

Comparative Analysis of Students' Performance in English Language and Mathematics in Public and Private Junior Secondary Schools in Edo State, Nigeria

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DOI: <https://doi.org/10.5281/zenodo.22114182>

Received: 16-05-2026

Accepted: 12-06-2026

Published: 26-08-2026

ABSTRACT

The study focused on Comparative Analysis of Students' Performance in English Language and Mathematics in Public and Private Junior Secondary Schools in Edo State, Nigeria to provide empirical evidence for a field persistently crowded by qualitative descriptive research. The objectives of the study are to examine the level of academic achievement of junior secondary schools in English and Mathematics, investigate whether statistically significant differences exist between public and private junior secondary schools in English and Mathematics, and examine if there is a significant difference between public and private junior secondary school students in Mathematics in the overall academic achievement in the 2024/2025 JSCE in Edo State. The study deployed an ex post facto (comparative) design for a population of 496 schools, a sample size of 300 (162 public and 138 private) and 12, 614 students to examine school-level aggregate achievement scores. The statistical analysis (descriptive statistics, Welch's Independent Samples t-test and Cohen's d, Ordinary Least Squares regression) was conducted to derive results for the study. Private schools significantly outperformed public schools in English Language (Cohen's d = 0.82) and Mathematics (Cohen's d = 0.47) at $p < .001$. School ownership provided a significant moderate predictor of academic performance, accounting for only variation in (English = 14.5%, Mathematics = 5.6%, Overall = 11.5%). The regression result obviously indicates that other factors outside of school type largely influence junior secondary school academic performance. The study concluded that other factors (including supervision, instructional time, institutional quality and accountability) provide differences in efficiency as explored by the education production functions. The study recommended improving training and supervision, enhancing teaching quality, and institutional quality as focal points for addressing improving learning outcomes in English Language and Mathematics.

Keywords: Academic performance; public schools; private schools; junior secondary education; Welch's t test; Nigeria

I. INTRODUCTION

The challenge of education today is to provide learning experiences that enable students to develop the understanding, skills, and attitudes needed to become lifelong learners, capable of solving problems and adapting to change (Imonikhe et al., 2010). This is especially significant in secondary education, which, according to the National Policy on Education (Federal Republic of Nigeria, 2013) is intended to

prepare students for useful living in society and for higher education (FGN, 2013). The junior secondary segment is a deliberate policy period in educational architecture. It covers a 3-year period of study and acts as an exit point for basic education and a foundation for Senior Secondary School. It fuses academic and pre-vocational elements.

For a mixed economic orientation in a developing country with the largest population in Africa,

Nigeria's education needs are provided through dual separate ownership structure consist of public (government) and private (individual). Public schools are established, financed and managed by the government and their private counterpart are owned by individuals, religious institutions and non-governmental organisations, with government control over registration and regulation of educational institutions (Ogunode, 2020; UNESCO, 2021).

Educating Nigeria's large population, with a dominant youth population, provides an expanding opportunity for the private sector to intervene in procuring public goods like education. Private school ownership is diversely characterised to attend to underserved communities, poor households, and quality targeting of diverse populations. The lingering debates cumulate into which ownership model provides better learning outcomes (Ashley et al., 2014; Tooley et al., 2005). Global evidence is unsettled and mixed on whether private school performance in mathematics is better. In the United States of America, Lubienski and Lubienski (2006) confirmed that performance in mathematics was higher in private schools in certain circumstances, and similarly for public schools, only after the students' backgrounds were considered as the dominant factor irrespective of the ownership structure of the school. Emerging evidence in developing countries explains private schools' higher student performance linked to the advantaged socio-economic background to afford better learning conditions, which is isolated from teachers' quality (Ashley et al., 2014; UNESCO, 2021).

Previous studies focusing on Nigeria deployed descriptive statistics that were based on mean and percentage analysis. Descriptive statistics can only identify differences in performance while unable to further examine statistically significant observations between variables that are compared. This study advances to overcome this limitation by adequately testing the stated hypothesis and applying a real, practical, large set of examination data from junior secondary in Edo State.

II. STATEMENT OF THE PROBLEM

An assessment of the standards and quality of basic and post-primary education in Nigeria indicates that both the schools and their products are generally below expectations (FME, 2009). Eghoghon (2022) observed that, for several years, students' performance in the Junior School Certificate Examination (JSCE) in Edo State has been declining. This decline is a concern for all stakeholders in education, including the government, parents, school authorities, and society at large.

Amidst this decline, debates continue regarding which category of schools (public or private) produces better-performing students regarding school regulation, area of intervention, subsidies or school choice arrangement. Some argue that public schools outperform private schools, while others hold the opposite view. Therefore, there is a need to investigate and determine which group of schools currently achieves higher academic outcomes among junior secondary school students in Edo State with robust local evidence. Current local comparisons are heavily dependent on descriptive statistics that produce trivial or less meaningful knowledge or understanding of the problem due largely to poor sampling variation. There is a need for a deeper methodological grounding with inferential comparison of public and private junior secondary performance in the state.

III. OBJECTIVES OF THE STUDY

The following objectives are to:

1. examine the level of academic achievement of junior secondary schools in English and Mathematics in the 2024/2025 JSCE in Edo State.
2. Investigate whether statistically significant differences exist between public and private junior secondary schools in English and Mathematics in the 2024/2025 JSCE in Edo State.
3. To examine if there is a significant difference between public and private junior secondary school students in Mathematics in the overall academic achievement in the 2024/2025 JSCE in Edo State

IV. RESEARCH QUESTIONS

To guide this investigation, the following research questions were formulated:

1. What is the level of academic achievement of junior secondary school students in English and Mathematics in the 2024/2025 JSCE in Edo State?
2. Is there a significant difference in the performance of public and private junior secondary school students in English Language and Mathematics in the 2024/2025 JSCE in Edo State?
3. To what extent is there a difference between public and private junior secondary school students in Mathematics in the overall academic achievement in the 2024/2025 JSCE in Edo State

V. RESEARCH HYPOTHESES

The following null hypotheses were tested at the 0.5 level of significance: there is a significant difference in the performance of public and private

junior secondary school students in English Language and Mathematics in the 2024/2025 JSCE in Edo State

H0₁: there is no significant difference in the performance of public and private junior secondary school students in English Language in the 2024/2025 JSCE in Edo State

H0₂: there is no significant difference in the performance of public and private junior secondary school students in Mathematics in the 2024/2025 JSCE in Edo State

H0₃: there is no significant difference between public and private junior secondary school students in Mathematics in the overall academic achievement in the 2024/2025 JSCE in Edo State

VI. SCOPE

This study focused on the Junior School Certificate Examination results in English Language and Mathematics for the 2024/2025 academic session. These two subjects were chosen because they are considered core subjects in the junior secondary curriculum. The JSCE was used as the basis of the study because it is the standardised examination taken by all JSS III students in Edo State.

VII. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

The section provides a theoretical anchor to provide direction for this study before attending to scholarly debate on the content as expressed in the literature review.

Theoretical Framework.

The theoretical framework for the study is the education production theory developed by Hanushek (1995, 2008, 2020). The education production theory focuses on the mechanism of production of education as input to social development (output) that is measurable. Its content of measuring input is teachers' quality, physical facilities, instructional materials, students' characteristics, institutional arrangements and family background. These inputs are transformed into output for social benefits and the development of society.

Organically, achievement is constructed as $A=f(S,T,F,P)$ where S represents school resources, T teacher attributes, F family background, and P peer effects.

The education production theory is significant in directly generating variables for our study. The theory situates academic performance as the dependent variable, operationalised as JSCE performance in English Language and Mathematics. This concurrently serves as the output of measurement for the study. The independent variable allotted is school ownership

and operationalised as institutional input. This has a bearing on determining the level of efficiency in converting other inputs for learning.

The central assumption of the theory as applied for the study is that identical inputs can manifest into different outputs depending on managerial efficiency, supervision and accountability (Hanushek, 2020) provided by ownership form or structure. Private school ownership in Nigeria is market driven through fee payment to cover cost and retain profits, it strives to justify its cost through thorough supervision of teaching and learning, small class size and personalised contact of student with teacher, maintaining high-quality assurance, and ensuring a balance for service delivery. Public school ownership is a welfare dream and intervention oriented towards filling the gap left by the private sector. Its advantage is that it can attract highly qualified teachers; it contends with poor morale and supervision, work overload and resource constraints for a large population (Adebayo & Lawal, 2022; Ogunode, 2020).

The theory accommodates a broader environment outside of the school that indirectly interacts with its operations and determines its outputs. Family background (F) serves as a valuable input that predisposes parental economic and emotional stability. Children from advantaged family backgrounds principally get extra support and concern towards their education and are mostly found in private schools (Ashley et al., 2014; Lubienski & Lubienski, 2006). Public schools owned by the government really attract a similar student composition. This theoretical assumption has implications for the study.

Literature Review

Academic Achievements: Concept and Measurement

Students' academic achievement is symbolised as the measurement of learning outcomes that is attained by students, essentially through tests adequately covered in standardised examinations (Adeyemi, 2021; Yusuf & Alabi, 2023). Measurement of students' achievement has evolved overtime and in the academic arena, cognitive ability, environmental influence, instructional effectiveness, socio-economic, biological factor and school level management capability concurrently interact to form frame performance (Eze & Nwankwo, 2024; Okeke et al., 2022).

The JSCE serve as a standardised examination in Nigeria that is typically utilised in the assessment of students for their basic educational achievement. The examination, irrespective of school, provides uniform content for testing students' capacity and grade using a defined scale. The examination content is administered simultaneously across

Nigeria, including Edo State where the study is carried out. This provides a methodological basis for conducting a comparative study between public and private schools.

Public and Private Schooling – Empirical Review

The empirical review situates a global comparison before a local position is addressed. Assessment of achievement favours private schools in the United States of America when the National Assessment of Educational Progress was evaluated; only after accounting for demographic composition, similar conditions were in alignment as both peers performed similarly in mathematics examination scores. The context for developing countries identified that students from private schools generally performed better than their counterparts in public schools. Research undertaken by the UK Department for International Development accentuates this difference in performance to the advantageous family background of students attracted from educated and wealthier families (Ashley et al., 2014; Nicolai & Rose, 2014) and when these factors are moderated, both schools performed similarly (UNESCO, 2021).

The Nigerian experience provides divergent results. Adebayo and Lawal (2022), Okebukola (2009), and Tooley et al. (2005) severally accounted for private school advantage due to closer supervision, smaller classes, and stronger accountability. Okeke et al. (2022), Omokhodion (1999), and Yusuf and Afolo (2023) indicated that public school students' performance was comparably higher due to students' family background, parents' educational status and concern for their children's education. These findings accentuated other contingent factors with greater influence on students' performance irrespective of public or private ownership.

Omokhodion (1996) survey stated a significant association between school type and achievement favouring public school students in Lagos ($r = .48$, $N = 406$, $p = .03$), attributing the result to better-equipped public schools at that time, while Okeke et al. (2022) and Yusuf and Alabi (2023) found socio-economic status, parental involvement and teacher effectiveness to be stronger determinants of achievement than ownership. Eze and Nwankwo (2024) add that within-sector variation is substantial, suggesting that management quality and resources, rather than ownership per se, drive school effectiveness. Leadership effectiveness, teacher quality, parental involvement, class size, and socioeconomic status persisted as strong predictors of achievement transversely in both context (Adeyemi, 2021; Ogunode, 2020; UNESCO, 2023).

Methodological Appraisal and the Research Gap

Three methodological deficiencies are observed for the studies in Nigeria's literature. The first deficiency accounts for the timing of the study. The prominent and most quoted study is that of Omokhodion (1996). The timeline is old and significantly predates the era when fewer schools were essentially private, with private schools still charging low fees to gain attraction. The quality of service then was barely lower due to the initial phase of the sector. This position is irrelevant to contemporary trends because of ahistorical factors.

The second methodological weakness is that the population of private schools considered for the previous studies were distantly unequal, usually a small sample; the focus was mainly urban and non-random. The generalisability of the sample was restrictive due to incomparability with contemporary developments.

Thirdly, the studies largely used descriptive statistics without inferential analytical power to determine significance from a large population study. In deploying the JSCE data from the Edo State context, the deficiencies reported are robustly accounted for in this study.

VIII. METHODOLOGY

Research design

The study adopted an ex post facto design (causal comparative). Its assign the independent variable (School Ownership) as an explainable variable that can be measured objectively and verified from state registration records (not manipulated). These pre-existing characteristics provide an ethical bias for objective measurement. The dependent variable assigned is student performance for the JSCE result of 2024/2025.

Population

The study population is the 496 secondary schools (public and private) in Edo State whose students enrolled and sat for the 2024/2025 JSCE examination.

Sample And Sampling Technique

Schools were stratified by ownership (public/private) and senatorial district. The study conducted an equal representation of a stratified random sample of 300 schools across the 3 senatorial districts of Edo State, with each having 200 schools. This represents about 60% (above the average of the total population of schools). The second stage was initiated by a proportional stratified random sample of 300 schools split into 162 public schools and 138 private schools. This is justified to account for their proportional representation of ownership status found in the

population. The number of students in the 300 schools recorded an enrolment strength of 12,614 students who sat for both English Language and Mathematics examinations.

The unit of analysis is the school. Students' scores were summed up as the average score for the school to permit comparison between types of schools. The criteria for inclusion of school in the study was registration by the Edo State Ministry of Education for the 2024/2025 and presented candidate for the examination who wrote English Language and Mathematics in the 2024/2025 academic session. Exclusion was schools not registered and did not present a candidate for the examination in the 2024/2025 academic session.

Instrument, Validity and Reliability

A Student Academic Achievement Inventory (SAAI) was developed to collect data. This enables the recording of students' performance according to their achievements in English Language and Mathematics. The form was utilised to record their observed score measured in Distinction, Credit, Pass and Fail. Grades were coded in 4-point categories. F = 0, 1 = Pass, 2 = Credit, and 3 = Distinction. The corresponding results were

translated to reflect Poor (0.00–0.99), Average (1.00–2.00), and Good (2.01–3.00).

The achievement standard was predetermined by the JSCE standard, and it is externally moderated by the state examination board. The principal standard for evaluating the result rests on the integrity of the Ministry of Education profile, and the instrument of record was reviewed by 3 measurement and evaluation experts at Ambrose Alli University.

Ethical Consideration.

Ethical approval was obtained from the Faculty of Education Research and Ethics Committee, and approval was granted to access the records of JSCE from the Ministry of Education. No records or data were collected directly from schools or the individual candidates. The archival records were coded and analysed without linking the identity of the candidates.

Data Presentation and Analysis

The data for the study were analysed using SPSS version 28. RQ1 was answered using Mean and Standard Deviation

Research Question 1: Level of Academic Achievements

Table1: Descriptive Statistics for JSCE Achievement in English Language and Mathematics (N = 300 schools)

Variables	N	Mean	SD	Decision
EnglishLanguage	300	1.77	0.36	Average
Mathematics	300	1.80	0.54	Average
GeneralAchievement	300	1.79	0.39	Average

The sample school for the study is 300, with an average Mean (M) of 1.77 and Standard Deviation (SD) of 0.36 for English Language, while Mathematics scored a Mean of 1.80 and Standard Deviation of 0.39. The overall mean is M= 1.79

and SD = 0.39. The result indicated higher marginal performance in English Language and a larger SD in Mathematics, which indicated higher variability in both subjects.

Table 2Independent Samples t-Test of Public and Private School Performance

Variable	School Ownership	n	M	SD	Mean Difference (95% CI)	t	df	P	Cohen's d	Decision
English Language	Public	162	1.65	0.35	0.28 (0.20, 0.36)	7.12	295	< .001	0.82	Reject H ₀₁
	Private	138	1.93	0.33						
Mathematics	Public	162	1.69	0.62	0.25 (0.13, 0.37)	4.21	279	< .001	0.47	Reject H ₀₂
	Private	138	1.94	0.4						
Composite Achievement	Public	162	1.67	0.42	0.26 (0.18, 0.34)	6.23	289	< .001	0.7	Reject H ₀₃
	Private	138	1.93	0.3						

*Welch's t due to violation of homogeneity [Levene's $F = 12.84$, $p < .001$].

Table 2 indicated that private schools outperformed public schools in both English Language and Mathematics, inclusive of overall performance in academic achievement. The difference in performance was statistically significant ($p < .001$), which obviously implied rejection of the three null hypotheses earlier stated. This is justified by the large effect size for English Language (Cohen's $d =$

0.82), a moderate effect for Mathematics ($d=0.47$), and for composite Achievement ($d=0.70$) was moderate to large. The Welch t-test was deployed since the assumption of equal variance was violated (Levene's $F= 12.84$, $p< .001$). This explains the need for further appropriate tests to be conducted for the two groups.

Table 3: Regression of School Type on Academic Achievement

Regression of School Type on Academic Achievement									
Outcome	B	SE	β	t	p	R ²	Model Interpretation		
English	0.28	0.04	0.38	7.12	<.001	0.145	14.5% variance explained – moderate effect		
Mathematics	0.25	0.06	0.24	4.21	<.001	0.056	5.6% variance – small effect		
Overall	0.26	0.04	0.34	6.23	<.001	0.115	11.5% variance – moderate effect		

Table 3 indicated that school type significantly impacted student academic achievements in English Language, Mathematics and overall performance ($p < .001$). Private schools showed persistently higher achievement across subject areas and overall performance than public schools. School explained 14.5% (moderate effect) of English Language achievement, Mathematics for 5.6% (small effect) of Mathematics achievement, and 11.5% (moderate effect) of overall performance. The result therefore indicated that other factors outside of school type influence student achievement in English Language and Mathematics.

Hypothesis Testing

H₀₁ bearing comparative assessment of English Language in Public and Private Schools. Private School recorded significant higher achievement of ($M = 1.93$, $SD = 0.33$) compare to Public School with ($M = 1.65$, $SD = 0.35$), $t (295) = 7.12$, $p < .001$. The mean difference of 0.28 (95% CI [0.20, 0.36]) corresponds to a large effect, $d = 0.82$. H₀₁ was rejected.

H₀₂ (Mathematics). Private schools ($M = 1.94$, $SD = 0.40$) recorded significantly higher achievement than public schools ($M = 1.69$, $SD = 0.62$), $t (279) = 4.21$, $p < .001$. The mean difference of 0.25 (95% CI [0.13, 0.37]) corresponds to a moderate effect, $d = 0.47$. H₀₂ was rejected.

H₀₃: (no significant difference between public and privateschool students) overall performance 11.5% at ($p < .001$, with moderate effect) showed that

private school performance was statistically significant. H₀₃was rejected.

All three null hypotheses were rejected. Private schools recorded significantly higher mean scores than public schools.

Discussion of the findings

The results on the level of performance for both public and private school students' achievement indicated a composite average of a mean of 1.9 out of 3.0 maximum. This suggests that the performance was above average and it is still below the expected standard of the Nigerian basic education quality (Federal Ministry of Education, 2009). The gaps also suggest that there is room for improvement over the purview of ownership type; a common problem persists in scale rather than kind. The result indicated that Mathematics performance was higher than in English Language. This also mirrorsa counter reflection of Eghoghon's (2022) account of declining JSCE performance in Edo State, as shown in the large effect in English Language ($d= 0.82$).

The result also indicated a significant wide variance gap (Cohen's $d = 0.82$), exhibiting a private school advantage over public schools in the English Language result. The result is explained by Adebayo and Lawal (2022) and Ogunode (2020), who accentuate the common practice by private schools to encourage regular use of English (speaking and writing), frequent supervision of teaching, and student support services to justify greater accountability to parents, especially commensurate with the payment of higher fees.

The results also acknowledge that private schools performed better in Mathematics, but the variance was smaller than in English Language (Cohen's $d = 0.47$). Variation in Mathematics was recorded among public schools ($SD = 0.62$) and for private schools ($SD = 0.40$). The variations across schools implied that the quality of teaching influenced student performance. The deficiency was more pronounced across public schools than among private schools. The finding is supported by Yusuf and Alabi (2023) acknowledgement that teacher effectiveness reinforces student performance in mathematics more than school ownership. However, the implied result objectively supports evidence that deployment of teaching and other resources efficiently produces significant differences, irrespective of ownership status and behaviour.

The regression results, while revealing a predictive power of ownership structure (private or public) to explain student performance, account for only a 15% difference in English, 6% in Mathematics, and 12% for overall performance. Other factors account for a larger part of the remaining achievement in the proportion. This is argued by Lubienski and Lubienski (2006), and explained by institutional quality, family background, socioeconomic position, emotional and cultural beliefs, among others, collectively combining to shape outcomes.

IX. CONCLUSION

Based on inferential evidence, it is concluded that the academic achievement of junior secondary school students in Edo State in the 2024/2025 JSCE is at an average level, with private schools significantly outperforming public schools in English Language, Mathematics and overall achievement, with moderate to large effects. School ownership is a significant but not sole determinant of learning outcomes. School ownership, although a significant predictor of students' performance, was recorded as a moderate factor, which exposes the lag in variation in outcomes across school and school type.

Limitation of the study

The unit of analysis specified as school type overlooks the implicit role of other important factors like socioeconomic status, family background, quality of supervision and quality of teaching resources. The resources are not evenly distributed among schools, and evidence indicated that private schools have a better opportunity to attract privileged students than public schools.

Recommendations

The following findings were derived from the study.

1. The Ministry of Education should intensify the inspection of public schools to balance the gap between public and private. The inspection should focus on upgrading facilities, teaching quality and motivation, address the challenge of inadequate resources deployed to public schools, especially in rural areas.
2. Increase funding for training and support for quality teaching in Mathematics and English Languages across public schools. The widespread teacher shortage should be progressively reviewed using gap analysis for addressing public school needs in this area. Mathematics and English Language teachers usually experience burnout due to the large class (student-teacher ratio) inherent in public schools. This problem can be resolved by adequately providing scholarships for students in these areas of study and granting automatic employment for them with appropriate incentives (including enhanced pay) to fill the gap.
3. The findings reveal instructional and teaching weaknesses and the need to improve the local need method for teaching Mathematics and English Language. This should be research-based and focus on improving curriculum in diverse learning environments. Other forms of study, like integrating technology and other computer-aided learning modes, should be incorporated into studying. Younger learners are addicted to the use of technology; this can serve as an inroad towards deploying these devices in simplifying learning.
4. The result showed an average performance across school type. Specific studies, along with the resultspeculiar to a school, should be analyse the know the needs of each school. The average analysis maybe misleading to assume that all private schools are better off than public schools. These outcomes are generally statements from the composite data analysed.
5. Future research should decompose specific resources as variables for investigation in understanding students' performance, like socioeconomic status, family background, teacher characteristics, funding level and student readiness or willingness to learn.

REFERENCES

- [1]. Adebayo, T. A., & Lawal, O. R. (2022). Impact of educational resources on students' academic performance in Nigeria. *International Journal of Educational Research*, 11(2), 45–58.
- [2]. Adeyemi, T. O. (2021). Determinants of students' academic achievement in

- Nigerian secondary schools. *Journal of Educational Management*, 9(1), 33–47.
- [3]. Ashley, L. D., McLoughlin, C., Aslam, M., Engel, J., Wales, J., Rawal, S., Batley, R., Kingdon, G., Nicolai, S., & Rose, P. (2014). The role and impact of private schools in developing countries: A rigorous review of the evidence. Department for International Development.
- [4]. Nicolai S, and Rose, P (2014). The role and impact of private schools in developing countries: A rigorous review of the evidence. Final report. Education Rigorous Literature Review.
- [5]. Department for International Development. @ <http://r4d.dfid.gov.uk/>
- [6]. Cohen, J. (1988). Statistical power analysis for the behavioural sciences (2nd ed.). Lawrence Erlbaum Associates.
- [7]. Eghoghon, O. E. (2022). Factors responsible for poor performance of students in Junior Secondary Certificate examination in Edo State [Paper presentation]. Graduation Ceremony of the Faith Word Group of Schools, Benin City, Nigeria.
- [8]. Eze, P. I., & Nwankwo, C. U. (2024). Digital learning and students' academic achievement in Nigerian secondary schools. *Journal of Education and Practice*, 15(3), 112–125.
- [9]. Federal Ministry of Education. (2009). Roadmap for the Nigerian education sector. Federal Ministry of Education.
- [10]. Federal Republic of Nigeria. (2013). National policy on education (6th ed.). NERDC Press.
- [11]. Hanushek, E. A. (1995). Interpreting recent research on schooling in developing countries. *The World Bank Research Observer*, 10(2), 227–246. <https://doi.org/10.1093/wbro/10.2.227>
- [12]. Hanushek, E. A. (2008). Education production functions. In S. N. Durlauf & L. E. Blume (Eds.), *The new Palgrave dictionary of economics* (2nd ed.). Palgrave Macmillan.
- [13]. Hanushek, E. A. (2020). Education production functions. In S. Bradley & C. Green (Eds.), *The economics of education* (2nd ed., pp. 161–170). Academic Press. <https://doi.org/10.1016/B978-0-12-815391-8.00013-6>
- [14]. Ifaka, J. O and Obi, A. V (2021). Rationalising human resources in Nigerian public and private schools in the COVID-19 era: Challenges, trend, and strategy. Pandemic in the 21st century: Multidimensional approaches: Conference proceedings for 2nd College of Management and Social Science 2021 conference held on 21st April 2021.
- [15]. Imonikhe, J., Aluede, O., Ojugo, A., Afen-Akpaida, J., & Onolemhenmhen, P. (2010). The influence of sex and school ownership on counsellors' awareness of comprehensive guidance and counselling programme in Midwest Nigeria. *American Journal of Scientific Research*, 7, 55–64.
- [16]. Lubienski, C., & Lubienski, S. T. (2006). Charter, private, public schools and academic achievement: New evidence from NAEP mathematics data (Occasional Paper No. 111). National Center for the Study of Privatisation in Education, Teachers College, Columbia University.
- [17]. Ogunode, N. J. (2020). Administration of secondary education in Nigeria: Issues and challenges. *Journal of Educational Administration*, 8(1), 23–35.
- [18]. Okebukola, P. (2009, September 26). The problem with the Nigerian educational system. *The Nigerian Guardian*, p. 13.
- [19]. Okeke, B. S., Okeke, A. C., & Eze, J. U. (2022). School environment and students' academic performance in Nigeria. *Journal of Social Sciences*, 12(4), 78–91.
- [20]. Omokhodion, J. O. (1996). *Sociology of education: An African experience*. Olu-Akin Publishers.
- [21]. Tooley, J., Dixon, P., & Olaniyan, O. (2005). Private and public schooling in low-income areas of Lagos State, Nigeria: A census and comparative survey. *International Journal of Educational Research*, 43(3), 125–146. <https://doi.org/10.1016/j.ijer.2006.05.001>
- [22]. UNESCO. (2021). Global education monitoring report, 2021/2: non-state actors in education: who chooses? who loses? UNESCO Publishing. <https://doi.org/10.54676/XJFS2343>
- [23]. Yusuf, M. A., & Alabi, T. O. (2023). Teachers' effectiveness and students' academic performance in secondary schools. *Journal of Educational Studies*, 14(2), 56–70.