



2017

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Recommended Citation

AbdulRaheem, Yusuf; Yusuf, Hamdallat T.; and Odutayo, Adesegun O., Effect of Peer Tutoring on Students' Academic Performance in Economics in Ilorin South, Nigeria, *Journal of Peer Learning*, 10, 2017, 95-102.

Available at: <http://ro.uow.edu.au/ajpl/vol10/iss1/7>

Effect of Peer Tutoring on Students' Academic Performance in Economics in Ilorin South, Nigeria

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ABSTRACT

Peer tutoring has generated a great deal of scholarly interest in the field of education. It is viewed as an essential instructional strategy for inclusive education because it constitutes one of the strongholds of cooperative learning. This study examines the effect of peer tutoring and the moderating effect of gender on the academic performance of economics students in Ilorin-South Local Government of Kwara State, Nigeria. Two intact classes in two different secondary schools were selected for this study. The experimental (peer tutoring) group had a population of 40 students while the control (conventional instruction) group had a population of 38 students. A 50-item multiple-choice objective test titled Economics Performance Test (EPT) was used to measure academic performance. Students in the peer tutoring group obtained higher EPT scores than students in the conventional instruction group. This effect was not moderated by gender. We recommend that teachers adopt peer tutoring instructional strategies in the classroom so as to develop students' generic skills.

INTRODUCTION

One of the objectives of the curriculum on economics, which was published in 2008, is to enable students to contribute intelligently to discourse on economic reforms and development as they affect Nigeria overall. Economics as a course equips students with the basic principles of economics required for higher education. It also encourages and prepares students to be prudent and effective in the management of scarce resources. Economics helps raise students' respect for the dignity of labour and their appreciation of the economic, cultural, and social values of society. It also assists students in acquiring knowledge for the practical solution of the economic problems of society in Nigeria, developing countries, and the world at large.

In the Senior Secondary Economics Curriculum (SSEC) published by the Nigerian Educational Research and Development Council (NERDC, 2008), economics was placed as an elective subject under humanities, and students may only choose the subject if it is within their field of study or as an elective outside their field of study (Omosewo & Akanmu, 2013). Since economics is an elective subject, students have no motivation to study economics because they feel it is less important in comparison to other subjects; they register for economics just to fulfil the required number of subjects at the senior

secondary school level. As a result, the number of students who study economics at the tertiary level of education is reducing drastically.

The philosophy of economics in the Nigerian educational system is to present it as a subject that has relevance in everyday life and could prepare graduates for an entrepreneurial career in the future (NERDC, 2008). Yusuf (2004) states that the conceptual approach of the new Senior Secondary Economics Curriculum is intended to ensure the effective handling of the subject in the classroom by inexperienced or untrained teachers while reinforcing the knowledge of teaching methods of the trained teachers. Zakaria, Chin, and Daud (2010) opine that to achieve effective and efficient teaching and learning, acquisition of knowledge should not merely focus on dispensing rules, definitions, and procedures for students to memorise, but should be inclined to actively engage students as primary participants. One approach to achieve that is peer tutoring, which is the focal point of this study.

Moreno and Duran (2002) describe peer tutoring as a method of cooperative learning based on the creation of pairs of students with a lopsided relationship; that is, the tutor and tutee do not have equal academic ability but they share a common goal. This goal must be achieved through a relationship framework organised by the teacher. Peer tutoring is regarded as an excellent resource for facilitating the mastery of interpersonal competencies. Fuchs, Fuchs, Mathes, and Martinez (2002) assert that socialisation experiences that occur during peer tutoring can benefit both the tutor and the tutee by encouraging students to learn and increase their social standing among peers. Peer tutoring was found to be helpful in socialisation experience as the level of interaction among students both inside and outside the classroom improved significantly.

Peer tutoring is also important for the tutor; that is, learning is encouraged through teaching. Hartman (2010) conducted an evaluation study and reported that peer tutoring increased students' motivation to learn. This result is supported by Whitman (2012) and Annis (2013) who argue that peer tutoring can be the most intellectually rewarding experience of a student's career. They found peer tutoring helped students perform better on higher-order conceptual understanding scales than students who read the material simply for study purposes. Topping (2010) also asserts that peer tutoring serves as an effective way to improve self-esteem in students. Peer tutoring aids interaction among peers not only academically but also socially.

One of the problems that attracts public concern in Nigeria today is the gender gap in academic performance of students in schools. This observable disparity has been blamed on a number of factors, including social, economic, and cultural stereotyping. Gender is the range of physical, biological, mental and behavioural characteristics pertaining to and differentiating between the feminine and masculine (female and male) population (Adigun, Onihunwa, Irunokhai, Sada, & Adesina, 2015). The importance of examining performance in relation to gender is based primarily on the socio-cultural differences between girls and boys. Some vocations and professions have been regarded as men's (e.g., engineering, arts and crafts, agriculture, etc.) while others have been regarded as women's (e.g., catering, typing, nursing, etc.). In fact, parents assign tasks like car washing, grass cutting, and home repair to the boys. Among the researchers who conducted a study on gender disparity in

the academic performance of secondary schools in Ilorin, none of the researchers gave a conclusive answer to the relationship between peer tutoring and gender.

The main point of this study is aligned with one of the principles for designing the new Senior Secondary School Curriculum, which is to develop autonomous learning capabilities in students or assist students to learn how to learn by developing their generic skills and interest, as articulated in NERDC (2008) for secondary schools in Nigeria (Awofala & Awolola, 2011). The main purpose of this study was to determine the difference in performance between students taught with peer tutoring and conventional instructional strategy in economics. A second purpose of the study was to investigate whether any difference in the performance of students taught with peer tutoring was a result of their gender, thereby finding out if peer learning favors males over females or vice-versa.

STATEMENT OF THE PROBLEM

The guiding concept of the new economics curriculum is the need to equip graduates of the senior secondary school with the basic knowledge and skills that will enable them to appreciate the nature of economic problems in any society. The conventional method of teaching, which is the preference of most economics teachers, allows students to simply obtain information from the teacher without building their engagement level with the subject being taught (Boud & Feletti, 1999). As a result, there are agitations for teachers to be dynamic with their instructional method to encourage the development of students' generic skills (Bennett, Dunne, & Carre, 1999). Hence, it was of interest to see if peer tutoring could be adopted as an alternative teaching and learning approach to the conventional method to aid students' understanding of economics as well as help learners fulfil untapped hidden potentials.

RESEARCH QUESTIONS

This study investigates the following research questions:

- i. What is the effect of peer tutoring and conventional instructional strategies on students' performance in economics?
- ii. Will the performance of students taught using peer tutoring instructional strategy vary on the basis of gender?

RESEARCH HYPOTHESES

On the basis of Mesler (2009) and Yusuf (2004), among others, we hypothesise that:

H_{01} : There is no significant difference in the performance of students taught using peer tutoring and conventional instructional strategies in economics.

H_{02} : There is no significant difference in the performance of male and female students exposed to peer tutoring instructional strategy.

METHODS

The study was a quasi-experimental design that employed a pre-posttest design. The population of this study was made up of all 72 senior secondary schools in Ilorin South, with a total of 2498 students. Nigeria operates a centralised curriculum, meaning that all the senior secondary schools in Ilorin use the same economics curriculum. Two secondary schools were randomly selected and randomly assigned to experimental and control groups. The experimental (peer tutoring) group had an intact class of 40 students while the control (conventional instruction) group had an intact class of 38 students, making a total of 78 students (46 male and 32 female). The instrument used in this study for data collection was the Economics Performance Test (EPT). This study used split-half to measure the reliability of the EPT. The EPT was administered once to SS 2 students in a school different from the schools intended for this study after which the reliability (0.68) was obtained via Spearman-Brown Prophecy Formula. The justification for the use of Spearman-Brown Prophecy was because it accommodates the dichotomous (i.e., right-wrong) answers that characterise the test. Analysis of Covariance (ANCOVA) was used to test all hypotheses formulated at 0.05 significance level. The data were run with a Statistical Package Sciences (SPSS 21.0) windows version.

RESULTS

The Levene's test found equal variances for EPT scores in each group (sig. level 0.786 > 0.05).

Ho₁: There is no significant difference in the performance of students taught using peer tutoring and conventional instructional strategies in economics.

Table 1
Result of Analysis of Covariance on the differences between experimental group and control group

Source of variance	Sum of squares	df	Mean square	F	Sig.
Corrected model	6183.209 ^a	2	2061.070	46.309	.000
Intercept	10956.037	1	10956.037	246.165	.000
Pretest	2702.128	1	2702.128	60.713	.000
Instructional Strategy	948.786	1	948.786	21.318	.000
Error	3293.509	74	44.507		
Total	288360.000	78			
Corrected Total	9476.718	77			

Note. a = R squared = .652 (Adjusted R squared = .638)

The ANCOVA result in Table 1 shows that there is a significant difference in the performance of students taught with peer tutoring, $F(1, 74) = 21.32$, $p < 0.001$. Therefore, the hypothesis was rejected. Students taught with the peer tutoring method had a greater mean score ($M = 14.94$) than those taught with the conventional instruction method ($M = 10.07$).

H_{02} : There is no significant difference in the performance of male and female students exposed to peer tutoring instructional strategy.

Table 2
Result of Analysis of Covariance on the posttest scores of students exposed to peer tutoring on the basis of gender

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4274.109 ^a	4	1068.527	9.711	.000
Intercept	6990.305	1	6990.305	63.530	.000
Pretest	3997.071	1	3997.071	36.326	.000
Peer tutoring	77.244	1	77.244	.702	.405
Gender	21.622	1	21.622	.197	.659
Peer tutoring × Gender	6.419	1	6.419	.058	.810
Error	8032.353	73	110.032		
Total	251568.000	78			
Corrected Total	12306.462	77			

Note. a = R Squared = .347 (Adjusted R Squared = .312)

The results of the ANCOVA analysis as depicted in Table 2 indicated that there was no significant difference in the performance of students taught with peer tutoring strategy on the basis of gender, $F(1, 73) = 0.058$, $p = 0.810$. On this basis, the hypothesis was confirmed.

SUMMARY OF THE FINDINGS

1. There was a significant difference in the performance of students taught with peer tutoring and conventional instructional strategy in economics.
2. There was no significant difference in the performance of students exposed to peer tutoring instructional strategy on the basis of gender.

DISCUSSION OF THE FINDINGS

This study reveals that peer tutoring instructional strategy has a significant effect on students' academic performance in economics in Ilorin. Therefore, the hypothesis which states that there is no significant effect on students' academic performance in economics was rejected. This finding concurs with Philip and Council (2010) and Romano and Walker (2010) who observed that peer tutoring has an effect on students' performance. It can be deduced from the result reported above that peer tutoring transformed the classroom from a place for the dispensation of knowledge into a place where knowledge is approached from multiple and missing perspectives, thereby allowing students to learn from one another. Invariably, peer tutoring depends on the process of mutual help between classmates, allowing the transfer of control to the students in the classroom. Peer tutoring allowed the teacher to accommodate a classroom of diverse students, including students with learning disabilities. The teacher selected the content and acted as a moderator for each lesson. The teacher got involved when the tutors had

difficulty explaining a particular concept or had issues understanding the language the tutee was using.

Also, the study upheld the hypothesis that states there is no significant difference in the performance of students exposed to peer tutoring in economics in Ilorin on the basis of gender. Peer tutoring had no gender bias with respect to improving students' academic performance in economics; that is, peer tutoring did not favour male over female or vice-versa. The improvement in the performance of students exposed to peer tutoring cannot be traced to gender, as both male and female students got a better grade. This is in line with similar studies by Oviawe (2008), Uwameiye and Aduwa-Ogiegbean (2006), and Ukadike (2005) who reported no significant difference in the academic achievement in prevocational subjects and sciences of both male and female students exposed to peer tutoring. However, this finding is at variance with Madu (2003) and Yager and Tamir (1993) who reported a significant difference in the academic performance of male and female students when exposed to a peer tutoring instructional strategy.

CONCLUSION AND RECOMMENDATIONS

Observations gathered during students' exposure to peer tutoring suggest that the quality of students' interaction with their peers improved significantly both socially and academically. Although not everyone may gain equally from participation, peer tutoring offered the opportunity for each participant to become aware of their weaknesses. Based on test scores and student observations, peer tutoring can help to achieve the objectives of the new senior secondary school economics curriculum. However, this study cannot determine the long-term effect of peer tutoring.

This study recommends the following:

- i. School authorities and educational administrators should ensure that peer tutoring instructional strategies are integrated into the secondary school economics curriculum.
- ii. Seminars, conferences, and workshops should be organised for teachers. This would help improve their knowledge and skills of peer tutoring instructional strategy in order to achieve effective implementation.
- iii. Teachers should expose students to peer tutoring instructional strategy in passing out instruction in the classroom to aid the development of students' generic skills.

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