

Effect of Cooperative Learning Strategy on Secondary School Students' Achievement in Commerce in Enugu State, Nigeria

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Abstract

The study investigated the effect of Cooperative Learning Strategy on Secondary School Students Achievement in Commerce in Enugu State. The design adopted for the study was quasi experimental, precisely pretest, Posttest non-equivalent control/group. Two research questions and three null hypotheses guided the study. The population for the study consisted of 450 SSS one students who offered commerce in 2019/2020 academic year in Enugu State, Nigeria. The sample consisted of eighty students (40 males and 40 females) drawn from the target population using sample random sampling technique. The instrument used for data collection was Commerce Achievement Test (CAT). The instrument was face and content validated by three experts. The instrument was further tested on 20 Senior Secondary School one students similar to those used for the study in Ebonyi State. The researcher adopted the Kuder Richardson formula (K-R20) in determining the pre-CAT and post-CAT hence yielded reliability coefficient of 0.65. Mean and standard deviation was used in answering research questions. Hypotheses were tested using Analysis of covariance (ANCOVA) at 0.5 level of significance. The study revealed that: students taught commerce using cooperative method performed better than their counterparts using conventional method. It also revealed that male students achieved higher than their female when taught commerce using cooperative learning strategy. Based on the findings, it was recommended among others that government should make cooperative teaching strategy compulsory.

Keywords: Commerce, Cooperative strategy, secondary School and achievement.

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INTRODUCTION

One of the strategies for fighting the menace of unemployment is by teaching the youths the subject commerce. According to Anyaele (2020), commerce is the study of production, distribution and exchange of goods and services aimed at satisfying human wants and in order to earn a living. The author further opined that commerce increases the citizen's standard of living. No wonder commerce is introduced in secondary schools.

Commerce is one of the electives subject in Business Studies in Senior Secondary Schools, (Federal Republic of Nigeria (2014). The West African Examinations Council (2009) stated that, Commerce comprises some elements of marketing and Business law while the main thrust of the subject is the study of the functions of commercial institutions. Based on this, commerce is a subject should be especially taught for its desired outcomes.

The primary objectives of teaching commerce in senior secondary schools according to Chibuikwe (2019) are to: enable the students to appreciate the role of commerce and its relationship with other aspects of production; enable the students to understand and appreciate the basic concept and principles of commerce to practical situations. With these objectives, students in secondary schools will be useful in the society.

Secondary school is where secondary education is obtained. According to the Federal Republic of Nigeria (2014), secondary education is a level of education where children receive education after primary education and before the tertiary stage. Anieke and Nwankwegu (2019), stated that secondary equips the learners with the background knowledge of basic arts and science related subjects for transition into tertiary institution.

Senior secondary schools are the next stage after upper Basic education three (Ugwunwoti and Onah, 2020). However, this study focused on senior secondary school one (SSS1) despite having senior secondary school two and three respectively. In senior secondary school one, various teaching methods are used by commerce teachers like lecture, discussion, demonstration, sales talk, field trips among others. However, stakeholders are worried that a lot are yet to be achieved regarding the objectives of commerce.

Could it be that the objectives of commerce depend on the methods adopted by teachers to be achieved? Eze and Okrie (2019), asserted that, the method used by teachers in sharing knowledge with the students is one of the factors influencing learning achievements of students in all levels of educational system. Ubani and Ndinka (2017) noted that, appropriate methods enhances learning achievement whereas defective and obsolete pedagogical strategies could suppress knowledge realization of learning objectives.

Research documents have shown that most commerce teachers still employ teachers-centred methods of teaching which make students passive and encourage role learning. These teachers-centred methods include the conventional lecture method and demonstration method. Many researchers in commerce (Business Studies) have

recommended in changing from teaching-centred method to learner-centred methods. Ugwunwoti (2021) observed that learner-centred methods engage students actively in the learning process.

According to Lunenburg (2011), the use of learner-centred teaching methods in classroom promotes students' academic achievement, critical thinking and problem-solving skills. It is believed that some of these learner-centred methods like cooperative learning strategies will promote students academic achievement.

Cooperative method instructional technique foaster critical thinking in students without depending on the instructor for answers (Eze and Okorie, 2019). The authors further observed that, cooperative learning has proven to be effective for all types of students, including academically gifted and mainstream students. In cooperative learning, students work in pairs as need arises and then get back to the larger group for interaction. Apart from this, the students in a group learn the same course, work together and share responsibility and teachers as facilitator not as dispenser of knowledge. (Ugwunwoti, 2021). This will enhance the student academic achievement.

Students academic achievement is a notable change in students performance as a result of their exposure to specific programme of instruction. According to Amadike (2014), achievement is an attained success in any given success in learning specific curriculum content. In order word, achievement is concerned with one's ability to perform with adequacy and excellence when measured against specific standard of attainment.

In this study, cooperative learning strategy is the experimental group while other is conventional lecture method. Hence there is need to investigate the academic achievement of students in commerce under the following topics of advertising, structure of Business, Division of commerce and trade. Moreover, this study was carried out in Enugu education zone of Enugu State. Enugu state is one of the five states in Eastern part of Nigeria with six (6) education zone.

Despite the crucial role commerce plays in the conduct of business generally, the achievement in the subject area at senior secondary school level is disencouraging based on the experience of teachers in teaching commerce over the years. Student poor academic performance in commerce can be linked to the teaching method(s) or techniques(s) used in teaching commerce.

Result analysis by the West African Examinations Council (2020), showed that the commerce recorded 53 percent failure on 2019 May/June SSCE. This poor performance has been of a great concern to the stakeholders of the subject.

Apart from teaching method employed by teachers in teaching commerce, gender is another variable to be considered. Gender according to Abdul-Raheem (2010), involves the roles, attitudes, behaviour and values ascribed by the society to male and females.

Agboola (2019), opined that male students experience less anxiety about the use of modern technology skills than female students. This is in contrast with the study of Simsek, Yular and kikuk (2013), that gender has no effect on the influence of the cooperative teaching method on academic achievement of students. Therefore, an investigation of gender influences in this research will shade more light on the issue of the commerce in Enugu Education zone of Enugu State, Nigeria.

Statement of the problem

The learning of commerce at the secondary school level is expected to be compulsory due to the central role it plays in the conduct of business generally. A careful look at the west African senior school certificate examination syllabus in commerce, shows that the subject comprises some elements of marketing and Business law while the main thrust of the subject is the study of the functions of commercial institutions. Yet, it is disappointing to observe that, students achievement in the subject is very low. This low achievement has been blamed partly on inappropriate instructional strategies which do not allow students achieve participation in the learning process.

Experts and researchers have recommended a repositioning from teacher-centred to learner-centred techniques. Since, cooperative learning is a learner-centred method the present study sought to investigate the effect of cooperative learning strategy on secondary school students achievement in commerce in Enugu State.

Purpose of the Study

The main purpose of the study was to investigate the effect of cooperative learning strategy on secondary school students achievement in commerce in Enugu state. Specifically, the study sought to:

1. determine the mean achievement scores of SSS1 students exposed to cooperative learning and conventional lecture method in both pre-test and post-test.
2. determine the mean achievement scores of male and female SSS students exposed to cooperative learning strategy and conventional method.

Research Questions

The following research questions guided the study

1. what are the mean achievement scores of SSS 1 students exposed to cooperative learning and conventional lecture method in both pretest and posttest?
2. what are the mean achievement scores of male and female SSS1 students exposed to cooperative learning strategy and conventional method.

Hypotheses

The following research hypotheses were tested at .05 level of significance

HO₁: there is no significant difference in the mean achievement scores of SSS1 students exposed to cooperative learning strategy and those exposed to conventional lecture method.

HO₂: There is no significant difference in the mean achievement scores of male and female students exposed to cooperative learning strategy.

HO₃: There is no significant interaction between teaching method and student gender on SSS1 students mean achievement scores.

Method

The study adopted a quasi-experimental design that involved one control group and one experimental group. Precisely, it used pretest, posttest non equivalent control group design using intact classes with randomization. The study was carried out in Enugu Education zone of Enugu state in 2019/2020 session. The population for the study consisted of all the commerce students in SSS1 totally 450 in 2019/2020 academic year. The sample for the study which comprised 80 SSS one students (40 males and 40 females) was drawn from the target population using simple random sampling techniques.

Commerce Achievement Test (CAT) used to collect achievement scores (pretest and posttest), was developed by the researchers. It has fifty (50) multiple choice questions with four options each. The items were drawn using table of specification to make sure that content areas are covered, maintain and spread across the different levels of the domain tested. CAT was validated (face and content) by three research experts, after corrections by the experts, it was confirmed to have face content validity. CAT yielded a reliability coefficient of 0.65 using kudar Richardson 20(KR- 20).

The researcher trained three regular commerce teachers (research assistants) in the three senior secondary schools used for the study for the period of two weeks. They were trained on selected topics used in the study. CAT was administered to all concerned of the study as pretest. Thereafter, the instrument was administered for a period of six (6) weeks.

The experimental (cooperative) group in each school was taught the selected commerce topics using cooperative learning strategy; while the control group in each school was taught same topics using conventional lecture method. All topics were drawn from SSS1 commerce scheme of work.

Mean with standard deviation was used in answering research questions while Analysis of covariance (ANCOVA) was used in testing hypotheses at 0.05 level of significance.

Result:

Research question one: What are the mean achievement scores of students taught commerce using cooperative learning strategy and those taught using conventional method in both pretest and posttest?

Table 1:

Mean achievement scores of students taught commerce using cooperative learning strategy and those taught using conventional method			
GROUP		PRETEST	POSTTEST
EXPERIMENTAL GROUP	N	40	40
	Mean	35.25	63.08
	SD	3.128	9.836
CONTROL GROUP	N	40	40
	Mean	35.25	51.30
	SD	3.209	6.014

The results in table 1 above, indicate that the experimental and control group obtained a mean score of 35.25 and 35.25 respectively in their pretest mean score with corresponding standard deviation of 3.128 and 3.209. After treatment, the posttest score of students in experimental group is 63.08 with standard deviation score of 9.836. On the other hand, the students in control group had posttest mean score of 51.30 with a corresponding standard deviation of 6.014. The difference in mean gain between students in experimental group and control group is 11.78. This indicates that students in experimental group achieved higher than students in control group, hence, students taught commerce using cooperative learning strategy achieved better than their counterparts taught using conventional method. However, the standard deviation scores of the students in the post test for the experimental group was 9.836, while for the control group was 6.014 indicating that the student

individual scores clusters around the mean in the control group than the experimental group.

Research question two:

what are the mean achievement scores of male and female students taught commerce using cooperative learning strategy and those taught using conventional method in both pretest and posttest?

Table 2:

Mean achievement scores of male and female students taught commerce using cooperative learning strategy and those taught using conventional method

Group			PRETEST	POSTTEST
EXPERIMENTAL	MALE	N	20	20
		Mean	36.00	69.65
		SD	3.449	7.889
	FEMALE	N	20	20
		Mean	34.50	56.50
		SD	2.646	6.732
CONTROL	MALE	N	20	20
		Mean	35.15	52.50
		SD	3.376	5.835
	FEMALE	N	20	20
		Mean	35.35	50.10
		SD	3.117	6.095

Table 2 shows that male students in the experimental group had mean achievement of 36.00 for pretest with standard deviation scores of 3.449. Likewise, the female students in experimental group had mean achievement scores of 34.50 for pretest and 2.646 for standard deviation. It was also revealed that the students in control group had pretest scores of 35.15 for male and 35.35 for female with their respective standard deviation scores of 3.376 and 3.117. After treatment, posttest scores of students in experimental group, shows that male students obtained mean score of 69.65 with standard deviation score of 7.889, whereas their female counterpart obtained mean score of 56.50 with standard deviation score of 6.732. However, the male students (69.65) in the experimental group achieved higher than their female (56.50) counterpart, and the difference was significant. Although, the standard deviation scores for male (7.889) and female (6.732) students in the experimental group, indicates that the female students' scores were more clustered around the mean than their male counterpart. Also, the posttest scores of students in control group, shows that male students obtained mean score of 52.50 with standard deviation score of 5.835, whereas their female counterpart obtained mean score of 50.10 with standard deviation score of 6.095.

Table 3:

Analysis of Covariance of mean achievement scores of male and female students taught commerce using cooperative learning strategy and those taught using conventional method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Dec
Corrected Model	4559.837 ^a	3	1519.946	34.012	0.000	
Intercept	261632.813	1	261632.813	5854.548	0.000	
Group	2773.013	1	2773.013	62.052	0.000	S
Gender	1209.013	1	1209.013	27.054	0.000	S
group * gender	577.813	1	577.813	12.930	0.001	S
Error	3396.350	76	44.689			
Total	269589.000	80				
Corrected Total	7956.187	79				

a. R Squared = .573 (Adjusted R Squared = .556)

Hypothesis one: There is no significant difference between the mean achievement scores of students taught commerce using cooperative learning strategy and those taught using conventional method.

Table 3 shows that the F-value on mean achievement scores of students taught commerce using cooperative learning strategy and those taught using conventional method is 62.052 which is significant at 0.000 level of significance, which is less than 0.05 level of significance set for the study. Therefore, the null hypothesis is rejected; this means that there is a significant difference between the mean achievement scores of students taught commerce using cooperative learning strategy and those taught using conventional method.

Hypothesis two: There is no significant difference between the mean achievement scores of male and female students taught commerce using cooperative learning strategy.

Table 3 shows that the F-value on mean achievement scores of male and female students taught commerce

using cooperative learning strategy is 27.054 which is significant at 0.000 level of significance, which is less than 0.05 level of significant set for the study. Therefore, the null hypothesis is rejected; this means that there is a significant difference between the mean achievement scores of male and female students taught commerce using cooperative learning strategy.

Hypothesis three: There is no significant interaction between teaching method and student's gender on mean achievement scores in commerce.

Table 3 shows that the F-value on the interaction between teaching method and student's gender on mean achievement scores in commerce is 12.930 which is significant at 0.001 level of significance; which is less than 0.05 level of significance set for the study. Therefore, the null hypothesis is rejected; this means that there is significant interaction between teaching method and student's gender on students mean achievement scores in commerce.

Summary of the major findings

The result of data analysis has shown that:

1. students taught commerce using cooperative teaching method performed better than their counterparts taught using conventional method.
2. male students achieved higher than their female, when taught commerce using cooperative learning strategy.
3. there is a significant difference between the mean achievement scores of students taught commerce using cooperative learning strategy and those taught using conventional method.
4. there is a significant difference between the mean achievement scores of male and female students taught commerce using cooperative learning strategy.
5. there is significant interaction between teaching method and student's gender on students mean achievement scores in commerce.

Discussion of the findings

The data presented in table 1 showed that students in experimental group achieved higher than students in control group; hence, students taught commerce using cooperative learning strategy achieved better than their counterparts taught using conventional method. This is in agreement with the opinion of Eze and Okorie (2019) that cooperative method instructional techniques that foster critical thinking in students without depending on the instructor for answers.

However, the result presented in table 3 indicate that they was a significant student taught commerce using cooperative learning strategy and those taught using conventional method.

Research question two sought to know the mean achievement scores of male and female, students in both the cooperative learning strategy and conventional method in both pre-test achieved higher than the female, when taught commerce using cooperative learning strategy.

The null hypothesis tested in false 3, showed that these was a significant difference between the mean achievement scores of students taught using commerce using cooperative learning strategy and those taught using conventional methods. The finding experience less anxiety about the use of mortem technology skills than female students.

The findings is in contract with the study of Simsek Yular and Kikuk (2013) that gender has no effect on the influence of the cooperative teaching method on academic achievement of students.

Again, the hypothesis ,tree tested Table 3 showed that these was significant interaction between teaching method and students gender on academic mean achievement scores in comers .

Recommendations

From the findings of this study, the following recommendations are deemed necessary.

1. The post-primary schools management board (PPSMB) should make the use of cooperative method compulsory for commerce teachers
2. Commerce teachers at the secondary school level should up-date their knowledge on the use of cooperative teaching method.
3. These should be regular workshops and seminars on the use of cooperative teaching method for all stakeholders.
4. Female commerce students should be advised to work hand in hand with their male counterparts for improvement on cooperative learning method.

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