Journal of Theoretical and Empirical Studies in Education (Special Issue)
September, 2025; ISSN: 2360-7172

IMPACT OF COOPERATIVE LEARNING INSTRUCTION ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN ECONOMICS IN ANAMBRA STATE

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Abstract

This study is a survey on the impact of cooperative learning instruction on academic achievement of secondary schools students in Economics in Anambra State. Four research questions and three null hypotheses tested at .05 level of significance guided the study. The study adopted the Quasi-experimental research design. In this quasi-experimental design pre-test and post test where administered to both experimental and control groups. It was carried out in Awka Education Zone of Anambra State. The population of the study comprised of all the SSS2 students in the 45 public secondary schools in Awka Education Zone. The sample of the study is 166 senior secondary school students (SSII) drawn from the population of the study. Stratified random sampling technique was used to select subjects for this study. Six intact classes were used for this study. Subjects for the cooperative learning instruction are 90 in number. This consists of 43 males and 47 females. The total number of subjects for lecture-based instruction are 76. This group consisted of 40 males and 36 females. This brings the sample size to one hundred and sixty-six (166), 83 males and 83 females. The instruments for data collection are two in number: the Economics Achievement Test (EAT) and senior secondary school (SSII) first term examination results of the students in Economics were collected and used to determine the present academic achievement of the students. The instrument was face, content and construct validated by three (3) experts, two (2) from the department of Educational Foundations Nnamdi Azikiwe University Awka. Their contributions and corrections helped the researchers to produce a copy for the study. Application of the Kuder-Richardson's formula K-R20 yielded .76 for the Economics Achievement Test items for the reliability. Means and standard deviations were used to answer the research questions. Analysis of covariance (ANCOVA) was used to test the hypotheses. Results

of the research showed that cooperative learning instruction has high impact in enhancing students' achievement in Economics. Despite the fact that there was mean indication that the male students achieved higher than the female students in the Economics using cooperative learning instruction as an instructional approach, the ANCOVA revealed that cooperative learning instruction has high impact for male than female. Based on the findings of this study, cooperative learning instruction of teaching was recommended to be adopted as one of the common approaches of teaching and learning of Economics in schools. In schools where such communicative approach is being practiced, care should be taken to ensure proper application of the approach.

Keywords: cooperative learning instruction, academic achievement and Economics

Introduction

Economics as a subject has been described as the bedrock for global development, and many nations of the world have keyed into judicious use of it (Okpala, 2015). Essentially, economics is the primary engine of a nation's growth and development. It plays a fundamental role in wealth creation, improvement of the quality of life and real economic growth and transformation in any society. It provides the key to unlocking any country's potential in terms of decreasing overhead costs associated with outsourcing and creating employment opportunities (Obinwa 2014). The impact of economics is felt in every sphere of human life so much that it is intricately linked with all aspects of nation's development. Economics, according to Umeh, (2017) is a social science subject that is studied in secondary school, which is concerned with the study of production, distribution, and consumption of goods and services. It studies how individuals, businesses, governments, and nations make choices about how to allocate resources. Similarly, Onakanowoja (2018) described economics as the study of how people allocate scarce resources for production, distribution, and consumption, both individually and collectively.

Economics as a subject that deals with the real-world situation, which makes the subject empirical science and deals with daily economic problems of life. It relies on

statistics that is applicable to real world situations. In this regard, economists formulate and publish numerous economic indicators, such as Gross Domestic Product (GDP) and the Consumer Price Index (CPI) from statistics to show how it affects an economy. Akarowhe (2017) stated that economics has been used to improve the standard of living, which is the level of quality of life of people in a particular society or country enjoying, which is not only affected by their level of income but the quality and quantity of goods and services made available to them. However, the importance and technicality of this subject makes it necessary that relevant instructional strategy should be used to teach it to the learners.

Teaching methods must be re-examined and organized in such a way that there should be more emphasis on instructional methods that will emphasize less lecture, more students' centered, more discussion and Economics teachers should design classrooms that will make students feel more successful. The teaching method used in the class is one of the factors that make students become passive and have less interaction with each other. Baird (2014) has criticized the traditional (Lecture) method used by teachers because only hardworking students can benefit from it. And to enhance the understanding of Economics, students must be more active in the classroom and must creatively acquire knowledge, especially in understanding various concepts in Economics. Therefore, it is necessary that students are given the opportunities to develop, to interact and to share with friends through cooperative learning activity.

Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. It is an educational approach which aims to organize classroom activities into academic and social learning experiences (Chien, 2012). Cooperative learning requires students to engage in group activities that increase learning

and adds other positive outcomes which include academic gains, improved race relations and increased personal and social development (Damon, 2016). Cooperative learning is a learning process that involves restructuring classes within small groups so that teamwork is embraced (Dike, 2020). It is a learning strategy that encourages group participation in handling assignments and academic or learning problems. Cooperative learning is a method that enables a student to work together and engage both cognitively and emotionally with each other while working towards the same purpose (Harrison, 2016). Students interact through sharing ideas, teaching each other, correcting each other, and evaluating each-others work by giving feedback.

Lecture-based instruction which is referred to as traditional instructional model on the other hand, involves teachers being the sole instructors and knowledge providers even in large classrooms. This is still the most dominant form of education in classrooms as many educators have not implemented cooperative learning in their classrooms (Hien & Thai, 2019). In a cooperative learning class, both the learners and the students have very important roles to play within the whole process. Cooperative learning also hangs its root within the Vygotskian tradition which aims at social interaction either among students or between students and a teacher, and essentially assists students in advancing through the Zone of Proximal Development (ZPD), which Vygotsky defined as: "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in cooperation with more capable peers" (Vygotsky 1978; Holmes, 2017). Based on these discussions, cooperative learning by nature creates opportunities to develop students' cognition by actively communicating with more proficient peers and thereby expanding conceptual potential. Thus, within ZPD, more capable students can provide peers with new ideas

and thereby establish a mutually beneficial social process of learning and improves students academic achievement.

Academic achievement of student is the ability of the student to study and remember facts and being able to communicate his knowledge orally or in written form even in an examination condition. Achievement is accomplishing or finishing something successfully. It means the one's successful completion of a task. According to Tafazoli, (2013) achievement is the success and accomplishment of an academic task by a student or teacher. Students' achievement depends on what the teachers know and their ability to use proper approaches that are effective.

Another area of interest in this study is the effect of gender on academic achievement. Gender refers to the social attributes and opportunities associated with being male and female and the relationships between girls and boys, as well as the relationship between women and men. Tran, (2019) sees gender as a cultural construct which distinguishes the roles, behavior, mental and emotional characteristics between the male and the female. According to National Teachers Institute (NT1) in Hasanah and Surya, (2017) it was evident from researches that girls are often shy of speaking up in class and sometimes fail to, give answers even when they know them. This could be due to gender stereotyping. Researchers like Uchendu, (2015) had shown that there are differences in learning styles, academic achievements and social interaction patterns of male and female students. Kpolovie, and Obilor, (2013) reported in his study that gender had no significant effect on achievement. Approaches teaching and learning that will help in ensuring free interaction among boys and girls in classroom for maximal achievements are needed. Therefore, the researchers decided to carry out this research on the impact of cooperative learning instruction on academic achievement of secondary schools students in Economics in Anambra State.

Statement of the Problem

Many students especially in the study area have fear and lack of interest for Economics; they shun away from Economics classes, paid little or no attention to lessons and as a result, continue to experience difficulties in answering questions in Economics. Therefore, they have very poor achievement and retention in terminal and promotional examinations. Hence, Schools are further challenged to evolve and use teaching and learning approaches that will enable the learners to be equipped with skills for continuous learning and information communication skills; yet in most schools today, learning approaches are still geared towards teacher - centeredness against student-centeredness.

Though it has been observed that learner-centered approaches provide opportunities for students to develop skills in groups' interaction and in working with one another which cooperative learning provides. Since the effectiveness of a learning approach depends on the teacher and his ability to motivate learner in the efforts to gain information, every good learning approach, should ensure active involvement of learners' confidence and self-esteem. In view of this, the study aims to examine the impact of cooperative learning instruction on academic achievement of secondary schools students in Economics in Anambra State.

Research Questions

The following research questions guided the study

1. What is the impact of cooperative learning instruction on academic achievement of secondary schools students in Economics in Awka Education Zone of Anambra State?

2. What is the impact of lecture-based instruction on academic achievement of secondary schools students in Economics in Awka Education Zone of Anambra State?
3. What is the impact of cooperative learning instruction on male and female Economics student's academic achievement in secondary schools in Awka Education Zone of Anambra State?

Hypotheses

The following null hypotheses were formulated and tested and at 0.05 alpha level.

$H0_1$: There is no significant difference in the mean achievement scores of student's exposed to cooperative learning instruction and those exposed to lecture-based instruction in Economics in secondary schools in Awka Education Zone of Anambra state.

$H0_2$: There is no significant difference in the mean achievement scores of male and female Economics students exposed to cooperative learning instruction in secondary schools in Awka Education Zone of Anambra State.

Methods

Quasi-experimental research design was adopted for the study. It is quasi-experimental because the participants will be chosen through convenience sampling methods, rather than a true randomized sample. The study was carried out in Anambra State. The population of the study comprised of all the year two senior secondary school (SSS2) students in the 45 public secondary schools in Awka Education Zone of Anambra State. Awka Education Zone has a total population of 3,890 SSSII students. The populations of male SSSII students are 1,692 while the population of SSSII female students are 2,198. The sample of the study was 166 senior secondary school students (SSII) drawn from the population of the study. Stratified sampling technique was used to

select subjects for this study. Simple random sampling technique was used in selecting Awka Education zone from the six education zones in Anambra State and selection of two secondary schools each from each stratum (Local Government Area) where this study was carried out. This brings the total number of schools for the study to six (6) schools. An intact class was randomly selected from each school. The instrument for data collection was Economics Achievement Test (EAT). The Economics Achievement Test items are 15 in number drawn from Senior secondary school two (SSS2) first term Economics scheme of work in the Senior Secondary Education Curriculum. The senior secondary school (SSII) first term examination results of the students in Economics was collected and used to determine the present academic achievement of the students. The instrument was face, content and construct validated by three (3) experts, two (2) from the Department of Educational Foundations Nnamdi Azikiwe University, Awka. They went through the items and vetted them appropriately. Their comments and suggestions were used to modify the instrument as directed by the validators. The subjects for reliability are 35 students drawn from a secondary school in Ogidi education zone of Anambra State using split half method. Application of the Kuder-Richardson's formula K-R20 which yielded .76 for the Economics Achievement Test items. This established the internal consistency of the item that is, reliability coefficient. Experimental study has a high validity if the threats which may mar the effects of the independent variable are removed or severely minimized. A major strength of the non-equivalent control group design is its ability to control sources of internal invalidity. Some attempts are to be made to control extraneous variables such as non-randomization effect, experimenter bias, and Hawthorne effect. Given the fact that it is not possible to assign subjects to experimental and control groups, it become necessary to ensure similarity among the

groups in terms of gender, background and organization. On Experimenter's Bias, the researcher minimized differences by ensuring that the objectives for each topic covered are the same for the groups, the cooperative learning instruction and Lecture-based instruction groups. The only difference is that groups A were taught using cooperative learning instruction embedded in Vygotsky's approach while groups B were taught using Lecture-based instruction. Hawthorne effect occurres when the subjects are aware that their performance are being studied, so to minimize this, each group were taught by their class teacher for Economics. The data collected for this study was analyzed thus: The research questions were answered using mean and standard deviations, whereas the Analysis of Covariance (ANCOVA) was used to test the hypotheses at .05 level of significance. SPSS version 23 was used to analyze the data.

Results

Research Question One: What is the impact of cooperative learning instruction on academic achievement of secondary schools students in Economics in Awka Education Zone of Anambra State?

Table 1: Pre-test and post-test mean academic achievement of Economics students exposed to cooperative learning instruction.

Learning Approach	Pre-test	Post-test	Gain in Mean	Decision
Cooperative	68.33	86.01	17.68	Impact
Lecture-based	34.44	45.46	11.02	Impact

Data presented in Table 4.1.1 showed the results on the impact of cooperative learning instruction and lecture-based instruction on the mean academic achievement of Economics students' in secondary schools using their pre-test and post test scores. Form the result presented, the post-test for cooperative has a mean achievement score of 86.01 while the pre-test has a mean achievement score of 68.33. There is gain of 17.68 (86.01-68.33) in the mean achievement score. For lecture-based instruction the post-test has a mean achievement score of 45.46 while the pre-test has a mean achievement score of

34.44. There is gain of 11.02 in the mean achievement score which was lesser than that of the cooperative learning instruction of 17.68. This indicates that cooperative learning instruction has more impact in enhancing student's achievement in Economics.

Research Question Two: What is the impact of lecture-based instruction on academic achievement of secondary schools students in Economics in Awka Education Zone of Anambra State?

Table 2: Pre-test and post-test mean academic achievement of Economics students exposed to cooperative learning instruction and lecture-based instruction.

Learning Approach	Pre-test	Post-test	Gain in Mean	Decision
cooperative	68.33	86.01	17.68	Impact
lecture-based instruction	34.44	45.46	11.02	

Data presented in Table 4.1.2 showed the results on the effect of cooperative learning instruction and lecture-based instruction on the mean academic achievement of Economics students' in secondary schools using their pre-test and post test scores. Form the result presented, the gain in mean for the cooperative learning instruction (17.68) is greater than the gain in mean for the lecture-based instruction (11.02). This implies that cooperative learning instruction has high impact.

Research Question Three: What is the impact of cooperative learning instruction on male and female Economics student's academic achievement in secondary schools in Awka Education Zone of Anambra State?

Table 3: Pre-test and post-test mean academic achievement scores of male and female Economics students exposed to cooperative learning instruction.

Gender	Pre-test	Post-test	Gain in Mean	Decision
Male	68.30	86.01	17.71	Impact
Female	68.36	75.85	7.49	

Data presented in Table 4.1.3 revealed that the results on the effect of cooperative learning instruction on the mean academic achievement of male and female Economics students' in secondary schools using their pre-test and post test scores. Form the result

presented, the gain in mean for male (17.71) is greater than the gain in mean for female (7.49). This implies that cooperative learning instruction has high impact for male than female.

Hypotheses One: There is no significant difference in the mean academic achievement scores of students exposed to cooperative learning instruction and those exposed to Lecture-based instruction in Economics in secondary schools in Awka Education Zone of Anambra state.

Table 4: ANCOVA summary table on the mean academic achievement scores of Economics student's exposed to cooperative learning instruction and Lecture-based instruction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	47323.152[a]	2	23661.576	394.141	.000
Intercept	6128.363	1	6128.363	102.083	.000
Post achievement	9.363	1	9.363	.156	.693
learning approach	10983.569	1	10983.569	182.958	.000
Error	9785.427	163	60.033		
Total	520228.000	166			
Corrected Total	57108.578	165			

a. R Squared = .829 (Adjusted R Squared = .827)

Data presented in Table 4.2.1 showed that the p-value (0.000) is less than the .05 alpha value. Based on this, the null hypothesis was rejected at .05 alpha level of significance, and a degree of freedom 1 and 163. This implies that there is a significant difference in the mean academic achievement scores of Economics students exposed to cooperative learning instruction and those exposed to Lecture-based instruction.

Hypotheses Two: There is no significant difference in the mean academic achievement scores of male and female Economics students exposed to cooperative learning instruction in secondary schools in Awka Education Zone of Anambra state.

Table 5: ANCOVA summary table on the mean academic achievement scores of male and female Economics students exposed to cooperative learning instruction.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	105.612[a]	2	52.806	.933	.397
Intercept	2710.997	1	2710.997	47.896	.000
Cooperative Learning	105.533	1	105.533	1.864	.176
Gender	.001	1	.001	.000	.997
Error	4924.388	87	56.602		
Total	425280.000	90			
Corrected Total	5030.000	89			

a. R Squared = .021 (Adjusted R Squared = -.002)

Data presented in Table 4.2.2 showed that the p-value (0.997) is greater than the .05 alpha value. Based on this, the null hypothesis was not rejected at .05 alpha level of significance and a degree of freedom 1 and 87. This implies that there is no significant difference in the mean academic achievement scores of male and female Economics students exposed to cooperative learning instruction.

Conclusion

The study set out to determine the impact of cooperative learning instruction on academic achievement of secondary schools students in Economics in Awka Education Zone of Anambra State. Based on the findings of this study, the following conclusions have been made:

That cooperative learning instruction has more impact in the teaching of Economics at the senior secondary school level. It enhanced students' academic achievement and immerses students in challenging tasks. Rather than beginning ideas and then moving to applications, cooperative learning activities frequently begin with problems, for which students must marshal pertinent facts or ideas and then move to applications. cooperative learning activities frequently involve students actively with problems or questions instead of making them distant observers of questions and answers, or problems and solutions that is students become immediate practitioners.

The results of the study also led to the conclusion that cooperative learning instruction has high impact in enhancing students' achievement in Economics. Despite the fact that there was mean indication that the female students achieved higher than the male students in the Economics using cooperative learning instruction as an instructional approach, the ANCOVA revealed that the high impact of cooperative learning instruction in enhancing mean achievement scores of male and female students in Economics. Finally one can conclude that cooperative learning instruction is a viable approach, in Economics lessons and as such teachers should use cooperative learning instruction to boost learning in schools.

Recommendations

Based on the findings of this study and their implications the following recommendations are proffered:

1. Cooperative learning instruction of instruction should be adopted as one of the common modes of teaching and learning in secondary schools.
2. Cooperative learning instruction should be adopted by teachers because it possesses the necessary ingredients for effective citizenship and harmonious co-existence.
3. Gender should not be place as criteria in selection of teaching approaches for lesson delivery since it has no effect in the academic achievement of the learners.
4. Educationists in Ministry of Education and other stake holders in education should help teachers acquire the skills of cooperative learning and transfer same to learners.

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