

Education financing policies and their influence on learning outcomes in public secondary schools in Calabar Metropolis, Nigeria

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Abstract

This study examined the influence of education financing policies on learning outcomes in public secondary schools in Calabar Metropolis, Nigeria. The aim was to assess how the adequacy, distribution, and management of educational funds affect students' academic performance, literacy, and skills acquisition. Survey research design was adopted, with data collected from 360 respondents. Data analysis findings revealed that 30.3% and 23.9% of respondents reported funding as inadequate and very inadequate respectively, while 32.8% and 26.1% indicated that learning materials influenced performance to a very great and great extent. State government allocations constituted the main funding source for 36.7% of schools. Challenges affecting fund utilization included delays in release of funds (28.1%), insufficient allocations (23.1%), and mismanagement (20.0%), resulting in 35.0% reporting very significant negative effects on teaching and learning. Analysis also showed a strong positive correlation between funding adequacy and learning outcomes ($r = 0.71$, $p = 0.000$), with regression analysis indicating that funding explained 50.4% of the variation in student performance ($\beta = 0.71$, $p = 0.000$). In conclusion, inadequate and poorly managed funding significantly limits student learning outcomes. Timely and equitable fund disbursement, diversification of funding sources, and strengthened financial accountability within schools is recommended.

Keywords: Education financing, Policies, learning outcomes, public secondary schools, resource management,

Introduction

Education financing policies refer to the structured frameworks, institutional arrangements, and regulatory mechanisms through which financial resources are mobilized, allocated, and utilized to support the delivery of education. These policies determine how funds are sourced, distributed, and managed across different levels of the education system, shaping the overall effectiveness of teaching and learning processes. Adequate financing ensures the provision of essential inputs such as qualified teachers, instructional materials, and conducive learning environments, all of which directly influence student achievement. Learning outcomes, in this context, encompass measurable academic performance, literacy and numeracy competencies, and broader cognitive and social skills acquired by students (Owan et al., 2023). These outcomes are commonly assessed through examinations, continuous assessment, and subject proficiency levels (Adams et al., 2025). Evidence further shows that the availability and proper management of school resources significantly enhance students' academic success and overall educational attainment (Ekpoto et al., 2024).

At the global level, there is substantial evidence demonstrating a strong relationship between education financing and student learning outcomes. Countries with well-structured financing systems tend to achieve higher educational performance due to consistent investment in infrastructure, teacher development, and instructional materials. Research indicates that adequate funding improves classroom conditions, reduces overcrowding, and enhances instructional quality, all of which contribute to better academic outcomes (Gabdo et al., 2025). In developed nations, education financing policies are often guided by equity-based allocation models that ensure disadvantaged schools receive additional resources, thereby reducing achievement gaps. Studies also show that efficient utilization of financial resources, supported by strong accountability systems, leads to sustained improvements in literacy and numeracy levels (Odukoya, 2025). Furthermore, evidence from comparative education research highlights that strategic investment in education remains a key driver of national development and human capital formation (Atolagbe, 2024).

Education financing systems are frequently constrained by limited fiscal capacity, dependence on external funding, and challenges in policy implementation. Many countries in the region struggle with inadequate budgetary allocations to the education sector, resulting in shortages of teaching materials, poor infrastructure, and insufficient teacher motivation. These constraints have been linked to lower levels of student achievement and increased dropout rates across several African countries (Gabdo et al., 2025). Studies also reveal that inefficiencies in resource allocation and weak financial management practices undermine the effectiveness of available funds, limiting their impact on learning outcomes (Nwokonko, 2024). In addition, disparities between urban and rural schools further exacerbate inequalities in access to quality education, as schools in disadvantaged areas often receive fewer resources (Ohamobi & Edor, 2025). Addressing these challenges requires reforms that strengthen governance, improve accountability, and promote more equitable distribution of educational resources across the continent.

In Nigeria, education financing is characterized by a multi-tiered structure involving federal, state, and local government contributions, alongside supplementary funding from institutional and community-based sources. Despite these multiple funding streams, significant disparities exist in allocation and utilization, which directly affect the quality of secondary education across different regions (Atolagbe, 2024). In Cross River State, particularly in Calabar Metropolis, public secondary schools often experience irregular funding disbursement, inadequate instructional materials, and limited support for teacher welfare, all of which negatively influence student performance (Anyalebechi et al., 2025). Empirical studies in the area have shown that the availability of school resources and effective management practices are critical determinants of learning outcomes (Egbo, 2025). Furthermore, the adoption of alternative financing strategies, such as school-based income generation and community contributions, has been identified as a means of mitigating funding gaps and improving school performance (Asuquo et al., 2024). These realities highlight the need for more efficient and equitable financing policies to enhance educational outcomes in public secondary schools within the state.

Statement of problem

Despite the existence of multiple policy frameworks aimed at strengthening secondary education in Nigeria, public secondary schools in Calabar Metropolis continue to experience persistent and clearly identifiable financing challenges that directly affect their operational effectiveness. One of the most critical issues is the irregular and delayed release of government funds, which disrupts school planning cycles and limits the ability of administrators to implement academic programmes as scheduled. In many cases, funds allocated for instructional materials, maintenance, and co-curricular activities either arrive late or fall short of approved budgets, creating gaps between policy intentions and actual practice. In addition, inequitable distribution of available resources across schools leads to situations where some schools operate with relatively adequate support while others struggle with severe shortages. The poor implementation of teacher welfare policies, including delays in salary payments and limited access to professional development opportunities, further reduces teacher motivation and instructional quality (Anyalebechi et al., 2025). These financial constraints are compounded by deteriorating infrastructure, overcrowded classrooms, and insufficient teaching aids, all of which have been shown to weaken classroom engagement and hinder effective learning processes (Okoi, 2022; Ekpoto et al., 2024; Odukoya, 2025).

In response to these constraints, schools have increasingly turned to alternative financing strategies such as school-based income generating activities and contributions from parent teacher associations. While these approaches have demonstrated some capacity to supplement government funding, their application remains uneven and often limited in scope. Many schools lack the managerial capacity, community support, or initial capital required to sustain such initiatives, resulting in inconsistent outcomes across the metropolis (Okoi et al., 2023). Furthermore, reliance on these alternative sources can introduce disparities, as schools located in more economically advantaged communities are better positioned to mobilize additional funds compared to those in less privileged areas. As a result, the overall impact of these strategies on improving educational quality remains modest. Consequently, key indicators of learning outcomes, including students' academic performance, literacy levels, and acquisition of practical skills, continue to fall below expected standards in several public secondary schools (Owan et al., 2023). This persistent gap between policy expectations and actual outcomes highlights the need for a more critical and context specific examination of how education financing policies and resource management practices shape educational quality in Calabar Metropolis.

Literature review

Role of education financing in learning outcomes

Adequate and sustained education financing plays a central role in shaping learning outcomes in secondary education by determining the quality and availability of key educational inputs. In practical terms, funding influences the recruitment and retention of qualified teachers, the provision of up-to-date instructional materials, and the maintenance of a conducive learning environment. Evidence from Calabar Metropolis shows that schools with access to sufficient teaching aids, functional laboratories, and structured student support programmes consistently record better academic performance and higher levels of student engagement (Adams et al., 2025). In the same context, the availability of school facilities such as libraries and classrooms has been found to significantly improve students' comprehension and retention of subject content (Ekpoto et al., 2024). Beyond material resources, financial investment in teacher welfare, including timely salaries and opportunities for professional development, enhances instructional delivery and classroom effectiveness. This is supported by findings from Lagos State, where targeted funding policies directed at improving teacher welfare and classroom support led to measurable improvements in students' examination outcomes (Odukoya, 2025). Similarly, broader analyses of learning outcomes indicate that financial inputs remain a critical predictor of students' academic success across multiple dimensions, including cognitive and practical skill acquisition (Owan et al., 2023).

Funding sources and allocation patterns

Education financing in Nigeria is characterized by a combination of government funding and supplementary sources, each contributing differently to school operations and performance. Public secondary schools primarily depend on allocations from federal, state, and local governments, which are intended to cover recurrent and capital expenditures such as salaries, infrastructure, and instructional materials (Aduma et al., 2025). In addition, schools often rely on internally generated revenue, parent teacher association contributions, and community-based support to address funding gaps (Okoi et al., 2023). Despite the diversity of these sources, allocation patterns are frequently uneven and influenced by administrative bottlenecks, delays in fund release, and broader political considerations that affect prioritization within the education sector (Atolagbe, 2024). Research also suggests that inefficiencies in budget implementation reduce the actual impact of allocated funds on school performance (Gabdo et al., 2025). Within Calabar Metropolis, schools that are able to combine government funding with alternative revenue streams tend to demonstrate stronger academic outcomes, largely due to their increased capacity to provide learning materials and maintain facilities (Asuquo et al., 2024). This aligns with findings that diversified financing structures contribute to improved institutional performance and more stable learning environments (Owan et al., 2023).

Policy implementation challenges and effects

The implementation of education financing policies in public secondary schools is often constrained by a range of systemic and operational challenges that limit their effectiveness. One of the most persistent issues is the delay in the release of approved funds, which disrupts school planning and reduces the ability of administrators to respond to immediate needs. In some cases, even when funds are released, weak financial management practices and lack of transparency in utilization reduce their overall impact on teaching and learning processes (Anyalebechi et al., 2025). Inadequate monitoring and evaluation mechanisms further compound these challenges, allowing inefficiencies and misallocation of resources to persist without corrective measures (Odigwe & Owan, 2022). These shortcomings directly affect classroom conditions, leading to shortages of instructional materials, poorly maintained facilities, and reduced teacher motivation. Consequently, students experience limited engagement and lower academic achievement levels (Okoi, 2022). Evidence also shows that school environment factors, including physical conditions and resource availability, play a significant role in shaping learning outcomes (Egbo, 2025). On the other hand, where school leaders demonstrate effective financial management and adherence to policy guidelines, there is a noticeable improvement in institutional goal attainment and student performance (Nwokonko, 2024).

Empirical evidence

Empirical research provides substantial support for the relationship between education financing and learning outcomes, particularly within Calabar Metropolis and other urban centres in Nigeria. Studies indicate that schools with adequate resources such as well-maintained infrastructure, access to modern instructional materials, and functional libraries consistently demonstrate higher levels of student achievement across core subjects. Adams et al. (2025) and Ekpoto et al. (2024) found that students in resource-rich schools perform significantly better in subjects like Social Studies, Mathematics, and English Language compared to their counterparts in underfunded institutions. Additionally, schools that engage in school-based income-generating projects are better positioned to supplement government funding, thereby enhancing their capacity to provide quality education. Comparative analyses conducted in cities such as Abuja and Lagos further reinforce these findings, showing that effective implementation of funding policies and efficient resource management lead to measurable improvements in educational quality and student performance (Gabdo et al., 2025; Odukoya, 2025). These studies collectively demonstrate that adequate and well-managed financial resources are a key determinant of educational success, highlighting the need for sustained investment and strategic policy implementation in the education sector.

Methodology

This study uses a mixed-methods approach, combining both quantitative and qualitative techniques to gain a well-rounded understanding of how education financing policies affect learning outcomes in secondary schools. The study focuses on students, teachers, and principals from twelve (12) public secondary schools in Calabar Metropolis, covering both junior and senior secondary levels to ensure balanced representation. A total of 360 respondents were selected, with students chosen through stratified random sampling to reflect differences in class level and gender, while teachers and principals were selected purposively because of their direct involvement in school management and policy implementation. Data were collected using structured questionnaires administered to students and teachers, which explored issues such as the adequacy of funding, availability of learning materials, and students' academic performance. In addition, semi-structured interviews were conducted with principals to gain deeper insights into how funds are managed, as well as the challenges faced in implementing financing policies. Secondary data were also gathered from government reports, TETFund records, and existing studies related to school financing and educational outcomes. For analysis, quantitative data

were examined using descriptive statistics, as well as correlation and regression techniques to determine the relationship between funding and learning outcomes. Meanwhile, qualitative data from the interviews were analyzed thematically, allowing key ideas and recurring issues to emerge and provide context to the findings.

Findings

The results from Tables 1 to 3 present a clear picture of the funding situation in public secondary schools in Calabar Metropolis and its effect on learning outcomes. Table 1 shows that most respondents perceive funding for teaching and learning as inadequate, with 30.3 percent rating it as inadequate and 23.9 percent as very inadequate, indicating that more than half of the schools face serious financial constraints. Only a small proportion consider funding to be adequate or very adequate, while a moderate number describe it as fairly sufficient. This suggests that many schools lack the financial capacity to provide essential instructional resources and maintain effective learning environments. Table 2 further highlights the importance of these resources, as a majority of respondents, over half, report that learning materials influence academic performance to a great or very great extent. This confirms that the availability of textbooks, teaching aids, and other materials plays a critical role in shaping students' academic success. Table 3 reveals that most schools rely heavily on state government allocations as their main source of funding, with relatively fewer schools accessing federal support, community contributions, or internally generated revenue. The limited number of schools benefiting from multiple funding sources suggests weak diversification, making them vulnerable to funding delays or shortages. Overall, the findings show that inadequate and poorly diversified funding directly limits access to learning materials and, in turn, negatively affects student performance in the metropolis.

Table 1: Adequacy of funding for teaching and learning

Adequacy of Funding	Frequency	Percentage (%)
Very adequate	21	5.8
Adequate	48	13.3
Moderately adequate	72	20.0
Inadequate	109	30.3
Very inadequate	86	23.9
Not sure	24	6.7
Total	360	100.0

Source: Author's fieldwork, 2026.

Table 2: Influence of learning materials on academic performance

Influence of Learning Materials	Frequency	Percentage (%)
To a very great extent	118	32.8
To a great extent	94	26.1
To a moderate extent	63	17.5
To a little extent	41	11.4
To no extent	23	6.4
Not sure	21	5.8
Total	360	100.0

Source: Author's fieldwork, 2026.

Table 3: Main source of school funding

Source of School Funding	Frequency	Percentage (%)
State government allocation	132	36.7
Federal government intervention	58	16.1
PTA/community contributions	64	17.8
Internally generated revenue	39	10.8
Combination of multiple sources	47	13.1
Not sure	20	5.5
Total	360	100.0

Source: Author's fieldwork, 2026.

The data in Tables 4 to 6 provide deeper insight into how financial management practices and systemic challenges affect teaching and learning in public secondary schools in Calabar Metropolis. Table 4 indicates that perceptions of fairness in the distribution and utilization of funds are largely negative, with 26.7 percent of respondents describing the process as unfair and 16.9 percent as very unfair, making this the dominant view. Only

a small proportion consider the process to be very fair or fair, while a moderate share views it as somewhat fair, suggesting that concerns about transparency and equity in fund allocation are widespread. Table 5 identifies the specific challenges driving these perceptions, with delay in the release of funds emerging as the most reported issue at 28.1 percent, followed by insufficient funding allocation at 23.1 percent and mismanagement of funds at 20.0 percent. Inadequate monitoring and supervision also account for a notable share, indicating weaknesses in oversight systems, while political or administrative interference, though less frequent, still contributes to inefficiencies in fund utilization. These challenges collectively create bottlenecks that limit the effective use of available resources. Table 6 shows the consequences of these financial constraints on teaching and learning outcomes, where a clear majority of respondents report negative impacts. Specifically, 35.0 percent indicate a very significant negative effect and 27.2 percent report a significant negative effect, meaning that over sixty percent perceive serious disruptions to educational processes. Only a small fraction believe the effect is minimal or nonexistent. Taken together, the three tables reveal that perceived unfairness in fund distribution, combined with delays, inadequate allocation, and weak accountability mechanisms, significantly undermines the effectiveness of teaching and learning in public secondary schools within the metropolis.

Table 4: Fairness in distribution and utilization of funds

Distribution	Frequency	Percentage (%)
Very fairly	27	7.5
Fairly	69	19.2
Moderately fairly	84	23.3
Unfairly	96	26.7
Very unfairly	61	16.9
Not sure	23	6.4
Total	360	100.0

Source: Author's fieldwork, 2026.

Table 5: Common challenges affecting use of education funds

Challenges	Frequency	Percentage (%)
Delay in release of funds	101	28.1
Mismanagement of funds	72	20.0
Inadequate monitoring and supervision	58	16.1
Insufficient funding allocation	83	23.1
Political/administrative interference	31	8.6
Not sure	15	4.1
Total	360	100.0

Source: Author's fieldwork, 2026.

Table 6: Effect of financing challenges on teaching and learning

Effect	Frequency	Percentage (%)
Very significant negative effect	126	35.0
Significant negative effect	98	27.2
Moderate effect	63	17.5
Little effect	39	10.8
No effect	19	5.3
Not sure	15	4.2
Total	360	100.0

Source: Author's fieldwork, 2026.

Data analysis

H₀: There is no significant relationship between education financing policies and students' learning outcomes in public secondary schools in Calabar Metropolis.

H₁: There is a significant relationship between education financing policies and students' learning outcomes in public secondary schools in Calabar Metropolis.

The Pearson Product Moment Correlation was used to measure the strength and direction of the relationship between education financing indicators and students' learning outcomes. The analysis in Tables 7 and 8 shows that funding adequacy has a strong and statistically significant positive relationship with students' learning outcomes in public secondary schools in Calabar Metropolis. The Pearson correlation coefficient of 0.71 ($p = 0.000$) indicates a strong association between better funding and higher learning outcomes. Regression analysis further confirms this relationship, showing that funding adequacy significantly predicts learning outcomes and accounts for 50.4 percent of the variation in students' performance. The positive beta coefficient of 0.71 demonstrates that improvements in funding directly translate into better academic achievement, while the F-value of 362.45 and p-value of 0.000 indicate that the model is highly statistically significant.

Table 7: Correlation between funding adequacy and learning outcomes

Variable	N	Mean	Std. Deviation	r-value	p-value
Funding Adequacy	360	2.41	1.12		
Learning Outcomes (Effect Level)	360	3.98	1.05	0.71	0.000

The result shows a strong positive relationship between funding adequacy and learning outcomes, with a correlation coefficient of 0.71. The p-value of 0.000 indicates that the relationship is statistically significant at the 0.05 level.

Table 8: Regression analysis of education financing on learning outcomes

Model	R	R ²	Adjusted R ²	F-value	p-value
Financing → Outcomes	0.71	0.504	0.502	362.45	0.000
Predictor	B	Std. Error	Beta	t-value	p-value
Constant	1.214	0.184		6.60	0.000
Funding Adequacy	0.812	0.043	0.71	19.03	0.000

Summary

This study examined the influence of education financing policies on learning outcomes in public secondary schools in Calabar Metropolis, Nigeria. It focused on understanding how the adequacy, distribution, and management of funds affect students' academic performance, literacy, and skills acquisition. Using a survey design, data were collected from 360 respondents, including school administrators and teachers, and analyzed through descriptive statistics, Pearson correlation, and regression analysis. The study found that a significant proportion of schools experience inadequate funding, delays in fund disbursement, inequitable allocation, and weak oversight, which together limit access to essential teaching and learning resources. Learning materials, classroom infrastructure, and teacher welfare emerged as critical mediating factors between financing and student performance.

The statistical analysis revealed a strong and positive relationship between funding adequacy and learning outcomes, with a correlation coefficient of 0.71 and a statistically significant regression model explaining 50.4 percent of the variation in student performance. These findings highlight that improvements in the quantity, fairness, and management of educational funds directly enhance students' academic achievement. The study underscores the need for timely, equitable, and well-monitored financing policies, alongside the promotion of alternative funding mechanisms such as school-based income generation and community contributions. Implementing these measures could strengthen resource availability, support effective teaching, and improve learning outcomes in public secondary schools across Calabar Metropolis.

Recommendations

Based on the findings, it is recommended that the government ensure timely and adequate disbursement of funds to public secondary schools, with mechanisms to monitor equitable allocation and proper utilization. Schools should also be encouraged to diversify their funding sources through sustainable school-based income generation and active engagement with parent-teacher associations to supplement government support. Additionally, strengthening financial management and accountability practices within schools, including regular audits and transparent reporting, would help ensure that available resources effectively enhance teaching quality and student learning outcomes.

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