

## INFLUENCE OF COOPERATIVE LEARNING ON CREATIVE THINKING

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### ABSTRACT

*The aim of the present study was to prepare a Cooperative Learning Strategy Based Instructional Material (CLSBIM) and to see its effectiveness in terms of Creative Thinking of students at elementary level. CLSBIM consisted of 20 lesson plans based on Cooperative Learning strategies, having various experiments, activities and thought provoking questions in which children were actively involved. A single group pre-test and post-test design was used to collect data before and after CLSBIM treatment. The performance of the students was recorded in terms of scores. The data was statistically analysed using pre-test and it was concluded that CLSBIM was significantly effective in enhancing the level of creative thinking*

**Keywords: Cooperative Learning Strategy, Creative Thinking.**

### INTRODUCTION

Children, the citizens of tomorrow are the future builders of the nation, therefore it becomes essential to develop a child's logical and creative thinking optimally. But these days, thinking process and academic achievement of students have been suppressed by the competitive environment of our schools. How students perceive each other and interact with one another is a neglected aspect of instruction. There are 3 basic ways in which students can interact with each other as they learn.

They can compete to see who is 'best', they can work individually towards a goal without paying attention to other students or they can cooperatively with a vested interest in each other's learning as well as their own. Of the 3 interaction patterns, competition is currently most dominant. Researches indicate that a vast majority of students view school as a competitive enterprise, where one tries to do better than other students. This competitive expectation is widespread when students enter school and grows stronger as they progress through school. In competition, there's a negative interdependence among goal achievements. It has been seen that this cut throat competition is ruining the environment. Students' thought are leading towards negative processes; they're not using their brains for creative thinking or to retain

something permanently. This competitive environment is suppressing the thinking process of students. Johnson & Johnson and Slevin(1991) claimed that group techniques such as cooperative learning and peer tutoring if applied systematically.

The term 'Cooperative learning' refers to an instruction method in which students at various performance levels work together in small groups towards a common goal. The students are responsible for one another's learning as well as their own. Thus, the success of one student helps other students to be successful.

The present view of small group cooperative learning is embedded in Piaget and Vygotsky's view that group interaction encourages cognitive development (Noddings, 1989). As a result, cooperative learning groups are child centred with an emphasis on group processes, problem solving, attitudes and social development. From the research conducted through the Centre for Research in Social Behaviour, University for Missouri, Columbia, it's evident that an increase in interest and use of small group instructions prevails in American classrooms. Good, Reys, Grouws and Mulryan (1988) report some of the advantages of small group cooperative learning as follows:

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1. Students become actively involved in their own learning and therefore, have control over it;
2. Interaction increases group communication skills;
3. Working together towards a common goal leads to significant gains in academic achievements, self confidence as a learner and social relationship; and
4. Cooperative learning leads to the enhancement of higher order thinking skills.

Research studies overwhelmingly favour cooperative learning as the most effective form of learning (Johnson & Johnson, 1984). Yet, despite all the studies and anecdotal experiences reported by teachers and researchers, the paradigm remains largely unused. The study tried to show the benefits of cooperative learning environment on the academic achievement.

Creative thinking is the process of generating ideas, processes, experiences or objects. It is a multidimensional attribute differentially distributed among the people. It is often equated with divergent thinking." Being creative is seeing the same thing as everybody else but thinking of something different.

Creative Thinking can be described as qualities of good thinking processes as types of thinking. There are many aspects to creativity, but one definition would include the ability to take existing objects and combine them in different ways for new purpose. Thus, a simple definition of creativity is the action of combining previously uncombined elements. Creative Thinking is the ability to generate novel and useful ideas & solutions to everyday problems and challenges.

The term achievement in academic subjects generally refers to the gains in instructional objectives. Achievement is defined as an outcome measure for some type of performance.

### OBJECTIVES

1. To prepare Cooperative Learning Strategy Based Instructional Material (CLSBIM) for the development of creative thinking.
2. To find out the effectiveness of CLSBIM in terms of development of Creative Thinking.

### HYPOTHESIS

The prepared Cooperative learning Strategy Based Instructional material does not influence significantly the various dimensions of Creative Thinking of the students of elementary level.

### THE STUDY

Present study entitled as "Influence of Cooperative Learning on Creative Thinking among 5th graders" involve two variables out of which cooperative learning is independent variable & Creative Thinking is dependant variable. The present study intends to experiment the effect of independent variable on dependent variable. The fundamental aim is to find out the effectiveness of Cooperative Learning environment on Creative Thinking among 5th graders. A Creativity test of B.K.Passi was administered on the sample of 40 students of class 5, then the two units containing seven chapters were taught following the lesson plans developed in the form of instruction material based on cooperative learning strategies. After completion of every chapter, self assessment by student, team assessment by team leader and by the teacher was done. After completion of teaching again the creativity test of B.K.Passi had been administered on the same group again. Thus, obtained data was statistically analysed.

### TREATMENT AND DATA GATHERING INSTRUMENT

#### Cooperative learning strategy based instructional material (CLSBIM)

The CLSBIM has been developed on the basis of 'Cooperative learning strategies' to incorporate cooperative learning environment. 2 units have been selected for the study that means instructional material has been developed on these two units. The units have been selected from the coursebook of 5th class (NCERT published). 20 lesson plans based on cooperative learning strategies have been prepared from these 2 units.

### **Strategies employed by the investigator in CLSBIM treatment**

#### **Lesson plan**

Lesson plan 1: Learning together  
Lesson plan 2: Group investigation  
Lesson plan 3: Think-pair-share  
Lesson plan 4: Numbered heads together  
Lesson plan 5: Team word webbing  
Lesson plan 6: STAD  
Lesson plan 7: Round Robin brain storming  
Lesson plan 8: Match mine  
Lesson plan 9: Pair's check  
Lesson plan 10: Co-op cards  
Lesson plan 11: TGT  
Lesson plan 12: Pose a question  
Lesson plan 13: Learning together  
Lesson plan 14: Inside outside circle  
Lesson plan 15: Learning together  
Lesson plan 16: Jigsaw  
Lesson plan 17: Group investigation  
Lesson plan 18: Group investigation  
Lesson plan 19: Brainstorming  
Lesson plan 20: STAD

The teams have been periodically asked to submit assessments of how well they're functioning. So many cooperative learning strategies like jigsaw, group investigation, round-robin, think-pair-share have been applied on students while teaching content.

#### **GROUP SELECTION & SIZE**

Groups can be formed using self-selection, random assignment or criterion-based selection. This study has used random selection, where students had been chosen randomly

#### **TEST FOR ASSESSMENT OF COOPERATIVE LEARNING**

For Cooperative Learning to be effective, the instructor must view teaching as a process of developing & enhancing the student's ability to learn. With Cooperative Learning instructional strategies, it is important that students be given an opportunity to develop assessment criteria to evaluate an activity. This gives the student ownership of the assessment tool/criteria. When

cooperative learning is used in instruction & assessment, & evaluation the assessment by individual, by the group & by the teacher. Keeping above considerations in mind the investigator constructed a questionnaire to test cooperative learning quantitatively. In this study three cooperative learning tools are developed: Children report on cooperative learning & team report on cooperative learning & teacher's report on cooperative learning.

#### **RESEARCH DESIGN**

First of all, the standardized "B.K Passi Creative thinking" test & cooperative learning test has been administered on students prior to giving treatment. The pre-test has been helpful in assessing students' prior knowledge & cooperative learning behaviour. A post- test has been administered to measure treatment effects. The total treatment has lasted for 30 days.

#### **STATISTICAL TECHNIQUE**

To study the influence of Cooperative Learning strategy based instructional material (CLSBIM) on Creative Thinking on students of class V, t-test has been used to test the hypotheses.

#### **RESULTS RELATED TO THE CREATIVE THINKING OF CLASS V STUDENTS**

Cooperative Learning Strategy Based Instructional Material (CLSBIM) is highly correlated with Creative Thinking of the students. After analysis it was found that Mean of pre-test is 71.05 and the mean of post test is 149.75. The mean difference is 78.7. The S.D. for both the pretest and posttest scores is 21.31 and 16.54 respectively. Correlation in both pre-test and post test scores was calculated and the value drawn was 0.81. The S.E. of mean difference is 1.97. The t-value so obtained is 40.10 which are very high in comparison to the values given in D table. The level of significance given in the D-table at 0.10 levels is 1.68 and the significance level at 0.02 levels is 2.42. The df is considered as 39. This shows that the t-value of test is significant at both the levels; means CLSBIM treatment is significantly effective.

The null hypothesis, thus, has been rejected & it has been concluded that the relationship between CLSBIM and creative thinking of primary level students is highly significant.

### IMPLICATIONS

Cooperation is a valuable commodity & works best when it is freely given & indirectly encouraged. It promotes goodwill toward men & women, & is a gift that is always appropriate.

For Cooperative Learning to be effective, the instructor must view teaching as a process of developing & enhancing student's ability to learn. The instructor's role is not to transmit information, but to serve as a facilitator for learning. This involves creating & managing meaningful learning experiences & stimulating students' thinking through real world problems. Future research studies need to investigate the effect of different variables in the cooperative learning process. Group composition: heterogeneous versus homogenous ,group selection & size, structure of cooperative learning, amount of teacher intervention in the group learning process, differences in preference for cooperative learning associated with gender & ethnicity & differences in preference & possibly effectiveness due to different learning styles, all merit investigation.

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