

The Effects of Cooperative Learning on Students' Economics Achievement and Attitude towards Economics

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ABSTRACT There has been a trend of poor achievement in Economics in Secondary Schools. Hence, this study was to determine the effects of cooperative learning on economics achievement and attitude towards economics as a school subject. This quasi-experimental study was carried out on two Senior Secondary School classes in Lagos, Nigeria. The two groups were pre-tested on achievement test and attitude towards economics prior to the implementation of the experimental study. At the end of the study, a post-test was administered. Data was analysed using the t-test to determine level of performance by comparing the mean of the post-test for treatment and control group. The results of this study showed that cooperative learning methods improve students' achievement in economics and attitude towards economics. The researchers concluded that cooperative learning is an effective approach, which economics teachers need to incorporate in their teaching, if improved results are to be achieved.

INTRODUCTION

The purpose of education is to develop independence in a child; such child will become fully functional within the family, community and society at large. It is in view of this, that Dada (2009), attempted to formulate the aims of education as a kind of all-round or holistic development (intellectual, physical, spiritual, moral) for the learners so that they take up their rightful place as responsible citizens in society. Adepoju and Akinwumi (2001) observed that the role of education in nation building has received considerable attention in developed countries where it is argued that heavy investment in education has a great potential for enhancing rapid economic growth. Education and an educated nation are important in the development and improvement of skills. Alade (2007) observed that the primary concern of education is the elevation of human conditions. By this Alade means, that the foundation of an educated society shapes the intelligence of the nation through social and cooperative means of engagement. Through education and the social implication(s) it has on society, people are enabled to develop their knowledge and skills, adopt new behaviour or make a paradigm shift in their attitude towards their responsibility as a worthy citizen and hence able to survive in the society. In the same vein, Oderinde (2005) opined that in all over the world, education is the key to socio-economic and cognitive development which

clearly demonstrated that education plays a vital role in the shaping and development of the individual, society and the nation as a whole.

Although, education goes on in all aspects of human endeavour, most societies have set up specific institutions that use a variety of means to promote efficient and desirable learning. Dada (2009) believed that usually in these institutions, the major concern of teachers and learners is the acquisition of what is considered to be knowledge. The responsibility of imparting knowledge revolves around the teacher who plans, organizes and implements the teaching learning process. Nonetheless, one of the issues to be resolved is whether or not the teachers are effectively performing their role in the teaching – learning process and to see the effects of their role in students' academic achievement. The revised National Policy on Education stated that no education system can rise above the quality of its teachers. This implies that the teacher has a vital role and responsibility to the development of self, community and nation building. This has made the subject of teacher effectiveness a perennial one in educational discourse since the quality of education at any level is highly dependent on the quality and dedication of the teachers (Ajiboye et al. 2005). Both developed and developing nations have been making huge investments on education. Anderson (2004) observed that teachers' salaries still account for 70 percent to 90 percent of the education budget in most countries. For example, in South Africa the

largest part of the national budget is allocated to Education. This is due to the fact that it is the teacher who determines the ambience of the classroom and together with other members of staff, the ambience and expectations of the school and its respective ethos and mission statement. Some teachers plan and execute these elements more effectively than others. But what is it, in particular, that contributes to an effective teacher?

In the teaching-learning process, both the teacher and the students must be active. The students learn through some activities while the teacher does all he/she considers necessary to make learning possible. For any society to be equipped with the basic knowledge and skills that will enable it to better appreciate the nature of economic problems, and how to make rational economic decisions, such a society must depend on the accumulated knowledge of economics, which the citizens possess. For many years, educators and researchers have debated over which variables influence students' achievement. A growing body of evidence suggests that schools can make a great difference in terms of student achievement, and a substantial portion of that difference is attributable to teachers (Adu and Olaoye 2015; Darling-Hammond 2010). Thus, the impact of school and home factors seem to be additive and cumulative. The studies highlighted above have brought into focus the prominent roles which school and home factors can play on student academic achievement in a given subject (Adu et al. 2015)

Several studies such as Ibanga (2007) in Accounting, Okpala (2007) in Physics, Anuka (2006) in Financial Accounting and Adu et al. (2011) in Economics have tried to identify the causes of poor performance in school subjects and each have come out with its own findings. In spite of all these findings, students' performance has not improved significantly to justify the efforts of previous research studies. This situation therefore, calls for more research directed at identifying the actual problem associated with students' achievement in Economics.

The teaching of Economics provides a learner with the opportunities to live meaningfully within the changing economic world. The following are the objectives of teaching Economics:

- ♦ To equip students with the basic principles of Economics necessary for useful living and higher education;

- ♦ To prepare and encourage students to be prudent and effective in management of scarce resources;
- ♦ To raise student respect for the dignity of labour and appreciation of economic, cultural and social values of our own society; and
- ♦ To enable students acquire knowledge for the practical solution of the economic problems of the society in Nigeria and possibly South Africa as developing countries and the world at large (Adu 2012)

From the highlighted objectives, the question is often asked: Why study Economics? To provide an answer, Adu et al. (2009) put forward the identified reasons:

The study of Economics enables a student to understand the nature of the complexity of the economic activities in which he/she is only a very small part.

- ♦ It enables students to understand and appreciate various government policies where choices have to be made such as probably to spend more money on free education and therefore provide less employment opportunities.
- ♦ The study of Economics provides the students with basic skills for analysing Economic problems thereby preparing them better for positions where economic decisions have to be made
- ♦ The study of Economics helps government to promote growth and development therefore improving the quality of life of the citizens.
- ♦ Knowledge of Economics is useful to analyse fascinating patterns of socio-economic behaviour.
- ♦ The study of Economics is useful to understand and alter the inequalities in the distribution of income and opportunities.

In view of the above, every society is faced with three fundamental Economic problems: the three focused questions will be phased in order to elicit the three fundamental Economic problems, namely: What to produce? How to produce? and for whom to produce? These problems are solved through the study of Economics. Economics has been widely accepted as a school subject by many countries to the extent that many students are now writing examination in it at the end of their Senior Secondary School level. Despite the relevance of Economics to everyday life in the area of commerce and industry,

the teaching of the subject in Nigeria is characterized by many inadequacies. Nigeria secondary school teachers of Economics have few materials on the teaching of Economics to work with. Similarly, in South Africa the inequalities in school provisions continues to exist which undermines the democratic notion of a unified and equal system of education. Audio-visual aids are either not available in sufficient quality, or what is available is usually inappropriate. These have affected the effectiveness of teachers of Economics (Adu 2012).

Although, there is an increase in the number of students that are offering the subject, achievement in Economics has not been as good as it has been before the introduction of a new Economics syllabus which incorporated some elements of Mathematics into the subject. The situation has been posing serious problem for the students in the Senior Secondary School classes partly as a result of the carry over effects of the negative attitudes which they have towards economics and ineffectiveness on the part of the teachers. The low levels of student – teacher interaction, students’ failure to ask questions and the use of lecture methods were identified as the main cause of poor achievement in Economics (Adu 2012). They demonstrated that achievement of candidates in Economics is not only poor generally but continues to fall over the years in a study on an “appraisal of trends in achievement of students in Economics at the Senior Secondary Certificate Examination in Oyo State”. In sum, this means that students are underperforming due to the inefficiencies of teachers who may not have adequate subject and content knowledge to present Economics to students in an innovative way (Adu 2012)

According to Adu and Adeyanju (2013), to achieve success in learning economics, students should be given the opportunity to communicate and reason economically, develop self-confidence to solve economics problems. One of the ways this can be done is through cooperative learning. In cooperative learning, students study in small groups to achieve the same goals using social skills. Many studies show that cooperative learning can improve performance, long-term memory and positive attitudes towards economics, self-concept and social skills. More opportunities should be given to discussion, problem solving, creating solutions and working with peers. Several educators in the field

of economics education conducted studies using cooperative learning and found an increase in students’ economics achievement (Adu et al. 2010).

Shimazoe and Aldrich (2010) provided several benefits on the use of cooperative learning approach for students. Firstly, cooperative learning promotes deep learning of materials. Secondly, students achieve better grades in cooperative learning compared to competitive or individual learning. Thirdly, students learn social skills and civic values. Fourthly, students learn higher-order, critical thinking skills. Fifthly, cooperative learning promotes personal growth. Finally, students develop positive attitudes toward autonomous learning. In other words, cooperative learning has the potential to engage students actively through cognitive and social encounters that foster collegial and collective thinking whereby generating infused knowledge at a higher level of cognitive thinking and deliberation through attitudinal change and motivational influences within the context of classroom-based teaching and learning.

Adu (2012) defined attitude as internal beliefs that influence personal actions which are learned through one’s experience. This has to do with a disposition to act or react in a particular way as the individual responds to a situation (Amoo and Rahman 2004). Thus, the students’ perceptions of the teachers’ disposition could influence their attitude and thinking toward Economics or any other school subject. Students more often than not judge their teachers in such areas as the teachers’ knowledge of the subject matter, communication ability, the choice of appropriate teaching method and the general classroom management skills. A teacher who is rated high on these indices in the perception of the students is likely to enjoy the confidence, respect and admiration of students.

In the recent years, studies on teaching and learning of economics have gained momentum basically because it is one of the core subjects in the school curriculum. The need to maintain a globally competitive workforce and the trend of interest in economic growth and development has also prompted researchers to place much emphasis on economics because all other social science related subjects are expressed, formulated and communicated through economics. In spite of this, the trend in the performance of students in economics for ten years understudied was not encouraging (Adu 2012)

Statement of the Problem

There has been a trend of poor achievement in Economics in Secondary Schools. It is therefore necessary to embark on research work in Economics Education towards finding solutions to the factors responsible for students' failure in the subject. Hence, this study investigated the effects of cooperative learning on students' Economics achievement and attitude towards Economics.

Hypotheses

The following null hypotheses were tested at 0.05 alpha level of significant

1. There is no significant relationship between cooperative learning and students' economics achievement.
2. There is no significant relationship between students' attitude and economics achievement

METHODOLOGY

Research Design

Since the classes existed as intact groups, the study used a quasi-experimental non-equivalent control group design. To control for teachers' training and experience as sources of internal invalidity, only teachers of equivalent training and experience were chosen.

Sample and Sampling Technique

Convenience sampling technique was used to select the schools that formed the study sample. The participants were 82 Senior Secondary School Two students from one of the schools in Lagos, Nigeria. Out of these respondents, 44 were in the experimental class, while 38 others were in the control class.

Data Administration and Instrumentation

The study was carried out for two weeks. A pre-test was administered to the two intact classes group before the two weeks of teaching had taken place. At the end of the teaching period, a post-test instrument was administered to the two intact classes of Senior Secondary class II students. Student Teams Achievement Divisions (STAD) developed by Slavin (1995) was used as

the cooperative model. The details of the instruments are as follows:

Achievement Test

In this study, the achievement test was used to measure the students' mastery of the topic of fractions. The pre and post-test contained 16 objective questions and 10 subjective questions. The time allocated is 60 minutes. Each subjective item is allocated five points, while two marks are allocated to each objective item. All items used are based on form SS11 economics syllabus. Validity is an important feature for an instrument (Wiersma 2010). An instrument is said to have high validity if the degree of its ability to measure what it should be measured, is high. All the items were reviewed by the Head of Department of Economics and Social Science and expert teachers for validation.

Attitude towards Economics

A set of attitude questionnaire items have been adopted and modified by the researchers. The instrument was given to experts in economics education for validation. Since the items were not scored dichotomously, the reliability coefficient of the test was estimated using Cronbach's coefficient alpha (α) as provided by Gregory (2004). The reliability coefficient was found to be 0.81. Attitude questionnaire contains 15 items. In this questionnaire, all respondents were required to choose the answer that reflects their own views and stance on the statements that are administered in accordance with the Likert scale of five points, strongly disagree-1 to strongly agree-5 points.

RESULTS

Hypothesis 1: There is no significant relationship between cooperative learning and students' economics achievement

The Table 1 shows the pre-test scores of the experimental and the control group. The results indicate that the mean score for experimental group was 50.34 with a standard deviation of 10.92 and that of control group was 47.68 with a standard deviation of 11.18. The results also indicate that the difference between the achievement mean scores for experimental and control group $t(80) = 0.281$ is not significant at the alpha

Table 1: Pre-test achievement mean scores of the experimental and the control group

Group	N	Mean	SD	t-value	Df	p-value
Experimental	44	50.34	10.92	-1.086	80	0.281
Control	38	47.68	111.18			

level of 0.05. This, therefore, means that the experimental and control groups were at the same level of achievement at the start of the study.

Table 2 shows the post-test achievement mean scores of the experimental and the control group. The results indicate that the mean score for experimental group was 56.18 and that of control group was 50.18. The results also indicate that the difference between the achievement mean scores for experimental and control group $t(80) = 0.031$ is significant at the alpha level of 0.05.

Hypothesis 2: There is no significant relationship between students' attitude and students' economics achievement

As shown in Table 3, the results indicate that the mean score for the experimental group was 41.41 with a standard deviation of 6.82 and that of the control group was 40.50 with a standard deviation of 7.19. The results also indicate that the difference between the attitude mean scores for experimental and control group $t(80) = 0.559$ is not significant at the alpha level of 0.05. This, therefore, means that the experimental and control groups were at the same level of attitude at the commencement of the study.

Table 4 shows the post-test attitude mean scores of the experimental and the control group. The results indicate that the mean score for the experimental group was 48.02 and that of the control group was 41.68. The results also indicate that the difference between the attitude mean scores for the experimental and control group $t(80) = 0.000$ is significant at the alpha level of 0.05.

Table 2: Post-test achievement mean scores of the experimental and the control group

Group	N	Mean	SD	t-value	Df	p-value
Experimental	44	56.18	-2.189	80	0.031	
Control	38	50.18				

Table 3: Pre-test attitude mean scores of the experimental and the control group

Group	N	Mean	SD	t-value	Df	p-value
Experimental	44	41.41	6.82	-0.578	80	0.559
Control	38	40.50	7.19			

Table 4: Post-test attitude mean scores of the experimental and the control group

Group	N	Mean	t-value	Df	p-value
Experimental	44	48.02	-4.801	80	0.000
Control	38	41.68			

DISCUSSION

Economics Achievements

The results of this study indicate that the cooperative learning approach in the subject Economics resulted in higher achievement than the traditional teaching approaches. The reason for the increase in students' achievement could contribute to the fact that the students' involvement in explaining and receiving explanation in which the concepts can be easily understood. Therefore the researchers argue that cooperative learning gives more space and opportunities for students to discuss, solve problems, create solutions, provide ideas and help each other. The results were also in line with previous studies, as reported by some researchers such as Tarim and Akdeniz (2008) and Adu (2012). Traditional teaching methods are teacher based, therefore, less opportunity is given to students for discussion, problem solving, creating solutions and working with peers. Similarly, Adu and Olaoye (2015) affirmed that cooperative method of teaching which they called (problem based learning) strategies help

significantly in helping learners to achieve greatly in mathematics

Attitude towards Economics

The results of this study also indicated that the cooperative learning approach increased student's attitude towards economics. This is probably because when students work in group they feel that they can depend on others for help and therefore increase their confidence in solving economics problem(s) from a collective position. This may indirectly change their attitudes towards economics as a school subject, and economics as understood from a societal, national and international perspective. Cooperative learning also emphasizes social interaction and relationship forming among groups of students in particular and among classmates in general. Cooperative learning actively involves students in the learning process which in turn stimulates and elevates their cognitive domain and ultimately their knowledge and understanding. These findings are consistent with the findings of some previous researchers such as Salako et al (2013) and Brush (2009). Likewise, Susan and Maureen (2014) found out that the interplay among motivation; ability and attitudes have effect on student performance in not only their homework but their final exam.

CONCLUSION

Student-centred approaches such as cooperative learning improve achievement and attitudes towards economics among students. Therefore, teachers in schools, especially teachers who teach economics need to be aware of the benefits and importance of cooperative learning and thus make a paradigmatic shift in their thinking, attitude and belief, changing the practice of teacher-centred teaching methods to student-centred teaching methods. This study bear witness through the quantitative data presented that positive changes are taking place when teachers change their teaching methods towards a more student-centred approach.

RECOMMENDATIONS

Teachers need to master the economics content to be delivered and plan how to implement cooperative learning better for improved student

achievement. Cooperative learning should be employed especially through STAD so that students can support, guide and mentor each other in small groups. Therefore, teachers are encouraged to practice these methods regularly and effectively. The results showed that cooperative learning could have a positive effect on the formation of a more positive attitude towards economics among students. However, attitude is something very abstract and subjective in detecting changes in the short term. This study only lasted for two weeks. This means that students are exposed to learning in a very short period. Therefore, research should take a longer time span so that the results of this study can be validated. Even though the study was undertaken over a two week period, the statistical evidence testifies to the fact that the effect of applying or making a paradigm shift from traditional classroom-based teaching and learning to a cooperative approach to the teaching of economics had a positive effect when collegial, collaborative and active student engagement in the subject economics is manifested through a student-centred approach to teaching and learning.

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