Electronic International Interdisciplinary Research Journal (EIIRJ)

ISSN 2277-8721 UGC Approved Journal No 48833

EFFECTIVENESS OF CO-OPERATIVE LEARNING STRATEGIES ON THE ACHIEVEMENT OF B.ED STUDENT

Wadhe Pritesh Rama

Ph.D Research scholar,

Department of Education,

Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu, Rajasthan

Dr. Jadhav Keshar Ramchandra

Assistant Professor

Abstract

Constructivism is a new approach in education that claims humans are better able to understand the information they have constructed by themselves. According to constructivist theories, learning is a social advancement that involves language, real world situations, and interaction and collaboration among learners. Co-operative learning strategies are based on social constructivism which is one of the main streams of constructivism. In this concept, students work in a small group and collectively for better learning. Students get the chance for the active participation than the passive listener like in traditional teaching methods. In the present study, an attempt was made to check the effectiveness of co-operative learning strategies and Lecture method on B. Ed students in Science Education subject. The Post Test- Only, Two Equivalent Groups – Experimental and control group Design was used for the present research. A significant achievement was seen in experimental group based on co-operative learning strategies as compare to control group instructed by Lecture method in B. Ed students.

Keywords: *Effectiveness, Co-operative learning strategies, Achievement, B. Ed students.*

Introduction:

Constructivism as a paradigm says that learning is an active and constructive process. The learner is always an information constructor. Learners actively construct or create their own subjective representations of objective reality. They link new information to prior knowledge, thus mental representations are subjective.

Constructivism is a new approach in education that claims humans are better able to understand the information they have constructed by themselves. According to constructivist theories, learning is a social advancement that involves language, real world situations, and interaction and collaboration among learners. The learners are considered to be central in the learning process. Learning is affected by our prejudices, experiences, the time in which we live, and both physical and mental maturity. When motivated, the learner exercises his will, determination, and action to gather selective information, convert it, formulate hypotheses, test these suppositions via applications, interactions or experiences, and to draw verifiable conclusions. Constructivism transforms today's classrooms into a knowledge-construction site where information is absorbed and knowledge is built by the learner.

Co-operative Learning:

Cooperative learning is based on social constructivism which is one of the main streams of constructivism. In this concept, students work in a small group and collectively for better learning. Students get the chance for the active participation than the passive listener like in traditional teaching methods. Co-operative learning is an educational approach that aims to organize classroom activities in to academic and social learning experiences**.** In co-operative learning, students need to work in groups to complete the given task collectively towards academic goals. Unlike individual learning, which can be competitive in nature, students work in a cooperation to acquire knowledge and to develop certain skills and everyone succeeds when group succeeds. In 1994 Johnson and Johnson published the 5 elements i.e. Positive interdependence, Individual accountability, Face to Face interaction, Social skills and group processing essential for effective group achievement, effective group learning and higher order social, personal and cognitive skills (e.g. Problem solving, Decision making, Reasoning, Planning, Organizing and reflecting)

Co-operative learning strategies:

There are a great number of cooperative learning strategies. Some cooperative

learning strategies utilize students pairing, while other utilize small group of four and more students. Hundreds of techniques have been practiced to use in content area of subject.Following cooperative learning strategies are widely used in teaching learning process.

1. Think Pair share
2. Jigsaw
3. Jigsaw II
4. Reverse Jigsaw
5. Reciprocal Teaching
6. Problem Based Learning (PBL)
7. Student Teams Achievement Divisions (STAD)
8. Team Game Tournament (TGT)

Need of the study:

- Teacher training education is based on the theoretical pedagogy and practical skills required for the teaching. Only cognitive development and basic practice teaching skills are not enough to prepared teachers for the various levels of the schools. Like other professions teaching profession also expect some development of emotional and professional level.
- Teacher education is different than other professional courses where teacher trainees need to acquire more skills by engaging themselves in all curricular, co-curricular and extra co-curricular activities hence active participation and interaction with each other is essential.
- In Teacher education, B. Ed students study their pedagogy subject separately and they are always in small numbers. It would be effective and better to use Co-operative learning strategies in pedagogy subjects in small groups

Importance of the study:

- B. Ed course is generally taught by using lecture method which is not 100% useful to develop necessary professional skills in students hence it is very important to

teach the syllabus by using co-operative learning strategies.

- Practice of co-operative learning strategies could help B. Ed students to remove rigidness in teaching-learning process and can make it full of fun. Enjoyable and more motivated.
- Co-operative learning strategies are interactive, so students can engage and participate in the learning process. It will allow discussion and critical thinking by which students can remember content for a long period of time.

Review of related literature:

In the present research study, review of related literature was taken from institutional libraries and online resources. The material was obtained from there such as from books, research Journals, ERIC and M. B. Much volumes and Ph.D dissertations were mentioned in the chapter review of related literature.

Objectives of the present research study:

1. To prepare lesson plans based on co-operative learning strategies and Lecture method on a selected unit of Science and Technology Education subject of B. Ed course.
2. To implement the lesson plans based on co-operative learning strategies and Lecture method on a selected unit of Science and Technology Education subject of B. Ed course on B. Ed students.
3. To check the effectiveness of co-operative learning strategies and lecture method on the achievement of Science and Technology Education subject of B.Ed students.

Hypothesis:

Ho: There is no significant difference in the achievement of B.E d students of Experimental and Control group in Science and Technology Education Subject after implementation of lesson plans based on co-operative learning strategies and Lecture method on B.Ed students.

Assumptions:

1. Cooperative arrangements were found superior to either competitive or individualistic structures on a variety of outcome measures, generally showing higher achievement, higher-level reasoning, more frequent generation of new ideas and solutions, and greater transfer of what is learned from one situation to another. **(Barkley, et al, 2005)**
2. Review of 67 studies in that 61% of the cooperative-learning classes achieved significantly higher test scores than the traditional classes. He notes that the difference between the more and less effective cooperative-learning classes was that the effective ones stressed group goals and individual accountability **(** Slavin,1991**)**

Delimitations and limitations of the Present Research:

1. This study is delimited to B. Ed students who are studying curriculum of S.N.D.T. Women's University, Mumbai
2. This study is delimited to Science and Technology Education subject content only.
3. This study is delimited to experimental method of research.
4. This study is delimited to 16 female students of B.Ed course
5. This study is delimited to achievement test as a tool of data collection.

Design of the study

Methodology- The present study is a quantitative research.The Experimental method was adopted for the present study."Equivalent Group only Post Test Design" was used for the present study.

Research variables:

1. **Independent Variables**:

For Experimental Group: Instruction through Co-operative learning strategies (Think Pair Share + Context/Problem Based Learning (C/PBL) +Student Teams Achievement Divisions) (STAD) For Control Group: Instruction through lecture method.

2. **Dependent Variables:** Professional skills are the dependent variable in the

present study.

Sample:

In the present research work, researcher selected one college by purposive sampling technique of non probability sampling method. B. Ed. students of Science and Technology method were selected from selected college by Incidental Sampling technique of Non-Probability Sampling Method The sample taken for this study was small and previous researches has proved that small sample is more useful in the context of co-operative learning based experimental studies

Number of B.Ed students	Control group	08	Total Students 16
	Experimental group	08	

No. of Selected B. Ed students

Tool of data collection:

Achievement test on Science and Technology Education subject was used as a tool of data collection to know the exact effect of co-operative learning strategies and Lecture method on the achievement of Science education subject. Detailed literature on achievement test was done and also visited several experts in the field of Teacher Education for preparing an achievement test and a content validity was established on the basis of suggestions given by the experts,

Tool of data analysis:

In the present research t- test is used to study whether there were significant difference in the means of the score of control and experimental group after implementation of lessons plans based on co-operative learning strategies and lecture method

Data analysis:

The analysis of data was done by using raw data collected by the researcher by using descriptive and inferential statistics

Particulars	Control Group	Experimental group
No. of Students (N)	08	08
Mean(M)	25.5	28.0
Standard Deviation(σ)	5.0	4.3
Standard Error(σ_M)	1.77	1.53
Coefficient of Correlation (r)	0.92	
Degree of Freedom (d_f)	14	
Standard Error of Difference(SED)	0.632	
Difference between Means (D)	2.5	
Obtained t value	3.96	
Table t value 0.05 level	2.145	

Table on Comparison of scores of Control and Experimental group

Interpretation: The scores of experimental group are increased than control group. There is a statistically significant difference between control group and experimental group scores after implementation of lesson plans based on lecture method and co-operative learning strategies on B. Ed students.

Findings:

From the above table it can be seen that the obtained table t-value is greater than table t-values at 0.05 significant level Hence, the null hypothesis is rejected. Therefore, there is a significant difference in the effectiveness of Lecture Method and Co-operative Leaning Strategies on the achievement of B.Ed students of control and Experimental groups in Science Education subject.

Major Findings –

1. The increase in the score in Achievement in experimental group after the implementation of co-operative learning strategies based lessons shows that Co-operative learning strategies are effective techniques of instructions at B. Ed level curriculum transaction.

2. Co-operative learning strategies were highly appreciated by the B. Ed students seen by their active participation and co-operation in learning of science education.

Conclusion:

On the basis of result obtained after the data analysis, it is concluded that co-operative learning strategies are more effective in the achievement of B. Ed students as compare to traditional lecture method.

Contribution to knowledge:

This study has been done by keeping the importance of co-operative learning strategies at teacher education level. An attempt was also made to create an interest in B. Ed students for co-operative learning strategies. Researcher has tried to explain the importance of co-operative learning strategies to B.Ed students and usability of its practice in secondary level school classrooms.

References:

Barkley, E.F., Cross, K.P., & Major, C.H. (2005). **Collaborative Learning Techniques: A Handbook for College Faculty.** San Francisco: Jossey-Bass.

Best, J.W. (2004), **Research in Education.** Prentice Hall of India Private Ltd. New Delhi

Johnson, D.W., & Johnson, R. (1994). Leading the cooperative school (2nd ed.). Edina, MN: Interaction Book Co.

Ransdell M, Moberly D.A (2003) " **A Journey in to Co-operative learning with Teacher Education students"** Essay in Education 6 (Summer)

Robert E. Slavin **(1991) "**Student Team Learning: A Practical Guide to Cooperative Learning" (3rdEdition)

Sharma S.P.(2003) **Teacher Education-Principals, Theories and Prcatices,** Kanishka Publishers, Distributors, New Delhi.

Tiwari S (2003). **Education in India,** New Delhi Atlantic Publishers Pvt Ltd.