

## PREDICTIVE ROLE OF ACTIVE LEARNING STRATEGIES ON LEARNING OUTCOMES IN ECONOMICS AMONG PUBLIC SECONDARY SCHOOL STUDENTS IN LAGOS STATE, NIGERIA

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### Abstract

*This study examined the predictive role of active learning strategies on learning outcomes in economics among senior secondary school students in Amuwo-Odofin Local Government Area of Lagos State Nigeria. Out of the various methods that can be utilised in active learning strategies, the study focused on Questioning, Peer Teaching, and Resource Person methods. The research utilised a survey research design, with the use of questionnaire as the primary tool for data gathering. A total of 417 participants were chosen using the simple random sampling technique. The study sample comprised 386 students and 31 teachers, a sample size which was calculated using Slovin's formula. Four hypotheses guided the findings of the study. The gathered data underwent analysis through both simple linear regression and multiple regression techniques. Findings revealed that active learning strategies have significant joint influence ( $F_{3,27} = 2.096$ ;  $P < 0.05$ ) on the learning outcomes of senior secondary school students in Economics. It was also found that questioning and peer teaching have significant positive influence ( $\beta_1 = 0.25$ ;  $P < 0.05$ ) and ( $\beta_1 = 0.29$ ;  $P < 0.05$ ) respectively, on students' learning outcomes in Economics. While resource person strategy was found to have a significant negative influence ( $\beta_1 = -0.30$ ;  $P > 0.05$ ) on students' learning outcomes in Economics. Based on the findings, it was recommended among others things that active learning techniques should be encouraged in economics classroom in order to enhance students' academic learning outcomes.*

**Keywords:** Active Learning Strategies, Economics, Learning Outcomes, Secondary Schools

### Introduction

Educational results encompass quantifiable knowledge, skills, cognitive understanding, attitudes, and proficiencies that students gain from their learning encounters. In the field of economics education, the achievement of desired learning outcomes is crucial for students to develop a strong understanding of economic principles and their practical application. According to Olukoya and Jimoh (2022) learning outcomes refer to the specific and observable knowledge, skills, verbal knowledge, attitudes, and competencies that students gain through their educational experiences which demonstrates students' active participation in classroom activities. Ismail et al (2020) asserted that active learning strategies have gained attention as potential predictors of improved learning outcomes in economics among public senior secondary school students. It refers to instructional methods that engage students in activities that require them to think critically, analyze, and apply economic concepts actively. Active learning strategies involve students' active engagement in the learning process through activities such as group discussions,

collaborative learning, peer teaching, questioning, problem-solving tasks, engagement of a resource person and hands-on experiments, rather than passively receiving information through traditional lecture-style teaching methods (Barem 2016; Hartikainen, 2019).

Research studies have shown promising results regarding the effectiveness of active learning strategies in improving learning outcomes among students. A study conducted by Mankilik and Ofofile (2015) explored the impact of a blended active learning method, incorporating case studies, role-playing, and simulations, on the comprehension of concepts related to direct current electricity among secondary school students in Nigeria. The findings revealed that students who were exposed to blended active learning method, showed a more profound grasp of concepts related to direct current electricity more effectively compared to those who received traditional instruction. Also, the research undertaken by AbdulRaheem et al (2017) investigated the effect of the peer tutoring approach on learning outcomes compared to the traditional instruction method. Peer tutoring involves students taking on the role of tutors, guiding and assisting their peers in the learning process. The study's results indicated that students who received instruction through the peer tutoring method achieved better learning outcomes compared to those who received traditional instruction. This suggests that peer tutoring can be an effective educational strategy for enhancing learning. Furthermore, researches by Hettler (2015) and Barem (2016) argued extensively on the role of active learning strategies, such as flipped classrooms and problem-based learning, in enhancing critical thinking skills and problem-solving abilities in economics education. The conclusion from these researches indicated that students who engaged in active learning activities are most likely going to exhibit higher levels of critical thinking, have lesser probability of failure and would be more adept at analyzing economic situations and proposing viable solutions. Also, the potentials of active learning techniques were highlighted, to not only improve learning outcomes but also foster students' higher-order thinking skills in the field of economics, while proffering theoretical basis for their use.

One academic theoretical anchorage that best explains active learning teaching techniques in Economics is constructivism. Constructivism is a learning theory, generally attributed to Jean Piaget, (1936) who articulated mechanisms by which knowledge is internalized by learners through active construction of information by their interactions with the environment. According to this theory, learners actively construct their understanding of concepts based on their prior knowledge, experiences, and interactions with the learning materials and activities. In the context of active learning techniques in Economics, constructivism suggests that students should be actively engaged in hands-on activities, problem-solving tasks, and real-life simulations to construct their understanding of economic principles and their applications (Alanazi, 2016; Barem, 2016).

Additionally, the social learning theory, proposed by Albert Bandura (1977), presents a relevant to explaining the effectiveness of active learning techniques in Economics. This theory emphasises the importance of social interactions and observational learning in the learning process. Hettler (2015) submitted that active learning techniques that involve collaborative group work, role-playing, and peer feedback can create a social learning environment in which students learn from each other's experiences and perspectives. By observing and interacting with their peers, students can develop a deeper understanding of economic concepts and enhance their learning outcomes. These theories provide a theoretical foundation for the effectiveness of active learning in promoting student

engagement, cognitive processing, and social interaction, ultimately leading to improved learning outcomes in Economics.

Overall, existing research suggests that active learning strategies hold promise for improving learning outcomes in economics among public senior secondary school students. By promoting student engagement, critical thinking, and application of economic concepts to real-world contexts, these strategies contribute to a more meaningful and effective learning experience (AbdulRaheem et al, 2017; Asarta et al, 2017; Mohammed, 2022). Despite the existing empirical evidence highlighting the positive relationship between active learning methods and academic achievement, there seems to be limited knowledge regarding the specific methods that contribute to student engagement in these studies. Additionally, the lack of correlational studies investigating the actual involvement of Economics students in creating their own learning activities, along with the discipline of Economics students, poses a noteworthy concern. It is important to note that minimal published research exists on this topic in Nigeria. Therefore, conducting research to explore the influence of active learning strategies such as questioning, peer teaching and resource person on the learning outcomes of Economics students in a classroom setting is imperative. While learning outcomes will specifically focus on verbal knowledge and attitude of students. It is on this note that this research was conducted to achieve the objectives listed below as well as test the accompanying hypotheses.

### **Objectives of the Study**

This study sought to:

1. Examine the influence of questioning learning method on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.
2. Examine the influence of peer teaching method on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.
3. Examine the influence of resource person learning method on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.
4. Ascertain the joint influence of active learning methods (questioning, peer teaching and resource person) on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

### **Research Hypotheses**

The following research hypotheses was formulated to guide the study and tested at 0.05 significance level.

- H01** Questioning learning method does not have any significant influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.
- H02** Peer Teaching learning method does not have any significant influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.
- H03** Resource person learning method does not have any significant influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

**H04** Active learning methods (questioning, peer teaching and resource person) does not have any significant joint influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

### **Methodology**

This research employed the descriptive survey research design. The population of the study consisted of all public senior secondary school teachers and students of Economics in Amuwo-Odofin Local Government of Lagos State. Simple random sampling technique was used in selecting a total of 417 respondents, comprising 386 students and 31 teachers using Slovin's formula. The research instruments are twofold namely; "Active Learning Strategies as Predictor of Students' Learning Outcomes in Economics Questionnaire (ALSPSLOEQ) and Active Learning Strategies in Teaching Economics Questionnaire (ALSTEQ). The two instruments consisted of two sections each: A and B. Section A of ALSPLOEQ comprised the demographic data of students while section B measured influence of active learning strategies on learning outcomes in Economics on the Likert scales: Very True of Me (VTM), True of Me (TM), Untrue of Me (UM), and Very Untrue of Me (VUT). Section A of ALSTEQ comprised the demographic data of teachers while section B measured teachers use of active learning techniques such as peer teaching, questioning and resource person methods to be responded to on four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The reliability of the instruments was established using Cronbach's alpha reliability method, which gave a value of 0.734 and 0.825 for ALSPSLOEQ and ALSTEQ. This is in line with the recommendations of Abari and Akinyemi (2023) that a coefficient of 0.70 and above is acceptable for research purposes. The researcher with the aid of three research assistance, administered copies of the instruments to the participants who cooperated and completed them immediately in the presence of the researcher, which made it possible for the instruments to be retrieved on the spot. Demographic data collected was analysed using inferential statistics such as simple regression analysis and multiple regression analysis. Simple regression was used to analyse hypotheses 1 to 3, while multiple regression was used to analyze hypotheses 4. All hypotheses were tested at 0.05 levels of significance using Statistical Package for Social Sciences (SPSS) version 25.

### **Findings and Discussion**

The findings arising from hypotheses testing and subsequent discussions are presented below.

**Test of H01:** Questioning learning method does not have any significant influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

**Table 1: Simple Linear Regression Analysis Coefficients for the influence of Questioning learning method on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	37.087	5.245		7.071	.000
	Questioning	.253	.317	.146	.797	.432

a. Dependent Variable: Learning outcomes in Economics

b. Predictors: (Constant), Questioning

Source: fieldwork 2023

Table 1 presented the result of the regression estimate of Questioning method on Learning Outcomes in Economics. The intercept coefficient ( $\beta_0$ ) is 37.087 with standard error, t-stat. and p-value of 5.245, 7.071 and 0.000 respectively. The slope coefficient ( $\beta_1$ ) of Questioning method with respect to Learning outcomes in Economics (is .253 with standard error, t-stat. and p-value of 0.317, 0.797 and 0.432 respectively. The slope coefficient ( $\beta_1$ ) is positive. This implies that Questioning method has a positive significant influence on students' learning outcome in Economics. Thus, the null hypothesis is rejected. Questioning method therefore has significant influence on learning outcomes in Economics. This result is in consonance with the findings of Hettler in (2015) who found that active learning method such as problem solving and critical thinking increased students learning outcomes in Economics.

**Test of Ho<sub>2</sub>:** Peer Teaching learning method does not have any significant influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

**Table 2: Simple Linear Regression Analysis Coefficients for the influence of Peer teaching method on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	36.878	4.317		8.542	.000
	Peer teaching	.296	.290	.187	1.023	.315

a. Dependent Variable: Learning outcomes in Economics

b. Predictors: (Constant), Peer Teaching

Source: fieldwork 2023

Table 2 presented the result of the regression estimate of Peer teaching method on Learning Outcomes in Economics. The intercept coefficient ( $\beta_0$ ) is 36.878 with standard error, t-stat. and p-value of 4.317, 8.542 and 0.000 respectively. The slope coefficient ( $\beta_1$ ) of Peer teaching method with respect to Learning outcomes in Economics (is 0.296 with standard error, t-stat. and p-value of 0.290, 1.023 and 0.315 respectively. The slope coefficient ( $\beta_1$ ) is

positive. This implies that peer teaching method has a positive significant influence on students' learning outcome in Economics. Thus, the null hypothesis is rejected. This result corroborated the result of AbdulRaheem et al (2017) who found that students who were taught using the peer tutoring approach outperformed those who were taught using the traditional instruction method in terms of learning outcomes.

**Test of Ho<sub>3</sub>:** Resource person learning method does not have any significant influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

**Table 3: Simple Linear Regression Analysis Coefficients for the influence of Resource Person strategy on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	45.391	4.596		9.876	.000
	Resource person	-.300	.327	-.168	-.919	.366

a. Dependent Variable: Learning outcomes in Economics

b. Predictors: (Constant), Resource Person Strategy

Source: fieldwork 2023

Table 3 presented the result of the regression estimate of Resource person strategy on Learning Outcomes in Economics. The intercept coefficient ( $\beta_0$ ) is 45.391 with standard error, t-stat. and p-value of 4.596, 9.876 and 0.000 respectively. The slope coefficient ( $\beta_1$ ) of Resource person strategy with respect to Learning outcomes in Economics (is -0.300 with standard error, t-stat. and p-value of 0.327, -0.919 and 0.366 respectively. The slope coefficient ( $\beta_1$ ) is negative. This implies that Resource person method negative significant influence on students' learning outcome in Economics. Thus, the null hypothesis is not rejected. This position negates the assertion of Asarta et al (2017) who found that inviting eminent economists to the discussion tables in the classroom positively influenced the learning outcomes of students in Economics. This disagreement in the findings could be as a result the geographical difference in the two research works.

**Test of Ho<sub>4</sub>:** Active learning methods (questioning, peer teaching and resource person) does not have any significant joint influence on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area.

**Table 4: Multiple Regression Analysis Coefficients for the influence of active learning strategies on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area**

Model		ANOVA <sup>a</sup>					Model Summary			
		Sum of Squares	df	Mean Square	F	Sig.	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	Regression	23.846	3	7.949	2.096	.009 <sup>b</sup>	.857 <sup>a</sup>	.865	.874	.24555
	Residual	2142.928	27	7.516						
	Total	2166.774	30							

- a. Dependent Variable: Learning outcomes in Economics
- b. Predictors: (Constant), Questioning, Peer teaching, Resource person

Source: fieldwork 2023

#### **F-value is significant at $P < 0.05$**

Table 4 showed that there is a significant joint influence of active learning techniques (questioning, peer teaching and resource person methods) on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area ( $F_{3, 27} = 2.096$ ;  $P < 0.05$ ). This clearly indicate that the model represents a good fit of the data. Therefore, the null hypothesis is rejected. It implies that there is a significant joint influence active learning techniques (questioning, peer teaching and resource person methods) on students' learning outcomes in Economics in public senior secondary schools in Amuwo-Odofin Local Government Area ( $F_{3, 27} = 2.096$ ;  $P < 0.05$ ). This result agreed in context with the findings of Mohammed (2022) who found a significant joint influence of threshold concept and active leaning in flipped classroom on learning outcomes in Economics.

#### **Conclusion**

This study examined the predictive role of active learning strategies on learning outcomes in economics among senior secondary school students in Amuwo-Odofin Local Government Area of Lagos State Nigeria. It was concluded from the findings of the study that active learning strategies (questioning, peer teaching and resource persons methods) have significant joint influence on the learning outcomes of senior secondary school students in Economics. It was also concluded that questioning and peer teaching have significant positive influence on students' learning outcomes in Economics. However, resource person strategy had a significant negative influence on learning outcomes in Economics.

#### **Recommendations**

It was recommended based on the findings of the study that;

1. Active learning strategies, especially questioning and peer teaching methods have been shown to have a significant positive influence on secondary school students' learning outcomes in Economics. Teachers should incorporate these active learning strategies in economics classrooms by encouraging students to ask questions, engage in discussions, and teach concepts to their peers, fostering a collaborative and intellectually stimulating learning environment.
2. Educational policymakers should consider integrating training and professional development for teachers to effectively employ active learning strategies in the economics classroom.
3. Teachers should use caution when incorporating the resource person method in economics instruction, as it was found to have a negative influence on students' learning outcomes. Further research should explore the specific factors contributing to the negative impact of the resource person strategy and work towards refining its effectiveness in economics education.

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