

Effect of Collaborative Learning Strategy on Economics Students' Learning Interest and Academic Achievement in Public Senior Secondary School Students of Federal Capital Territory, Abuja

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Abstract

The study examined the effect of collaborative learning strategy on economics students' learning interest and academic achievement in public senior secondary school students in Federal Capital Territory (FCT), Abuja. The study adopted quasi-experimental research design. The population of the study comprised of 22,320 SS2 students respectively in 96 Public Senior Secondary Schools. The sample for the study comprised of two intact classes with 138 SSII Students. The instruments used for data collection was a 40-item Economics Achievement Test (EAT) and a 20-item Economics Interest Scale (EIS). The instruments were subjected to validation of experts in Economics and Measurement and Evaluation. Scores emanating from the validation process was computed to obtain a logical validity index of 0.78 and 0.72 respectively. The instruments were further subjected to pilot study by administering it to a sample of 30 students within the study population but outside the sampled schools. Results obtained from the exercise were used to obtain reliability indices of 0.77 and 0.74 respectively for the achievement test and interest scale. The research questions were answered using mean and standard deviation while the hypotheses were tested using analysis of covariance (ANCOVA). The findings from the study showed there is a significant difference in the mean interest scores of students taught Economics using collaborative learning strategy and conventional teaching strategy in public senior /secondary schools in FCT, Abuja and there is a significant difference in the mean achievement scores of students taught Economics with collaborative learning strategy in public senior secondary schools in FCT, Abuja. The study recommended that teachers should be trained on the use of collaborative learning strategy in order to enhance learners' interest and also economics teachers should be provided with appropriate and adequate learning materials that enhance students' academic achievement. The study concluded that use collaborative learning strategy enhances students' learning interest and achievement in public senior secondary schools of FCT, Abuja.

Key words: Collaborative Learning Strategy, Students Learning Interest, Academic Achievement.

Introduction

Economics is a vital subject offered at Senior Secondary School level in Nigeria. Economics is traced generally to the economic development of any nation. It is a social science of order, logic and pattern. Because we live in a world of pattern where nothing is entirely new, anyone having very sound grasp of the knowledge of economics may not find it difficult to fit in, since everything about Economics itself is pattern. It has been reported by several scholars in education that good knowledge of economics will help students understand other subjects. Akinoso et al. (2021) averred that any student who does not understand Economics well will end up struggling in other subjects and such students' career options are limited. Elaine (2013) while defining economics as the social science that studies with the production, distribution and consumption of goods and services. Anaduaka and Olaoye (2018) submitted that economics is a logical way of thinking that aims at solving personal and social problems, and it has timely improved business production and recreational activities. The concern of stake holders in the education industry is that in spite of the importance of Economics to the society, students are not performing satisfactorily well in both internal and external examinations. WAEC Economics result analysis in Nigeria from 2016-2020 revealed that 487,835 (31.58%), 443,426 (28.44%), 635,930 (40.78%), 569,570 (35.82) and 534,756 (34.76%) could not pass Economics at credit level in 2016, 2017, 2018, 2019 and 2020 respectively. These numbers of non-credit performance are considered too high by the researchers and it calls for concern.

Academic achievement refers to how students manage their learning and how they cope with or accomplish various tasks assigned by their teachers. Academic achievement is the ability to study and remember facts and to be able to communicate facts and knowledge orally or on paper. Adeniyi and Aderinkola (2022) reports that in educational institutions, success is measured by academic achievement or the extent to which a student meets the standards set by the institution.

Researchers such as Durojaiye et al (2021), affirmed that use of poor learning strategies by economics teachers is a major factor affecting the achievement of students in economics among others. Negative feelings towards learning of economics begin as a result of a number of encounters relating to the way economics teachers present or teach the subject to the students. Because of the importance placed on economics, the National Policy on Education (NPE, 2013), apart from making economics a core subject in both primary and Secondary schools also demand that in order to fully achieve the goals of education in Nigeria and gain from its contribution to the national economy, government shall take necessary measures to ensure that teaching shall be practical, activity-based, experimental, socially interactive and Information Technology (IT) supported. One of the social interactive strategies of teaching economics today which may also significantly enhance achievement, increase students' interest and reduce anxiety of young learners is the collaborative Learning Strategy. Collaborative learning (CL) is described by Rigacci (2020), as 'an instructional method in which students work together in small groups in order to facilitate effective learning. Collaborative learning is an approach in which small groups of students of different levels of ability work together whereby each member in the group is expected not only to learn what is being taught by the teacher, but one student helps group mates study (Abdulwahab, 2016). Collaborative learning strategies

play a crucial role in fostering a conducive learning environment wherein students actively engage with peers to acquire knowledge and develop essential skills (Salma, 2020). Furthermore, the academic achievement of learners is dependent on their level of interest, interest in this context refers to the like or dislike of a learner towards economics as a subject (Olumide, 2016).

A series of empirical reviews have been carried by authors on the effect of collaborative learning on students' academic achievement. Ana (2020) examined the effects of Online Collaborative Learning (OCL) on student achievement and engagement in physical science. A one-group pre-test/post-test pre experimental research design was employed. The participants were Grade 11 students (n=30) in a public stand-alone senior high school in Congressional District 1, Quezon City, Philippines, who were selected using purposive sampling. This study utilized five research instruments: (1) OCL-based lesson plans, (2) Learning Activity Sheets (LAS), (3) Physical Science Achievement Test (PSAT), (4) CIP Engagement Questionnaire, and (5) Student Learning Experience Survey. The collected data were analysed and interpreted quantitatively and qualitatively. Quantitative data were obtained from the validated 40-item achievement test and the adopted engagement questionnaire, while responses to the Student Learning Experience Survey provided qualitative data. Paired t-test was employed to determine the significant difference in achievement and engagement before and after the OCL's implementation. The results showed a significant difference between the pre-test and post-test mean scores of the students in the achievement and engagement in physical science. Likewise, there was a statistically significant difference between the pretest and posttest mean scores for all engagement factors: cooperation, interest, and participation. The result of the survey revealed that students' exposure to the OCL strategy was effective in facilitating significant improvements in their achievement and engagement in physical science.

Onu (2020) the effect of collaborative instructional strategy in improving students' interest and achievement in Biology. The study was adopted quasi-experimental research design and was conducted in Obollo-Afor education zone. The study was conducted in Obollo-Afor education zone of Enugu state and spanned 7 months, between October 2018 to May 2019. Methodology: Population of the study comprised of 1,691 SSI Biology students, from where a sample of 200 students from six (6) intact classes was sampled using multi-stage sampling procedure, to take part in the study. Biology achievement test and Biology interest inventory were instruments used to collect data for the study. Data were analysed using mean, standard deviation and ANCOVA. Findings revealed that students taught Biology using collaborative instructional strategy had higher level of interest. The aim of teaching and learning in any system is to endure a permanent change in behaviour through improved academic achievement, This may however become a distant dream if the appropriate learning strategies are not employed in learning economics in secondary schools, It is based on this realization that the study is geared towards examining the effect of collaborative learning strategy on students' learning interest and academic achievement in economics in public senior secondary schools in FCT, Abuja .

Research Questions

The following research questions guided the study:

1. What difference exist in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja?
2. What difference exist in the mean achievement scores of students taught economics with collaborative learning strategy in public senior secondary schools in FCT, Abuja?

Research Hypotheses

The following null hypotheses guided this study and will be tested at 0.05 level of significance:

1. There is no significant difference in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja.
2. There is no significant difference in the mean achievement scores of students taught economics with collaborative learning strategy in public senior secondary schools in FCT, Abuja.

Theoretical Review

Social interdependence theory is adopted for this study. The theory was propounded by David W Johnson and Roger T Johnson, two American Educational Psychologists in the 1970s. The social I interdependence theory explains how social relationships and interactions, influence motivation, behavior and learning outcomes. The social interdependence theory promotes positive interdependence by ensuring that individuals work together to achieve a common goal, promoting mutual support. The theory further emphasizes on individual accountability, promote interaction and social skills. The theory is relevant to the current research work because it encourages students to collaborate and work in groups in groups complete tasks, promoting mutual support, shared knowledge and collective responsibility.

Research Method

Quasi-experimental research design was used in this study. The population of the study comprises 22,320 SS2 students respectively in 96 Public Senior Secondary Schools on FCT, Abuja. The sample for the study comprised of two intact classes with 138 SSII Students. The instruments used for data collection were a 40-item Economics Achievement Test (EAT) and Economics Interest Scale (EIS) were developed for the study for the purpose assessing students' academic achievement and learning interest in economics. The instruments were subjected to validation of experts in Economics and Measurement and Evaluation. Scores emanating from the validation process was computed to obtain a logical validity index of 0.78 and 0.72 respectively. The instruments were further subjected to pilot study by administering it to a sample of 30 students within the study population but outside the sampled schools. Results obtained from the exercise were used to obtain reliability indices of 0.77 and 0.74 respectively for the achievement test and

interest scale. The research questions were answered using mean and standard deviation while the hypotheses were tested using analysis of covariance (ANCOVA).

Results and Discussion

Research Question 1: What difference exists in the mean interest scores of students taught with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja?

Table 1: Mean and Standard Showing Difference in the Mean Interest Scores of Students taught Economics with Collaborative Learning Strategy and those taught with Conventional Learning Strategy in Public Senior Secondary Schools in FCT, Abuja.

S/N	Groups	N	Pretest		Posttest		Mean Interest Gain
			Mean	Std Dev	Mean	Std Dev	
1	Experimental	75	35.29	7.71	53.25	9.73	17.96
2	Control	63	20.71	3.24	27.87	3.17	7.16

Table 1 shows the difference in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja. Results indicate that the pretest mean and standard deviation interest scores for the experimental group was given as 35.29 and 7.71 respectively while the posttest mean and standard deviation scores were 53.25 and 9.73. As for the control group, the pretest means and standard deviation interest scores were 20.71 and 3.24 respectively while the posttest mean and standard deviation mean scores were given 27.87 and 3.17 respectively. It is observed from the table that the mean interest gain for the experimental group was found to be higher at 17.96 than the mean interest gain of the control group. At 7.16. Hence difference exists a high difference in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja

Research Questions 2: What difference exist in the mean achievement scores of students taught economics with collaborative learning strategy and those taught with conventional strategy in public senior secondary schools in FCT, Abuja?

Table 2: Mean and Standard Showing extent of difference in Mean Achievement Scores of Students taught Economics using Collaborative and conventional Learning Strategy in Public Senior Secondary Schools in the FCT, Abuja.

S/ N	Gender	N	Pretest		Posttest		Mean Achievement Gain
			Mean	Std Dev	Mean	Std Dev	
1	Experimental	76	17.00	2.79	67.75	8.40	50.75
2	Control	62	12.29	4.59	40.00	2.45	27.71

Table 2 shows the mean achievement scores of students taught economics using collaborative and conventional learning strategies differ in public senior secondary schools in FCT, Abuja. Results indicate that the pretest mean and standard deviation academic achievement scores for the experimental group (collaborative) was given as 17.00 and 2.79 respectively while the posttest mean and standard deviation scores were 67.75 and 8.40. As for the control group, the pretest mean and standard deviation academic achievement scores were 12.29 and 4.59 respectively while the posttest mean and standard deviation mean scores were given 40.00 and 2.45 respectively. It is observed from the table that the mean gain for the experimental group was found to be higher at 50.75 than the mean achievement gain of the control group at 27.71. Hence, mean achievement scores of students taught economics using collaborative learning strategy differ to a high extent from those taught using conventional method in public senior secondary schools in FCT, Abuja. Hence, students taught using collaborative strategy achieved better than their counterpart taught using conventional strategy.

Hypothesis 1: There is no significant difference in the mean achievement scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja.

Table 3. Analysis of Variance showing significant of difference in the Mean Achievement Scores of Students taught Economics with Collaborative Learning Strategy and those taught with Conventional Learning Strategy in Public Senior Secondary Schools in the FCT, Abuja.

Source	Type III Sum of				
	Squares	Df	Mean Square	F	Sig.
Corrected Model	288.741 ^a	2	144.37	4.675	.036
Intercept	1738.243	1	1738.243	12.040	.000
Pre-test	1060.546	1	1060.546	4.560	.034
Learning Interest	288.741	1	288.741	4.675	.036

Error	2841.259	72	39.462	7.317	.000
Total	67078.000	75			
Corrected Total	3130.000	74			

Table 3 above shows analysis of variance on the significance of difference in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja. The results showed that at F-calculated value of 4.675, the p-value of 0.036 was found to be less than 0.05. Hence, the result reveals there is a significant difference in the mean achievement scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja.

Hypothesis 2: There is no significant difference in mean achievement Scores of students taught economics using collaborative learning strategy in Public Senior Secondary Schools in FCT, Abuja.

Table 4. Analysis of variance Statistics showing the Significance of difference in Mean Achievement Scores of Students taught Economics using Collaborative Learning Strategy in Public Senior Secondary Schools in the FCT, Abuja.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	472.580 ^a	2	236.29	48.123	.000
Intercept	198.138	1	198.138	20.176	.000
	5772.655	1	5772.655	13.890	.000
Pretest	472.580	1	472.580	48.123	.000
Achievement	451.733	72	6.274	75.323	.000
Error	37721.000	75			
Total	924.312	74			
Corrected Total					

Table 4 above shows the analysis of variance statistic on the significance of difference in Mean Achievement Scores of Students taught economics using collaborative Learning strategy in Public Senior Secondary Schools in FCT, Abuja. The results showed that at F-calculated value of 48.123, the p-value of 0.000 was found to be less than 0.05. Hence, the result reveals that there is a significant difference in mean achievement scores of students taught economics using collaborative learning strategy and those taught using conventional strategy in Public Senior Secondary Schools in FCT, Abuja.

Discussion

Findings from the study on hypothesis one reveal there is a significant difference in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in FCT, Abuja. This finding is in agreement with the findings from the study of Ana (2020) which examined the effects of Online Collaborative Learning (OCL) on student achievement and engagement in physical science. findings showed there was significant the effects of Online Collaborative Learning (OCL) on student achievement and engagement in physical science.

Findings from the study on hypothesis two reveal there is a significant difference in mean achievement scores of students taught economics using collaborative learning strategy in public senior secondary schools in FCT, Abuja. This finding is in agreement with the findings from the study of Onu (2020) t which examined the effect of collaborative instructional strategy in improving students' interest and achievement in Biology. Findings showed there was significant effect of collaborative instructional strategy in improving students' interest and achievement in Biology.

Conclusions

The study concludes that there is a significant difference in the mean interest scores of students taught economics with collaborative learning strategy and those taught with conventional learning strategy in public senior secondary schools in the FCT, Abuja. Findings further revealed that there is a significant difference in mean achievement scores of students taught economics using collaborative learning strategy in Public Senior Secondary Schools in the FCT, Abuja. Based on the findings of the study and conclusion, it was therefore recommended among others that schools should be equipped by the Federal ministry of Education with collaborative learning tools for the purpose of creating an enabling environment that will enhance students' learning interest. Additionally, economics teachers should be provided with appropriate and adequate learning materials that an enhance students' academic achievement in economics.

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