

Effectiveness Of Cooperative Learning On Learning Outcome In Social Studies Of Secondary School Students

Mr. Arashdeep Singh

Assistant Professor
DAV College of Education, Abohar
Punjab, India.
ABSTRACT

The objective of the this research was to study the effectiveness of Cooperative Learning (jigsaw strategy) on Learning Outcome in Social Studies of secondary school students. 100 students of 9th class from the schools affiliated to P.S.E.B Mohali were taken as sample in present study. Data of students was gathered by using Learning Outcome test in Social Studies constructed and validated by investigator himself. By employing one way ANOVA on data results showed that students taught through cooperative learning (jigsaw strategy) (Mean=4.44, N=50) learned significantly higher in social studies as compared to traditional method of teaching (Mean=2.74, N=50).

Key words: Cooperative Learning, jigsaw, Learning Outcomes in Social Studies

Introduction

As other countries of the globe, India is in a process of educational revolution including a change of paradigm of educational exercises in common and school education specifically. The change is from a teacher centered classroom to a student centered classroom and this has far-reaching consequences throughout the educational system, but in each and every country where this is occurring, educationists are somewhat confused as to how to put constructive qualities in a teacher. Undoubtedly, at present it is a believed that good learning is focused learner. But still in our schools, education is perceived as a narrow repertoire of cultured classroom behavior, and only two abilities are developed: memorization and repetition. Teachers are the focus of classrooms. More ever, teachers completely support the class management and usually force a memorization way in teaching. This leads to restrain students from analytical abilities, sharing ideas and self learning.

National Curriculum Framework- Secondary Education (2005) stated that knowledge should be built and the method should be learner centered. For this we must part ways with traditional teacher centered techniques of teaching to student centered strategies such as

cooperative learning. Cooperative learning is not new; it has been present since the early 1900's when it was practiced in one room school houses. Cooperative learning is one of the most notable and rich areas of theory, research and practice in education. Cooperative learning is the methodological use of small groups so that students exercise and learn together to enhance their own and each other's learning. (Johnson, Johnson & Holibec, 1998). Although numerous cooperative learning methods are practiced in classroom teaching, a famous and highly effective method is Jigsaw, built by Elliot Aronson. The jigsaw classroom is a cooperative learning method with a three-decade record of effectively minimizing racial issues and increasing positive educational results. Just as in a Jigsaw puzzle, each piece- each student's contribution is vital for the comprehension and full understanding of the final product. If every student's contribution is vital, then each student is vital; and that is accurately what makes this method so efficient (Elliot Aronson 2012-13). In Jigsaw, students of a regular-sized class are separated into groups of four to six students, each of which is provided with a list of sub topics to investigate. Individual students in each group then disperse to work with the "experts" from other groups, investigating a part of the matter being learnt, after which they come back to their initial body in the role of guide for their subcategory. The Jigsaw strategy is a cooperative learning method relevant for students from 3rd to 12th grade.

Jigsaw technique, which is an efficient way, has challenging problems, including student, and sharing their own thoughts and ideas (Maritland, Latourelle, Valenti and Bookman, 2001). In addition, the jigsaw technique allows students to proficiently work in groups, to better teamwork abilities in problem solving. Jigsaw strategy fascinates students towards learning contents and increasing perception skills (Turk, Brine & Kanev, 2006). Johnson, Johnson & Stanne (2000) stated that cooperative learning methods are widely practiced as they are based on theory verified by research and any teacher in some way or the other can use cooperative learning methods that are continuous with personal philosophies. In a meta-analysis of 158 studies Johnson and Johnson stated that recent research discoveries present proofs that cooperative learning methods are likely to yield positive learning outcome consequences. Slavin, (1990) in a synthesis of research about cooperative learning discovers that cooperative learning methods enhance the learning outcome of students and their connections. In 60 studies of learning outcomes effect of cooperative learning, 65% found efficiently greater learning outcomes in cooperative then in traditionally practiced control groups. Positive effect was discovered in all major subjects, all grade levels, in urban, rural and suburban schools and for every student.

Objective of the study

To study the effect of Cooperative Learning on learning outcome in social studies.

Hypothesis of the study

1. There will be no significant difference in mean scores of learning outcome in social studies of experimental and control group.

Method

Sample

Sample was selected by using random sample technique. This study was carried on 100 students of 9th class of Swami Keshwanand Sen. Sec. School Abohar and Divine light Sen. Sen. School Abohar of Dist. Fazilka from state of Punjab, affiliated to P.S.E.B Mohali. From each school, two sections of the class were shortlisted randomly, first group named as experimental group and the other as control group.

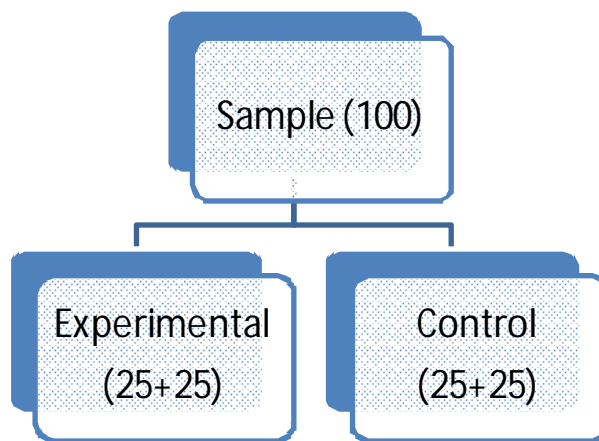


Fig.1 Sample Split for Experimentation stage

Measure

Learning Outcomes test in Social Studies constructed and validated by investigator. Cooperative Learning Modules based on Jigsaw strategy were also prepared by the investigator.

Experimental Design

Being experimental in nature, the study was structured on the basis of Non- equivalent Pretest-Posttest Control group design.

Table 1: Non-equivalent Pretest-Posttest Control Group Design

Experimental Group	Pretest	Treatment	Posttest
Control Group	Pretest	Traditional Method	Posttest

Procedure

The study was designed to check the effectiveness of Cooperative Learning (jigsaw strategy) on Learning Outcome in Social Studies of secondary school students. The Principals of the Swami Keshwanand Sen. Sec. School, Abohar and Divine Light Sen. Sec. School, Abohar, were requested to give permission to the conduction of experiment. Principals showed the green signal to the conduction of experiment. Two sections of 9th class were selected from both schools. One group was allocated randomly to the treatment and was named as experimental group and the other was named as control group. Firstly, Learning outcome in Social Studies test were administered to all the groups (N=100 students) as pretest in both schools. Each tool was bilingual (English and Punjabi) due to which the students had no problems whatsoever while attempting the test. Secondly, the experimental group was taught Social Studies through Jigsaw method (with modules prepared by the invigilator) for an hour a day for 40 days. Also, the control group was taught based on selected topics of social studies with the help of traditional method for an hour a day for 40 days for the same dates. Thirdly, as the treatment came to an end, Learning outcome in Social Studies test for the 9th class students were given to both the groups again as post test. The extraneous variables like influence and motivation of the teacher were restrained.

Then firstly, from both groups, scores of learning outcome were obtained and named as pretest scores. Secondly, after the experiment, scores of learning outcome were obtained from both groups and named as posttest scores. To analyze the significance difference between both groups, difference between pretest scores and posttest scores was calculated and named as learning outcome scores. Finally one way ANOVA was used on learning outcome scores to check significance difference.

Results

Table 2: Group Wise mean scores; S.D., N and t-value of Pre test mean scores of learning outcomes in social studies

	Group	Mean	N	Std. Deviation	T value	Remarks
Pre-test	Experimental	21.76	50	6.83	.885	Not Significant
	Control	22.80	50	5.77		

From table 1: it is found that t-value is .885 which is not significant at 0.05 point level of significance with df 1/98. It indicates that the mean scores of learning outcome in social studies of experimental and control group do not differ significantly. it may therefore concluded that students in both group i.e. experimental and control group were equal on pre test mean scores of learning outcome in social studies.

Table 3: KS value and SW value of pre test scores of learning outcome

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Learning Outcome	.064	100	.200	.985	100	.339

From Table 2: it's found that the value of Normality test of Kolmogorov-Smirnov for learning outcome is .200 and the value of Normality test of Shapiro-Wilk is .339. It shows that the distribution of pre test scores of experimental group and control group of learning outcome is normally distributed.

Table 4: Summary of One Way ANOVA on mean scores of learning outcome in social studies of experimental and control groups

Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	72.250	1	72.250	40.25	.000
Within Groups	175.940	98	1.795		
Total	248.190	99			

From the table 5.48 it is evident that reported F-value for mean scores of learning outcomes in social studies is 40.25, which is significant at .01 level with df 1/98. It means that there is significant difference in mean scores of learning outcomes in social studies between experimental and control group. In the light of this the null hypothesis, which states, "There will be no significant difference in the mean scores of learning outcome in social studies." is rejected. Further the mean scores of learning outcomes in social studies of experimental group (Mean=4.44, N=50) is higher than that of control group (Mean=2.74, N=50), it shows that cooperative learning (jigsaw strategy) was found to be effective to increase learning outcome in social studies as compared to traditional method of teaching.

Finding of the Study

There exist significant difference in mean scores of learning outcome in social studies of experimental and control group.

It showed that the experimental group taught through cooperative learning (jigsaw technique) scored better in social studies in comparison to control group taught through traditional method.

Discussion

The current study showed that the cooperative learning (Jigsaw strategy) has effects learning outcome under two important assumptions: group and individual responsibility. Group goals cheer students to assist their group-mates in learning. They build positive interrelations among individuals in the group, providing them a cause to cooperate in a meaningful way (Deutsch, 1949; Johnson & Johnson, 1989; Stevens, 1994). Individual responsibility, an analyzer of every student's learning, enhances the chances that every student will learn and decrease the possibility for a free rider effect, where a student does less and depends on others in the group to achieve the goal (Johnson & Johnson 1989, Slavin, 1994; Stevens, 1994). In this study, the subjects studied by jigsaw method of cooperative learning were discovered higher in learning outcome in social studies as compared to subjects learnt by traditional way of teaching. Thus, the result of the current study underlines and supports the concept that cooperative learning methods have a positive effect on learning outcome in social studies. To examine the results more it is a distinct pro of cooperative learning that it gives a structure to assist and control the classroom; which develops from the positive interdependence built within learning teams; and assists the students take more accountability; and also it provides more guidance flexibility to include the enhanced class-wide heterogeneity (Johnson & Johnson, 1989; Slavin, 1994). Cooperative learning has all the vital ingredients that can change the change in education for better as it is supported by new paradigm of teaching which says that knowledge is found, built, transformed and proliferated by students. (Aggarwal and Nagar, 2011).

So, results of this study highly recommended that cooperative learning should use as a teaching method by teachers to achieve learning goals more effectively and successfully.

References

- Aggarwal, R. & Nagar, N. (2011). *Cooperative learning*. Delhi: Kalpaz Publications.
- Aronson, E., & Pantone, S. (2011). *Cooperation in the classroom: The jigsaw Method*. Pinter and Marten Ltd, London.
- Aronson, E. (2000-2013). Jigsaw classroom: Overview of the Technique. Retrieved from <http://jigsaw.org/overview.html>.
- Deutsch M. (1949). A theory of cooperation and competition. *Human Relations*, 2, 129-152.
- Garrett, N.B. (1981). *Statistics in psychology and Education*. Columbia University, Vakils, Feffer and Bombay .
- Johnson, D. W., (1989) & Johnson, R. T. (1989). *Cooperation and competition: Theory and research*. Interaction Book Co. Edina, Minn.
- Johnson, D. W., (1989) & Johnson, R. T. & Holubec, E. (1998). *Cooperation in the classroom*. Allyn and Bacon, Boston.
- Johnson, D. W., (1989) & Johnson, R. T. & Stanne, M. B. (2000). Cooperation learning methods: a Meta analysis . Retrieved from <http://www.clrc.com/pages/cl-methods.html>
- Maritland, L., & et.al., (2001) Retrieved from <http://www.dde.Edu/flccjigsaw.html>.
- NCF (2005). *National Curriculum Framework*. Retrieved from <http://www.ncert.nic.in/rightside/links/pdf/framework/english/nf2005.pdf>.
- Slavin, R. E. (1991). Synthesis of research on cooperative learning. *Educational leadership*, 48, 71 -82.
- Slavin, R. E. (1994). Using Student Team Learning. Baltimore: John Hopkins University. As reported in Slavin, R.E.(1995). *Educational Psychology: Theory and Practice*. Allyn and Bacon, Boston
- Stevens, R.J.(2004). Why do educational innovations come and go? What do we know? What can we do? *Teaching and Teacher Education*, 20, 389-396
- Turk, D., Brine, H., & Kanev, K. (2006). Print-Based Digital Content Interfaces for Social Reading Activities. *Journal, IEEE Computer Society*. Retrieved from <http://ejournals.swu.ac.th/index.php/ictl/article/viewFile/352/347>