



Effect of Cooperative Learning Strategy on Students Academic Performance in Commerce in Secondary Schools

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ABSTRACT

This study assessed the Effect of a Cooperative Learning Strategy on Students' Academic Performance in Commerce in Secondary Schools in Lagos State. It aimed to examine the effects of Conventional and cooperative learning strategies on the academic performance of students in commerce in Lagos State. The reliability coefficient realized was 0.82 which shows that the instrument was strong. Two research questions were raised and hypotheses were formulated, tested, analyzed, and interpreted. The research methodology employed was quasi-experimental design type, simple random sampling techniques were used to select from the senior secondary schools in Lagos State. The sample size comprised Commerce teachers and SS2 students in the sampled schools. The researcher used Stratified Random sampling to select the number of respondents per school. The instrument that was used is the Commerce Achievement Test (CAT), with 20 questions adapted from the Lagos SSCE commerce examination of 2014. The data obtained from the field was tested statistically using Statistical Package Social Sciences (SPSS). The findings of this study revealed that the cooperative learning strategy had a significant effect on the academic performance of Commerce students in Lagos State Secondary School.

ARTICLE INFO

Article History:

Submitted/Received 02 Mei 2022

First Revised 12 Jun 2022

Accepted 30 Aug 2022

First Available online 01 Sep 2022

Publication Date 01 Sep 2022

Keyword:

Academic performance,

Commerce,

Cooperative learning.

1. INTRODUCTION

The prime objective of teaching and learning is to bring positive change in the behavior of the learner. The change can occur when the teacher imparts the required knowledge, skills, principles, and values to the learner. Teaching and learning are characterized by give and take between the teacher and the learner. However, for the teacher to impact significantly on the performance of students, the teacher needs to choose a method of instruction in line with the mental readiness of the students (Aishalya *et al.*, 2022). For students to perform wonderfully in schools, some requirements must be met ranging from qualified teachers, enough teaching materials, well-ventilated classrooms, and purposeful administration in the school among others (Zepke *et al.*, 2011; Rüschoff & Ritter, 2001). There are varieties of teaching methods at the disposal of the teacher such as the corporative method, drama method, field trip method, discussion method, lecture method, play-way method, and excursion method among others. Commerce is a social science discipline taken by students in commercial classes at a higher level of secondary schools that is, SS1 – SS3, and science students are exempted from taking it because it is not a natural science.

The teachers, who are supposed to guide students after defining the learning task, do allow students to deviate from the main theme of the discussion which is an abuse of the method. There are cases where the teachers leave the classes after assigning the task for discussion on the premise that the students can discuss freely on their own (Maheshvari, 2022; Ekamilasari & Puspitasari, 2021). The absence of the teacher from the classroom is an automatic license for some students to quarrel, and deviate from the main point of discussion with the consequent negative effect on their performance. The method to be used for effective teaching and learning is a matter of grave concern to teachers and educators (Atakpa, 2004; Bebbington *et al.*, 2007; Malik *et al.*, 2011; Marriott & Lau, 2008). It has been observed that the conventional method is commonly used for teaching commerce in Lagos state secondary schools in which the teacher directs students to learn through memorization and recitation, which do not develop their critical solving skills.

The conventional method does not permit students to freely interact among themselves instead they have to receive the knowledge and ideas from the teacher as final (Albar *et al.*, 2021). The method is concerned with the teacher being the controller in the environment and what the students learn (Jizat & Sulong, 2021). This method is not so effective because the students are not allowed to interact with the environment and maximally develop their intellectual capabilities.

Over the years secondary school students in Lagos state have expressed hues and cries over the conventional method of teaching employed by their teachers in teaching them commerce as it is dominated by the teacher thereby rendering them passive listeners. This method is characterized by the teacher talking and writing a bulky note on the board for the students to copy which is very tiresome. Because of this, the researcher intends to investigate the effect of the discussion method of teaching on the performance of students in commerce in senior secondary schools in Lagos State (Ogben & Amahi, 2008; Pandey, 2008; Okorie *et al.*, 2014). Confirmed that the methods adopted by teachers in most cases include the conventional method (lecture) with very little concern for practical activities. Further that a teacher is expected to be a facilitator whose main function is to help learners to become active participants in their learning and thereby make a meaningful connection between prior knowledge, new knowledge, and the process involved in learning. If children are allowed to be listened to and guided in a non-threatening atmosphere, they would perform wonders in terms of problem-solving and decision-making.

Cooperative is a method in which the teacher leads or guides the students in expressing their opinions and ideas to identify and solve problems collectively (Alghamdi & Gillies, 2013; Aziz & Hossain, 2010). The cooperative method works on the principle that the knowledge and ideas of several people are more likely to find solutions or answers to specified problems or topics (Ajaja & Eravwoke, 2010). This is in line with the saying that "Two good heads are better than one". The cooperative method of teaching engages both the teachers and students in thinking. It also develops students' social skills of talking and listening (Gokkurt *et al.*, 2012; Nnaobi, 2007). Of course, the method also has some demerits including the possibility that class may be diverted from the topic. Academically weak students may not actively take part in the lessons. Some brilliant ones may likely take over the discussion. Problems may occur among the participants owing to a lack of respect for other people's" opinions and the whole class may turn into a state of pandemonium (Shaturaev, 2023; Erinoshio *et al.*, 2008; Felder & Rugarcia, 2000; Aydin, 2011). The above problems may arise as a result of poor handling of the cooperative method.

The researcher used the planned cooperative method in the experimental group where he initiated the discussion by specifying a topic for the students to discuss while he moderated. Commerce is the social science that describes the factors that determine the production, distribution, and consumption of goods and services. In teaching commerce in Nigerian schools, therefore, learners should be exposed to those processes that will make them identify the major difference between information, knowledge, and reality (Obeka, 2010; Osokoya, 2006). Learners gain knowledge when appropriate information is given to them and they process the information constantly. The information does not become knowledge automatically until learners have been actively involved in its processing (Akinsanya, 2012; Freeman, 1996).

Therefore, commerce teachers should promote cooperation as a method of teaching Commerce that encourages the active participation of learners in learning processes. Cooperative is a method of teaching Commerce in Nigeria. It works on the principle that many people are to put their heads together in terms of knowledge and ideas to find solutions to specified problems. The activities of the cooperative group are to be regulated and directed by the teacher or an appointee of the class (Rizaldi & Linasari, 2021; Parveen & Batool, 2012).

The exchange of ideas between several people is the best process of learning and teaching one another. In the classroom environment, a cooperative is the best way of promoting conducive learning and convenient teaching situation (Hossain & Tarmizi, 2013). It refers to the method of instruction which allow students to express their views or opinions orally on certain issues. One person speaks at a time, while others listen. Different forms of discussion can be used in the classroom. Kochhar identifies two major types of discussions which are formal and informal. Informal discussions are governed by a pre-determined set of rules and it includes debates, panels, symposia, and so forth. Participants present multiple points of view, respond to the ideas of others, and reflect on their ideas to build their knowledge, understanding, or interpretation of the matter at hand. The research was informed as a result of the relevance of the cooperative method of teaching in preparing the students for group work and encouraging critical thinking as well as problem-solving (Savery & Duffy, 1995; Sidik & Masek, 2021). The prime focus of the study is to find out the effect of the cooperative method on the performance of students in commerce in secondary schools in Lagos State.

2. METHODS

A quasi-experimental design was adopted. The design enables the researcher to identify and stabilize the effects of learning methods on the academic performance of students in commerce in achieving a goal. Quasi-experimental design merely measures two or more variables rather than manipulating one or more independent variables and subsequently measuring the dependent variable. The population of the study includes all the SSS 2 commerce students in the 339 public secondary schools that made up the six educational districts in Lagos State. The researcher used simple random sampling techniques to select from the senior secondary schools in Lagos State. The sample size comprised Commerce teachers and SS2 students in the sampled schools.

The researcher used Stratified Random sampling to select the number of respondents per school. The instrument that was used is the Commerce Achievement Test (CAT). The CAT contains 20 questions adapted from the Lagos SSCE commerce examination of 2014. The 20 questions were raised to 100% to determine the performance of the sampled students in the test. The instrument designed for data collection will be subjected to both face and content validity. Face validity refers to the relevance of the items to what is being measured. That is to what extent the items measure what they are expected to measure.

The researcher visited the sampled schools to teach or watch the commerce teacher teach using the two methodologies and then administer the CAT to the learners. The data obtained by the researcher from the field was tested statistically; Statistical Package Social Sciences (SPSS) was employed for analyzing the data. The mean score will be used to answer the research questions, and ANCOVA was used to test the hypotheses raised at a 0.05 level of significance.

Despite the potential benefits of cooperative learning strategies for improving students' academic performance, the implementation and effectiveness of these strategies in secondary schools in Lagos State remain largely unexplored (O'Grady, 2003; Oyediji, 1996). Given the complex and diverse educational context in Lagos State, it is important to investigate the extent to which cooperative learning strategies can positively impact students' academic achievement in commerce and identify any potential barriers to their implementation. Therefore, this study aims to examine the effect of cooperative learning strategies on students' academic performance in commerce in secondary schools in Lagos State and explore factors that may facilitate or hinder their successful implementation.

3. RESULTS AND DISCUSSION

The result of this study is presented according to the research questions. Research question no 1 is about the effects of cooperative learning strategy on the academic performance of secondary school students in commerce in Lagos State (**Table 1**).

Table 1. Mean of pretest and posttest scores of google classroom, edmodo, and traditional methods on students' achievement in educational technology concepts.

Group	N	Pretest \bar{X}	Posttest \bar{X}	Mean Gain \bar{X}_z
Cooperative learning strategy	85.00	13.81	63.22	49.41
Conventional learning strategy	85.00	14.85	62.55	47.70

The data presented in **Table 1** shows that the experimental group (Cooperative learning strategy) had a mean score of 13.81 in the pretest and a mean score of 63.22 in the posttest

making a pretest, posttest mean gain in the experimental group (Cooperative learning strategy) to be 49.41. The control group (conventional learning strategy) had a mean score of 14.85 in the pretest and a mean score of 62.55 in the posttest making the pretest and the posttest mean gain in experimental group 2 to be 47.70. With these results, the students in experimental group 1 (google classroom) had the highest mean gain in the achievement test followed by the experimental group 2 (Edmodo) than the students in the control group. Hence, students taught educational technology through google classroom performed better than those taught using Edmodo and traditional methods (Puspitawati *et al.*, 2021; Adedayo, 2012).

The next research question 2 is about the differences in the effects of cooperative learning strategy on the academic performance of secondary school students in commerce in Lagos State based on gender (**Table 2**). The data presented in **table 2** show that male students taught commerce with the cooperative learning strategy had a mean achievement score of 13.93 in the pretest and a mean achievement score of 65.04 in the posttest making a pretest, posttest mean gain of 51.11.

Meanwhile, female students taught commerce with a cooperative learning strategy had a mean achievement score of 13.63 on the pretest and a posttest mean achievement score of 60.55 with a pretest, posttest mean gain of 46.92. Also, male students taught commerce with a conventional learning strategy had a mean achievement score of 13.75 in the pretest and a mean achievement score of 63.15 in the posttest making a pretest, and a posttest mean gain of 49.40. Female students taught commerce with a conventional learning strategy had a mean achievement score of 16.93 in the pretest and a posttest mean achievement score of 61.39 with a pretest, posttest mean gain of 41.46. With these results, male students had higher mean achievement scores than female students in the Cooperative learning strategy Test. Thus, there was an effect attributable to the gender on the cooperative learning strategy test.

Table 2. Pretest and posttest mean scores gender difference in the main effects of cooperative learning strategy on academic performance of secondary school students in commerce in lagos state.

Gender	Cooperative Learning Strategy				Conventional Learning Strategy			
	N	Pretest	Posttest	Mean (\bar{X})	N	Pretest	Posttest	Mean (\bar{X})
Male	50.00	13.93	65.04	51.11	49.00	13.75	63.15	49.40
Female	35.00	13.63	60.55	46.92	36.00	16.93	61.39	41.46

The following null hypotheses were formulated during the cause of the study

- (i) Ho1: There are no significant differences in the effects of cooperative learning strategy on the academic performance of secondary school students in commerce in Lagos State.
- (ii) Ho2: There are no significant differences in the effects of cooperative learning strategy on the academic performance of secondary school students in commerce in Lagos State based on gender.

The data presented in **Table 3** shows F-values for, the effects of cooperative learning strategy on academic performance of secondary school students in commerce in Lagos State gender and differences in the effects of cooperative learning strategy on academic performance of secondary school students in commerce in Lagos State based on gender. The F-value of [F (1,445) =1915.437; p<0.05] was significant at a 0.05 level of significance. The null hypothesis is therefore rejected. With this result, there was a significant effect of cooperative

learning strategy and traditional methods of teaching commerce in senior secondary schools in Lagos state.

The F value for gender is [F (1,445) =28.717; p<0.05] and was significant at a 0.05 level of significance. This means that there was a significant gender difference in the main effect of treatments on students' achievement in learning commerce in senior secondary schools in Lagos state. Therefore, the null hypothesis of no significant difference between the effect of gender (male and female) on students' achievement was rejected.

Table 3. Summary of analysis of covariance (ANCOVA) for test of significance of three effects: cooperative learning strategy on academic performance, gender differences in the effects of cooperative learning strategy on academic performance of secondary school students in commerce in Lagos State.

Source	SS	Df	MS	F	Sig.
Corrected Model	125971.667 ^a	6	20995.278	664.247	0.000
Intercept	36626.299	1	36626.299	1158.780	0.000
Pretest	7243.298	1	7243.298	229.163	0.000
Group	121084.844	2	60542.422	1915.437*	0.000
Gender	907.662	1	907.662	28.717	0.000
Group * Gender	282.593	2	141.296	4.470	0.012
Error	13875.750	439	31.608		
Total	1116994.000	446			
Corrected Total	139847.417	445			

a. R Squared = 0.901 (Adjusted R Squared = 0.899)

*Significant at sig of F< 0.05

The interaction effect of treatments and gender has an F-value of [F(1,445)=4.470; p<0.05] and was significant at a 0.05 level of significance. The null hypothesis for the interaction effect of treatment and gender is therefore rejected. Hence, there was a significant interaction effect of gender and treatments on the achievement of students teaching commerce in senior secondary schools in Lagos state.

The findings of research question one and Null hypothesis one in **Tables 1** and **3** respectively showed that the cooperative learning strategy had a significant effect on the academic performance of Commerce students in Lagos State Secondary School. This might be because commerce as a subject does not only require any of the conventional learning strategies but rather requires cooperative, competitive, brainstorming teaching methods. The study approves with the findings of Rasheed and Robyn (2013) which found a statistically significant difference between the mean scores of the students who were taught in the cooperative learning environment (experimental group) and those who were taught English by using the conventional method (control group) in the post-test that favored the cooperative learning strategy (experimental) group. The inference that can be drawn from this finding is that, with a cooperative learning strategy, there is improvement in students' retention, self-esteem, intrinsic motivation, and the development of a more positive attitude towards learning commerce.

The findings from research question two and null hypothesis two as contained in **Table 2** and **Table 3** respectively showed that cooperative learning strategy has a significant effect on the academic performance of Commerce students in Lagos State Secondary School (Khan *et al.*, 2010; Novianti & Pratama, 2021; Supriyadi *et al.*, 2021; Sukmawati & Maryanti, 2022). This might be because commerce as a subject does require conventional learning strategies where both teachers and students can freely exchange ideas and opinions regarding the subject

matter. The method allows the students to gain the values they need to think autonomously inside and outside of the classroom. These findings confirmed that quite many students in secondary schools tend to be active in learning when they are allowed to engage in discussion.

4. CONCLUSION

Based on the findings from the study, it is concluded that cooperative and conventional learning strategies had a significant effect on students' academic performance in commerce. The use of both cooperative and conventional learning strategies helped the commerce students to improve their academic performance both at different rates. Additionally, the usage of a cooperative learning strategy has a high impact on female students than on male students in commerce. the usage of conventional learning strategy has a high impact on male students than female students in commerce.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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