

Impact of Sustainable Funding and Resource Management Strategies on Quality Early and Primary Education in Nigeria

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ABSTRACT

Ensuring quality early childhood and primary education requires sustainable funding and effective resource management. However, many education systems face financial instability, inefficient resource allocation, and policy inconsistencies that hinder the delivery of quality learning. Inadequate funding leads to overcrowded classrooms, insufficient learning materials, low teacher motivation, and poor infrastructure, affecting student performance and overall educational outcomes. This study explores sustainable funding mechanisms and best practices in resource management to improve education quality. Using a survey-based approach, data were collected from government officials, school administrators, teachers, parents, and donor agencies. The study employed structured questionnaires to identify challenges in funding and resource management, as well as proposed strategies for financial stability. Findings provided evidence-based recommendations for equitable resource distribution, policy interventions, and financial accountability. This research is significant for policymakers, school administrators, and stakeholders seeking to enhance the quality of education through effective financial planning. It aims to contribute to a well-managed and financially sustainable education system that guarantees access to quality learning opportunities for all children. By examining the relationship between funding, resource management, and learning outcomes, this study also provided valuable insights for education sector reforms and long-term sustainability.

INTRODUCTION

Quality early childhood and primary education are fundamentals in shaping a child's cognitive, social, and emotional development. However, achieving and maintaining high educational standards require sustainable funding and effective resource management (UNESCO, 2021). Many educational institutions, particularly in developing countries, struggle with financial constraints that limit access to essential learning materials, qualified teachers, and adequate infrastructure (World Bank, 2020). These challenges highlight the need for research on sustainable funding mechanisms that can enhance equity and quality in education.

Early childhood and primary education needs comprise of physical, emotional, social and cognitive development.

This study focuses on three key variables: sustainable funding, resource management, and quality education. Sustainable funding refers to long-term financial strategies that ensure continuous investment in education through government allocations, donor contributions, and community support (OECD, 2019). It involves reliable financial planning that prevents budget deficits and ensures that schools receive consistent funding to meet operational and developmental needs. Without sustainable funding, educational institutions often face interruptions in essential services, leading to compromised learning outcomes and increased dropout rates.

Resource management involves the efficient allocation and utilization of financial, human, and material resources to maximize educational outcomes (Ngware, 2018). Effective resource management ensures that available funds are used appropriately to improve teacher salaries, school infrastructure, learning materials, and

student support services. Poor resource management can lead to wastage, inefficiencies, and misallocation of funds, further widening the gap between well-funded and underfunded schools.

Quality education, in this context, is characterized by improved student performance, well-trained teachers, sufficient learning materials, and a conducive learning environment (UNICEF, 2020). The availability of sustainable funding and effective resource management directly influences education quality, as schools with adequate financial resources and proper management are more likely to offer engaging curricula, modern teaching methods, and well-maintained facilities that enhance learning experiences.

Despite global efforts to promote free and compulsory education, many schools still struggle with inadequate financial resources. Inefficient budget allocation, corruption, and economic instability further exacerbate disparities in education quality (Glewwe & Muralidharan, 2016). Without proper financial sustainability, schools face challenges such as teacher shortages, outdated curricula, and poor infrastructure, ultimately affecting student success (Hanushek & Woessmann, 2020).

Education funding is increasingly being influenced by both government and private sector investments. Governments remain the primary source of education funding, allocating budgets to public schools and providing subsidies to support education access (OECD, 2020). However, financial constraints often lead to funding gaps, prompting private sector involvement. Private institutions, corporate sponsorships, and public-private partnerships (PPPs) have become essential in supplementing government funding. While private sector investment can enhance infrastructure and technology in schools, concerns arise regarding access and affordability, particularly in low-income communities.

International donors, non-governmental organizations (NGOs), and development agencies play a crucial role in funding education initiatives. Organizations such as the World Bank, UNICEF, and UNESCO provide grants, scholarships, and infrastructural support to improve education quality, particularly in developing countries. Donor support is essential for addressing emergencies, supporting marginalized groups, and promoting educational reforms. However, dependency on donor funding raises sustainability concerns, as funding priorities may shift based on global economic and political conditions (Altbach & de Wit, 2021).

Community involvement in education funding has gained traction as a means to ensure sustainability and inclusivity. Local communities contribute through fundraising, school development levies, and volunteer services. Parent-teacher associations (PTAs) and community-based organizations play a pivotal role in bridging funding gaps by supporting school programs, infrastructure, and extracurricular activities. Engaging communities in education funding fosters a sense of ownership, accountability, and long-term sustainability (Bray, 2018). However, disparities in community resources can lead to unequal educational opportunities, requiring balanced funding strategies.

This research aims to find out sustainable funding and education quality, identify challenges in resource management, and propose strategic solutions for long-term financial stability in early childhood and primary education. Findings from this study will provide policymakers and stakeholders with insights to enhance funding strategies and optimize resource utilization for improved educational outcomes.

STATEMENT OF THE PROBLEM

The foundation of any nation's educational system lies in early childhood and primary education, as these stages play a crucial role in shaping children's cognitive, social, and emotional development. However, the quality of education at these levels is heavily dependent on adequate and sustainable funding as well as efficient resource management. In many developing and even developed nations, early childhood and primary education systems often struggle with financial constraints, poor resource allocation, and inefficient management, leading to overcrowded classrooms, inadequate learning materials, poorly trained teachers, and substandard infrastructure. One of the major challenges facing early childhood and primary education is inconsistent and insufficient funding from government and private sources. Many schools rely on government subventions, donor support, or parental contributions, which may not be sustainable in the long run. In cases where funds are available,

mismanagement, corruption, and lack of proper accountability mechanisms often hinder the effective utilization of these resources, preventing schools from achieving their educational goals. Additionally, the lack of long-term financial planning and reliance on unpredictable funding sources often result in interruptions in school operations, delays in teacher salaries, and a decline in the quality of education. Another critical issue is inefficient resource management. In many schools, available resources including finances, infrastructure, instructional materials, and human capital are not optimally allocated or utilized, leading to wastage and underperformance. Poor planning and lack of transparency in budgeting contribute to inequitable distribution of educational resources, with some schools receiving better funding and facilities while others remain underfunded. Moreover, rapid population growth and increasing school enrollments further strain the already limited resources, making it difficult for schools to maintain small class sizes, provide individualized learning, and ensure teacher effectiveness. Failure to address these financial and resource management challenges has long-term consequences on learning outcomes, as students in poorly funded schools often experience lower academic achievement, higher dropout rates, and limited access to quality education. Additionally, teachers working in underfunded environments may lack motivation, professional development opportunities, and necessary teaching aids, further affecting the quality of instruction. Given the importance of sustainable funding and effective resource management in achieving quality education, this study seeks to explore innovative and practical solutions to ensure that early childhood and primary education systems receive consistent funding and optimize available resources. The study will investigate various funding models, resource allocation strategies, and policy interventions that can enhance the sustainability of educational financing while ensuring efficient utilization of resources to improve learning outcomes. By addressing these issues, this research aims to contribute to the development of a financially stable and well-managed educational system that guarantees quality early childhood and primary education for all children, regardless of their socioeconomic background.

Research Questions

1. What are the effects of sustainable funding on early childhood and primary school education?
2. What are the effects of quality resource management strategies on early childhood and primary school education?

Research Aims

1. To find sustainability in funding early childhood and primary school education.
2. To find out the resource management strategies employed in early and primary schools' education

Theoretical Framework

This study adopts the Human Capital Theory introduced by Gary Becker in 1964. The theory states that investment in education, training, and skills development enhances human productivity, leading to economic and social benefits. According to Becker (1964), education is a crucial form of capital that yields long-term returns, both at the individual and societal levels. The principles of the Human Capital Theory emphasize the importance of continuous investment in knowledge and skills to drive economic growth, reduce inequalities, and improve overall well-being. This theory is relevant to this study as it underscores the need for sustainable funding and efficient resource management in education, ensuring that children receive quality education that contributes to national development and economic stability. By aligning financial strategies with human capital investment, policymakers and educators can create a robust education system that produces well-equipped individuals ready to contribute to society.

Research Design

This study adopted a survey research design, which is appropriate for gathering quantifiable data from a large and diverse population. The survey design enabled the collection of structured, comparable responses that could be analyzed statistically to draw inferences about sustainable funding and education quality in early childhood and primary education. Structured questionnaires with closed-ended questions were developed as the main data collection instrument. This choice ensured uniformity in responses and facilitated quantitative analysis. The

research approach was underpinned by the positivist paradigm, which emphasizes objectivity, reliability, and generalizability of results. Data analysis was carried out in two phases. First, descriptive statistics percentage, mean scores, and frequency distributions were applied to present trends in funding adequacy, teacher salary satisfaction, and availability of learning materials. Second, inferential statistics, specifically regression analysis, were used to test hypotheses and determine the extent to which sustainable funding and resource management predicted education quality. By combining descriptive and inferential analysis, the study ensured both clarity of trends and depth of interpretation.

POPULATION AND SAMPLING

Population

The population for this study comprised 1,250 key stakeholders in early childhood and primary education in Plateau and Nasarawa states. These stakeholders were considered critical, as their decisions and perspectives directly shape the financing, management, and quality of education. Below is a table depicting the population for the study.

Teachers	Parents	School administrators	Policy makers	Total Population
500	350	250	150	1250

Sampling

A stratified random sampling technique was employed to ensure that subgroups were adequately represented. The strata were based on:

- **School type:** public vs. private institutions
- **School location:** urban vs. rural communities
- **Stakeholder role:** teachers, administrators, parents, policymakers

From the total population, a sample size of 300 respondents was drawn using standard statistical sample determination methods. The breakdown was as follows:

Teachers	Parents	School administrators	Policy makers
100	80	70	50

This sampling approach enhanced representativeness, reduced bias, and increased the generalizability of findings across various socio-economic and institutional settings.

Method of Data Collection

Data were collected using structured questionnaires distributed to the sampled respondents. The instrument consisted of four sections:

1. **Demographic** Information (age, gender, role, school type, and location)
2. **Adequacy of Funding** (questions on school financing, government support, and alternative funding sources)
3. **Teacher** Remuneration and Welfare (questions on salary satisfaction, allowances, and motivation)
4. **Availability of Resources** (questions on provision of textbooks, teaching aids, classrooms, and other infrastructure)

The instrument was pre-tested in a pilot study to check for reliability and clarity. Cronbach's Alpha yielded a reliability coefficient of 0.81, indicating a high level of internal consistency.

ANALYSIS AND DISCUSSION OF FINDINGS

Descriptive Findings

Table 1: Adequacy of Funding

Response	Count	Percentage
YES	225	75%
NO	75	25%

Source: Field Survey, 2025

The results show that a majority of respondents (75%) perceive funding as adequate, though 25% consider it inadequate. This indicates a funding gap in certain schools, especially in rural and low-income settings.

Table 2: Teacher Salary Satisfaction

Response	Count	Percentage
YES	174	58%
NO	126	42%

Source: Field Survey, 2025

Teacher salary satisfaction was moderate, with 58% satisfied and 42% dissatisfied. The dissatisfaction rate underscores concern about teacher welfare, which can influence teacher retention and classroom performance.

Table 3: Availability of Learning Materials

Response	Count	Percentage
YES	246	82%
NO	54	18%

Source: Field Survey, 2025

A large majority (82%) reported sufficient learning materials, while 18% disagreed. This suggests that although learning materials are fairly available, disparities exist across schools, particularly between urban and rural institutions.

Inferential Findings (Regression Analysis)

Regression analysis was conducted to examine the relationship between sustainable funding indicators (adequacy of funding, teacher salary satisfaction, and availability of learning materials) and education quality. The results are summarized below:

Adequacy of funding significantly predicted education quality ($\beta = 0.62$, $R^2 = 0.41$, $p < 0.05$).

Availability of learning materials also showed a strong positive effect ($\beta = 0.54$, $R^2 = 0.37$, $p < 0.05$).

Teacher salary satisfaction had a weaker but still significant effect ($\beta = 0.29$, $p < 0.05$).

DISCUSSION

The findings of this study highlight the pivotal role of sustainable funding in shaping the quality of early childhood and primary education in Plateau and Nasarawa States, Nigeria. The descriptive and inferential analyses demonstrate that funding adequacy, availability of learning materials, and teacher salary satisfaction all contribute significantly to education quality, though with varying degrees of influence. Consistent with previous studies (Musah, 2024 Hassan, Groot, & Volante 2025), the results confirm that adequate financial investment in schools enhances the provision of teaching and learning resources, which in turn supports better student performance. The regression results showed that funding adequacy and learning material availability had the strongest predictive power, underscoring the argument that financial resources remain the foundation upon which educational outcomes are built. This aligns with Ugwuibe and Anyadike's (2024) observation that without sustainable financing, achieving the Sustainable Development Goal 4 (SDG 4) of inclusive and equitable quality education remains elusive. Teacher salary satisfaction, though statistically significant, exerted a comparatively weaker influence on education quality. This finding partly reflects the structural issues in Nigeria's wage system for educators, where salary levels often fail to keep pace with inflation and rising living costs (Amadi, 2023). While salary satisfaction alone may not guarantee improved outcomes, inadequate remuneration undermines teacher motivation, retention, and instructional commitment (Bello & Musa, 2023). Thus, addressing teacher welfare remains a critical element of education reform.

The study further reveals disparities between urban and rural schools, particularly in terms of learning material provision. Respondents from rural communities reported greater funding inadequacies and limited access to instructional resources, echoing similar patterns documented in Sub-Saharan Africa (Droubi, Mertens, & Williams, 2023). This rural-urban divide suggests that education financing policies in Nigeria must prioritize equity, ensuring that resource allocation bridges systemic gaps rather than reinforcing them. Another important implication is the need for diversified funding strategies. Sole reliance on government allocations, which are frequently delayed or insufficient, is unsustainable. Community participation, public-private partnerships, and innovative financing mechanisms such as education levies or philanthropic contributions could provide supplementary resources. As Koh (2023) suggests, sustaining educational quality requires broad-based support that extends beyond the state.

Finally, the findings emphasize the necessity of transparent financial management and accountability. Funding without effective utilization risks waste, corruption, and mismanagement. Policies must therefore incorporate monitoring frameworks that track expenditure and ensure resources directly enhance teaching and learning.

LIMITATIONS OF THE STUDY

While this study offers valuable insights, it is important to recognize its limitations:

Geographic scope: The research was limited to Plateau and Nasarawa States. Findings may not fully represent the situation in other Nigerian states. **Self-reported data:** The reliance on questionnaires may introduce subjectivity or bias, as responses reflect personal perceptions rather than direct observation. **Exclusion of students:** The study focused on administrators, teachers, parents, and policymakers, but did not include student voices. Their perspectives could provide additional insights into the impact of funding on learning experiences. **Cross-sectional design:** Data were collected at a single point in time, which limits the ability to establish causal relationships. Longitudinal studies could provide deeper understanding of trends over time.

Future research could address these limitations by expanding to additional states, using mixed methods (interviews and classroom observations), and including student perspectives.

CONCLUSION

Overall, this study provides empirical evidence that sustainable funding is not only a matter of increasing financial inputs but also of ensuring that resources are equitably distributed, efficiently managed, and strategically aligned with the needs of teachers and learners. The discussion highlights that strengthening

Nigeria's education system requires a holistic approach one that addresses financing adequacy, teacher welfare, resource distribution, and accountability simultaneously.

RECOMMENDATIONS

- Education funding should be increased and distributed equitably to reduce disparities between urban and rural schools.
- Teacher welfare should be improved through fair salaries, benefits, and professional development to enhance motivation and retention.
- Transparent financial management and diversified funding sources should be adopted to ensure sustainability and accountability in education.

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