



EFFECTIVENESS OF COOPERATIVE LEARNING STRATEGIES ON ACHIEVEMENT & EMOTIONAL INTELLIGENCE OF STUDENTS

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Abstract

Emotional intelligence is the ability or tendency to perceive, understand, regulate and harness emotions adaptively in self and in others. It includes the ability to understand and regulate others as well as own emotions. The thinking, feeling and action of modern man are practically guided by the effect of science. An attempt is being made to assess an existing status regarding the cooperative learning strategies as well as to develop the program of cooperative learning Strategies and find out the effectiveness on Emotional Intelligence of 8th standard student. The objective of the research to develop cooperative learning program for general science subject of 8th standard student and find its effectiveness on Achievement and Emotional Intelligence of students. Multi-method research was adopted. By using product development method Researcher developed cooperative learning program for Science subject of 8th standard students. Researcher used Experimental method with equivalent group design and conducted posttest by using Researcher made Achievement Test and Emotional Intelligence scale of Anukul Hyde, Sanjyot Pethe and Upindar Dhar (2002). Data analyzed using t test after normality test were conducting using SPSS program.so study concluded that researcher developed program of cooperative learning Strategies is useful to improve the Achievement and Emotional Intelligence of primary level students.

Keywords: *Cooperative learning Strategies, Emotional Intelligence.*



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INTRODUCTION:-

Science has made a tremendous impact on the cultural life of the present day society which is a product of science. The thinking, feeling and action of modern man are practically guided by the effect of science. Science is one of those human activities that man has created to gratify certain human needs and desires. Curiosity has been the greatest motive power of scientific research.

Emotional intelligence is the ability or tendency to perceive, understand, regulate and harness emotions adaptively in self and in others. (Schutte et al; 1998) It includes the ability to understand and regulate others as well as own emotions. Emotional intelligence such as motivational ability to control, impulses regulate mood and keep distress away.

The main aim of education, as we know is to produce the desired changes in the behavior of the children, and when those changes have taken place, we say that the child has learnt.

Woodworth (1954) defined learning as the process of acquiring new knowledge and new responses. It is, undoubtedly, right to say that learning is wealth to poor, an honor to rich, an aid to the young and a support and comfort to the aged.

REVIEW OF RELATED LITERATURE:-

Chinnappa Arasu P. (2006) investigated 'The Effectiveness of Co-operative learning approach in teaching Chemistry'. The major finding was that there existed significant difference between the control group and the experimental group in their post – test performance, (t-value in 2.75), which was significant at 0.05 level for two tailed test. This result showed the superiority of the co-operative learning over the traditional method of instruction.

Satya Prakash, C.V. and Patnaik, S.P. (2006), conducted a study on 'Effect of Cooperative Learning on Achievement Motivation and Achievement in Biology'. The finding indicated that there was positive effect of Cooperative Learning on Achievement Motivation, and the Cooperative Learning had a positive effect on achievement in Biology.

Sangeeta (2005) made a study on 'Role of Multimedia and Cooperative Learning in Enhancing the Writing Competency of Students'. The results indicated that the difference between the mean pre and post test scores of experimental group in writing composition was statistically significant.

Sathya Prakash C.V., and Patnaik, S.P. (2005) conducted a study on 'Effect of Co-operative Learning on Development of Process Skills in Biology'. Findings indicated that Co-operative learning significantly helped in the improvement of different components of process skills in Biology such as observation, generalization, interpretation, inference and prediction.

Sathya Prakash C.V. and Pushpanjali B.S. (2005) conducted a study on 'Effect of Cooperative Learning on Achievement, Motivation And Anxiety'. The main objective was to find out the effectiveness of cooperative learning strategy on achievement motivation and anxiety of class VIII students of Bangalore city. Hence, it was implied that this strategy could be effectively employed in teaching various subjects in the elementary school level.

Ponnusamy P. and Sudarsan.S (2005) conducted a study on 'Student Achievement and Cooperative Learning method in Mathematics at upper primary level'. The findings indicated that the Co-operative Learning contributed a lot to improve the academic performance of the students in 7 & 8th grades in learning Mathematics.

STATEMENT OF THE PROBLEM:

To develop the program based on Cooperative Learning Strategies and find out the effectiveness developed program on the Achievement and Emotional Intelligence of 8th standard student.

OBJECTIVE OF THE STUDY:-

1. To develop a program based on Cooperative Learning Strategies for Science subject of 8th standard student
2. To find out the effectiveness of developed program on Achievement and Emotional Intelligence of 8th standard students.

HYPOTHESIS:-

Research Hypothesis:

1. There is a significant difference between the mean scores of Achievement of Science subject of 8th standard student of Experimental and Control Group on the post test.
2. There is a significant difference between the mean scores of Emotional Intelligence of Experimental and Control Group on the post test.

Null Hypothesis: -

H₀₁. There is no significant difference between the mean scores of Achievement of Science subject of 8th standard student of Experimental and Control Group on the post test.

H₀₂. There is no significant difference between the mean scores of Emotional Intelligence of Experimental and Control Group on the post test.

ASSUMPTION:-

1. Individuals can create meaning when they interact with each other and with the environment they live in. (Kim, 2001).
2. Co-operative learning facilitates mathematics learning. (Effandi, Z., 2010)

SCOPE, LIMITATION AND DELIMITATION:-

SCOPE: -

1. The research is conducted in Maharashtra State.
2. This study is related to Science subject of students of 8th standard.

LIMITATION:-

1. The attitude, interest and fatigue of Teacher and students are beyond the control of researcher.

2. The Teacher and students who were present at the time of data collection are included in the study.

DELIMITATIONS:-

1. This survey is delimited to the 8th standard. students of science.
2. Only One School from Pune district are included in the Experiment.
3. The research study includes only Marathi Medium School.
4. This study is delimited to the use of Cooperative learning program.
5. Only Four units of Science from syllabus are taken into account to frame the program.

PLAN AND PROCEDURE OF STUDY:-

The present study is based on Applied Research and Multi method was used. Cooperative learning program developed by Researcher. Developed Cooperative learning program implemented on 60 Students of Science. Researcher used only post test equivalent group design for Experiment. Researcher made Achievement Test and Emotional Intelligence scale of Anukul Hyde, Sanjyot Pethe and Upindar Dhar (2002) implemented on both group as a post test.

DATA ANALYSIS:-

In the present study survey study data analyzed using percentage. For the experimental study descriptive and inferential analysis used. Mean, media and mode, Standard deviation calculated. T-test' used to determine the difference between pretest and posttest scores in science pedagogy of experimental group after normality test were conducting using SPSS program.

HYPOTHESIS TESTING:-

1. **H₀₁**. There is no significant difference between the mean scores of Achievement of Science subject of 8th standard student of Experimental & Control Group on the post test.

Table No: 01 Comparison of mean scores of post tests of experimental and control group of Achievement

Group	Student number (N)	Mean (M)	S.D.	Paired t-value 0.05 df-29	Table t-value 0.05	Effect size	Significant /not significant
Control group (post)	30	27.00	3.81	3.99	2.04	0.51	Significant (Null Hypothesis rejected)
Exp. group (post)	30	28.30	4.38				

Observation and interpretation for post-test of experimental and control group

Since the obtain t-value (3.99) is greater than the table t-value (2.04) with df - 29 at 0.05 level the difference is significant. Therefore the null hypothesis is rejected. The calculated size effect is 0.51 (Moderate Effect) indicates that the program was effective

Graph 1:- Post-test Academic Achievement Scores of Both Groups.

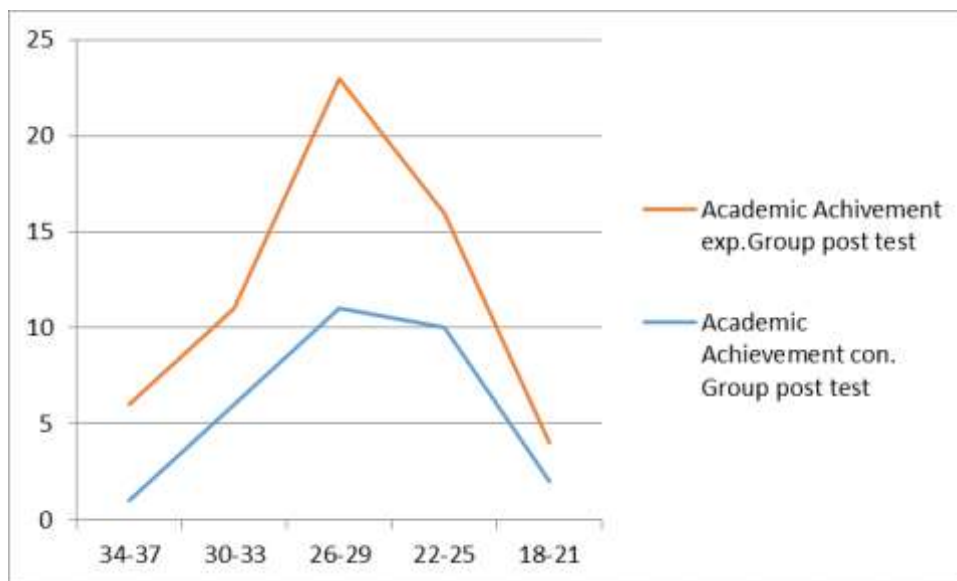


FIGURE 1:- Line graph showing the post-test Academic Achievement Scores of Both Groups.

2. H_{02} . There is no significant difference between the mean scores of Emotional Intelligence of Experimental and Control Group on the post test.

Table no:-02 Comparison of mean scores of posttests of experimental and control group of Emotional Intelligence

Group	N	Mean	S.D.	df value	Paired T-value	Decision
Control	30	110.90	8.22	29	1.98	Significant
Experimental	30	106.83	7.66			

Observations:

The result of the experiment shows the t value of Experimental group is 1.98, therefore null hypothesis is rejected at 0.5 level. It reflects that there were a significant difference between the Emotional Intelligence of Experimental and Control Group after the implementation of the Program of Cooperative Learning Strategies.

MAJOR FINDINGS:-

1. Achievement of Science subject of 8th standard student of Experimental Group was increased than the achievement of Control Group because of the implemented Program of Cooperative learning Strategies in Science subject.
2. Emotional Intelligence of 8th standard students of Experimental Group was increased than the Control Group because of the implemented Program of Cooperative learning Strategies in Science subject. So the developed Program of Cooperative learning Strategies was effective.

DISCUSSION ON FINDINGS:-

The present research study was conducted by using the Multi Research Methods such as; Product Development Method and Experimental Method. Product Development Method was conducted to develop the program based on Cooperative learning Strategies for science subject at primary level. The findings regarding Experimental method reflected that Achievement and Emotional Intelligence increased after implementation of Cooperative learning program. The findings of the present study are supported by **Kaul (2010), Behera and Pattanaik (2010)** it showed that there is a significant difference between the results of experimental and control groups. Learning together technique of cooperative learning method is more effective than traditional teaching methods regarding academic achievements of students in mathematics. **Gupta and Pasrija (2011)** in their study, Cooperative Learning Versus Traditional Learning Effect on Achievement in Mathematics“ found that experimental group performed better than control group on post-test showing the obvious dominance of cooperative strategy (STAD) over Conventional Method of teaching. Significant difference was found between mean retention scores of the two groups (E and C) favouring the cooperative

learning strategy. The findings of the present study are also supported by **Mehar and Sekhri (2012)** who investigated the effect of co-operative learning strategy on achievement in mathematics in relation to self-esteem. Co-operative learning strategy was found more effective than the conventional teaching strategy in enhancing the academic achievements of students. However, the findings suggest that co-operative learning strategy can prove to be a better strategy for teaching mathematics at secondary school stage.

CONCLUSION:-

The developed Program of Cooperative learning Strategies were increased the achievement in Science subject and Emotional intelligence of students.

CONTRIBUTION TO THE FIELD OF EDUCATION:

Cooperative learning assigns a new role to the teachers. It is the teacher to convert the passive listeners in the class in to active members and achievers by implementing cooperative learning in perfect way. While constructing the curriculum, all learning experiences including cooperative learning behaviours should be added so that students can be more benefited and enjoy the learning. A conducive environment with no threat of competition will allow the child to blossom and achieve his full potential in a relaxed atmosphere.

Meaningful content in cooperative lessons is critical for the success of all students. For students to succeed within their groups, careful consideration regarding group heterogeneity must be in conjunction with roles that ensure active and equal participation. Students in heterogeneous classroom team to solve complex cognitive tasks and the progress of the lower achieving students does not occur at the expense of the higher achievers or vice versa. So cooperative learning is recommended for fostering students reasoning and communication.

The results and conclusions reached during the course of this study clearly highlight the effectiveness of cooperative learning in raising the students' academic achievements and Emotional Intelligence. These findings certainly have a number of important implications for teachers, teacher-educators, curriculum makers and planners and for the society at large.

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