

Influence of Teachers' Age and Gender on Student's Academic Achievement in Economics in Secondary Schools in Enugu State, Nigeria

Eze, Daniel Munachimso¹, Machebe, Chioma Henrietta^{2*}, Mba, Emmanuel Ikechukwu³, Eze, Chikodili⁴, Mbagwu Desmond Tutu⁵, Ugwu, Paschaline⁶, Ameh, Chika⁷ & Gotip, Nehemiah Wokji⁸

1, 2.Department of Social Science Education (Economics Education)), University of Nigeria, Nsukka.

3.Department of Statistics, University of Nigeria, Nsukka.

4, 6, 7.Department of Economics, University of Nigeria, Nsukka.

5.Department of Social Science Education, University of Abuja.

8.Department of Art and Social Science Education, Veritas University Abuja.

*Corresponding Author Email: chioma.machebe@unn.edu.ng

Abstract

This study examined the influence of teachers' age and gender on students' academic achievement in Economics in secondary schools in Enugu State, Nigeria. A correlation survey research design was adopted with a population of 6,980 respondents comprising 484 Economics teachers and 6,496 SSII students. Using multi-stage sampling, 360 respondents (324 students and 36 teachers) were selected. Data were collected using the Economics Achievement Test (EAT) validated by three experts and tested for reliability using Kuder-Richardson 20 formula ($r = 0.789$). Simple linear regression was used to analyze data at 0.05 level of significance. Results showed that teachers' age had a positive relationship with students' achievement ($R = 0.777$, $R^2 = 0.605$) but was not statistically significant ($F = 0.267$, $p = 0.606$). Similarly, teachers' gender had a positive relationship with students' achievement ($R = 0.776$, $R^2 = 0.603$) but was not statistically significant ($t = -0.161$, $p = 0.872$). The study concluded that while teachers' age and gender show positive relationships with students' academic achievement in Economics, these relationships are not statistically significant. Other teacher qualities such as pedagogical competence, subject mastery, and teaching effectiveness may be more important in determining student achievement in Economics.

Keywords: *Teachers' Age, Teachers' Gender, Academic Achievement, Economics, Secondary Schools.*

INTRODUCTION

Successful Economics instruction in secondary schools is fundamentally dependent upon students' interest, which constitute critical determinants of academic performance. Economics, as a social science discipline, investigates the production, distribution, and consumption of goods and services, seeking to explain how individuals, businesses, governments, and societies make allocation decisions regarding resources in addressing unlimited wants while confronting limited availability (Okafor & Okoye, 2021).

The subject occupies a significant position in the senior secondary school curriculum due to its comprehensive conceptual framework that enhances students' understanding of human behavioral patterns, particularly in decision-making processes when faced with resource scarcity, thereby enabling individuals to identify alternative resource applications. At this educational stage, students have attained sufficient cognitive maturity to engage meaningfully with the abstract and analytical dimensions of economic theory.

According to Nworgu and Obi (2018), the significance of Economics includes facilitating equitable wealth distribution, enabling nations to achieve sustainable economic growth and development, and promoting optimal resource allocation, among other benefits. This importance has secured Economics a prominent position in the secondary school curriculum. The Nigerian Educational Research and Development Council (NERDC, 2008) delineated the objectives of secondary school Economics as providing students with comprehensive understanding of fundamental economic principles, concepts, and analytical methodologies. This foundation enables students to participate in informed discourse on economic reforms and development in Nigeria, as well as comprehend the structure and operations of economic institutions. The objectives further aim to foster understanding of how public policies impact the national economy and to cultivate students' capacities in exercising rational economic decision-making. Additionally, the study of Economics at the secondary level seeks to encourage students to contribute to national economic growth through entrepreneurship and other productive means.

Academic achievement provides essential information regarding the extent to which students have attained predetermined performance standards. It facilitates the determination of individual students' relative standing based on their performance outcomes, typically assessed through formal examinations. Student academic achievement fundamentally reflects instructional effectiveness within classroom settings. Consequently, substandard academic performance may indicate inadequacies in teachers' pedagogical approaches and instructional processes. Mohammed and Jimoh (2022) documented a persistent downward trend in Economics achievement, particularly in the West African Senior Secondary School Certificate Examination (WASSCE), throughout the past two decades. This observation receives substantial corroboration from numerous WAEC Chief Examiners' Reports spanning 2020 to 2024, which consistently identify deteriorating student performance in Economics compared to previous years across Nigeria.

Research conducted by Idika, Onuoha, Nji and Eze (2018) revealed pronounced decline in student achievement, with an alarming average failure rate of 61.3% in Economics nationwide. This finding was corroborated by the WAEC Chief Examiners' Report of 2021, which depicted unsatisfactory student performance in Economics. This troubling situation has prompted urgent calls for intervention from various educational stakeholders. The Chief Examiners' Reports identified several specific deficiencies, noting that students encountered substantial difficulties with sophisticated economic concepts, exhibited insufficient mastery of economic terminology resulting in errors in both definition and application, and demonstrated excessive reliance on rote memorization rather than evidencing genuine conceptual comprehension of economic principles.

Beyond the intrinsic challenges associated with abstraction and quantification inherent in Economics, numerous variables may account for persistent inadequate student performance across Nigeria generally and within Enugu State specifically. These determinants encompass student characteristics, institutional factors, instructional methodologies, teacher variables, and familial circumstances. Teachers occupy a central and influential position in stimulating and sustaining student interest in Economics while concurrently enhancing academic achievement. This perspective receives empirical validation from Locke and Hihnston (2016) and Pavlovic, Stanisavljevic-Petrovic and Injac (2017), who identified teacher variables as major determinants influencing both student performance outcomes and interest levels in Economics. Scholarly consensus establishes that the quality of any educational system cannot exceed the

quality of its teaching personnel (Federal Republic of Nigeria, 2013; Ogunyinka, Okeke & Adedoyin, 2015; Chigbu & Azor, 2018). Ekperi (2015) posited that educational system quality is fundamentally contingent upon teaching staff quality, contending that absent competent and qualified teachers, educational institutions cannot realize their articulated goals and objectives.

Acknowledging the paramount importance of teachers in advancing educational quality, the Federal Government of Nigeria has instituted multiple initiatives and legislative frameworks designed to promote educational development. Among these policy interventions are comprehensive regulations governing teacher preparation and recruitment, established to guarantee qualitative educational outcomes. Nigeria's National Policy on Education explicitly stipulates that only appropriately qualified and professionally competent teachers should be inducted into the nation's educational system (FRN, 2013). Ashimole (2011) underscored that effective teaching and learning processes depend predominantly on teachers, asserting that the effectiveness of all educational structures, developmental initiatives, and institutional growth rests fundamentally on teacher quantity, quality, and professional dedication. Correspondingly, Akinsola (2010) characterized teachers as essential prerequisites for student attainment of educational goals and objectives. Consequently, teachers represent the most critical element in any educational system, and their instructional quality exercises undeniable influence in shaping pedagogical processes and learning outcomes, affecting both student achievement (Ibe, Nworgu & Anyaegbunam, 2018) and interest (Ugo & Ezumba, 2019). The most salient teacher factors potentially influencing student academic achievement in Economics comprise biological, behavioral, and experiential attributes, collectively designated as teacher variables or characteristics (Kosgei et al., 2013). This investigation focused specifically on such teacher variables as age and gender as critical determinants in teaching and learning Economics.

Teachers' age denotes the chronological years an educator has existed. Empirical investigations examining the influence of teachers' age on students' academic achievement have produced inconsistent findings. Aransi (2018) documented a positive yet weak linear association between teacher age and high school student performance in Economics. Conversely, Dien, Abang and Ngban (2022) established that teachers' age exerts no significant influence on teaching effectiveness and instructional delivery. These contradictory findings indicate that the relationship between teachers' age and students' achievement warrants additional empirical investigation.

Teachers' gender encompasses the biological, social, and cultural attributes that characterize educators as male or female, thereby influencing their experiences, interpersonal interactions, and pedagogical approaches. Male and female teachers exhibit differential characteristics regarding interest, attitude, professional experience, and qualifications. Scholarly literature suggests that students may demonstrate slight preferences for female teachers, potentially attributable to factors such as empathic listening capabilities, enhanced understanding, and perceived concern manifested by female educators. However, Bodhe and Jankar (2015) reported that students do not regard teacher gender as a discriminating factor. Research findings concerning the influence of teachers' gender on students' academic achievement demonstrate considerable inconsistency. Lee, Rhee and Rudolf (2019) identified positive effects of female teachers on student achievement and interest levels. Daniel, Gamaraja and Ijantiku (2023) documented a weak positive relationship between gender and student academic achievement. In contrast, Godpower-Echie and Ihenko (2017) and Atta and Ita (2017) reported that gender exerts no significant influence on students' academic achievement. Conversely, Onyia (2020) established that teachers' gender significantly

influences students' academic performance. These divergent findings underscore the necessity for context-specific investigation of how teachers' age and gender influence the teaching and learning of Economics in Enugu State.

Despite the critical role of Economics in preparing students for higher education and employment, Economics students in Enugu State continue to perform poorly in examinations. This poor performance threatens their chances for higher education and future employment opportunities. Many factors may contribute to this problem, including student characteristics, teaching methods, school facilities, and teacher variables. Teachers play a critical role in improving student achievement because no educational system can rise above the quality of its teachers. Among teacher variables, age and gender are important demographic factors that may influence how effectively teachers deliver instruction. However, research findings on how these variables affect student achievement remain mixed and inconclusive. It is against this background that this study examined the influence of teachers' age and gender on students' academic achievement in Economics in secondary schools in Enugu State, Nigeria.

The following research questions guided the study:

- 1) What is the relationship between teacher's age and secondary school students' academic achievement in Economics?
- 2) What is the relationship between teacher's gender and secondary school students' academic achievement in Economics?

Hypotheses

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

- H₀₁:** There is no statistically significant relationship between teacher's age and secondary school students' academic achievement in Economics in Enugu state
- H₀₂:** There is no statistically significant relationship between teacher's gender and secondary school students' academic achievement in Economics in Enugu state

METHODS

This study employed a correlational survey design in Enugu State. The population comprised 6,980 participants (484 Economics teachers and 6,496 SSII students in public secondary schools). SSII students were selected as they had chosen Economics and were not preparing for external examinations. The sample included 360 participants (36 teachers and 324 students). Multi-stage sampling was implemented: simple random sampling selected three of six educational zones, then six schools per zone (18 total), followed by purposive sampling of two Economics teachers and 18 students per school. The Economics Achievement Test (EAT) served as the data collection instrument. Section A gathered demographic data on teachers' age and gender, while Section B comprised 30 multiple-choice items adapted from WAEC past questions covering SS1 Economics curriculum. Items were scored dichotomously (1=correct, 0=incorrect). A test blueprint ensured content validity. Three experts from the University of Nigeria, Nsukka (two from Economics Education, one from Measurement and Evaluation) validated the instrument. Pilot testing established reliability using the Kuder-Richardson 20 formula, yielding a coefficient of 0.789, deemed sufficiently high for data collection. Simple linear regression analyzed the data. The coefficient of determination (R^2) addressed research questions, while ANOVA and t-tests tested hypotheses at $\alpha = 0.05$. Hypotheses were rejected when $p < 0.05$ and retained when $p > 0.05$.

RESULTS

Research Question 1: What is the relationship between teacher's age and secondary school students' academic achievement in Economics?

Table 1: Simple linear regression on the relationship between teacher's age and secondary school students' academic achievement in Economics

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.777 ^a	.605	.592	5.94216
a. Predictors: (Constant), Economics Teachers' Age				

0.70 & above=high; 0.30-0.69 = moderate; 0.01-0.29 = low

Table 1 revealed that the regression coefficient (R) of 0.777 has a coefficient of determination (R^2) of 0.605. This shows that teacher's age has a positive relationship with secondary school students' academic achievement in Economics. The coefficient of determination also indicates that 60.5% of variation on students' academic achievement in Economics in Enugu state can be as a result of Economics teachers' age.

Hypothesis 1: There is no statistically significant relationship between teacher's age and secondary school students' academic achievement in Economics in Enugu state

Table 2: ANOVA associated with simple linear regression on the relationship between teacher's age and secondary school students' academic achievement in Economics in Enugu state

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.415	1	9.415	.267	.606 ^b
	Residual	11369.582	322	35.309		
	Total	11378.997	323			
a. Dependent Variable: Economics Achievement Test						
b. Predictors: (Constant), Economics Teachers' Age						

Table 2 revealed that, the F-statistics associated with the linear regression is 0.267 is not significant at 0.60 which is greater than the 0.05 level of significance. Hence, the null hypothesis of no significant relationship is not rejected. Therefore, the researcher concludes that there is no significant relationship between teacher's age and secondary school students' academic achievement in Economics in Enugu state.

Research Question 2: What is the relationship between teacher's gender and secondary school students' academic achievement in Economics?

Table 3: Simple linear regression on the relationship between teacher's gender and secondary school students' academic achievement in Economics

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.776 ^a	.603	.599	5.94438
a. Predictors: (Constant), Economics Teachers' Gender				

0.70 & above=high; 0.30-0.69 = moderate; 0.01-0.29 = low

Table 3 revealed that the regression coefficient (R) of 0.776 has a coefficient of determination (R^2) of 0.603. This shows that teacher's gender has a positive relationship with

secondary school students' academic achievement in Economics. The coefficient of determination also indicates that 60.3% of variation on students' academic achievement in Economics in Enugu state can be as a result of Economics teachers' gender.

Hypothesis 2: There is no statistically significant relationship between teacher's gender and secondary school students' academic achievement in Economics in Enugu state

Table 4: t-test associated with simple linear regression on the relationship between teacher's gender and secondary school students' academic achievement in Economics in Enugu state

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	11.672	1.140		10.237
	Economics Teachers' Gender	-.109	.677	-.009	-.161

a. Dependent Variable: Economics Achievement Test

Table 4 revealed that, the t-statistics associated with the linear regression is -0.161 is not significant at 0.87 which is greater than the 0.05 level of significance. Hence, the null hypothesis of no significant relationship is not rejected. Therefore, the researcher concludes that there is no significant relationship between teacher's gender and secondary school students' academic achievement in Economics in Enugu state.

DISCUSSION

Economics teachers' age has a positive but statistically insignificant relationship with secondary school students' academic achievement in Economics in Enugu state. This finding suggests that age alone may not be a determining factor in students' learning outcomes. This could be due to various reasons, such as the fact that effective teaching is more closely tied to factors like teacher enthusiasm, subject matter expertise, and pedagogical skills, rather than age. Additionally, teachers of different ages may bring unique strengths and perspectives to the classroom, which can benefit students in various ways. The lack of statistical significance implies that any observed relationship between teacher age and student achievement could be due to chance rather than a systematic effect. This finding highlights the importance of focusing on teacher qualities and characteristics that are more directly related to student learning outcomes, such as teacher training, experience, and instructional practices. In alignment, Dien Abang & Ngban (2022) reported that there is no significant influence of teachers' age on teaching effectiveness. Also in alignment, Aransi (2018) reported that there was no significant influence of age on the academic performance in Economics.

Economics teachers' gender has a positive but statistically insignificant relationship with secondary school students' academic achievement in Economics in Enugu state. This finding suggests that teacher gender may not play a decisive role in determining student learning outcomes. This result is likely due to the fact that effective teaching is more closely tied to factors such as teacher competence, enthusiasm, and instructional quality, rather than gender. Both male and female teachers can possess the skills, knowledge, and attributes necessary to deliver high-quality instruction and support student learning. The lack of statistical significance implies that any observed differences in student achievement based on teacher gender could be due to chance rather than a systematic effect. This finding highlights the importance of focusing on teacher qualities and characteristics that are more directly related to student learning outcomes, such as teacher training, experience, and teaching practices. In alignment, Aransi

(2018) reported that there was no significant influence of gender on the academic performance in Economics. Similarly, Afolabi (2009) indicated that there exists no significant relationship between teachers' gender and primary science performance. Igberadja (2016) also revealed that the teachers' gender does not have any significant effects on students' performance.

CONCLUSION

Based on the findings, the study concluded that teachers' age and gender are not significant determinants of students' academic achievement in Economics in secondary schools in Enugu State. Although both variables showed positive relationships with student achievement, with teachers' age explaining 60.5% and teachers' gender explaining 60.3% of the variation in student achievement, these relationships were not statistically significant. This means that the observed relationships could be due to chance rather than actual influence. The findings suggest that demographic characteristics of teachers such as age and gender are less important than other factors in determining student achievement in Economics. What matters more for improving student achievement are likely teacher competencies such as subject matter knowledge, pedagogical skills, use of effective teaching methods, classroom management abilities, and the capacity to engage students meaningfully with Economics concepts. Therefore, educational stakeholders should focus on developing these professional competencies rather than emphasizing demographic attributes when seeking to improve student achievement in Economics.

Recommendations

Based on the findings, the study recommended that:

- 1) School administrators and education policymakers should prioritize teacher professional development programs that enhance pedagogical competence, subject mastery, and innovative teaching strategies rather than focusing on demographic factors like age and gender during recruitment and placement.
- 2) Economics teachers should adopt effective teaching methods such as problem-based learning, use of real-life examples, and interactive approaches that make Economics practical and engaging for students regardless of their age or gender.

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