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RESEARCH PAPER

## Effectiveness of Co-operative Learning Method Vs Traditional Learning Method: An Experimental Study

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**Key words** - *Traditional Method, cooperative learning etc.*

### Abstract

*In most of the schools, a teacher has to teach a large class in which sixty to seventy students learn together. The teacher has no opportunity to give individual attention to all students in a large class while using traditional learning method. Cooperative learning method may be used as instructional approach to improve the scientific skills of the students. This study focused to find the effect of cooperative learning and traditional learning method on the Science teaching of the students of 8th class in the schools of Banaras and propose the strategy for the affective learning of Science. The present investigation was conducted with the following objectives in mind To assess the effects of cooperative learning and traditional learning methods on achievement of the students in the subject of Science. 100 students For Control Group and 100 Students For Experimental Group were selected. Quasi experimental research design was used. It is found that Experimental group was better in posttest than pretest after treated by cooperative learning method. It is also found that experimental group was better than control group with regard to overall performance on posttest.*

### INTRODUCTION

Education is a very powerful instrument for the social, political and economic development of a country. The term 'Education' is derived from Latin Language in which "education" means "to educate" where 'e' means from 'inner' side and 'duco' means to 'develop'. Therefore, education means to develop pupil's innate power from inside to outside. Education is a wide concept which has a strong effect upon pupil's success. Education is a never ending process of inner growth and development and its period stretches from cradle to the grave. It is very important for the progress of individuals and society. Education is the

only means with a society to adjust with its needs. Therefore, a society can never exist without education. Through education the members of a society learn the skills to enrich, transmit and transform the cultural heritage as well as existing social and scientific knowledge for the continuous advancement of a society. Human endeavours to explore the universe and foster social, cultural and economic needs have resulted in a widespread educational system on profound basis of knowledge, learning and expertise. Today, a nation with a superior educational system is superior to others and indeed dominant in very many respects.

In most of the schools, a teacher has to teach a large class in which sixty to seventy students learn together. The teacher has no opportunity to give individual attention to all students in a large class while using traditional learning method. There is severe curtailment of student science experiment and understanding in traditional learning method. Cooperative learning method may be used as instructional approach to improve the scientific skills of the students. This study focused to find the effect of cooperative learning and traditional learning method on the Science teaching of the students of 8th class in the schools of Banaras and propose the strategy for the affective learning of Science.

#### **BASIC ASSUMPTIONS OF COOPERATIVE LEARNING**

1. The cooperative learning ideology rests in making the teaching-learning process as learner-centered rather than being content or teacher-centered.
2. It advocates the constructivist ideology for better teaching-learning outcomes by encouraging the students to formulate their own constructs and ways of understanding the content material.
3. It believes in redefining the role of a teacher from a lecturer, expert or repository of subject knowledge to capable facilitator for helping his students in their cooperative learning task.
4. It advocates proper teaching-learning environment instead of mere lecturing and demonstration on the part of the teacher. Here, the responsibility for learning is, thus, shifted to the students from the teachers' efforts for making them to learn by resorting to various tactics.
5. It emphasizes social learning by assuming that learning takes place better in a social situation and group environment rather than in isolation.

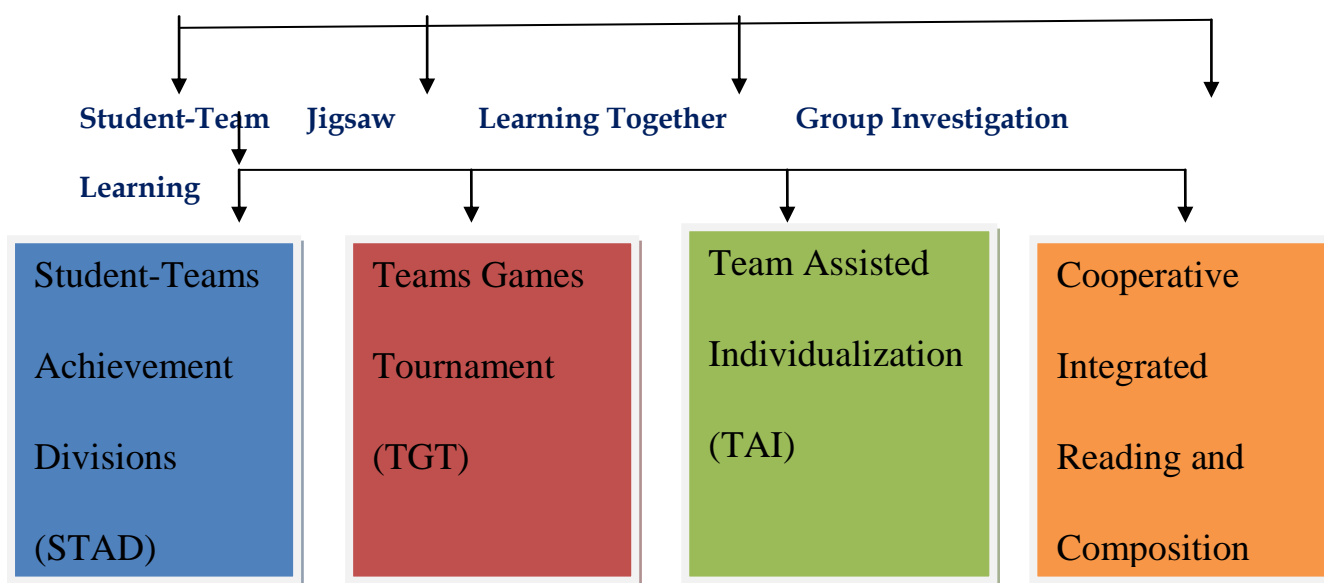
6. It assumes that children learn better in a non-competitive anxiety-free cooperative environment rather than in a competitive stressful environment as available in the traditional classroom situations.
7. It believes in group efforts and cooperation among the learners in place of individual efforts and competition.
8. It is of the view that children learn better in a cooperative way from each other on account of the proximity, equality, interdependence and support existing among them instead of the learning thrust upon them by some outside agency, including together.
9. It believes that student's achievements and performances may be achieved better in term of group achievements in the less threatening group situation rather than the competitive, more threatening individualistic situations.
10. It believes that students learn best when they are totally involved in the learning process by cooperating with each other for attaining the maximum benefit.
11. It advocates that the two necessary elements- group goals and individual accountability should be used together for the evaluation of group achievements in cooperative learning.
12. It believes in providing the students the opportunity to learn and work cooperatively in a group in order to develop them into a cooperative and responsible social being on the very assumption that students who cooperate with each other in learning learn to like each other in real life.

### COOPERATIVE LEARNING METHODS

Replacing the traditional classroom learning and setting up a cooperative learning system is not an easy task. One may have to face so much opposition and resistance from the fellow teachers, students, authorities and parents in doing so. However, much depends upon the teacher who is convinced about the fruitful outcomes of co-operative learning in doing so, he may try a number of typical cooperative learning set-ups.

Slavin (1995) summarized the most extensively researched and widely used cooperative learning techniques as:

### Cooperative Learning Methods



### STATEMENT OF THE PROBLEM

The problem of the study has been precisely stated as mentioned below -

**Effectiveness of Co-operative Learning Method Vs Traditional Learning Method: An Experimental Study**

### OBJECTIVES OF THE STUDY

The present investigation was conducted with the following objectives in mind -

To assess the effects of cooperative learning and traditional learning methods on achievement of the students in the subject of Science.

### HYPOTHESES OF THE STUDY

There is no significant difference between mean scores of control group and experimental group with regard to achievement in Science on Pre test and post test.

### DELIMITATION OF THE STUDY

Delimitation of the study were as under :

1. Students of elementary School, were selected for the present study.
2. Only 200 students from the Elementary Level Schools were selected in view of lack of time and money.
3. The Study were limited to schools of Banaras.
4. Only Experimental Method and Pre test & Post test were used.

5. Only mean, Standard deviation and t-test statistics were used.
6. One self made tool i.e. Achievement Test were used.
7. 100 students For Control Group and 100 Students For Experimental Group were selected.
8. Students were selected in the range of 13-14 Years.

**REVIEW OF LITERATURE:-**

The review of literature are discussed under the following headings.

- Cooperative Learning & Achievement
- Cooperative Learning and School Subject

**RESEARCH METHOD :-**

For the present study the researcher has selected the Quasi experimental research design.

**SAMPLING TECHNIQUE USED FOR PRESENT STUDY**

Sampling technique reduces the expenditure, saves time and energy, permits measurement of greater scope and produces greater precision and accuracy. In the present study, the sample comprised 200 students studying in Four sections of the VIII class of School, Banaras. Each of the Four sections/groups contained 50 students. Two section formed the control group and the other sections formed the experimental groups.

**Sample of the Study**

S. No.	Groups	Total no. of Students
1.	Experimental group (E)	100
2.	Control group ( C)	100
Total		200

In the present study pre-test, post-test group control quasi-experimental design was employed with a purposive sample in the form of intact sections of class VIII of the same school. It involved two groups of students', i.e., experimental groups (A) and control group (B). Experimental group was taught in cooperative learning setting involving STAD methods and the control group was taught through traditional approach, for which the researcher would have to depend on the permission of the school principal. Thus, the intact classes made available by the school authorities were considered as the sample. After

selection of sample the tool has to be administered on the groups for conducting of the research.

The intact sections were equated. Quasi-experimental design of the study, as given in Table, comprising three stages. The first stage involved pre-testing of all the students of two groups on academic achievement in Science. The second stage involved the experimental treatment, which consisted of teaching of VIII grade Science through cooperative learning method, i.e., STAD to experimental group E and through traditional method to control group C.

**Design of the Study**

Groups	Pre-Test	Independent Variables	Post-Test
Experimental Group (E)	T1	Teaching through cooperative learning i.e. STAD	T2
Control Group (C)	T1	No intervention (Traditional Method)	T2

In the third stage, students were post-tested on academic achievement in Science. A schematic view of the phases of the experiment is presented in the table

**Phases of the Study**

Stage	Treatments	
	Control Group (C)	Experimental Group E1
Pre-testing	Measurement of Achievement in Science	Measurement of Achievement in Science
Treatment	Teaching Science through traditional method	Teaching Science through STAD under Cooperative Learning method
Post-testing	Measurement of Achievement in Science	Measurement of Achievement in Science

## TOOL USED IN RESEARCH

### ACHIEVEMENT TEST

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.

### PROCEDURE FOLLOWED

Procedure of the experiment comprised two main stages, that is, selection of the sample and conducting the experiment.

#### Stage 1: Selection of the Sample

- Selection of Control Group
- Selection of Experimental Groups

#### Stage 2: Conducting the Experiment

The experiment was conducted in three phases as given below:

- Phase I: Administration of Pre-test
- Phase II: Conducting the Instructional Programme; and
- Phase III: Administration of Post- test.

### STATISTICAL TECHNIQUES USED

The data collected was statistically analyzed to test objectives of the study by using the following techniques or statistical tools:

- Mean, Standard Deviation, t-Test

### MAJOR FINDINGS

1. It is found that the calculated value of  $t$  (4.870) was greater than table value (1.96) at 0.05 level of significance, hence  $H_0$  was rejected. It means that control group was better in posttest than pretest after treated by traditional learning method but average performance was less than experimental group.

2. It was found that the calculated value of  $t$  (13.101) was greater than table value (1.96) at 0.05 level of significance, hence  $H_0$  was rejected. It means that experimental group was better in posttest than pretest after treated by cooperative learning method .

3. It was found that the calculated value of  $t$  (7.381) was greater than table value (1.96) at 0.05 level of significance, hence  $H_0$  was rejected. It means that experimental group was better than control group with regard to overall performance on posttest .

### SUGGESTIONS FOR FURTHER RESEARCH

- The present study examined only the academic achievement of students in Science. Further studies may be conducted to investigate the effectiveness of cooperative learning for other dependent variables, such as attitude towards subjects, self-esteem, peer relation, social skills and academic motivation for different subjects.
- The studies can also be conducted to compare the different cooperative learning methods with other methods of instructions at different grade levels.
- Similar studies can also be conducted in other subjects like Science, Social Science, etc.
- A comparative study is needed to analyze the effect of different cooperative learning methods on special groups of children such as the gifted, the learning disabled and other handicapped students in cognitive and non-cognitive domains.

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