

Influence of Cooperative Learning Strategy on University Students Achievement in Sociology: Implication for Educational Technology

Dr. (Mrs.) Ann E. Umeh, C.O. Oboh (Mrs.), C.S. Tuğura, I.I. Kuta
Department of Science Education, Federal University of Technology, Minna, Niger State, Nigeria
Email:Umehann22@gmail.com

Abstract

The study investigated the influence of cooperative learning strategy on university students achievement in sociology: Implication for educational technology. The research design used for the study was quasi experimental specifically non-randomized pretest posttest control group design. Two (2) research questions and two (2) null hypotheses guided the study. Sample for the study was 110, 200 level students (60 males and 50 females) selected from four schools (faculties) using purposive random sampling technique. Social studies achievement test (SOLAT) was used for data collection. The reliability co-efficient of the sociology achievement was found using Kuder Richardson formula 20 (KR – 20) to be 0.82. It revealed that cooperative learning is more effective than lecture method in terms of teaching method. Students taught sociology performed better than those taught with lecture method. In terms of gender boys, taught with cooperative learning strategy scored higher than the girls taught with the same strategy. It was recommended that cooperative learning should be used in the classroom settings and that there should be regular workshops, seminars and in-service training for teachers on the use of cooperative learning strategy.

Introduction

Sociology plays profound roles in the life of every individual, community, society and nation at large. According to Umeh (2010), sociology explains to people who they are and why they live, where they live and why they live. It is a subject that develops people by allowing way of the life of people by allowing individual to appreciate human achievements and aspiration.

According to Kadart (2012), sociology provides explanation of change in terms of human intentions, beliefs and motives. He went further to say that one of the problems facing the subject ranges from the abstract nature of the subject which he said to be fully of values, norms and attitudes and this can be fully achieved through the use of technological aids which is part of educational technologies. This will make the subject practicable and meaningful to the students. Calb (2012) was of the view that teachers of social studies and other subjects do not present an existing approach to teaching and learning and therefore suggested that the use of Audio-visual aids which is part of educational technology in the teaching and learning. He went further to say that the use of instructional technology can effectively promote the learning of subjects especially social studies that is abstract in nature.

Impacts of technology on individual and nations explain why most countries including Nigeria are making huge investment in the field of technology today.

In a study conducted by Umar (2012) on how to combat shortage of science and technology teachers in Nigerian schools, it was concluded that poor staffing, teaching method adopted in giving instruction, nature of schools and inadequate provision of technological equipment in both secondary schools and universities are the major causes of students' low performance in both science and technology.

Umeh (2013) observed that lecture method is the practice of hearing the teacher or lecture at the front of the class talking to students and the student listening to the teacher. This is seen as one way of communication, since the teacher or lecturer is the only speaking. Umeh went further to say that this method is only suitable for a large class or for introduction of a new topic by the teacher. It does not enhance achievement in technology.

Cooperative learning is an innovation teaching-learning strategy in which small team (each with students of different level of ability), use a variety of learning activities to improve their understanding of a subject (Coolman 2010). Cooperative learning strategy allows students to work collaboratively in small groups which give them the opportunity to verbalize what they know and consider each other's view point.

According to Kengo (2012) cooperative learning strategy is an instructional use of small groups that will allow students to work together to maximize their own and each other's learning. Kengo went further to say that in this method of learning, students are made to cooperate with group members, work as a team in mix-ability classification.

In the research of Thelma (2010) gender is one of the factors influencing students achievement in the use of cooperative learning strategy in sociology at the university level of education. Thelma found some items which account for gender achievement; these include among others, unfair behavior of teachers which retard female

students interest and participation, unequal access for male/female students to participate in classroom discussion, higher achievement level set for boys than girls and female students being assisted often in practical, projects and other assignment even by some of their teachers.

It is therefore become expedient to explore the efficacy of cooperative learning strategy (using university students) to check if sociology learning outcome could be improved.

Research Questions

1. What are the mean achievement scores of students taught sociology using cooperative learning strategy and those taught using lecture method?
2. What are the mean scores of male and female students taught sociology using cooperative learning strategy.

Research Hypotheses

- There is no significant difference in the mean achievement scores of students taught sociology using cooperative learning strategy and those taught using lecture method.
- There is no significant difference in the mean scores of male and female students taught sociology using cooperative learning strategy.

Methodology

The design used for the study was quasi experimental design. The study was conducted in lapai, Niger State. The population for the study comprised all the 200 level students of Ibrahim Badamasi Babangida University Lapai, Niger State. 200 level students were used for the study because the selected topics were mainly form 200 level sociology curriculum or scheme of work. Sociology Achievement Test (SOAT) was the instruments used or data collection. The reliability co-efficient of the instrument was found using Kuder Recharldson formula 20(KR – 20) and it was found to be 0.82.

Research questions were answered using mean and standard deviations. The hypotheses were tested using Analysis of Covariance ANCOVA at 0.5 level of significance. The management of the university selected was contacted for permission to use the university. Some staff of the university were trained as researcher's assistance on the use of the instructional guide. Pretest was administered at the first week for assertion of the experimental and control groups four weeks was also used for the treatment of the experimental group using cooperative instructional strategy while conventional instructional method. The researcher guided the trained staff on the used for the treatment of the experimental group throughout the four weeks. At the end of the treatment on fifth week, Sociology Achievement Test (SOAT) was administered as posttest.

Results

Results were discussed according to the research questions and Research hypotheses.

Research Question one

- i. What are the mean achievement scores of students taught sociology using cooperative learning strategy and those taught using lecture method?

Mean achievement pretest and posttest scores on sociology and standard deviation of students in experimental and control groups.

Table 1: Students Pretest Posttest

Groups	Mean	SD	Mean	SD	Mean
Experimental group	13.53	3.64	19.14	3.55	5.61
Control group	12.93	4.65	13.86	4.5	0.93

In the above table, the experimental group mean scores was 13.53 in the pretest and 19.14 in posttest, 3.64 and 3.55 standard deviation. Control group mean score was 12.93 and respectively in the pretest and posttest. Standard deviations were 4.65 and 4.54. The result revealed that experimental group had a higher mean score than the control group in the posttest.

Hypothesis One:

There is significant difference in the mean achievement score of students taught sociology using cooperative learning strategy and those taught using lecture method.

In table two (2), the computed results of students achievement scores of the experimental and control groups are shown using analysis of covariance (ANCOVA).

Source of variation	Sum of squares	df	Mean	F-cal	F-table	Dec
Covariance	269.9476	1	269.9476	1.24	3.89	NS
Main affect	917.0862	1	917.0862	4.22	3.89	S
Method	917.0862	1	917.0862	4.22	3.89	S
Explanation	1208.8294	2	604.4147			
Residual	5150.4603	237	217.3190			
Total	6359.2897	239				

The above table showed that the F-cal (1.24) was less than the F-table (1.24). Therefore covariate is not significant. Method of teaching, the F calculated (F cal) value 4.22 is greater than the F-table value 3.89. From the values, there is a significant difference in the mean achievement scores of students taught sociology using cooperative learning strategy and taught and those taught using the lecture method.

Research Question Two:

- What are the mean scores of male and female students taught sociology using cooperative learning strategy?

Table 3: Mean achievement scores and standard deviations of male and female students taught sociology using cooperative learning strategy.

Sex	Mean	SD	Mean	SD	Score
Male students	89.42	18.61	103.40	15.89	12.68
Female students	78.80	22.43	110.30	18.66	31.50

Sex Pretest protest

Table three (3) revealed that the male students in the experimental group scored 89.42 and 103.10 on the pretest and posttest with a standard deviation of 18.61 and 15.89. The females in the other hand scored 78.80 and 110.30 in both pretest and posttest with a standard deviation of 22.43 and 18.66. It was revealed from the result that female students scored higher than the male students in the experiment group.

Hypothesis Two:

There is no significant difference in the mean scores of male and female students taught sociology using cooperative learning strategy.

Source of variation	Sum of square	df	Mean	F-cal	F-table	Dec
Covariate	221.4101	1	221.4101	1.99	3.89	NS
Pretest main effect	223.6354	1	223.6354	2.01	3.89	NS
Sex	223.6354	1	223.6354	2.01	3.89	NS
Explanation	447.2508	2				
Residual	26368.9518	227				
Total	2616.2026	229				

From the table, the F-cal (1.99) which is less than the F-table (3.89), therefore, covariate is not significant. Sex, the calculated (F-cal) value 2.01 is less than the F-table value 3.89. Therefore, hypothesis two is accepted. There is no significant difference between the meanscores of female and male students taught sociology using cooperative learning strategy.

Discussion of Results

The mean achievement scores of the students taught using cooperative learning strategy was higher than the mean achievement scores of student taught using lecture method as shown in table four (4). ANCOVA was used to shown the difference in the scores.

Therefore hypothesis one (1) was rejected. The result obtained confirmed the research of Kengo (2011) who was of the opinion that cooperative learning strategy is superior in the classroom to teaching method.

Performance of male and female students using cooperative learning strategy, the result indicated that female students in the experimental group perform better than the male students when expose to the same cooperative learning strategy there by rejecting hypothesis two (2). The finding revealed that there was no significant difference in the performance of male and female students towards sociology. ANCOVA result revealed that gender influence on students' performance, cooperative learning showed significant difference in the perception of male and female students on their environment. This findings revealed that there is gender performance in

Nigerian classroom situation.

Conclusion

The role of sociology in the life of every individual in the family, community, society and nation at large cannot be overemphasized. As such it has been revealed from this study that student's performance in sociology is not encouraging at all. This may be attributed to the inappropriate instructional technologies being adopted by many sociology teachers.

Recommendation

Cooperative learning strategy enhanced students learning in the classroom. Therefore, the instructional planners should introduce cooperative learning strategy that will ensure group work and promote better academic achievement. Sociology teachers should focus more on activities that would foster cooperative learning amongst students.

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