
Using Cooperative Learning Instructional Strategy in Solving the Problem of Gender Stereotyping on Junior Secondary School Students' Achievement in Social Studies

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Abstract

This study investigated the effects of using the Students Team Achievement Division (STAD) model of Cooperative Learning Instructional Strategy to solve the problem of gender gap in the achievement of Junior Secondary School Students in Social Studies. The study adopted a quasi-experimental research design. The sample for the study comprised one hundred and thirty two (134) Junior Secondary School II Social Studies students, selected from five secondary schools in Abakaliki Education Zone of Ebonyi State. The instrument for data collection was a multiple choice objective test titled: Social Studies Achievement Test (SOSAT) to collect data from the respondents. The instrument had a reliability coefficient of 0.91 using Kuder Richardson 20. Two research questions and two hypotheses guided the study. The collected data were analyzed using adjusted mean and standard deviation to answer the research question while Analysis of Covariance (ANCOVA) was used to test the null hypotheses at alpha level of 0.05. The results of the study showed that STAD model of cooperative learning strategy was more facilitating for achieving result in social studies than the conventional instructional strategy. HO_1 was significant but HO_2 was not. From the finding of the study: STAD model of cooperative learning strategy was recommended to be adopted for teaching Social Studies in junior secondary schools in Ebonyi State so that the gender gap (between male and female) in achievement could be reduced if not totally eradicated.

Introduction

The importance of Social Studies, as a subject of study in Ebonyi State is much as it strives to boost full cordial co-existence and harmonious relationship amongst the citizens and also create better education for her citizenry in the areas of achievement and bridging gap in performance at public examination in Social Studies of both boys and girls. The broad objectives of Social Studies in Nigeria tend to give direction to effective instruction and capacity development in certain basic skills are essential for forming sound judgment and to ensure the acquisition of relevant body of knowledge and information which is an essential pre-requisite to personal development and positive contribution to the betterment of the society (Okobia, 1985). The realization of these broad objectives lies in the quality of instruction at schools, which explains the rationale on which the teaching of Social Studies as a discipline in the Nigerian schools was perceived.

The review on students' achievement in Social Studies in Junior Secondary School Certificate Examination (JSSCE) in Ebonyi State, according to Usulor (2009) for 2008, showed that students' achievement in Social Studies was poor and indeed gender was stereotyping. Carefully planned instructional strategies have been tried to improve students' achievement in Social Studies at different learning situations such as concept mapping, small group instruction as a problem solving oriented method; metacognitive, conceptual change pedagogical strategies on students' achievement towards Social Studies (Ogbu, 2008).

The above strategies do not seem to have adequately addressed the need of cognitive schematic activation of the learner and in capable of bridging the gap between male and female achievement in Social Studies achievement at the junior secondary school level. Low achievement and gender stereotyping have been problems of teachers, educationists and school administrators. Identified causes to these are: inappropriate medium of instruction (STAN, 1992; Obemeata, 1995); school environmental factors (Jegade, 1992) and admission of unqualified students (Igwe, 1994). Further studies attributed poor achievement largely to the use of poor instructional strategies (Unachukwu, 1990), inappropriate medium of instruction (STAN, 1992; Adeyegbe, 1993); and faulty methods (Igba, 2005) by teachers. Over dependence on the conventional teaching method by teachers appears to be the main culprit in this preponderance of ineffective instructional strategies used in teaching Social Studies (Igba, 2005). There is therefore an urgent need to look for an effective instructional strategy to teach Social Studies concepts, which should be innovative and learner-based in order to combat the high failure rate of the students in Social Studies and enhance their pursuit of chosen careers at the higher levels.

Students Teams Achievement Division (STAD), a model of Cooperative Learning Strategy is the area of interest of this researcher. Slavin (1990) describes cooperative learning as an instructional approach through which learners have a common goal and they attain their goal through interdependence and cooperation with one another. Since STAD exploits interactive nature of the subject matter and of the learner in terms of his/her alternative framework, acceptance and cooperation with each other, the strategy seems comprehensive enough to meet the need of the gender range of the students (male and female). This informed the reason this researcher sought to determine the effect of STAD model of Cooperative Learning strategy on junior secondary school male and female students' achievement in Social Studies in Abakaliki Education Zone of Ebonyi State.

The STAD model of cooperative learning is simple (Arends, 1991). At the end of the teacher's presentation of his/her lesson, students within a given class form four to six member learning heterogeneous teams. Team members use study materials/devices to master the learning materials. They work groups in their teams through peer interactions, tutoring and discussion. They are encouraged to help each other and ensure that everybody understands the material because each student is individually accountable to the success of the team. After students have had adequate time to study together as a team, they

take individual quizzes or class test and are scored through the individual improvement score system (IIS) and the winning team is recognized by summing up the individual scores in each team to make up that team's score. The team with the highest score becomes the winning team and is appropriately rewarded (Igwe, 2002). The conventional teaching method is usually teacher centered (Igwe, 2006) and was used as the control along with the treatment in this study.

Statement of the Problem

Gender differences in achievement have been reported in Social Studies at the junior secondary school level. Incidentally, of all factors causing the low achievement, the teacher centred method (conventional teaching method) that does not encourage students' achievement in Social studies is highest on the list. The situation will affect Nigeria from realizing her global aim of teaching Social Studies in her schools and redesigning Social studies curriculum to meet environmental challenges and problems.

The worry here is that if the low achievements of students in Social Studies in Ebonyi State based on gender differences are allowed to continue unchecked, the global aim of realizing curriculum goals of social studies may not be realized. Thus, the problem of the study is: what are the effects of STAD model of cooperative learning instructional strategy bridging the gap in achievement between male and female students in Social studies?

Research Questions

The following research questions guided the study.

1. What is the effect of the Cooperative Instructional Strategy on the mean achievement scores of students in Social Studies?
2. What is the effect of using STAD model of cooperative learning on the mean achievement of male and female social studies students?

Hypotheses

The following null hypotheses were tested at an alpha level of 0.05:

H0₁: There will be no significant difference in the mean achievement scores of students taught Social Studies using the Cooperative instructional strategy and those taught using the conventional strategy.

H0₂: There will be no significant difference in the mean achievement scores of male and female students taught Social Studies using the Cooperative instructional strategy and those taught using the conventional strategy.

Methodology

Quasi-experimental, pretest, posttest, non-equivalent control group design was adopted for this study. Intact classes were used for the study. Specifically, the study utilized a 2-group design comprising one experimental group (the cooperative strategy group) and the Control group (conventional teaching method). The study was carried out in Abakaliki Education Zone of Ebonyi State. The researcher used only coeducational schools. The total number of public coeducational schools in the education zone is twenty one (21),

courtesy of record from Education Board, 2012. From the same board the record indicated that six hundred and two (602) social studies students enrolled for the year 2012 for SS II. Four secondary schools were drawn from the coeducational secondary schools through simple random sampling technique. Out of the four secondary schools that were used for the study, two were assigned to the cooperative instructional strategy group and two to the control group. The assignment of schools to the two groups was achieved through simple balloting with replacement. Data for the study were collected from two intact classes in JSS II from each of the four schools, making a total of eight intact classes. A total of one hundred and thirty four students participated in the study as sample, seventy two (72) for the experimental group and sixty two (62) for the control group.

The instrument used for this study was a multiple choice test instrument entitled: Social Studies Achievement Test (SOSAT). It had two sections, A and B. Section A sought personal information on the students with respect to name of student, name of the school, gender (sex), age and date of test. Section B consisted of forty two (42) multiple choice test items that covered the contents taught. Each test item was followed by four (4) options (a-d) from which the student selected the correct alternative. Test items covered the concepts taught during the study in the three lower levels of cognitive domain of “knowledge, comprehension and application”.

The SOSAT instrument was subjected to both face and content validation by specialists in Social Studies Education and Measurement and Evaluation. The draft was also face validated by two junior secondary school Social Studies teachers. The test items were scaled down to thirty eight (38) after the face validation. In addition, difficulty and discrimination indices of the items were established. Five items were dropped and this reduced the number of items from thirty eight to thirty three (33) after this exercise. The test of internal consistency for the SOSAT was conducted using the K-R 20 approach, and yielded an internal consistency index of 0.91 which was considered sufficiently high.

At the end of the experiment the posttest was administered to the subjects in the two groups. Data that were collected during the pretest and posttest for the two groups were used to answer the research questions and test the hypothesis through mean and standard deviation for the research questions and ANCOVA for the hypotheses.

Result and Discussion

Research Question 1

What is the Effect of the Cooperative Instructional Strategy on the mean achievement scores of students in Social Studies?

Table 1: Mean Achievement Result on Cooperative Learning and Conventional Teaching Method

Instructional Strategies	N	Mean	SD
STAD (Cooperative instructional strategy)	72	76.96	6.00
Conventional instructional strategy	62	50.37	7.45

From the results in table 1, STAD aspect of cooperative method had a mean score of 76.96 with a standard deviation of 6.00 for seventy two (72) students whereas the

conventional teaching method had a mean score of 50.37 with a standard deviation of 7.45 for sixty two (62) students. The above results indicated that STAD aspect of cooperative learning is more facilitating for better achievement than the conventional teaching method.

Research Question 2

What is the effect of using STAD model of cooperative learning on the mean achievement of male and female social studies students?

Table 2: Mean Achievement Results on Treatment Based on Gender

Gender Categories	N	Mean	SD
Male	32	77.31	6.30
Female	40	76.68	5.82

From the results of data analysis as shown in table 2, male students numbering thirty (32) had a mean score of 77.31 with a standard deviation of 6.30 while female students numbering forty (40) had a mean score of 76.68 with a standard deviation of 5.80. The above results show that both the male and female students performed marginally as the difference between their scores is significantly small.

Hypothesis Testing

HO₁: There is no significant difference in the mean achievement scores of students taught social studies using the cooperative instructional strategy and those taught using the conventional strategy

Table 3: ANCOVA Result based on Cooperative Instructional and Conventional Instructional Strategy

Source of variation	Sum of squares	DF	Mean square	Fcal	Fcv
Covariates	24.312	1	24.312	.590	
Main effects	24128.601	2	12064.300	292.679	
Teaching methods	24126.621	1	24126.621	585.310	3.89
Explained	24172.798	4	6043.200		
Residual	5317.410	129	41.220		
Total	29490.209	133	221.731		

Significant at P<0.05

HO₁ states that there is no significant difference in the mean achievement scores of students in social studies. From ANCOVA results in table 3, result is significant because Fcal is greater than Fcrit, meaning that HO₁ is not accepted. Hence, there is a significant difference in the mean achievement of students between STAD Model of cooperative learning and the Conventional Teaching method.

HO₂: There is no significant difference in the mean achievement scores of male and female students taught social studies using the cooperative instructional strategy

Table 4: ANCOVA Result of Male and Female Students taught using STAD Model of Cooperative Learning Strategy

Source of variation	Sum of squares	DF	Mean square	F	Fcv
Covariates	25.501	1	25.501	.698	
Main effects	8.788	1	8.788	.240	
Gender	8.788	1	8.788	.240	4.00
Explained	34.290	2	17.145	.469	
Residual	2522.585	59	36.559		
Total	2556.875	71	36.012		

Not significant at $P < 0.05$

H_{O2} states that there is no significant main effect of gender on students' achievement in social studies. From ANCOVA results in table 4, F. cal is less than F.crit. of 4.00. Hence, H_{O2} is not rejected meaning that there is no significant difference.

Discussion

From the results in tables 1 above, it was established that students who used STAD aspect of cooperative strategy performed better than those who used conventional teaching method. The study also found out that H_{O1} was significant showing that there was a significant difference in the mean achievement of students' in social studies. The above results agree with the study of Adeyegbe (1993) where major methods of teaching social studies of discussion, assignment, note copying and project performed better than the conventional teaching method. The result of the H_{O1} is in line with Igwe (2006) who tested for significance of method used in teaching chemistry to bridge gap in achievement between male and female at 0.05 level; which was found to be significant. The results in this study could not have been any different as students interacted in small discussion groups, which facilitated learning. Hence, the result obtained justified the procedure presented by this strategy.

The research question 2 as well as hypothesis 2 with results in tables 3 and 4 tried to determine the effect of instructional strategies and their significant effects of students' achievement on male and female students (gender). Result showed that male performed marginally better than females in tables 3 under cooperative strategy.

With regard to the results of hypothesis 2 in table 4, it was found that gender had no significant effect on students score in cooperative learning. The above result is in line with Alebiosu (1998) and Ogbu (2008) who found no significant effects of male and female students in Biology and Social Studies respectively. Hence, STAD model of cooperative learning is an effective teaching method for bridging the gap differences in achievement between male and female students in social studies. The above result situation could have resulted from the interactive nature of STAD over the teacher centred conventional teaching method.

Educational Implications

The results of this study have educational implications for teachers, students, institutions of higher learning, curriculum planners and school management. Cases of poor achievement in JSS social studies have been pointed out generally. The use of the

strategy would mean improved performance by students in their school work in particular. If the strategies are neglected by teachers, it means that students' achievement will continue to be low.

The result on significance of hypothesis two has educational implications for teachers who when they adopt the STAD model of cooperative learning will very highly bridge the gap in achievement of male and female students in social studies. By so doing the gender stereotyping that is incidence in most of the programmes of higher institutions in Nigeria will be abridged.

Recommendations

Following the results of this study, these recommendations are made:

1. STAD model of cooperative learning strategy instruction should be adopted in junior secondary schools in Ebonyi State.
2. Teachers should use the model in teaching the students without minding the sex of the students. They should teach unassumingly.

Conclusion

The results of the study showed that students performed very highly using STAD model instructional strategy and that especially this strategy has the efficacy of erasing gender stereotyping in our school system. It is therefore expected that putting in use the recommendations of this study based on the findings would not only improve the performance of Social Studies students in Ebonyi State but also be of equal benefit to both male and female students.

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