy of the co-operative learning through the Jigsaw technique
- X₂ = Pedagogy of the Teacher's Manual Method (Lecture method)

7.2 Population

A population is any group of individuals that have one more characteristics in common, that are of interest of the investigator, for the present study, the students in the ninth grade of D.N. High School, Anand in the academic year 2009-10 was the population. The detail of which can be seen from the table 2(Population for the study).

Table 2

Class level	Number of students
A	48
B	50
C	51
D	50
E	49
F	48
G	52
Total	346

7.3 Selection of the Sample

In the present study the random sampling method has been adapted. According to this method of sampling, it was decided to administer on that sample. The details of selected representative sample, which can be scan from the table 3 (Details of representative sample of the study)

Table 3

Class level	Number of students	Group	Methods of teaching
IX th A	48	Experimental Group	To be introduced through the co-operative learning method in the pattern Jigsaw learning technique.
IX th F	48	Control Group	To be introduced through the Teacher's Manual Method in the pattern of lecture method.

7.4 Technique for Analysis of Data

The research on the comparison of the learning achievement in English subject of ninth grade students with a pedagogy of learning implementing the learning activity in the pattern of Jigsaw technique, coupling with the teaching through the method given in the Teacher's Manual (lecture method), Leading to the Experimental Research (Quasi experiment, control group, present post-test design), with students is the ninth grade, D.N. high school, Anand, under the supervision of the first area committee for education office, as the unit of analysis, with following details and stages in the research undertaking. The investigator has used the mean S.D., t-test and coefficient of correlation as the statistical technique in the study.

7.5 Tools Used

The investigator designated following research tools.

1. The pedagogy on English subject through the co-operative learning method in the pattern of Jigsaw technique.
2. The pedagogy on English subject through the Teacher's Manual Method (lecture method)
3. The achievement test on English subject for the students in grade ninth (50 items)

7.6 Analysis and Interpretation of Data

7.6.1 Significance of learning achievement in English taught by co-operative learning method

H₀₁: To find out whether the difference between the Pre-test score and the post-test score of learning achievement in English subject of ninth grade students taught by the co-operative learning method is signification or not.

The result of the applied 't' test is shown in the below table: The difference between Pre-Test Score and Post test Score of learning achievement in English subject of Ninths Grade students taught by co-operative learning method.

Table 4

Test	N	$\sum D$	$\sum D^2$	't' Value	Remark
Pre-test	48	933	18715	38.87**	Significant
Post-test	48				

** Significant at 0.01 level.

The observed value of 't' is found to be 38.87 which is more than the table value of 't'. It is highly significant at both levels. Hence the null hypothesis is achieved. There is no significant difference between the learning achievements (Pre-test-post-test) of ninth grade students in English subject taught by co-operative learning method,' was rejected at 0.01 level of confidence. It can be concluded from the 't' value, that there is highly significant difference between the Pre-test score and post-test score of learning achievement in English subject of ninth grade students taught by co-operative learning method Mean score of pre-test was 21.54 and mean score of post-test was 41.08. Mean score achievement of post-test was significantly higher then that of pre-test.

7.6.2 Significance of learning achievement in English taught by Teacher's Manual Method

H₀₂: To find out whether the difference between the Pre-test score and post-test score of learning achievement in English subject of ninth grade students taught by Teacher's Manual Method is significant. The calculated 't' value is shown in the below table: The difference between the Pre-Test Score and Post Test Score of learning achievement in English subject of Ninth Grade students taught by teachers manual method:

Table 5

Test	N	$\sum D$	$\sum D^2$	't' Value	Remark
Pre- test	48	674	9601	57.02**	Significant
Post- test	48				

**Significant of 0.01 level

The observed value of 't' is found to be 57.02 which is more than the table value 't' 2.58. It is highly significant at both level. Hence the null hypothesis is achieved. "There is no significant difference between the learning achievements (Pre-test post-test) of ninth grade students in English subject taught by Teacher's Manual Method was rejected at 0.01 level of confidence. It can be concluded from the 't' value that there is highly significant difference between the Pre-test score and post test score of learning achievement in English subject of ninth grade students taught by Teacher's Manual Method (lecture method). Mean score of pre-test was 20.75 and mean score of post-test was 34.56. Mean score achievement of post-test was significantly higher than that of pre-test.

7.6.3 Significance of learning achievement of Ninth grade students in English Subject taught by co-operative learning method and teacher's manual method

H₀₃ : The comparison of the mean scores of learning achievement of ninth grade students in English subject taught by co-operative learning method and Teacher's Manual Method (lecture method) is significant or not. The calculated 't' value is given in following table: Difference between mean Scores of Learning achievement in English subject of Ninth grade students taught by co operative learning method and teacher's manual method.

Table 6

Test	N	X	S.D	t-test
Pre-Test Co-operative learning method	48	21.54	4.14	1.23 NS
Teacher's Manual Method	48	20.75	1.60	
Post-Test Co-operative learning method	48	41.08	2.30	11.46**
Teacher's Manual Method	48	34.56	3.19	

**Significant at 0.01 level

From table 6.5 it can be seen that the obtained mean score (Pre-test) of learning achievement in English subject of ninth grade students taught by co-operative learning method is 21.54 where as the obtained mean score (Pre-test) of learning achievement in English subject of ninth grade students taught by Teacher's Manual Method is 20.75. The difference between the mean scores of learning achievement in English subject of ninth grade students taught by co-operative learning method and Teacher's Manual Method was tested for its significant by 't' test. The obtain 't' value is 1.23. It is not significant. It can be concluded that the mean score (Pre-test) of the learning achievement in English subject of ninth grade students taught by co-operative learning method obtained the equal value with the mean score of the learning achievement in English subject of ninth grade students taught by Teacher's Manual Method. The result of the 't' test indicate that before started the experimental research, the students in ninth/F and students in grade ninth/A obtained the equal level of learning achievement in English subject.

The obtained mean score (Post-test) of learning achievement in English subject of ninth grade students taught by co-operative learning method is 41.08 where as the obtained mean score (post-test) of learning achievement in English subject of ninth grade students taught by Teacher's Manual Method is 34.56. The difference between the mean scores of learning achievement in English subject of ninth grade students taught by co-operative learning method and Teacher's Manual Method is tested for its significant by 't' test. The obtain 't' value is 11.46. It is significant at 0.01 levels. It can be concluded that the mean score (Post-test) of the learning achievement on English subject ninth grade students taught by co-operative learning method obtained the grater value that of the mean score of the learning achievement in English subject of ninth grade students taught by Teacher's Manual Method. The results of the 't' test indicate that after the experimental research, the student's in ninth/F obtained smaller value of the learning achievement in English subject than the students in grade ninth/A. Hence the null hypothesis. "There is no significant difference between the mean scores of learning achievement of ninth grade students in English subject taught by co-operative learning method and Teacher's Manual Method was rejected.

7.6.4 Significance of the high I.Q. On learning achievement in English

Ho₄ : To find out whether the difference between the mean score of the high I.Q. of secondary school students (ninth grade) in English subject taught by co-operative learning method and Teacher's Manual Method is significant or not. The calculated 't' value is given in following table: The difference between mean score of high I.Q. Secondary school students in English Subject of Ninth grade students taught by Co-operative Learning Method and teacher manual method.

Table 7

Group	N	Mean	S.D.	t-value	Remark
Experimented	13	22.92	1.80	1.57	Not significant
Control	13	24.06	1.60		

The observed value of 't' is found to be 1.57 which is less than the table value t. 1.96. It is not significant at both level. Hence the null hypothesis achieved. There is no significant difference between the mean score of the high I.Q of secondary school students (ninth grade) in English subject taught by co-operative learning method and Teacher's Manual Method was accepted.

7.6.5 Significance of the low I.Q. on learning achievement in English

Ho₅ : To find out whether the difference between the mean score of the low I.Q of secondary school students (Ninth grade) in English subject taught by co-operative learning method and Teacher's Manual Method is significant or not. The calculated 't' value is shown in the below

table: The difference between the mean score of Low I.Q. secondary school students in English subject of Ninth grade students taught by co operative learning method and teachers manual method.

Table 8

Group	N	Mean	S.D.	t-value	Remark
Experimental	13	18.38	1.32	4.16**	Significant
Control	13	15.23	2.38		

**Significant at 0.01 level.

The observed value of 't' is found to 4.16 which is more than the table value 't' 2.58. It is significant at both level. Hence the null hypothesis. There is no significance difference between the mean score of the low I.Q. of secondary school students (ninth grade) in English subject taught by co-operative learning method ad Teacher's Manual Method was rejected at 0.01 level of confidence. It can be concluded from the 't' value that there is significant difference between the mean score of the low I.Q of secondary school students (ninth grade) in English subject taught by co-operative learning method and Teacher's Manual Method. Mean score of pre-test was 15.23 and mean score of post-test was 18.38. Mean score achievement of post-test was significantly higher then that of pre-test.

8. Findings

8.1 Findings for co-operative learning method and Teacher's Manual Method

1. It was found from the study that there was the significant difference between the pre test and post test scores of learning achievement in English subject of ninth grade students taught by co-operative learning method (experimental group). The difference between pre-test score and post test score of learning achievement in English subject of ninth grade students taught by the co-operative learning Method (experimental group) testing by 't' test (dependent) obtained t-value =38.87, which was significant at 0.01 level. The post-test score in English subject of ninth grade students taught by co-operative learning method (experimental group) has greater value than that of Pre-test score in English subject of ninth grade students taught by co-operative learning method (experimental group).
2. It was found that there was the significance difference between Pre-test score and post test score of learning achievement in English subject o ninth grade students taught by Teacher's Manual Method (control group). The difference between Pre-test score and post test score of learning achievement in English subject of ninth grade students taught by Teacher's Manual Method. (Control group), testing by t-test (dependent) obtained t-value = 57.02. Which was significant at 0.01 levels. The post-test score in English subject of ninth grade students taught by Teacher's Manual Method (control group) has greater value than that of Pre-test. Score in English subject of ninth grade students taught by Teacher's Manual Method. (Control group).
3. The mean score (Post-test) of the learning achievement in English subject of ninth grade students taught by co-operative learning method. (Experimental group) obtained the grater value than that of the mean score of the learning achievement in English subject of ninth grade students taught by Teacher's Manual Method (control group). The results of the t-test (independent) indicated that after the experimental research. The students in grade 9-F (control group) obtained smaller value of the learning achievement in English subject than the students in grade 9/A (experimental group).
4. There is no significant difference between the high I.Q of secondary school students in English subject taught by co-operative leaving method and Teacher's Manual Method.
5. The difference between the mean score of low I.Q of secondary school students in English subject taught by Co-operative Learning Method and Teacher's Manual Method testing by t-test was 4.16 which were significant at 0.01 level of confidence.

9. Conclusion

This study aims to construct and Jigsaw learning materials for the ninth grade students. The investigator hopes their study will be useful to Teacher and students to learn joyful way.

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