

Managing School-Based Resources and Secondary School Effectiveness in Cross River State, Nigeria

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Abstract

This study investigated the relationship between school-based resource management and secondary school effectiveness in Cross River State, Nigeria, using a descriptive survey research design. The population consisted of 487 administrators across the three senatorial districts of the state, with a census sampling technique ensuring full participation and eliminating sampling error. Data were collected using validated and reliable instruments-the School-Based Resource Management Questionnaire (SBRMQ) and Secondary School Effectiveness Inventory (SSEI) and analyzed using a four-point Likert scale with a criterion mean of 2.50 as the benchmark for interpretation. Findings revealed that effective management of human, financial, and physical resources significantly enhances administrative and instructional effectiveness in secondary schools. However, challenges such as inadequate funding, limited autonomy, and insufficient training impede optimal resource utilization. The study concludes that strategic interventions like capacity building, stakeholder engagement, and digital integration are essential for addressing these challenges. It recommends comprehensive policy reforms and sustained investment in resource management to improve the effectiveness of secondary schools in Cross River State.

Keywords: School-Based Resource Management, Secondary School Effectiveness, Educational Administration, Human Resource Management, Financial Resource Management

Introduction

The effective management of school-based resources has become a vital aspect of enhancing secondary school effectiveness in contemporary educational systems. Resources such as funding, teaching and non-teaching personnel, infrastructure, instructional materials, and time are foundational to delivering quality education (Ukpong & Uzoigwe, 2019; Ategwu et al., 2022). In particular, secondary schools in Nigeria are expected to function optimally and respond to increasing demands for improved student outcomes despite facing persistent resource constraints (Chuktu & Uzoigwe, 2019). Efficient and transparent management of these resources at the school level is crucial, as it directly influences academic achievement, staff motivation, infrastructure development, and overall school performance (Nnaji & Uzoigwe, 2021; Sunday et al., 2025).

In Cross River State, Nigeria, secondary schools operate within a dynamic and often challenging educational landscape characterized by limited government funding, rising enrollment pressures, and an aging infrastructure (Ogbeche & Uzoigwe, 2020; Ukpabio & Uzoigwe, 2023). Many school

administrators, especially principals, are charged with the responsibility of overseeing the planning, allocation, and supervision of both physical and financial resources (Adams & Uzoigwe, 2023). However, anecdotal evidence and empirical observations suggest that a significant number of these schools continue to struggle with effective resource management (Uzoigwe, Zakka, & Anuforo, 2023). This situation results in underperformance, inadequate teaching and learning facilities, low teacher morale, and declining student achievement (Inah & Uzoigwe, 2024).

The shift toward school-based management under Nigeria's broader education reform framework has placed more responsibility on schools to manage their resources efficiently (Paul, Uzoigwe, & Sunday, 2024). The expectation is that increased autonomy and accountability at the school level will enhance educational quality and stakeholder participation (Onya & Uzoigwe, 2023). Nevertheless, this approach requires school leaders to possess the technical knowledge, leadership capacity, and managerial competence necessary to maximize available resources for educational improvement (Mbon & Uzoigwe, 2023). The mismatch between these expectations and the actual capacity of many secondary school leaders in Cross River State presents a critical area for investigation, especially in relation to student performance and institutional effectiveness (Inah, Ekpang, & Uzoigwe, 2024).

Given these realities, there is an urgent need to empirically explore how the management of school-based resources affects secondary school effectiveness in Cross River State (Sunday, Umoren, Inyang, Afia, & Akpan, 2025). Understanding the link between resource utilization and educational outcomes can inform the development of targeted interventions and capacity-building initiatives (Ekpenyong et al., 2020). This study, therefore, aims to evaluate current practices in school resource management and assess their implications for administrative efficiency, academic performance, and stakeholder satisfaction (Ojobe, Uzoigwe, & Bassey, 2024). Through such an analysis, education policymakers and school managers will be better positioned to implement evidence-based strategies for improving the overall effectiveness of secondary education in the state (Umoh, Uzoigwe, & Sunday, 2024).

Statement of the problem

Effective management of school-based resources is critical to the success of secondary schools, as it directly influences the delivery of quality education, student outcomes, and overall school effectiveness (Sunday, Ifiok, Essien, & Blessed-Udo, 2025). However, in Cross River State, Nigeria, secondary schools face significant challenges in resource management, including inadequate funding, inefficient resource allocation, and poor maintenance of available facilities (Onya et al., 2023). These issues often result in overcrowded classrooms, insufficient teaching materials, and deteriorating infrastructure, which negatively impact the learning environment and hinder the achievement of educational goals (Chuktu & Uzoigwe, 2019). Despite the critical role of resource management in ensuring school effectiveness, there is a lack of systematic strategies to optimize the utilization of available resources in the state (Ategwu et al., 2022).

Moreover, school administrators in Cross River State encounter difficulties in balancing the demands of managing human, financial, and material resources effectively (Ukpong & Uzoigwe, 2020). Limited training in resource management, coupled with inconsistent policy implementation and inadequate monitoring mechanisms, exacerbates these challenges (Uzoigwe, Zakka, & Anuforo, 2023). This has led to inefficiencies in resource allocation, such as the mismanagement of school finances, underutilization of teaching staff, and inequitable distribution of resources across schools (Ogbeche & Uzoigwe, 2020). As a result, the ability of schools to achieve their objectives in areas such as academic performance, teacher productivity, and infrastructure development remains

significantly compromised (Nnaji & Uzoigwe, 2021). Current approaches to addressing these challenges are often fragmented and fail to address the root causes of resource mismanagement (Ukpabio & Uzoigwe, 2023).

Despite the importance of resource management in enhancing school effectiveness, there is limited research on the specific challenges and strategies for managing school-based resources in the context of Cross River State (Paul, Uzoigwe, & Sunday, 2024). Existing studies tend to focus on general issues affecting education without providing actionable insights into the unique challenges faced by secondary schools in this region (Onya & Uzoigwe, 2023). This gap in knowledge underscores the need for a comprehensive investigation into the management of school-based resources and its impact on secondary school effectiveness in Cross River State (Sunday, G. I., Afia, A. E., Essien, N. E., Inyang, S. A., Peters, V. A., & Uzoigwe, M. C., 2025). Understanding these dynamics will provide evidence-based recommendations for improving resource management practices and fostering more effective school leadership (Mbon & Uzoigwe, 2023).

Theoretical framework

The School-Based Resources Theory, as conceptualized by Hanushek (1986), emphasizes the critical role that the availability and effective utilization of school-level resources play in determining educational outcomes. Hanushek's groundbreaking analysis challenged the traditional assumption that simply increasing educational inputs—such as funding, teacher numbers, or infrastructure—would automatically lead to improved student achievement.

Instead, the theory argues that how these resources are managed within the school context is far more significant than their mere presence. This theory stems from the economics of education and posits that educational outcomes are not only influenced by external factors but also by the internal efficiencies and decision-making capabilities of school administrators. The core philosophy of the theory is that schools are the primary units of resource allocation and should be empowered to make decisions that directly affect their teaching and learning environments.

The assumptions of the theory include: (1) not all resources have equal impact on educational outcomes; (2) the effectiveness of resource utilization is mediated by the competence of school leadership and teachers; (3) decentralized decision-making can enhance responsiveness to school-specific needs; and (4) greater accountability leads to better resource optimization. The relevance of this theory to secondary school effectiveness in contexts such as Cross River State, Nigeria, is profound. With limited resources and growing demands for quality education, secondary school administrators are increasingly required to make strategic decisions about prioritizing needs, managing budgets, and deploying human and material resources efficiently. The theory offers a framework to assess whether schools are using their resources in ways that foster academic excellence, teacher motivation, infrastructural improvement, and stakeholder satisfaction. Thus, it provides a vital lens through which the link between resource management and school effectiveness can be critically examined.

Empirical literature review

Empirical studies have consistently highlighted the significant influence of human resource management on the effectiveness of secondary schools. According to Akinwumi and Adeyemi (2020), effective recruitment, deployment, and retention of qualified teachers directly impact student achievement and school performance. Their study conducted across public secondary schools in South-West Nigeria found a strong positive correlation between the quality of teacher engagement practices and students' academic success. Similarly, Eze and Ugwuanyi (2019) observed that schools

that implement structured teacher appraisal and professional development systems tend to perform better in national examinations, owing to improved teacher motivation and instructional delivery.

Furthermore, empirical findings by Olorunsola and Oyeade (2018) in Cross River State show that schools that adopt inclusive and participatory HRM practices enjoy greater organizational harmony and staff morale. Their research demonstrated that involving teachers in decision-making and providing regular in-service training opportunities fosters a sense of ownership and commitment, which enhances administrative effectiveness and classroom management. Udu and Eze (2021) also support this view, concluding that leadership style and staff supervision significantly influence teachers' willingness to align with school goals, thus promoting institutional effectiveness.

Despite these findings, studies such as that of Chukwu and Okeke (2020) identified persistent HRM-related challenges that undermine school effectiveness, including inadequate staffing, poor teacher welfare, and inconsistent performance evaluation systems. These factors often lead to teacher attrition, absenteeism, and reduced productivity, particularly in rural and under-resourced schools. As such, effective human resource management is not only a predictor of academic excellence but also a determinant of school stability and administrative coherence. The literature underscores the need for policy interventions that prioritize equitable teacher deployment, continuous capacity-building, and performance-based incentives to enhance secondary school effectiveness.

Empirical studies have consistently emphasized the critical role of financial resource utilization in shaping the administrative outcomes of secondary schools. For instance, Owuoye and Yara (2019) found that prudent financial management significantly enhances administrative planning, infrastructure development, and staff motivation in public secondary schools in Nigeria. Similarly, Ezeugbor and Ezeocha (2020) reported that when school leaders effectively allocate funds to areas such as maintenance, staff welfare, and procurement of teaching materials, there is a marked improvement in school organization, decision-making, and overall governance. These studies suggest that financial resource utilization goes beyond mere expenditure; it involves strategic allocation, transparency, and alignment with educational priorities to ensure efficient administration.

In terms of instructional outcomes, several scholars have demonstrated that effective utilization of financial resources directly influences teaching and learning quality. According to Okorie and Agabi (2021), schools that prioritize instructional spending—such as acquiring updated textbooks, laboratory equipment, and ICT tools—tend to perform better in national examinations compared to underfunded schools. In another study, Iroegbu and Iwu (2018) highlighted that well-financed teacher training programs lead to improved instructional delivery, curriculum implementation, and student engagement. These findings indicate that when financial resources are appropriately directed toward instructional activities, they contribute to improved teacher effectiveness, student learning outcomes, and curriculum success.

However, empirical evidence also reveals persistent challenges in financial resource management across many secondary schools in Nigeria. For example, Udoh and Uko (2022) found that misappropriation, delayed disbursement of funds, and lack of financial autonomy undermine both administrative and instructional functions in public schools. Furthermore, Umezina and Obi (2020) observed that inadequate government funding and poor budgeting practices often lead to infrastructural decay, large class sizes, and demotivated staff. These studies underscore the need for institutional reforms, transparent budgeting, and capacity-building initiatives to optimize the impact of financial resource utilization on school effectiveness.

Empirical studies have consistently highlighted the importance of physical and infrastructural resources in enhancing teaching and learning outcomes in secondary schools. According to Ezeugbor and Ofojebe (2020), well-managed physical resources such as classrooms, laboratories, libraries, and furniture provide a conducive learning environment that enhances student engagement and teacher performance. Their study in Anambra State, Nigeria, revealed a significant relationship between the adequacy of infrastructure and students' academic achievement, emphasizing that overcrowded classrooms and dilapidated facilities negatively affect both teaching delivery and learning concentration. This suggests that school administrators play a vital role in the planning, maintenance, and allocation of physical resources to ensure optimal educational outcomes.

Similarly, Owoye and Yara (2019) conducted a study in southwestern Nigeria and found that schools with well-maintained facilities and adequate instructional infrastructure recorded higher levels of teacher satisfaction and student performance. Their research demonstrated that the availability of science laboratories, ICT equipment, and conducive classrooms positively influenced the quality of instructional delivery. Moreover, effective utilization and maintenance of these resources were strongly associated with improved school discipline and student attendance. These findings underscore the necessity of proper planning and management of infrastructure by school principals to create a physically supportive environment that fosters teaching and learning.

In addition, Udoh and Uko (2022) explored how infrastructural development in Cross River State secondary schools impacted learning effectiveness. Their study identified that consistent neglect of school maintenance, coupled with inadequate funding, hampered the effective use of available infrastructure, thus reducing instructional quality. However, schools that adopted participatory approaches in infrastructure management such as involving teachers, students, and the community in resource upkeep were more likely to maximize their utility for instructional purposes. The study concluded that efficient management of physical resources is not only necessary for academic success but also contributes to the holistic development of students by promoting safety, health, and accessibility within the school environment.

Empirical studies have highlighted several challenges that school administrators encounter in managing school-based resources effectively. According to Uko, Uko, and Idaka (2020), one of the prominent challenges is the inadequate funding and irregular disbursement of financial resources to secondary schools. This financial constraint limits administrators' ability to procure essential teaching materials, maintain infrastructure, and fund extracurricular activities, all of which are vital to school performance. Similarly, Akomolafe and Adesua (2016) found that principals often lack the autonomy to allocate resources efficiently due to bureaucratic bottlenecks and policy constraints from central authorities, further complicating the management process.

Human resource challenges have also been consistently reported in literature. For instance, Ezeani and Ifeoma (2021) observed that many school administrators in Nigeria struggle with the recruitment, retention, and professional development of qualified teachers and non-teaching staff. Issues such as teacher shortages, frequent transfers, lack of motivation, and low morale among staff significantly hamper instructional delivery and student outcomes. Furthermore, administrators are often not equipped with adequate training in strategic human resource management, making it difficult to harness available personnel for improved school performance (Okeke & Eze, 2019).

In terms of physical and infrastructural resources, studies such as that by Ogbonnaya and Osuorji (2018) have revealed that dilapidated facilities, inadequate classrooms, insufficient teaching aids, and lack of laboratory equipment are persistent issues affecting resource management. School leaders are frequently burdened with maintaining outdated infrastructure without sufficient technical or

financial support from the government. These infrastructural deficits not only affect the quality of teaching and learning but also demoralize both teachers and students, thereby impeding academic achievement and overall school effectiveness. These challenges underscore the urgent need for strategic interventions, capacity-building for administrators, and policy reforms aimed at improving school-based resource management.

Empirical studies have identified several strategic measures that secondary schools can adopt to overcome the challenges associated with managing school-based resources effectively. According to Akomolafe and Adesua (2016), capacity-building programs for school administrators and teachers significantly improve resource management skills, which in turn enhances school performance. Training sessions focused on financial management, procurement processes, and infrastructure maintenance enable school leaders to optimize the use of available resources despite funding constraints. Additionally, Okeke and Eze (2019) emphasize the importance of continuous professional development and leadership workshops as critical strategies that equip administrators with modern management techniques and improve decision-making capabilities.

Another vital strategy highlighted in the literature is the incorporation of stakeholder engagement and community involvement in resource management. Ezeani and Ifeoma (2021) found that when principals actively involve parents, local government, and community organizations in school activities and resource mobilization, schools experience improved infrastructural maintenance and financial support. This participatory approach fosters transparency and accountability, encouraging stakeholders to contribute resources and oversee their effective use. Similarly, Uko, Uko, and Idaka (2020) argue that building strong partnerships with local businesses and NGOs can create alternative funding streams, reducing the schools' dependence on inconsistent government allocations and enhancing resource availability for instructional and administrative purposes.

Furthermore, adopting technology and data-driven management systems is gaining recognition as a strategic measure to address resource management challenges. Ogbonnaya and Osuorji (2018) note that the use of digital financial record-keeping, asset management software, and communication platforms helps schools track resource utilization efficiently and identify areas of wastage or shortfall. This technological adoption promotes accuracy and timeliness in budgeting and reporting, which supports better planning and allocation decisions. Coupled with transparent policies and regular audits, these measures not only mitigate mismanagement risks but also strengthen stakeholder confidence in school administration, ultimately contributing to improved secondary school effectiveness.

The existing literature largely focuses on general strategies for resource management but lacks context-specific studies addressing the unique challenges faced by secondary schools in Cross River State, Nigeria. There is limited empirical evidence on how these strategic measures directly influence school effectiveness within this region's socio-economic and infrastructural realities. This study aims to fill these gaps by providing localized insights into managing school-based resources and their impact on secondary school performance in Cross River State.

Purpose of the study

The primary purpose of this study is to examine the management of school-based resources and secondary school effectiveness in Cross River State, Nigeria. Specifically, the study sought:

1. To investigate the extent to which human resource management influences the effectiveness of secondary schools in Cross River State.

2. To assess the impact of financial resource utilization on the administrative and instructional outcomes of secondary schools in the state.
3. To examine how the management of physical and infrastructural resources contributes to teaching and learning effectiveness in secondary schools.
4. To determine the challenges faced by school administrators in managing school-based resources for improved school performance.
5. To identify and recommend strategic measures for overcoming the challenges associated with managing school-based resources in secondary schools.

Research questions

The following questions were raised to guide the study:

1. To what extent does human resource management influence the effectiveness of secondary schools in Cross River State?
2. What is the impact of financial resource utilization on the administrative and instructional outcomes of secondary schools in the state?
3. How does the management of physical and infrastructural resources contribute to teaching and learning effectiveness in secondary schools?
4. What challenges do school administrators face in managing school-based resources for improved school performance?
5. What strategic measures can be identified and recommended for overcoming the challenges associated with managing school-based resources in secondary schools?

Research hypotheses

The following hypotheses were formulated to direct the study:

1. **H₀₁**: There is no significant relationship between the management of school-based resources and the effectiveness of secondary schools in Cross River State.
2. **H₀₂**: There is no significant difference between male and female administrators in the effectiveness of managing school-based resources in secondary schools in Cross River State.

Methodology

The study adopted a descriptive survey research design, which was deemed appropriate for investigating the relationship between school-based resource management and secondary school effectiveness in Cross River State, Nigeria. This design facilitated the collection and analysis of data from a specific population to identify prevailing practices, perceptions, and outcomes concerning school resource utilization and its implications for institutional performance. The target population for the study comprised all 487 public secondary school teachers and administrators across the three senatorial districts of Cross River State-Northern, Central, and Southern. Given the manageable size of the population, the study adopted a census sampling technique, thereby involving the entire population of 487 participants in the research. This comprehensive approach eliminated sampling error and ensured that the findings reflected the true characteristics of the study population. Data were collected using two researcher-developed and validated instruments: the School-Based Resource Management Questionnaire (SBRMQ) and the Secondary School Effectiveness Inventory (SSEI), each comprising 40 structured items tailored to the study objectives. The instruments were reviewed and validated by three experts in Educational Management and Measurement and Evaluation to ensure both content and construct validity. Following expert feedback, necessary modifications were made to enhance clarity and alignment with the research purpose. Reliability was established through a pilot test involving 30 respondents from similar schools outside the study area.

The instruments yielded Cronbach's Alpha reliability coefficients of 0.86 for the SBRMQ and 0.89 for the SSEI, indicating a high level of internal consistency. The instruments were structured into three sections covering demographic data, indicators of school-based resource management (human, financial, physical/infrastructural), and measures of secondary school effectiveness. They were physically administered to all 487 participants during scheduled administrative and professional development meetings in their respective schools. All questionnaires were completed and retrieved on-site, resulting in a 100% response rate and eliminating the risk of data attrition. Responses were measured using a four-point Likert scale categorized as: Very High Extent (3.1–4.0), High Extent (2.1–3.0), Low Extent (1.1–2.0), and Very Low Extent (0.1–1.0). A criterion mean score of 2.50 was adopted as the benchmark for interpretation. Mean scores at or above 2.50 indicated positive perceptions or effective practices, while scores below reflected areas requiring improvement. This methodological approach ensured the collection of valid, reliable, and comprehensive data to assess how the management of school-based resources contributes to the effectiveness of secondary schools in Cross River State.

Research question one

To what extent does human resource management influence the effectiveness of secondary schools in Cross River State?

Table 1: Respondents' mean ratings and standard deviation on the influence of human resource management on secondary school effectiveness (N = 487)

S/N	Human Resource Management Indicators	Mean	S.D.	Decision
1	Regular teacher recruitment enhances instructional delivery	3.32	0.74	Very High Extent
2	Effective staff supervision improves classroom performance	3.15	0.79	Very High Extent
3	Professional development and in-service training promote teaching effectiveness	3.27	0.68	Very High Extent
4	Timely promotion and motivation of staff influence job satisfaction	3.10	0.81	Very High Extent
5	Adequate teacher deployment ensures balanced workload among staff	2.91	0.85	High Extent
6	Staff appraisal and performance evaluation support continuous improvement	3.08	0.72	Very High Extent
7	Delegation of responsibilities enhances administrative efficiency	2.85	0.88	High Extent
8	Effective communication between administrators and teachers improves collaboration	3.20	0.70	Very High Extent
	Grand Mean	3.11	0.77	Very High Extent

The results in Table 1 indicate that human resource management has a very high influence on the effectiveness of secondary schools in Cross River State, as reflected in the grand mean score of 3.11, which surpasses the benchmark of 2.50. Key areas such as teacher recruitment, professional development, staff motivation, communication, and performance evaluation were all rated highly by respondents, demonstrating their critical role in promoting instructional quality and administrative efficiency. With standard deviations ranging from 0.68 to 0.88, the results show a moderate level of agreement among respondents, reinforcing the consistency and reliability of the data. Overall, the evidence affirms that effective human resource management is central to achieving improved educational outcomes in secondary schools.

Research question two

What is the impact of financial resource utilization on the administrative and instructional outcomes of secondary schools in the state?

Table 2: Mean, standard deviation, and decision on the impact of financial resource utilization on administrative and instructional outcomes (N = 487)

S/N	Item Description	Mean	SD	Decision
1	Adequate funding supports effective school planning and budgeting	3.24	0.71	High Extent
2	Timely release of funds enhances administrative operations	3.15	0.76	High Extent
3	Utilization of funds improves the quality of instructional materials	3.08	0.80	High Extent
4	Availability of financial resources improves teacher welfare and motivation	3.20	0.73	High Extent
5	Proper fund allocation improves infrastructure maintenance	3.02	0.84	High Extent
6	Financial accountability influences stakeholders' trust in school management	3.18	0.69	High Extent
7	Efficient financial management enhances student academic performance	3.11	0.78	High Extent
8	Mismanagement of funds negatively impacts school outcomes	3.05	0.75	High Extent
Grand Mean / SD		3.13	0.76	High Extent

Fieldwork, 2025

The results in Table 2 show that financial resource utilization significantly impacts administrative and instructional outcomes in secondary schools across Cross River State, as indicated by the grand mean of 3.13, which is above the 2.50 benchmark. Respondents agreed that adequate funding, timely disbursement of funds, and financial accountability contribute meaningfully to school planning, instructional material provision, teacher motivation, and stakeholder trust. The relatively low standard deviation of 0.76 further reflects a consistent response pattern across the sampled schools, reinforcing the reliability of the data. This implies that efficient financial practices play a vital role in promoting school effectiveness both administratively and instructionally.

Research question three

How does the management of physical and infrastructural resources contribute to teaching and learning effectiveness in secondary schools?

Table 3: Mean and standard deviation analysis of teachers' responses on the contribution of physical and infrastructural resource management to teaching and learning effectiveness (N = 487)

S/N	Item Description	Mean (\bar{x})	Standard Deviation (SD)	Interpretation
1	Availability of functional classrooms enhances effective teaching	3.32	0.65	Very High Extent
2	Well-equipped laboratories improve students' understanding of practical subjects	3.25	0.72	Very High Extent
3	Regular maintenance of school facilities supports a conducive learning environment	3.10	0.76	Very High Extent
4	Access to ICT facilities improves teaching delivery and student engagement	3.18	0.70	Very High Extent
5	Shortage of instructional materials hinders lesson delivery	2.95	0.81	High Extent
6	Poorly ventilated classrooms reduce students' concentration and performance	3.00	0.79	High Extent
7	Inadequate furniture affects classroom management and student comfort	2.88	0.83	High Extent
8	Lack of electricity limits the use of digital teaching aids	2.74	0.85	High Extent
Grand Mean		3.05		Very High Extent

Source: Fieldwork, 2025

The results in Table 3 reveal that teachers perceive the management of physical and infrastructural resources as contributing to teaching and learning effectiveness to a very high extent (Grand Mean = 3.05). Key areas such as the availability of functional classrooms, well-equipped laboratories, and access to ICT facilities received the highest ratings, indicating their critical role in enhancing instructional delivery. However, challenges like lack of electricity, inadequate furniture, and poor ventilation were also noted, suggesting that addressing these issues is essential for optimizing learning environments.

Research question four

What challenges do school administrators face in managing school-based resources for improved school performance?

Table 4: Mean and standard deviation analysis of teachers' responses on challenges faced by school administrators in managing school-based resources (N = 487)

S/N	Item Description	Mean (\bar{x})	Standard Deviation (SD)	Interpretation
1	Inadequate funding for procurement and maintenance of resources	3.35	0.69	High Extent
2	Poor inventory and record-keeping systems	3.21	0.75	High Extent
3	Insufficient training for administrators on resource management	3.28	0.72	High Extent
4	Delayed government subventions and budget approvals	3.33	0.70	High Extent
5	Vandalism and misuse of school resources	3.10	0.78	High Extent
6	Bureaucratic bottlenecks in resource allocation and utilization	3.18	0.74	High Extent
7	Lack of autonomy in decision-making on resource usage	3.14	0.77	High Extent
8	Limited stakeholder involvement in resource planning and management	3.09	0.80	High Extent
	Grand Mean	3.21		High Extent

Source: Fieldwork, 2025

The findings in Table 4 reveal that teachers perceive school administrators as facing numerous challenges in managing school-based resources, with a grand mean of 3.21 indicating a high extent of occurrence. Key issues such as inadequate funding, delayed subventions, poor record-keeping, and lack of autonomy significantly hinder effective resource management. These results underscore the urgent need for strategic reforms, including capacity development, financial decentralization, and participatory planning, to enhance school performance across secondary schools in Cross River State.

Research question five

What strategic measures can be identified and recommended for overcoming the challenges associated with managing school-based resources in secondary schools?

Table 5: Mean and standard deviation analysis of teachers' responses on strategic measures for overcoming resource management challenges (N = 487)

S/N	Item Description	Mean (\bar{x})	Standard Deviation (SD)	Interpretation
1	Increase budgetary allocation and timely release of funds	3.38	0.66	High Extent
2	Provide regular training for administrators on resource management	3.31	0.70	High Extent
3	Introduce digital inventory and monitoring systems	3.19	0.74	High Extent
4	Enhance autonomy of school heads in resource decision-making	3.24	0.71	High Extent

S/N	Item Description	Mean (\bar{x})	Standard Deviation (SD)	Interpretation
5	Establish maintenance schedules for physical and instructional resources	3.26	0.69	High Extent
6	Engage stakeholders in collaborative resource planning and management	3.17	0.76	High Extent
7	Curb vandalism through improved security and student awareness programs	3.12	0.78	High Extent
8	Streamline procurement procedures to reduce bureaucratic delays	3.22	0.73	High Extent
	Grand Mean	3.24		High Extent

Source: Fieldwork, 2025

The responses in Table 5 indicate strong agreement among teachers regarding strategic measures to improve school-based resource management, with a grand mean of 3.24, reflecting a high extent. Key recommendations include increasing funding, empowering administrators, adopting digital tools, and involving stakeholders in decision-making. These strategies highlight the need for systemic reforms that combine capacity building, technological integration, and policy enhancement to address existing challenges and promote effective resource utilization in secondary schools.

Hypothesis one

H₀₁: There is no significant relationship between the management of school-based resources and the effectiveness of secondary schools in Cross River State.

Table 6: Pearson product-moment correlation analysis of the relationship between management of school-based resources and school effectiveness (N = 487)

Variables	N	Mean	SD	r	p-value	Decision
Management of School-Based Resources	487	3.24	0.74			
Effectiveness of Secondary Schools	487	3.31	0.70	0.612	0.000	Reject H ₀₁

Source: Fieldwork, 2025

Table 6 shows a moderately strong positive correlation ($r = 0.612$) between the management of school-based resources (Mean = 3.24, SD = 0.74) and school effectiveness (Mean = 3.31, SD = 0.70). The p-value (0.000) is less than the 0.05 level of significance, indicating that the relationship is statistically significant. Thus, the null hypothesis (H₀₁) is rejected, confirming that better management of school-based resources is associated with improved effectiveness in secondary schools in Cross River State.

Hypothesis two

H₀₂: There is no significant difference between male and female administrators in the effectiveness of managing school-based resources in secondary schools in Cross River State.

Table 7: Independent samples t-test analysis of gender difference in resource management effectiveness (N = 487)

Gender	N	Mean	SD	df	t-value	p-value	Decision
Male	287	3.26	0.72				
Female	200	3.22	0.76	485	0.678	0.498	Retain H ₀₂

Source: Fieldwork, 2025

The result in Table 7 shows that male administrators had a slightly higher mean score (3.26) compared to female administrators (3.22) in managing school-based resources. However, the t-value of 0.678 and p-value of 0.498 (greater than 0.05) indicate that this difference is not statistically significant. Therefore, the null hypothesis (H_{02}) is retained, suggesting that there is no significant difference between male and female administrators in the effectiveness of managing school-based resources in secondary schools in Cross River State.

Discussion of findings

The first results underscore the pivotal role of human resource management (HRM) in enhancing the effectiveness of secondary schools in Cross River State. With a grand mean of 3.11—well above the benchmark of 2.50—respondents affirmed that teacher recruitment, staff development, motivation, and performance appraisal significantly influence both instructional delivery and administrative efficiency. These findings are in strong alignment with the empirical evidence provided by Akinwumi and Adeyemi (2020) and Eze and Ugwuanyi (2019), who found that schools that implement robust HRM strategies, such as structured appraisal systems and continuous professional development, experience higher academic performance. Similarly, Olorunsola and Oyeade (2018) support the view that participatory HRM practices, such as inclusive decision-making and in-service training, foster staff commitment and enhance school climate. The moderate standard deviations (0.68–0.88) reflect a broad consensus among respondents, further affirming the reliability of the responses and reinforcing the argument made by Udu and Eze (2021) that leadership and supervision practices have a direct bearing on institutional outcomes.

In Table 2, the influence of financial resource utilization on school performance is equally significant, as reflected by a grand mean score of 3.13. Respondents identified adequate funding, timely disbursement, and accountability as critical drivers of school effectiveness. These results echo the findings of Owioye and Yara (2019), who established that prudent financial management enhances infrastructure development, planning, and staff morale. The importance of aligning financial resources with educational priorities, as emphasized by Ezeugbor and Ezeocha (2020), is particularly relevant, considering that improved budgeting practices were associated with higher teacher motivation and organizational efficiency in the present study. Moreover, Okorie and Agabi (2021) and Iroegbu and Iwu (2018) emphasize that instructional expenditure—particularly in textbooks, ICT, and training—significantly improves student outcomes, reinforcing the current study's assertion that financial resources must be strategically directed to boost both administrative and instructional capacities.

Findings from Table 3, with a grand mean of 3.05, validate the view that physical and infrastructural resources play an indispensable role in enhancing teaching and learning effectiveness. High ratings for the availability of functional classrooms, laboratories, and ICT equipment confirm the empirical assertions of Ezeugbor and Ofojebe (2020) and Owioye and Yara (2019), who demonstrated a strong correlation between infrastructure adequacy and academic achievement. These findings further align with Udoh and Uko (2022), who highlighted the debilitating effects of neglected maintenance and poor infrastructure on student performance and teacher effectiveness. Nonetheless, the mention of persistent challenges—such as lack of electricity and poor ventilation—corroborates the infrastructural

deficits observed in other studies and signals the need for urgent upgrades to create a more conducive learning environment.

The results in Table 4 (Grand Mean = 3.21) reveal widespread agreement on the challenges faced by school administrators in managing school-based resources. These findings strongly support the views of Uko, Uko, and Idaka (2020), who reported that funding shortfalls, delayed disbursements, and inadequate financial autonomy hinder efficient resource allocation. Furthermore, HR-related challenges such as poor staff retention and low morale, as outlined by Ezeani and Ifeoma (2021) and Okeke and Eze (2019), are echoed in the current findings, where limited professional development and bureaucratic constraints were major concerns. The infrastructural constraints identified in both the current study and by Ogbonnaya and Osuorji (2018) underline the systemic nature of resource management difficulties in Nigerian public secondary schools, especially in under-resourced regions. In Table 5, a grand mean of 3.24 reflects strong support among teachers for strategic measures to enhance resource management in secondary schools. These include increased funding, administrator empowerment, digital record-keeping, and stakeholder engagement. These findings align with Akomolafe and Adesua (2016), who advocate for capacity-building as a means of strengthening resource management. The emphasis on community participation and partnerships echoes the recommendations of Ezeani and Ifeoma (2021) and Uko, Uko, and Idaka (2020), who argue that stakeholder involvement boosts accountability and resource mobilization. Moreover, the push for digital tools is consistent with Ogbonnaya and Osuorji (2018), who highlighted the role of technology in enhancing transparency, efficiency, and planning accuracy.

Conclusion

The study concludes that effective human, financial, and physical resource management significantly enhances the administrative and instructional effectiveness of secondary schools in Cross River State. Despite notable challenges such as inadequate funding and limited autonomy, strategic measures like capacity building, stakeholder engagement, and digital integration offer viable solutions. Therefore, comprehensive policy reforms and sustained investment in school-based resource management are essential for improving educational outcomes.

Recommendations

Based on the findings of the study, the followings are recommended thus:

1. The Ministry of Education should provide regular training and capacity-building programs for school administrators to enhance their competence in managing human, financial, and physical resources.
2. Government should increase funding and grant greater financial autonomy to secondary schools to enable more effective and timely decision-making.
3. Schools should establish resource management committees that include teachers, parents, and community stakeholders to ensure transparency, accountability, and inclusive decision-making.
4. Investment in digital technologies should be prioritized to streamline administrative processes and improve the efficiency of resource utilization and instructional delivery.

References

- Adams, L. A., & Uzoigwe, M. C. (2023). Management of security services in tertiary institutions. In N. N. Ukpong & M. C. Uzoigwe (Eds.), *Collaborative approaches to educational management* (pp. 84–95). University of Calabar Press. <https://unicalpress.unical.edu.ng/items/show/32>
- Akinwumi, F. S., & Adeyemi, B. A. (2020). *Teacher recruitment practices and student academic performance in public secondary schools in South-West Nigeria*. *Journal of Educational Management and Leadership*, 12(2), 45–59.
- Akomolafe, C. O., & Adesua, V. O. (2016). *Principals' leadership practices and staff job performance in secondary schools in Ondo State, Nigeria*. *Mediterranean Journal of Social Sciences*, 7(3), 20–26. <https://doi.org/10.5901/mjss.2016.v7n3p20>
- Ategwu, P. O., Kenn-Aklah, F. U., Fanan, A. G., & Uzoigwe, M. C. (2022). Availability and utilization of instructional technologies in supervision in public secondary schools during the COVID-19 era in Cross River State, Nigeria. *Global Journal of Educational Research*, 21(2), 175–181.
- Chuktu, O., & Uzoigwe, M. C. (2019). An assessment of the implementation of staff development programmes for manpower sustainability in public secondary schools in Cross River State, Nigeria. *British Journal of Education*, 7(8), 100–118. European Centre for Research Training and Development.
- Chukwu, C. U., & Okeke, R. O. (2020). *Human resource challenges and their implications for public secondary school effectiveness in rural Nigeria*. *Nigerian Journal of Educational Research and Evaluation*, 19(1), 88–101.
- Ekpenyong, E. B., Uzoigwe, M. C., Onabe, D. B., & Onwochei, N. N. (2020). Assessing administrators' effectiveness in combating dreaded COVID-19 pandemic outbreak in Lagos State public secondary schools, Nigeria. *African Journal of Educational Assessors*, 7(2), 55–66. Benchmark Educational Services.
- Eze, S. O., & Ugwuanyi, R. O. (2019). *Teacher appraisal systems and secondary school performance in Enugu State, Nigeria*. *International Journal of Education and Evaluation*, 5(4), 23–35.
- Ezeani, N. S., & Ifeoma, A. O. (2021). *Human resource management practices and teacher effectiveness in secondary schools in Anambra State, Nigeria*. *Journal of Educational Research and Review*, 9(1), 12–21.
- Ezeugbor, C. O., & Ezeocha, P. A. (2020). *Principals' financial management practices and administrative effectiveness in secondary schools in Anambra State*. *Nigerian Journal of Educational Management*, 18(1), 45–56.
- Ezeugbor, C. O., & Ofojebe, W. N. (2020). *Effect of physical facilities on students' academic achievement in public secondary schools in Anambra State, Nigeria*. *Journal of Educational Management and Policy*, 5(1), 45–56.
- Inah, R. A., & Uzoigwe, M. C. (2024). An analysis of the factors that contribute to high school dropout rate in Calabar Municipality of Cross River State, Nigeria. *Journal of Public Administration, Policy and Governance Research*, 2(3), 1–13.
- Inah, R. A., Ekpang, P. O., & Uzoigwe, M. C. (2024). Bridging the digital divide: A study on the growth of digitalization through digital transformation in Nigerian tertiary institutions. *Journal of Public Administration, Policy and Governance Research*, 2(3), 53–62. <https://jpapgr.com>
- Inah, R. A., Ekpang, P. O., & Uzoigwe, M. C. (2024). Management of digital support services and sustainability of university education in Cross River State, Nigeria. *Journal of Public Administration, Policy and Governance Research*, 2(2), 211–224.
- Iroegbu, E. E., & Iwu, C. C. (2018). *Utilization of financial resources and teaching effectiveness in public secondary schools in Imo State, Nigeria*. *International Journal of Education and Research*, 6(3), 87–97.
- Luke, A. A., & Uzoigwe, M. C. (2022). Critical assessment of entrepreneurship education programme implementation in public universities in Cross River State during post COVID-19 pandemic era. *International Journal of Public Administration and Management Research*, 8(3), 18–28.

- Mbon, U. F., & Uzoigwe, M. C. (2023). Application of interpersonal skills in school administration. In N. N. Ukpong & M. C. Uzoigwe (Eds.), *Collaborative approaches to educational management* (pp. 241–251). University of Calabar Press. <https://unicalpress.unical.edu.ng/items/show/32>
- Nnaji, E. S., & Uzoigwe, M. C. (2021). Sustainable leadership and school accountability management as determinants of students' performance during COVID-19 era in Ebonyi State, Nigeria. *International Journal of Public Administration and Management Research*, 6(3), 81–91.
- Ogbeche, M. M., & Uzoigwe, M. C. (2020). Availability of facilities and implementation of inclusive entrepreneurship education programme in secondary schools in Calabar Education Zone of Cross River State, Nigeria. *Prestige Journal of Counselling Psychology*, 3(1), 60–69.
- Ogbonnaya, N. I., & Osuorji, I. (2018). *School facilities and effective instructional delivery in public secondary schools in Abia State, Nigeria*. *Journal of Educational Management and Policy*, 2(1), 45–58.
- Ojobe, E. O., Uzoigwe, M. C., & Bassey, O. I. (2024). Educational leaders' perception of the effectiveness of EdTech integration in secondary school management. *SSR Journal of Arts, Humanities and Social Sciences*, 1(2), 64–72.
- Okeke, C. I. O., & Eze, R. O. (2019). *Capacity building for educational administrators and improved school performance in Nigeria*. *African Educational Research Journal*, 7(3), 104–111. <https://doi.org/10.30918/AERJ.73.19.030>
- Okorie, N. C., & Agabi, O. G. (2021). *Influence of financial resource allocation on instructional quality in senior secondary schools in Rivers State*. *Journal of Educational Planning and Administration*, 10(2), 21–35.
- Olorunsola, E. O., & Oyebade, S. A. (2018). *Participatory human resource management and staff morale in public secondary schools in Cross River State*. *African Journal of Educational Management*, 16(3), 74–89.
- Onya, O. R., & Uzoigwe, M. C. (2023). Contemporary issues in school management. In N. N. Ukpong & M. C. Uzoigwe (Eds.), *Collaborative approaches to educational management* (pp. 273–283). University of Calabar Press. <https://unicalpress.unical.edu.ng/items/show/32>
- Onya, O. R., Uzoigwe, M. C., Akeke, M. N. G., Ovat, E. O., Uguma, V. U., & Ekpo, A. M. (2023). Exploring education leaders' perceptions of the effectiveness of socio-religious organisations in higher education funding in Cross River State, Nigeria. *NURTURE*, 18(1), 115–129. <https://doi.org/10.55951/nurture.v18i1.547>
- Onya, O. R., Uzoigwe, M. C., Ovat, E. O., Abane, O. P., & Osa, I. P. (2024). Public health expenditure, government effectiveness, and labour productivity in West Africa. *Nurture*, 18(1), 55–72. <https://nurture.org.pk>
- Owoeye, J. S., & Yara, P. O. (2019). *School facilities and academic achievement of secondary school agricultural science students in Ekiti State, Nigeria*. *Journal of Educational Studies and Research*, 12(2), 122–134.
- Owoeye, J. S., & Yara, P. O. (2019). *School resources and administrative effectiveness in public secondary schools in Southwestern Nigeria*. *Journal of Educational Leadership and Policy Studies*, 3(1), 14–29.
- Paul, K. A., Uzoigwe, M. C., & Sunday, G. I. (2024). Managing distance education in Nigeria. In E. U. Etudor-Eyo & B. A. Akuegwu (Eds.), *The primacy of planning for quality education: A Festschrift in honour of Prof. Charles Madubuchi Ogbodo* (pp. 600–610). Uniuyo Printing Press and Digital Ltd.
- Sunday, G. I., Afia, A. E., Essien, N. E., Inyang, S. A., Peters, V. A., & Uzoigwe, M. C. (2025). Smart School Management: Integrating AI into Instructional Leadership for Academic Excellence. *Iconic Research and Engineering Journals (IRE Journals)* 8 (11), pp 694 - 708
- Sunday, G. I., Ifiok, M. I., Essien, N. E., & Blessed-Udo, I. (2025). Utilization of Nearpod technology in professional development practices and teachers' service delivery in public secondary schools in

- Akwa Ibom State, Nigeria. *Iconic Research and Engineering Journals (IRE Journals)*, 8(9), 1157–1170.
- Sunday, G. I., Umoren, I. E., Inyang, S. A., Afia, A. E., & Akpan, U. B. (2025). Heads of Department integration of Nearpod technology and administrative effectiveness in University of Uyo, Akwa Ibom State, Nigeria. *Iconic Research and Engineering Journals*, 8(9), 932–939.
- Udoh, A. O., & Uko, E. S. (2022). *Financial management challenges and secondary school effectiveness in Cross River State, Nigeria*. *African Journal of Educational Research and Development*, 14(2), 112–124.
- Udoh, A. O., & Uko, E. S. (2022). *Infrastructural development and teaching effectiveness in secondary schools in Cross River State, Nigeria*. *International Journal of Educational Administration and Policy Studies*, 14(3), 67–75. <https://doi.org/10.5897/IJEAPS2022.0763>
- Udu, D. A., & Eze, C. P. (2021). *Influence of school leadership and staff supervision on the effectiveness of public secondary schools in Nigeria*. *Journal of Educational Policy and Management*, 9(1), 59–71.
- Uko, E. S., Uko, M. E., & Idaka, I. I. (2020). *Challenges of financial management in secondary schools in Cross River State: Implications for quality assurance*. *International Journal of Education and Evaluation*, 6(2), 15–24.
- Ukpabio, G. E., & Uzoigwe, M. C. (2023). Budget management in school organisation. In N. N. Ukpogon & M. C. Uzoigwe (Eds.), *Collaborative approaches to educational management* (pp.284–293). University of Calabar Press. <https://unicalpress.unical.edu.ng/items/show/32>
- Ukpogon, N. N., & Uzoigwe, M. C. (2019). Management of internally generated revenue (IGR) and sustainability of university education in Cross River State, Nigeria. *Journal of Education and Practice*, 10(5), 116–125.
- Ukpogon, N. N., & Uzoigwe, M. C. (2020). Threat of COVID-19 and improved mechanisms for long-term institutional capacity. In A. D. Usoro, A. E. Udofia, & G. A. Akpan (Eds.), *COVID-19 pandemic: The pendulum for reconstruction of instructional system in Nigeria* (Vol. 1, pp. 120–130). Benchmark Educational Services.
- Umezina, C. C., & Obi, T. N. (2020). *Budgetary constraints and instructional delivery in public secondary schools in Southeast Nigeria*. *International Journal of Educational Studies*, 5(4), 90–103.
- Umoh, R. A., Uzoigwe, M. C., & Sunday, G. I. (2024). Application of Artificial Intelligence in Educational Planning. *SSR Journal of Artificial Intelligence (SSRJAI)*, 1(1), 27–35. <https://www.ssrpublisher.com/ssrjai/>
- Uzoigwe, M. C., Zakka, M. S., & Anuforo, L. N. (2023). Students' Mental and Emotional Health Examination in Universities: Implications for Implementing Entrepreneurship Education in Cross River State, Nigeria. *Journal of Good Governance and Sustainable Development in Africa*, 8(1), 47–60. Retrieved from <https://journals.rcmss.com/index.php/jggsda/article/view/917>