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Effect of Co-Operative Learning In Enhancing Students Academic Achievement Among Higher Secondary Students

Dr. S. SUMITHRA
Teaching Assistant
Alagappa University College of Education
Karaikudi – 630 003, Tamil Nadu
e-mail:sumithramurugu@gmail.com

Dr. M. SANMUGA REVATHI
Assistant Professor
Alagappa University College of Education
Karaikudi – 630 003, Tamil Nadu
e-mail:sanmugarevathi@alagappauniversity.ac.in

Abstract

The present study focuses on the effectiveness of co-operative learning in enhancing students' academic achievement at the higher secondary level.The investigator adopted the experimental method for the present study. The higher secondary level in Sivagangai district constitutes the sample of the present investigation. As per the objectives framed in the present investigation, the 50 students with different variables were selected as a sample for the present study by using sampling technique. A questionnaire with open-ended items has been established as a tool for the present study. The measures of central tendency mean and differential studies such as S.D. and 't' – test were used as the statistical techniques for the present study. Then the researcher interpreted the findings and concluded on the basis of the findings.

Keywords: Co-operative learning, Academic Achievement, Higher secondary Students.

I. INTRODUCTION

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 itsperiod stretches from cradle to the grave. It is very important for the progress of individuals and society. Today, a nation with a superior educational system is superior to others and dominant in many respects. Co operative learning is one of the recommended teaching-learning techniques in which students achieve learning goals by helping each other in a small social setting. Education itself has been regarded as social adjustment of an individual in a society. It is more elaborate than group work activity.It is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. The term academic achievement refers to the degree of successor level of attainment by pupil

in the scholastic or the curricular subjects prescribed with in the syllabus in brief academic achievement is the amount of knowledge derivedfromlearninginthe classroom.

NEED AND SIGNIFICANCE FOR THE STUDY

The outcome of students achievement in the course depends on the learning strategies they use. Various researchers have investigated the relationship between these co-operative learning strategies and academic success. By rneet al. (2001) revealed that the deep and strategic approaches are positively associated with high academic performance and the surface approach with poor academic performance.

Education is unique investment and academic achievement is a vital aspect of it. In this world of industrialization and globalization, education has become highly commercial and academic excellence has gained through tough competitions. The educational status of an individual is highly depicted through the academic achievement. Academic achievement of students has-been great concern to education is since time immemorial. Now a day, this trend has been intensively felt by the academicians, parents and students. Strikingly, academic achievement has become a detrimental index in determining a child's future. This speaks a lot about the significance of taking up the present investigation.

OBJECTIVES OF THE STUDY

- To identify suitable activities to enhance Co-operative Learning and academic achievement of Higher secondary students.
- To develop and validate tools for measuring Co-operative Learning and academic achievement of Higher secondary students.

HYPOTHESIS OF THE STUDY

- There exists a significant difference between the Pre-test and Post-test scores of the Control group in co-operative -learning.
- There exists a significant difference between the Pre-test and Post-test scores of the Experimental group in co-operative learning.
- There exists a significant difference between the Pre-test and Post-test scores of academic achievement in the Control group.
- There exists significant difference between the Pre-test and Post-test scores of academic achievement in the Experimental group.
- There is no correlation between cooperative learning and academic achievement.

DELIMITATIONS OF THE STUDY

- This study was confined to higher secondary students only.
- The focus of the present investigation was bound to enhance the cooperative learning and academic achievement only.
- The experiment was conducted for 30 days only.
- The sample size is restricted to 60 students only.

METHOD USED FOR THE STUDY

Experimental method is the most scientifically sophisticated process. These experimental studies are involving intervention by the investigator.

SELECTION OF SAMPLE

60 students who are studying in higher secondary level Sivaganga district were taken as sample for the present study.

TOOLS USED FOR THE STUDY

- Co-operative learning- Independent variable.
- Academic achievement - Dependent variable.

STATISTICAL TECHNIQUES USED IN THE STUDY

Statistics plays a vital role in the field of education. Statistics is a body of mathematical techniques or process for gathering, organizing, analyzing and interpreting numerical data. Every research is subjected to statistical analysis; statistical techniques are used to draw inferences from the data which are collected by the researcher during the experimentation. Classification, tabulations and analysis of collected data are very much essential to draw inferences. The statistical techniques used for the study are:

1. Mean(M)
2. Standard Deviation(SD)
3. 't'test

HYPOTHESES TESTING

HYPOTHESES:1 There exists a significant difference between the Pre-test and Post-test scores of the control group in co-operative Learning. Test

Test	N	Mean	S.D	t-value	Level of Significance
Pre-Test	30	50.50	7.93	8.95	Significant at 0.05 level
Post-Test	30	67.37	7.14		

Table 1: Pre-Test and Post-Test Results of the Group

Significant at 0.05 level Df = 28

Since the calculated t' value (8.95) is higher than table value (1.96)at 0.05level, it is inferred that there exists significant difference between the co-operative Learning of control group from the Pre-test and Post-test. Hence the hypothesis framed by the investigator is rejected.

HYPOTHESES-2 There exists a significant difference between the Pre-test and Post-test scores of the experimental group in co-operative Learning.

Test	N	Mean	S.D	t-value	Level of Significance
Pre-Test	30	56.03	7.43	17.47	Significant at 0.05 level
Post-Test	30	90.67	9.33		

Table 2: Pre-Test and Post-Test Results of the Group

Significant at 0.05 level Df = 28

Since the calculated t' value (17.47) is higher than table value(1.96)at 0.05 level, it is inferred that there exists significant difference between the co-operative -Learning of the Experimental group from the Pre-test and Post-test. The statistical finding proves the expected co-operative-Learning. Hence the hypothesis framed by the investigator is rejected.

HYPOTHESES-3 There exists a significant difference between the Pre & Post-test scores on academic achievement in Control group.

Significant at 0.05 level Df = 28

Since the calculated 't' value (1.22)is less than table value (1.96) at 0.05 level, it is inferred that there exists significant difference between the Post-test scores and academic achievement in the Control

Control Group	N	Mean	S.D	t-value	Level of Significance
Pre-Test	30	67.37	7.14	1.22	Not Significant at 0.05 level
Post-Test	30	70.90	12.72		

Table 3: Pre-Test and Post-Test Results for Control Group

group. The statistical finding proves the expected Self-Learning. Hence the hypothesis framed by the investigator is accepted.

HYPOTHESES-4 There exists a significant difference between the Pre-Test &Post-test scores on Academic achievement in Experimental group.

Group	N	Mean	S.D	t-value	Level of Significance
Experimental Group (Pre-Test)	30	90.67	9.33	5.92	Significant at 0.05 level
post test	30	74.27	12.76		

Table 4: Pre-Test Results for Experimental Group

Significant at 0.05 level Df = 28

Since the calculated t value (5.92) is higher than table value(1.96) at 0.05 level, it is inferred that there exists significant difference between Post-test scores and academic achievement in Experimental group. The statistical finding proves the expected co operative-Learning. Hence the hypothesis framed by the investigator is rejected.

HYPOTHESES-5 There is no correlation between cooperative learning and academic achievement.

Post-Test	N	γ-value	Level of Significance
Co-operative Learning	60	0.082	Not Significant at 0.05 level
Academic Achievement	60		

Table 5: Post-Test Results for Co-operative Learning and Academic Achievement

Significantat 0.01 level Df=118

Since the calculated t' value (0.082) is less than table value (0.113) at 0.05 level, it is inferred that there exists correlation between the co-operative Learning and academic achievement. The statistical finding proves the expected co-operative Learning. Hence the hypothesis framed by the investigator is accepted.

MAJOR FINDINGS OF THE STUDY

- The calculated 't' value (8.95) is higher than table value (1.96) at 0.05 level, it is inferred that there exists significant difference between the co-operative Learning of control group from the Pre-test and Post-test. Thestatistical finding proves the expected co-operative Learning. Hence the hypothesis framed by the investigator is rejected.
- The calculated 't'value (17.47) is higher than table value(1.96) at 0.05 level, it is inferred that there exists significant difference between the co-operative Learning of Experimental group from the Pre-test and Post-test. The statistical finding proves the expected co-operative Learning. Hence the hypothesis framed by the investigator is rejected.
- The calculated 't' value (1.22) is less than table value (1.96)at 0.05 level, it is inferred that there exists significant difference between the Post-test scores and academic achievement in Control group. Thestatistical finding proves the expected co-operative Learning. Hence the hypothesis framed by the investigator is accepted.
- The calculated 't' value (5.92) is higher than table value (1.96) at 0.05 level, it is inferred that there exists significant difference betweenPost-test scores and academic achievement in Experimental group.The statistical finding proves the expected co-operative Learning. Hence the hypothesis framed by the investigator is rejected.

- The calculated 't' value (0.082) is less than table value (0.113)at 0.05level, it is inferred that there exists correlation between the co-operative Learning and academic achievement. The statistical finding proves the expected co-operative Learning. Hence the hypothesis framed by the investigator is accepted.

SUGGESTION FOR THE FURTHER STUDY

The following problems are suggested for further study.

- The influence of organizational variables likes climate, socio economic status, teacher adjustment and teacher's personality can be studied with co-operative learning of student teachers.
- The student teachers studying in private institutions can be compared with Government institutions in other districts of Tamil Nadu.
- The same study may be undertaken with larger samples and wider area.
- The study may be conducted on Primary, Upper Primary and Secondary level students.

CONCLUSION

On the basis of the findings, the study concluded that: Significant differences in students' achievement in mathematics were found between experimental and control groups. After the treatment, experimental group students showed significant improvement in achievement towards mathematics in comparison to control group students. It was found that students' performance in science and attitudes towards mathematics were affected by exposure to cooperative learning. Students seem to prefer learning mathematics by sharing knowledge. They feel contented when they can function effectively in group work. It is hoped that the findings of this study may assist policymakers and teachers in identifying appropriate measures that could promote cooperative learning in science classrooms. The results of the study might also advance our understanding of the practical contribution of co operative learning. On the whole, the findings of this study have shown a great improvement in achievement and attitudes towards the particular subjects. Therefore, co operative learning can be successfully used to promote student' performance in their subjects at the school level.

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