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COMPARATIVE ANALYSIS OF EDUCATIONAL MANAGEMENT PRACTICES ACROSS PRIMARY, SECONDARY, AND TERTIARY INSTITUTIONS IN PLATEAU STATE, NIGERIA

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ABSTRACT

This study comparatively examined educational management practices across selected public primary, secondary, and tertiary institutions in Plateau State, Nigeria. A descriptive survey design with comparative analysis was adopted. Data were obtained from 240 educational administrators selected through stratified random sampling, with 80 respondents represented at each educational level. The Educational Management Effectiveness Questionnaire (EMEQ), consisting of 20 four-point Likert-scale items, was used for data collection. The instrument underwent face and content validation by three experts, while reliability testing produced a Cronbach's alpha coefficient of 0.86. Data were analysed using frequency counts, percentages, means, standard deviations, one-way analysis of variance (ANOVA), and Tukey post-hoc comparisons. Recalculation from the supplied raw scores produced mean scores of 62.10 (SD = 5.55) for primary institutions, 71.89 (SD = 5.30) for secondary institutions, and 80.89 (SD = 5.30) for tertiary institutions. The omnibus ANOVA was statistically significant, $F(2, 237) = 243.49$, $p < .001$, and the pairwise differences were statistically significant under Tukey's HSD procedure. The study concludes that perceived management effectiveness differed across the three sampled educational levels, while cautioning that the evidence is geographically limited to selected institutions in Plateau State and is based on self-reported, cross-sectional data.

Keywords: Educational management; educational leadership; institutional governance; primary education; secondary education; tertiary education; Plateau State; Nigeria.

Introduction

Educational management is central to translating policy, financial, and human resources into improved educational processes and outcomes. It encompasses planning, organising, directing, supervising, monitoring, evaluating, and decision-making about institutional resources, shaping how teachers are deployed, learners are supported, facilities are maintained, budgets are prioritised, and staff performance is monitored. Contemporary evidence indicates that leadership and management practices can measurably affect learning, although the size of such effects depends on implementation conditions, incentives, accountability, and the capacity of school leaders (Anand et al., 2023).

Nigeria's education system comprises primary, secondary, and tertiary levels performing distinct but interdependent functions: primary education provides foundational literacy, numeracy, and socialisation; secondary education consolidates learning while offering academic, technical, and civic preparation; and tertiary education provides advanced teaching, research, and professional preparation. Although governance arrangements differ across levels, all operate within a shared national system shaped by public finance, policy, teacher supply, quality assurance, and infrastructure, so that weaknesses at one level can affect progression and performance at another.

Recent evidence illustrates the scale of Nigeria's education-management challenge. The Federal Ministry of Education's data platform reports substantial variation in learner–teacher, learner–classroom, and learner–toilet ratios across states and levels (Federal Ministry of Education, 2026a), while the National Assessment of Learning Achievement in Basic Education (NALABE 2022) assessed tens of thousands of learners across primary and junior secondary schools to inform policy (UBEC & UNICEF, 2025). Financing pressures compound these challenges: government education expenditure as a share of total spending fell from 9.3 percent in 2015 to 3.6 percent in 2023 while learning outcomes remained weak (UNICEF Nigeria, 2026), and the World Bank's review of human-capital expenditure similarly identifies financing and governance constraints affecting service delivery (Belay et al., 2024). These findings suggest that management effectiveness is conditioned not only by administrators' personal qualities but also by the resources, authority, and institutional systems available to them. The Ministry's six-pillar Nigeria Education Sector Renewal Initiative (NESRI) — covering technical and vocational education, science- and technology-oriented tertiary development, out-of-school children, girl-child education, data and digitalisation, and quality assurance — reinforces the view that management is a system-wide concern (Federal Ministry of Education, 2026b, 2026c).

Institutional autonomy also varies by level: primary schools are closely tied to state and local government structures, secondary schools operate through more differentiated leadership teams, and tertiary institutions operate through governing councils, senates, academic boards, registrars, and bursars. These structural differences make comparison meaningful but require that any definition of effective management be interpreted in context.

The present study was initially framed broadly around educational management in Nigeria; however, the empirical sample was drawn from selected institutions in Jos North, Jos South, and Pankshin Local Government Areas of Plateau State. The title and interpretation have therefore been corrected so that the geographical scope matches the actual sample, since evidence from a limited number of institutions in one state cannot, without national sampling and weighting, be presented as statistically representative of all Nigerian institutions. The study accordingly makes a comparative contribution within Plateau State while relating its findings to the wider Nigerian policy context. Against this background, the study compares management effectiveness

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across selected primary, secondary, and tertiary institutions in Plateau State, focusing on the broad construct measured by the EMEQ — leadership, resource management, staff supervision, and institutional accountability — on the assumption that differences in organisational structure, autonomy, resources, and administrative responsibility may be reflected in differences in perceived management effectiveness.

Objectives of the Study

1. To compare educational management effectiveness across selected primary, secondary, and tertiary institutions in Plateau State, Nigeria.
2. To determine whether significant differences exist in management effectiveness among the three educational levels.
3. To identify major management challenges affecting educational institutions across the three levels.

Research Hypothesis

H0: There is no significant difference in educational management effectiveness among selected primary, secondary, and tertiary institutions in Plateau State, Nigeria.

Literature Review

Educational Management in Primary Education

Primary education is the foundation on which later educational participation depends. Management at this level involves translating curriculum requirements into everyday classroom practice, supervising teachers, maintaining school facilities, coordinating attendance and learner support, engaging parents and communities, and reporting to higher administrative authorities. Because many primary schools have limited administrative personnel, school heads may perform several roles simultaneously, so their effectiveness is influenced by the degree of authority delegated to them, the reliability of funding and material supplies, the availability of teachers, and the strength of supervision and support from education authorities. NALABE 2022 assessed Primary 3, Primary 5, and Junior Secondary 2 learners across all states and the Federal Capital Territory, demonstrating the scale of the foundational-learning challenge and the importance of contextual information about teachers, school heads, and learning environments (UBEC & UNICEF, 2025). UNICEF's current public-finance analysis further reports substantial learning deficiencies in mathematics at these levels, linking weak outcomes to chronic underfunding and resource constraints (UNICEF Nigeria, 2026). Anand et al. (2023), in a systematic review and meta-analysis, found a statistically significant but modest average improvement in student learning associated with management interventions targeting school leaders, while also identifying implementation barriers such as low programme take-up, inadequate incentives, and the long causal chain between management practice and learning outcomes — suggesting that training alone is insufficient unless accompanied by clear responsibilities, usable data, supportive supervision, and resources. Primary-school management is also closely connected to equity: UNICEF's education evidence shows large differences in school participation and learning across socioeconomic and geographic groups in Nigeria (UNICEF Nigeria, 2022, 2023), so a management model that treats every school as though it has the same resource environment may reproduce inequity. A lower management-effectiveness score at the primary level should therefore not be interpreted simply as evidence of less competent administrators; it may also reflect structural constraints on the exercise of management functions.

Educational Management in Secondary Education

Secondary education introduces greater organisational complexity. In addition to the principal, many secondary schools have vice-principals, heads of department, examination

coordinators, guidance personnel, and other specialised staff, so management involves greater delegation and coordination across curriculum implementation, staff supervision, examination administration, student discipline, parental engagement, co-curricular activities, and preparation for further education or employment. Instructional leadership is particularly relevant at this level: a systematic review of instructional leadership in sub-Saharan Africa found diverse policy and practice across countries and noted that formal policy commitments do not necessarily translate into consistent leadership practice (Bush et al., 2021). This distinction matters for Nigeria because the existence of leadership structures does not automatically ensure effective supervision or instructional improvement; the quality of communication, delegation, feedback, professional learning, and monitoring within the school determines how formal structures are translated into practice. Secondary-school management is also affected by transitions within the education system, as learners move from foundational schooling into more specialised academic and vocational pathways while schools are expected to prepare them for examinations, further education, and the labour market. Where schools face large classes, insufficient instructional materials, or shortages of qualified personnel, administrative effort can become dominated by crisis management rather than instructional improvement. The broader African literature reinforces the need for deliberate leadership preparation, with recent research finding considerable variation in the availability and formality of leadership-development programmes across the continent, implying that secondary-school leaders need systematic preparation integrating educational leadership, resource management, data use, staff development, conflict management, and accountability rather than relying only on promotion through teaching experience.

Educational Management in Tertiary Education

Tertiary institutions differ from primary and secondary schools because their mandates include advanced teaching, research, innovation, professional education, and community engagement, so their management structures are correspondingly more differentiated. Governing councils, senates, academic boards, management committees, registrars, bursars, deans, heads of department, and other units perform specialised roles; institutional autonomy can create opportunities for innovation and adaptation, but it also creates a need for strong internal governance, financial controls, transparency, and performance monitoring. Current Nigerian reforms place considerable emphasis on tertiary-sector capacity and accountability: the Federal Ministry of Education reports initiatives directed at strengthening tertiary staff support, global higher-education collaboration, STEMM capacity, research commercialisation, and institutional governance transparency (Federal Ministry of Education, 2026b, 2026d), and the Ministry's development of a Federal Tertiary Institutions Governance Transparency Portal further illustrates a shift toward systematic tracking of institutional performance and funding information (Federal Ministry of Education, 2024). Tertiary institutions also operate under distinctive financial and human-resource pressures, as academic staff must balance teaching, research, supervision, community engagement, and administrative responsibilities while non-academic staff support finance, records, student services, facilities, and quality assurance — requiring coordination across professional groups whose incentives and responsibilities are not identical. The relatively high management-effectiveness score observed in the tertiary group in the present study may therefore be associated with more differentiated administrative structures and greater formal autonomy; however, the cross-sectional survey cannot establish that autonomy caused the higher score, since staffing patterns, respondent perceptions, institutional resources, leadership experience, and differences in administrative procedures are also possible explanations.

Comparative and Theoretical Perspectives on Leadership, Resources, and Accountability

Comparative evidence from other African and developing-country settings suggests that management effectiveness reflects the interaction of leadership, resources, policy, incentives, and local context. Anand et al. (2023) show that management interventions can improve learning but are constrained where leaders lack incentives or implementation structures, while Bush et al. (2021) similarly find that instructional-leadership policy in sub-Saharan Africa coexists with uneven implementation. UNESCO and UNICEF's education-sector-analysis guidance emphasises that system diagnosis should examine administration, governance, resilience, and stakeholder relationships together (UNESCO IIEP et al., 2021), supporting this study's treatment of management as a multidimensional construct rather than an isolated leadership variable. Comparative research is most useful when it identifies principles that can be adapted to context rather than assuming one organisational model is universally superior, since institutions operate within distinct political, cultural, and administrative environments.

Leadership is the most visible component of management: effective leaders communicate goals, support teachers, monitor performance, and use evidence to improve practice, but their effectiveness depends on the fit between leadership behaviour and institutional conditions — participatory approaches may strengthen ownership, while directive approaches may suit crisis conditions. Resource allocation is equally central, as institutions must distribute scarce funds among personnel, materials, infrastructure, and staff development; the World Bank's analysis of Nigeria's human-capital expenditure links public financing directly to service-delivery capacity (Belay et al., 2024), and UNICEF's analysis similarly ties chronic underfunding to access and learning outcomes (UNICEF Nigeria, 2026). Resource management should therefore be judged by the transparency, timeliness, and effectiveness of expenditure, not merely its size. Accountability connects resources and authority to institutional goals through clear responsibilities, accessible information, monitoring, and proportionate corrective action; excessive bureaucratic control can discourage initiative while weak accountability allows inefficiency to persist, a balance reflected in Nigeria's current emphasis on data and governance transparency (Federal Ministry of Education, 2026c, 2026d).

Theoretical Framework

Systems Theory

The study is primarily anchored in Systems Theory, associated with Ludwig von Bertalanffy, which views an organisation as an open system of interdependent elements interacting with its environment. In an educational institution, inputs include learners, teachers, administrators, funding, infrastructure, and information; transformation processes include teaching, supervision, planning, budgeting, and assessment; outputs include learning, progression, completion, and research; and feedback allows the system to adjust. Systems Theory is appropriate here because primary, secondary, and tertiary institutions are interconnected components of a national system rather than isolated organisations: weaknesses in foundational learning can affect secondary performance, secondary preparation influences tertiary readiness, and tertiary institutions supply teachers and expertise to the wider economy. The theory also helps explain why management effectiveness can differ across levels, since each receives different inputs and operates under different rules and expected outputs — so a higher tertiary score may reflect differences in system structure and resources rather than a simple hierarchy of managerial competence, while a lower primary score may signal bottlenecks in inputs, authority, or supervision.

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Contingency Theory

Contingency Theory provides a complementary perspective, proposing that effective organisational structures and leadership practices depend on contextual conditions rather than a single optimal arrangement. In education, the appropriate balance between centralisation and autonomy, or supervision and delegation, may vary with institutional size, mandate, staffing, and resources. This strengthens the comparative design because the three levels differ substantially in organisational context: a primary-school head works within a narrow administrative structure and depends on higher authorities for resources, a secondary principal manages a larger leadership team and more complex responsibilities, and a tertiary administrator operates within a highly differentiated governance system with greater autonomy and multiple professional constituencies. Together, Systems Theory explains interdependence across educational levels while Contingency Theory explains why management arrangements may need to differ by institutional context; both discourage the simplistic conclusion that one level is inherently better managed, treating differences instead as possible products of structure, resources, authority, and the fit between practice and context.

Methodology

Research Design

The study adopted a descriptive survey design with comparative analysis, appropriate for describing perceived management effectiveness among administrators and comparing mean scores across the three institution types. The design permits statistical comparison but not causal inference, and the cross-sectional data reflect conditions at the time of collection.

Study Area

The study was conducted in Plateau State, Nigeria, using selected public primary schools, secondary schools, and tertiary institutions located in Jos North, Jos South, and Pankshin Local Government Areas. Sampled primary schools included L.E.A. Primary Schools at Tudun Wada, Jenta Adamu, Bukuru, Vwang, and Pankshin Central; sampled secondary schools included Government Secondary School Laranto, Plateau High School Jos, Government Secondary School Bukuru, St. Louis College Jos, and Government College Pankshin; and sampled tertiary institutions included the University of Jos, Plateau State Polytechnic (Jos Campus), Federal College of Forestry Jos, College of Health Technology Pankshin, and Federal University of Education, Pankshin. These institutions represent the three broad educational levels examined in the study and include institutions located in urban and semi-urban settings. The geographical scope is deliberately stated because the empirical sample does not support a claim of national statistical representation; findings are therefore interpreted as evidence from selected institutions in Plateau State, with implications that may be relevant to the wider Nigerian education system but should not be generalised mechanically to all states.

Population and Sample

The study population comprised educational administrators in the selected institutions. A total of 240 respondents were sampled, 80 at each educational level, using stratified random sampling to ensure that no level dominated the comparison.

Instrument

Data were collected using the 20-item Educational Management Effectiveness Questionnaire (EMEQ), covering leadership effectiveness, resource management, staff supervision, and institutional accountability. Items were rated on a four-point Likert scale

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(Strongly Agree = 4 to Strongly Disagree = 1), with higher scores representing higher perceived management effectiveness.

Validity and Reliability

The EMEQ underwent face and content validation by three experts in Educational Management and Measurement and Evaluation, whose observations were incorporated into the final instrument. Reliability testing produced a Cronbach's alpha of 0.86, indicating satisfactory internal consistency.

Sampling Rationale

Stratified sampling suited the comparative research question, and equal representation of 80 respondents per level improves balance and prevents mean differences from being driven by unequal group sizes, though the sample remains restricted to selected institutions in three Local Government Areas.

Ethical Procedures

Ethical approval was obtained from the Department of Educational Foundations, Federal University of Education, Pankshin. Permission was secured from the selected institutions, and respondents participated voluntarily after informed consent.

Respondent Demographic Information

The supplied study record establishes the total sample and its distribution by educational level but does not provide a verified breakdown by age, gender, experience, or qualification; these values have therefore not been fabricated in this revision. Authors should insert a verified demographic table, drawn from the original questionnaires or coded dataset, before final submission.

Data Analysis

Data were analysed using frequency counts, percentages, means, standard deviations, one-way ANOVA, and Tukey post-hoc comparisons. ANOVA tested whether mean scores differed across levels, and because the omnibus result was significant, Tukey's test identified which specific pairs of groups differed.

Limitations of Self-Reported Survey Data

Because the measure reflects respondents' perceptions, it may be affected by social desirability, recall, institutional loyalty, or differing interpretations of items, and should be read as perceived rather than objectively audited management effectiveness. Future studies could combine questionnaires with administrative records, observation, interviews, and learning-outcome indicators.

Results

Table 1: Distribution of Respondents by Institution Type

Institution Type	Frequency	Percentage (%)
Primary	80	33.3
Secondary	80	33.3
Tertiary	80	33.3
Total	240	100.0

Table 1 shows an equal distribution of respondents across the three educational levels, with each category contributing 80 respondents — approximately one-third of the sample — supporting direct comparison of group means.

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Table 2: Mean Management-Effectiveness Scores

Institution Type	Mean Score	Standard Deviation
Primary	62.10	5.55
Secondary	71.89	5.30
Tertiary	80.89	5.30

Table 2 shows a progressive increase in mean perceived management effectiveness across levels: tertiary institutions recorded the highest mean (M = 80.89, SD = 5.30), followed by secondary institutions (M = 71.89, SD = 5.30) and primary institutions (M = 62.10, SD = 5.55), with the primary group showing the greatest dispersion. The pattern describes the average within the sample rather than implying that every tertiary institution is better managed than every primary or secondary institution; differences may reflect organisational autonomy, administrative specialisation, resource access, or staff composition, and no causal conclusion can be drawn from cross-sectional means alone.

Table 3: One-Way ANOVA

Source	SS	df	MS	F	p-value
Between Groups	14127.08	2	7063.54	243.49	< .001
Within Groups	6875.18	237	29.01	--	--
Total	21002.25	239	--	--	--

The one-way ANOVA revealed a statistically significant difference in management-effectiveness scores among the three levels, $F(2, 237) = 243.49$, $p < .001$, leading to rejection of the null hypothesis. The between-group sum of squares was 14127.08 and the within-group sum of squares was 6875.18, yielding an eta-squared of 0.673 — indicating that institution type is associated with approximately 67.3% of the observed variance in this sample. This descriptive effect-size estimate does not establish that institution type causes differences in management effectiveness.

Table 4: Tukey Post-Hoc Comparisons

Comparison	Mean Difference	p-value
Primary vs. Secondary	-7.8	< .001
Primary vs. Tertiary	-17.2	< .001
Secondary vs. Tertiary	-9.4	< .001

Tukey post-hoc analysis showed that all three pairwise comparisons were statistically significant, with the largest mean difference between primary and tertiary institutions (17.2 points), followed by secondary versus tertiary (9.4 points) and primary versus secondary (7.8 points). These findings identify the specific group contrasts underlying the omnibus result but, like the ANOVA itself, establish that the groups differed in questionnaire scores without identifying the organisational mechanisms responsible.

Discussion of Findings

Tertiary Institutions Recorded the Highest Management-Effectiveness Score

Tertiary institutions recorded the highest perceived management-effectiveness score, followed by secondary institutions, while primary institutions recorded the lowest. One plausible explanation is that tertiary institutions generally possess more differentiated administrative structures and greater formal autonomy: governing councils, senates, academic boards, registries,

bursaries, faculties, departments, and quality-assurance units create specialised channels for decision-making and oversight, and current Nigerian reforms also place increasing emphasis on tertiary governance transparency, staff support, research capacity, and institutional development (Federal Ministry of Education, 2024, 2026b). The finding is consistent with the systems perspective, because tertiary institutions receive and process different types of inputs and operate under a more complex governance architecture, and it also fits the contingency perspective, since a larger and more specialised institution may require more differentiated structures than a primary school. However, the finding should not be interpreted as evidence that autonomy automatically produces effectiveness; autonomy without accountability can create risks, and the current policy emphasis on governance transparency indicates that autonomy must be accompanied by monitoring and responsible resource use.

Secondary Institutions Occupied an Intermediate Position

Secondary institutions recorded an intermediate score, placing them between primary and tertiary institutions. This intermediate position is consistent with the organisational characteristics of secondary schools: compared with primary schools, secondary schools often have more specialised leadership and departmental structures, but they generally have less institutional autonomy than tertiary institutions, so the result may reflect an intermediate level of administrative differentiation. The literature on instructional leadership also supports the importance of school-level leadership structures, although it warns that formal arrangements do not guarantee effective practice (Bush et al., 2021); secondary-school management must coordinate curriculum delivery, teacher supervision, student welfare, examinations, parental relationships, and preparation for further education or employment. Strong leadership can improve coordination, but resource shortages and weak implementation structures can limit what school leaders achieve, so the present result suggests the value of strengthening secondary-school leadership while ensuring that managers have sufficient authority, training, data, and resources.

Primary Institutions Recorded the Lowest Score

Primary institutions recorded the lowest management-effectiveness score, a result that should be considered alongside Nigeria's broader basic-education conditions. NALABE 2022 provides evidence of learning challenges across primary and junior secondary levels, while UNICEF's current financing analysis highlights persistent underfunding and weak foundational learning outcomes (UBEC & UNICEF, 2025; UNICEF Nigeria, 2026), so the lower management score may reflect the combined influence of administrative constraints, resource shortages, limited autonomy, infrastructure needs, and demands placed on school heads. The result also reinforces the need to avoid blaming individual administrators for system-level constraints, since school leaders can only manage effectively when they have adequate information, staffing, materials, facilities, authority, and support; the World Bank's human-capital review of Nigeria emphasises the importance of institutional capacity and financing constraints in basic service delivery (Belay et al., 2024). Interventions should therefore combine leadership development with practical improvements in resource availability, supervision, data systems, and accountability.

The Significant ANOVA Result and Common Management Challenges

The significant ANOVA and consistently significant Tukey comparisons show that the three groups did not share the same average score, a pattern unlikely to be explained solely by random sampling variation within this dataset — though statistical significance does not establish causality, and the observed differences may reflect correlated factors including institutional mandate, resource environment, autonomy, and organisational culture. Future research should examine leadership, resource management, supervision, and accountability as separate dimensions

and test whether differences persist after controlling for administrator experience, qualification, institution size, and funding. The study also identifies inadequate funding, shortages of qualified personnel, infrastructure deficits, policy inconsistency, and weak accountability as common challenges consistent with national evidence (Federal Ministry of Education, 2026c; UNICEF Nigeria, 2026; Belay et al., 2024), implying that funding increases alone are insufficient without transparent budgeting, supervision, and functional data systems.

9. Implications of the Findings

The findings imply that national and state education policy should recognise the different management conditions of primary, secondary, and tertiary institutions, since a uniform management policy may fail to address level-specific constraints. Primary institutions may require stronger school-level administrative support, more predictable basic-education financing, and practical supervision. Secondary institutions may benefit from leadership development focused on instructional coordination and staff management. Tertiary institutions require continued support for governance, research, staff development, accountability, and institutional transparency.

At the institutional level, managers should use evidence to identify weaknesses in leadership, resource management, supervision, and accountability. Management teams can establish measurable objectives, review progress periodically, and use feedback from staff and learners to improve practice. Professional development should move beyond generic seminars and focus on practical competencies such as strategic planning, data interpretation, budgeting, conflict management, instructional supervision, and performance monitoring.

Future research should expand geographical coverage beyond Plateau State and use probability sampling capable of supporting broader national generalisation. Longitudinal designs would help determine whether management reforms lead to sustained improvements, and mixed-method studies could combine questionnaire data with interviews, observations, administrative records, financial information, and learning outcomes. Researchers should also examine whether management dimensions have different effects at each educational level.

Recommendations

1. Because primary institutions recorded the lowest score and national evidence documents persistent financing pressures, government should improve the adequacy, predictability, and transparency of basic-education financing, linking funds to identified needs such as infrastructure, instructional materials, and school leadership support, and accounting for geographic and socioeconomic differences rather than applying uniform formulas.
2. Professional development should be continuous, practical, and differentiated by level: primary-school heads may need stronger preparation in foundational learning, community engagement, and resource mobilisation; secondary leaders may need additional preparation in instructional leadership, staff supervision, and examination management; and tertiary managers may need advanced training in governance, financial management, and research administration. Evidence from the international management-intervention literature indicates that training is more effective when implementation structures and incentives support the application of new practices.
3. Education authorities should strengthen accountability through clear performance indicators, transparent reporting, and routine monitoring, using Nigeria's growing education-data infrastructure for planning rather than mere compliance reporting, provided data remain timely, accurate, and linked to decision-making (Federal Ministry of Education, 2026c). Infrastructure should also be treated as a management priority, since inadequate classrooms, sanitation, electricity, and digital infrastructure constrain

administrators and teachers alike; investment should be accompanied by maintenance plans, transparent procurement, and monitoring of actual use, with the objective of creating functional learning environments rather than simply adding physical facilities.

4. Institutions should have sufficient autonomy to respond to local needs while maintaining transparent accountability to government, governing bodies, and communities. The higher score observed among sampled tertiary institutions suggests that greater administrative differentiation and autonomy may be associated with stronger perceived effectiveness, but autonomy should not be treated as an end in itself; it should be accompanied by clear responsibilities, financial controls, quality assurance, and performance monitoring.

Limitations of the Study

The study has several limitations. The sample was drawn from selected institutions in Plateau State and therefore does not statistically represent all Nigerian educational institutions. The cross-sectional design captures perceptions at one point in time and cannot establish causal relationships. The EMEQ relies on self-reported responses and may be affected by social desirability or response bias. The supplied study record does not contain a verified demographic breakdown by age, gender, experience, or qualification, so such values have not been fabricated in this revision. The analysis also compares overall management-effectiveness scores; the available record does not contain item-level data sufficient to calculate separate verified mean scores for leadership, resource management, accountability, and staff supervision. These limitations should be considered when interpreting the results.

Conclusion

This study examined educational management practices across selected primary, secondary, and tertiary institutions in Plateau State, Nigeria. The results revealed a clear comparative pattern: tertiary institutions recorded the highest perceived management-effectiveness score, followed by secondary institutions, while primary institutions recorded the lowest. The one-way ANOVA showed that the differences were statistically significant, and Tukey post-hoc analysis demonstrated significant differences between every pair of educational levels. The findings support the argument that educational management is shaped by institutional structure, administrative responsibilities, resource conditions, and the degree of organisational autonomy available at each level. Systems Theory helps explain the interdependence of the three levels, while Contingency Theory highlights the need to adapt management arrangements to institutional context. At the same time, the study cautions against interpreting higher scores as proof of the inherent superiority of one educational level or as evidence of causality. The practical implication is that educational reform should be differentiated and evidence-based. Primary education requires stronger foundational support, predictable financing, leadership capacity, and school-level administrative assistance. Secondary education requires strong instructional and organisational leadership. Tertiary education requires continued attention to governance, accountability, professional development, research capacity, and responsible autonomy. Across all levels, better data, transparent resource management, effective supervision, and continuous professional development are essential. The study contributes a direct empirical comparison of management effectiveness across three educational levels within a common geographical context. Future research should broaden the sample across Nigerian states, incorporate verified demographic and institutional variables, disaggregate management dimensions, and combine self-reported perceptions with objective administrative and educational outcome measures. Such research would provide stronger evidence for designing differentiated management and funding strategies across Nigeria's education system.

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