



EFFECTIVENESS OF COOPERATIVE LEARNING: AN EXPERIMENTAL STUDY

Archana V. Katgeri, Ph. D.

Associate Professor, Hansraj Jivandas College of Education, Mumbai

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Abstract

The study aimed to find out the effectiveness of the cooperative learning as a technique to enhance the teaching-learning process. The study concluded that the learners take a great responsibility for learning on their own and there is less control of the teacher and more learner autonomy. The study helped the student teachers to experience and gain insight into the cooperative learning strategy and its implications in the actual classrooms.



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Introduction

Cooperative learning was introduced in the early twentieth century by John Dewey, who saw experience and education as being closely linked and believed that people needed extensive experience in cooperation to function effectively in groups. Cooperative learning activities can vary greatly in duration. One cooperative learning exercise might last for just five or ten minutes in one class period, while another might be a multi-week project focused on developing a solution for a real-world problem. Regardless of duration and scale, cooperative learning features several predictable elements and can be carried out with a range of teaching methods. It is an approach to teaching and learning that requires learners to work together to deliberate, discuss, and create meaning. It aims to organize class activities, develop social intelligence and educational learning experience. Here students work together in groups to perform a task. It is the responsibility of the teacher to carefully select the group. Each member is responsible for learning. And also, to teach what is taught to his/her teammates. The success of each member is determined and depends on the group's success.

Basically, there are five elements of cooperative learning

1. Positive Interdependence

It means that they have clear goals or target. Also, their effort not only helps oneself but the group. Positive interdependence is committed to personal success, as well as the success of every member of the group.

2. Individual and Group Accountability

The group is accountable for its actions. Also, the members are accountable for their individual contribution. It helps for achieving the group goal. Besides no one can copy or steal others work. Everyone's performance must be assessed. And its results should be given to the group.

3. Small group and Interpersonal skills

Small group and interpersonal skills require carrying out as part of a group. Basically, they are teamwork skills. Self-motivation, efficient leadership, decision making, trust building, communication, and conflict managing are basic skills.

4. Promotive face-to-face Interaction

This means that students share each other success by dividing resources. They also learn to help, give confidence, support, and admire each other's work. Educational and individual both are part of this common goal.

5. Group Processing

Group members require experiencing freedom to communicate frankly with others. Also, they feel each other's concern and make merry at accomplishments. Besides, they should converse about achieving the goal and maintaining helpful working relations.

Teacher-Student Collaboration

Teacher is not the only one who is having information rather it is a shared responsibility of the teacher and student to gain deeper understanding about the knowledge received. Learning is not an individual act which can be done in isolation but a combined act where the learner and the more knowledgeable other who takes the role of the teacher work together to construct knowledge. Johnson and Johnson (1986) similarly emphasize that when students and teachers talk and listen to each other; they gain a deeper understanding of the content and can develop the skills necessary to negotiate meaning throughout their lives. Cooperative learning demands a paradigm shift from teacher centred instructions to instruction and learning that is designed by both teachers and students. Collaboration between student and teacher plays a critical role in helping students reflect and engage in their own learning experiences.

Need for Cooperative learning: The concept of cooperative learning is not something new but has been stressed upon by psychologist Lev Vygotsky, John Dewey, Benjamin Bloom and Jerome Bruner in their theories on how students learn better through interaction in a social environment rather than individual learning. Sills, Digby, and Russ (1991) found that those involved in collaborative learning understand content at deeper levels and have higher rates of achievement and retention than learners who work alone. They suggest that collaborative learning gives students opportunities to internalize their learning. Slavin's (1989) research also suggests that students and teachers learn more, are more engaged, and feel like they get more out of their classes when working in a collaborative environment. A meta-analysis from the Cooperative Learning Center at the University of Minnesota concluded that having students work collaboratively has significantly more impact on learning than having students work alone (Johnson, Maruyama, Johnson, Nelson, & Skon, 1981). An analysis of 122 studies on cooperative learning revealed:

- More students learn more material when they work together—talking through the material with each other and making sure that all group members understand—than when students compete with one another or work alone individualistically.
- More students are motivated to learn the material when they work together than when students compete or work alone individualistically (and the motivation tends to be more intrinsic).
- Students have more positive attitudes when they work together than when they compete or work alone individualistically.
- Students are more positive about the subject being studied, the teacher, and themselves as learners in that class and are more accepting of each other (male or female, handicapped or not, bright or struggling, or from different ethnic backgrounds) when they work together.

Collaboration can be between teachers, between students, and between teacher and student.

Purpose of the study: The purpose of the study is to see the effectiveness of jig saw technique of cooperative learning.

Methodology

For the present study experimental design was used.

Sample

For the present study the sample consisted of 50 student teachers from Hansraj Jivandas College of Education, Mumbai

Tool for the study

For the present study Jig Saw technique of cooperative learning was used. The jigsaw classroom is a research-based cooperative learning technique invented and developed in the early 1970s by Elliot Aronson and his students at the University of Texas and the University of California.

Steps of the Jigsaw technique

Step 1: 50 students were divided into 7 groups. Six groups had 7 students each and one group had 8 students.

Step 2: From each group one student was appointed as the leader, the one who was more mature and had good comprehension and explanation skills.

Step 3: The topic of 'Attention' which is part of the B.Ed. syllabus for second year was selected for this experiment. It was divided into seven small segments. Each group was assigned to work on one element. Resources were provided in form of books, notes and internet access.

Step 4: It was ensured that students had access only to their own segment.

Step 5: Students were given half an hour to work on their segment and get familiarised with it.

Step 6: An expert group was formed which had one member representing from each group. The students in the expert group were given half an hour to discuss their own segment with the other members of the expert group.

Step 7: The students from the expert group were asked to return back to their original groups.

Step 8: Each student from expert group presented what they had gained through the interaction with the other groups to their own group members. Participants were engaged in lot of brainstorming and discussion in the course of action.

Step 9: The teacher supervised the group work by moving from one group to another and solving the queries if any.

Step 10: The leader from every group was asked to come and present the content which was followed by discussion and clarification wherever the teacher felt was needed.

Observations of the researcher

- It was found that students took more active participation as compared to the lecture method.
- The isolates slowly opened up and also contributed.
- It generated a lot of discussion & brainstorming among the group members.
- Some Groups also had conflicts with respect to the views on the topic which was resolved by the teachers' intervention.

- It was also observed that in few groups one or two members were very dominating and suppressed others' views. Again, the teachers' intervention helped to maintain the socio-emotional climate of the group.

Discussion and Suggestions

As compared with the traditional teaching methods cooperative learning strategies have several advantages like:

- It is highly student centric approach
- Active participation of the students. Students actively engage in the process of learning and are just not passive listeners which is very important.
- It develops social skills among the learners like team spirit, cooperation, being more tolerant and patient, valuing and respecting others views, positive interdependence, well-being, cohesiveness and also developing better communication skills. These skills will help the students not only to be friendly with their classmates but also to work effectively beyond the school in the larger society which is based on the philosophy of democratic, egalitarian and secular principles.
- When students work in groups the brainstorming helps in developing critical thinking and leads to mastery learning.
- Students have great autonomy in learning on their own.
- Students take responsibility for their own learning.
- It helps in fostering decision-making skills in the young students.
- There is healthy competition among the various groups.
- Also, it helps in breaking the monotony of the lecture method which is teacher centric approach.

Thus, as very rightly said by Chris Watkins 'In classrooms where a sense of community is built, students are the crew not the passengers.'

Cooperative learning is just not making the students sit in the groups and work together; rather it requires a careful and structured plan with well-defined tasks for the students by the teacher to make it successful. Hence the role of the teacher includes:

- Meticulous planning
- Creating a conducive learning community.
- Teachers need to know the group dynamics of the classroom so as to form groups such that they will work with great efficiency. Thus, the teacher needs to keep in mind

certain things like: different learning styles, cultural background, intellectual potential, personalities and gender

- Set some ground rules to work in the groups so as to minimise conflicts
- Training the students who have good comprehension and explanation skills as experts
- Equipping the students with the required learning resources
- Supervising from group to group as a facilitator
- Giving constructive feedback to the students on the work done
- Giving the students freedom & exercising less control on the group will lead to better performance

Conclusion

Thus, in cooperative learning teachers fade in the background and become a coach, facilitate, or and sometimes a spectator after the lesson is implemented. Teachers who set up a good cooperative lesson teach children to teach themselves and each other. Students learn from their peers and become less dependent on the teacher for help.

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