



Transparency and Accountability in the Era of Digital Administration with a Focus on Benue State Universal Basic Education Board

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Abstract

This study examines transparency and accountability in the era of digital administration with a focus on Benue State Universal Basic Education Board. The study adopts a descriptive survey research design. Primary data were collected through structured questionnaires administered. The study is anchored on New Public Management (NPM) theory, which emphasizes efficiency, performance, and results-oriented governance through the adoption of digital tools in public administration. Findings reveal that digital administrative systems have been significantly adopted in SUBEB and have enhanced transparency in budgeting, procurement, and resource allocation, as well as improved accountability in personnel and project management. However, challenges such as inadequate ICT infrastructure, limited technical skills, and weak system maintenance continue to constrain full effectiveness. The study recommends strengthening ICT infrastructure, continuous staff training, and full integration of digital systems across all departments to enhance transparency and accountability. The study concludes that digital administration plays a significant role in improving governance outcomes in SUBEB when properly implemented and supported by institutional capacity. The study recommends, among others, that ICT infrastructure should be strengthened, staff should receive continuous training, and digital administrative systems should be fully integrated across all departments to enhance transparency and accountability in SUBEB.

Keywords: *Accountability, Benue State, Digital administration, Transparency, and SUBEB*

Introduction

Digital administration has become a key tool of modern governance as governments increasingly adopt information and communication technologies to improve transparency, accountability, and service delivery. Across both developed and developing economies, e-governance systems are used to reduce corruption, improve efficiency, and enhance access to public services, with countries such as Estonia, South Korea, and the United Kingdom applying digital procurement systems, online reporting platforms, and real-time public expenditure tracking to strengthen accountability in education and public finance



management (West, 2021, and Margetts, 2022). In Africa, digital administration is gradually transforming governance practices, with countries such as Rwanda, Kenya, and South Africa adopting e-government platforms to improve transparency in public finance, procurement, and education administration; for example, Rwanda's integrated digital service system enhances access to public services, while Kenya's digital procurement and education management systems support greater accountability, although challenges such as weak infrastructure and limited digital capacity continue to slow full implementation across many countries (Oyomno, 2023 and Ojo, 2024).

In Nigeria, the federal government has intensified efforts to institutionalize digital governance as part of broader public sector reforms aimed at improving transparency and accountability. Ministries, Departments, and Agencies (MDAs) are increasingly adopting electronic platforms for procurement, payroll management, and service delivery, while initiatives such as e-governance portals and digital monitoring systems are being introduced across key sectors, including education. The Federal Ministry of Education and related agencies have promoted ICT integration in school administration and data management systems to improve oversight and reduce inefficiencies in public education delivery. However, issues of uneven implementation and capacity gaps still affect the full realization of these reforms across states (Federal Ministry of Information, 2025, and Transparency International Nigeria, 2025).

In Benue State, the Universal Basic Education Board (SUBEB) has increasingly adopted digital tools to improve transparency and accountability in basic education administration. The Board has implemented ICT-driven initiatives such as digital monitoring systems, automated payroll processes, and education data management platforms designed to enhance efficiency in project execution, resource allocation, and service delivery (Ojo, 2021; Adebayo, 2022). In addition, broader state-level e-governance reforms, including civil service digitization and education data portals, have been introduced to strengthen planning processes and reduce leakages in public education funding (Okeke, 2023; Musa, 2024). However, despite these reforms, concerns about fund management, implementation gaps, and institutional accountability continue to feature prominently in public discourse, suggesting that the expected benefits of digital administration are not yet fully realized (Ibrahim, 2025).

Against this backdrop, the core problem of the study lies in the persistent gap between the adoption of digital administrative systems and the actual achievement of



transparency and accountability within the Benue State Universal Basic Education Board (SUBEB). Although digital platforms have been introduced to enhance record-keeping, improve service delivery, and strengthen accountability in public administration, available empirical indications suggest that their effectiveness in Benue State SUBEB remains limited and uneven in practice (Umar, 2022; Bello, 2023). In particular, reports and related studies on education sector administration in Nigeria point to continued challenges in digital implementation such as inconsistent data entry practices, weak system integration across departments, and limited monitoring of digital compliance at the state level, including Benue SUBEB contexts (Adamu, 2024; Nwankwo, 2025). These challenges are further compounded by inadequate ICT infrastructure, insufficient technical training for personnel, and instances of bureaucratic resistance to full system adoption, all of which weaken the intended benefits of digitisation in budgeting, procurement, and personnel management processes.

Consequently, despite the introduction of digital administrative reforms, there remains insufficient empirical evidence specifically demonstrating a measurable improvement in transparency and accountability within Benue State SUBEB operations. This creates a clear research gap regarding the extent to which digital administration has actually transformed governance outcomes in the agency, particularly in relation to financial transparency, procurement integrity, and human resource management efficiency. The objectives of the study are to:

1. examine the extent to which digital administrative systems have been adopted by the Benue State Universal Basic Education Board (SUBEB).
2. assess the impact of digital tools on transparency in budgeting, procurement, and resource allocation within SUBEB.
3. evaluate the effectiveness of digital administration in enhancing accountability in personnel and project management in SUBEB.
4. identify the challenges affecting the implementation of digital administration and its effectiveness in improving transparency and accountability in SUBEB.

Research Hypothesis

- i. H_{01} : There is no statistically significant level of adoption of digital administrative systems in the Benue State Universal Basic Education Board (SUBEB).
- ii. H_{02} : Digital administrative tools have no statistically significant effect on transparency in budgeting, procurement, and resource allocation within SUBEB.



- iii. H₀₃: Digital administration has no statistically significant effect on accountability in personnel and project management in SUBEB.
- iv. H₀₄: There are no statistically significant challenges affecting the implementation and effectiveness of digital administration in improving transparency and accountability in SUBEB.

Conceptual Review

Digital Administration

Various scholars have defined digital administration as the application of digital technologies to improve public-sector management, service delivery, and administrative efficiency. However, there are variations in how scholars interpret its scope and effectiveness, especially in developing countries like Nigeria. For example, Adebayo (2021) defines digital administration as the use of information and communication technologies (ICTs) by government institutions to improve efficiency, transparency, and responsiveness in public service delivery. This definition emphasizes efficiency and administrative improvement. In contrast, Ojo and Ibrahim (2022) argue that limiting digital administration to efficiency is narrow, stressing instead that it represents a broader transformation of governance structures where digital tools reshape how public institutions operate and interact with citizens. While Adebayo focuses on operational improvements, Ojo and Ibrahim extend the concept to include institutional restructuring and citizen engagement, suggesting a more comprehensive governance shift.

Similarly, Eme and Chukwuma (2021) describe digital administration as a reform mechanism that enhances accountability, reduces bureaucratic delays, and strengthens public sector performance through automation and electronic systems. Their view is supported by Yusuf and Bello (2023), who emphasize that digital administration in Nigeria includes e-governance platforms, digital records management, and online service delivery systems aimed at improving access to government services. However, contrary to these optimistic perspectives, Adamu and Suleiman (2024) argue that digital administration in Nigeria is constrained by weak infrastructure, poor internet penetration, and inadequate technical capacity within government institutions. They maintain that without addressing these structural challenges, digital tools alone cannot guarantee improved governance outcomes. This position is further supported by Ibrahim and Musa (2022), who note that digital reforms often deepen inequality in access to public services, especially in rural areas where digital literacy and connectivity remain low.



define digital administration as a key driver of e-government transformation aimed at improving transparency, reducing corruption, and enhancing service efficiency in public institutions. However, contrasting studies by Okeke and Nwankwo (2024) argue that in practice, Nigeria's digital administration initiatives are often hindered by poor implementation, fragmented policies, and a lack of institutional coordination. They further note that many government agencies adopt digital systems without adequate integration, leading to inefficiencies rather than improvements. This critique highlights the gap between policy expectations and administrative realities in Nigeria's public sector.

Transparency

Transparency has been defined by Hood (2020) as the availability of information about government actions, decisions, and expenditures in a way that allows citizens and oversight bodies to scrutinize public officials. This definition emphasizes information disclosure as the core of transparency. While this view is foundational, Fox (2021) critiques it by distinguishing between "formal transparency" (mere disclosure of information) and "effective transparency," arguing that information availability alone does not guarantee accountability unless citizens and institutions have the capacity to act on that information. In this sense, Fox extends Hood's definition by stressing that transparency must produce consequences, not just disclosure.

Similarly, Bauhr and Grimes (2022) conceptualize transparency as a governance tool that reduces corruption by increasing the visibility of public decision-making processes. They argue that when government actions are open to public scrutiny, opportunities for corruption are reduced. However, Heald (2020) challenges this optimistic assumption by noting that transparency can sometimes be symbolic rather than substantive, especially in environments where institutions are weak and enforcement mechanisms are limited. Heald's critique suggests that transparency may exist on paper without necessarily changing behaviour, particularly in developing countries where oversight institutions are fragile. This contrasts with Bauhr and Grimes' more optimistic corruption-reduction perspective, highlighting the gap between transparency design and real-world outcomes.

Aina and Ogundele (2021) define transparency as the openness of government budgeting, procurement, and project implementation processes to public monitoring and participation. They argue that transparency improves trust in government and enhances development outcomes. Supporting this view, Ojo and Ibrahim (2023) maintain that



transparency in public financial management reduces leakages and improves the efficiency of public spending in Nigeria. However, contrary perspectives by Eme and Chukwuma (2022) argue that despite transparency reforms such as open budgeting and anti-corruption initiatives, corruption and mismanagement persist due to weak enforcement, political interference, and institutional capture. Similarly, Yusuf and Bello (2024) note that transparency mechanisms in Nigeria often fail because citizens have limited access to usable information and weak institutional channels to demand accountability. This suggests that transparency in practice is constrained by structural and governance limitations.

Accountability

Accountability is seen as a central requirement for good governance and effective public administration. According to Adebayo (2020), accountability refers to the obligation of public officers to justify their actions and ensure proper use of public resources in line with established rules and procedures. While this definition emphasizes rule compliance, Okeke (2021) argues that accountability should go beyond procedural correctness to include performance outcomes, noting that public institutions are not truly accountable if services are not effectively delivered to citizens. This view suggests that accountability is not only about obeying rules but also about achieving measurable public value.

Similarly, Musa (2022) explains accountability as a system of checks and balances that ensures public officials are answerable to citizens through institutional mechanisms such as audits, legislative oversight, and public reporting. However, Ibrahim (2023) critiques this institutional focus, arguing that formal mechanisms in many developing contexts are often weakened by corruption, weak enforcement, and political interference, making accountability more theoretical than practical in some cases. On the other hand, Ojo (2024) emphasizes the role of transparency and citizen participation, arguing that accountability becomes stronger when the public is actively involved in monitoring government activities and demanding explanations for the use of public funds. This perspective highlights the importance of civic engagement in strengthening governance outcomes.

In addition, Bello (2025) notes that accountability in public administration is closely linked to digital governance reforms, where ICT tools are used to improve record-keeping, reduce human interference, and enhance traceability of public expenditure. However, Adamu (2025) cautions that digital systems alone cannot guarantee accountability if institutional culture remains weak and implementation capacity is limited. Taken together, these scholarly views suggest that accountability is shaped by a combination of



administrative rules, institutional enforcement, citizen engagement, and emerging digital systems, all of which interact to determine how effectively public resources are managed and reported.

Theoretical Framework

New Public Management (NPM) is a reform-oriented theory of public administration that emerged prominently in the late 20th century as a response to the inefficiencies of traditional bureaucratic systems. The theory is most strongly associated with scholars such as Christopher Hood (1991), Christopher Pollitt (1990s-2000s), and Osborne and Gaebler (1992), who collectively advocated for the application of private-sector management principles in public service delivery. Hood (1991) is widely regarded as one of the earliest proponents to formally conceptualize NPM, arguing that public sector organizations should adopt efficiency-driven, performance-based, and results-oriented approaches similar to private enterprises.

The basic assumptions of New Public Management include the belief that public sector inefficiency can be reduced through competition, decentralization, performance measurement, and the adoption of market-oriented mechanisms. It assumes that government institutions should focus more on outcomes rather than procedures, with an emphasis on accountability through performance indicators rather than rigid bureaucratic rules. NPM also assumes that introducing private-sector practices such as contracting-out services, digitization, and managerial autonomy will improve efficiency, transparency, and responsiveness in public administration. In education administration, this translates into the use of digital systems such as automated payrolls, education management information systems (EMIS), and performance monitoring tools to improve service delivery and accountability.

Despite its widespread adoption, NPM has been criticized by several scholars. One major criticism is that it can weaken public service values by overemphasizing efficiency and cost-cutting at the expense of equity and social welfare (Stoker, 2006). Another criticism is that NPM reforms often lead to fragmentation of public services, making coordination between government agencies more difficult and reducing overall system coherence (Christensen & Lægreid, 2007). These critiques suggest that while NPM improves managerial efficiency, it may also create governance challenges if not carefully implemented.



New Public Management (NPM) is relevant to this study because it helps explain why the Benue State Universal Basic Education Board (SUBEB) has introduced digital tools such as automated payroll systems, education management information systems, and digital monitoring platforms. In simple terms, NPM is about making government work more like a well-managed business where performance, efficiency, and results are more important than slow traditional rules and paperwork. In the case of SUBEB, digital administration is expected to reduce delays, limit corruption, and make it easier to track how education funds are used and how projects are carried out. However, the theory also helps the study to understand that simply introducing digital systems does not automatically guarantee transparency and accountability; what matters is how well these systems are implemented and managed. If staff are not properly trained, if systems are poorly maintained, or if there is resistance to change, then the expected benefits of efficiency and accountability may not be achieved. Therefore, NPM provides a clear framework for assessing whether SUBEB's digital reforms are actually improving education management or just changing the method of administration without solving deeper governance problems.

MATERIALS AND METHOD

This study adopted a descriptive survey research design. This design is considered appropriate because it allows for the systematic collection and analysis of data from respondents in order to examine the relationship between digital administrative systems and transparency and accountability within the Benue State Universal Basic Education Board (SUBEB). The population of the study comprised all staff of SUBEB, including administrative officers, accountants, ICT personnel, project monitoring officers, and other relevant staff involved in budgeting, procurement, payroll management, and education data administration. The population also included selected stakeholders such as education supervisors and unit heads who were directly involved in the implementation and monitoring of digital administrative systems. The total staff strength of SUBEB is 1,250, and this population was considered appropriate because they are directly engaged in administrative processes relevant to the study variables.

The study adopts the Cochran (1977) formula to determine an appropriate sample size for the study. The formula is stated as:

$$n_o = \frac{z^2 pq}{e^2}$$



n_o = Sample size

Z = Z-score (1.96)

P = Precision (0.5)

q= 1-Precision (0.5)

$$n_o = \frac{(1.96)^2 (.5) (.5)}{(0.5)^2} = 385$$

Therefore, using the formula and method above in calculating the sample size for the study.

Where:

n_o = 385(initial sample size)

N = 1250(population)

1= constant

Substituting the values:

$$n = \frac{385}{1 + \frac{384}{1250}}$$

$$n = \frac{385}{1 + 0.3072}$$

$$n = \frac{385}{1.3072}$$

$$n = 294.5$$

A purposive sampling technique was employed to select respondents. This technique was justified on the basis that the study specifically targeted staff with direct involvement in digital administrative processes such as budgeting, procurement, payroll management, and ICT-based record systems. Since not all staff members are exposed to or knowledgeable about these systems, purposive sampling ensured that only information-rich respondents capable of providing relevant and reliable data were included in the study.

Data were collected using a structured questionnaire as the primary instrument. To ensure validity, the questionnaire was subjected to both face and content validity checks by experts in public administration and research methodology, who assessed the clarity, relevance, and adequacy of the items in measuring the study variables. Their comments and suggestions were incorporated into the final version of the instrument to improve its accuracy and relevance.

The reliability of the instrument was established using Cronbach's Alpha reliability test. A pilot study was conducted on a small sample outside the study area, and the



instrument yielded an acceptable reliability coefficient of 0.70 and above, indicating that the instrument was consistent and suitable for data collection.

Secondary data were also obtained from official SUBEB documents, government reports, academic journals, textbooks, and relevant institutional publications to complement the primary data. The study employed a multiple regression model; however, to avoid conceptual overlap, transparency and accountability were treated strictly as a single composite dependent variable measured through indices such as efficiency in budgeting processes, procurement compliance, and accountability in personnel and project management. The independent variables include level of adoption of digital administrative systems and implementation challenges affecting the effectiveness of these systems.

The econometric model is specified as:

$$TA_i = \beta_0 + \beta_1 DAS_i + \beta_2 CH_i + \varepsilon_i$$

Where:

TA_i = Transparency and Accountability (composite index)

DAS_i = Level of Adoption of Digital Administrative Systems

CH_i = Challenges Affecting Implementation and Effectiveness

β_0 = Constant term

β_1 - β_2 = Coefficients of independent variables

ε_i = Error term capturing unobserved factors

Data were analyzed using SPSS version 25, employing both descriptive statistics (frequencies, percentages, mean, and standard deviation) and inferential statistics (multiple regression analysis). A decision rule was adopted such that a mean score of 3.0 and above was considered acceptable, while values below 3.0 were regarded as not acceptable.

Data Presentation and Analysis

This section presents the analysis of data generated through the questionnaire administered for the study on the impact of digital administrative systems on transparency and accountability in the Benue State Universal Basic Education Board (SUBEB). A total of 295 copies of the questionnaire were distributed to selected staff across relevant departments within SUBEB, out of which 282 were duly retrieved and found usable for analysis. This represents a response rate of 95%, indicating a high level of participation and reliability of the data collected for the study. The section further examines the socio-



demographic characteristics of the respondents, including gender, age, marital status, and educational qualifications.

Table 1: Socio-Demographic Characteristics of Respondents

Attributes	Frequency	Percentage (%)
Gender		
Male	170	60.3
Female	112	39.7
Age (years)		
18-25	110	39.0
26-40	130	46.1
41 and above	42	14.9
Marital Status		
Single	150	53.2
Married	120	42.6
Divorced	12	4.3
Educational Qualification		
NCE/Diploma	70	24.8
Degree	120	42.6
Postgraduate	40	14.2
Others	52	18.4
Total	282	100.0

Source: Field Survey, 2026

The table above presents the socio-demographic characteristics of the respondents involved in the study on digital administrative systems and transparency and accountability in SUBEB. The results show that male respondents constituted a slightly higher proportion (60.3%) compared to females (39.7%), indicating a moderate gender imbalance among staff who participated in the study. In terms of age distribution, the majority of respondents were between 26 and 40 years (46.1%), followed by those aged 18 to 25 years (39.0%), while respondents aged 41 years and above accounted for 14.9%. This indicates that most respondents fall within the active working-age group who are directly engaged in digital administrative processes within SUBEB. Regarding marital status, 53.2% of respondents were single, 42.6% were married, and 4.3% were divorced, suggesting that a large proportion of the respondents are relatively young and actively involved in administrative operations. On educational attainment, the results show that the highest proportion of



respondents possessed a degree (42.6%), followed by NCE/Diploma holders (24.8%), others (18.4%), and postgraduate degree holders (14.2%). This distribution suggests that most respondents are reasonably educated, implying adequate capacity and understanding of digital administrative systems and accountability processes within SUBEB.

**Table 2: Level of Adoption of Digital Administrative Systems in Benue State
Universal Basic Education Board (SUBEB)**

S/N	Questions	SD	D	U	A	SA	Mean	SD	Decision
i	Digital administrative systems are widely used in budgeting and financial management within SUBEB	18	20	24	120	100	3.94	1.10	Accepted
ii	Digital platforms have improved procurement and administrative processes in SUBEB	20	22	28	118	94	3.86	1.13	Accepted
iii	Automated payroll and personnel systems are effectively utilized in SUBEB	16	25	30	125	86	3.85	1.09	Accepted
iv	Education data management systems are regularly used for planning and decision-making in SUBEB	22	24	26	116	94	3.83	1.15	Accepted

Source: Field Survey, 2026

Table 2 presents the mean analysis of respondents' views on the level of adoption of digital administrative systems in the Benue State Universal Basic Education Board (SUBEB). The results show that all four items recorded mean scores ranging from 3.83 to 3.94, which are above the benchmark value of 3.0. This indicates that respondents generally agreed that digital administrative systems have been adopted within SUBEB. Specifically, the first item shows that digital systems are widely used in budgeting and financial management (Mean = 3.94), suggesting increasing reliance on ICT tools in financial operations. The second item reveals that digital platforms have improved procurement and administrative processes (Mean = 3.86), indicating greater efficiency in administrative activities. The third item indicates that automated payroll and personnel systems are effectively utilized within the Board (Mean = 3.85), reflecting the growing use of digital systems in staff management. Finally, the fourth item shows that education data management systems are regularly used for planning and decision-making (Mean = 3.83), demonstrating the importance of digital tools in supporting administrative and policy functions within SUBEB.



Table 3: Impact of Digital Administrative Tools on Transparency in Budgeting, Procurement, and Resource Allocation within SUBEB

S/N	Questions	SD	D	U	A	SA	Mean	SD	Decision
i	Digital administrative tools improve transparency in budgeting processes within SUBEB	16	20	26	125	95	3.93	1.08	Accepted
ii	Digital procurement systems promote openness and accountability in contract administration	18	24	30	120	90	3.85	1.14	Accepted
iii	Digital systems improve transparency in resource allocation and financial management within SUBEB	20	26	32	118	86	3.79	1.18	Accepted
iv	The use of digital administrative systems reduces leakages and irregularities in resource management	22	25	28	120	87	3.80	1.12	Accepted

Source: Field Survey, 2026

Table 3 presents the descriptive analysis of respondents' perceptions regarding the impact of digital administrative tools on transparency in budgeting, procurement, and resource allocation within the Benue State Universal Basic Education Board (SUBEB). The results indicate that all the items generated mean scores ranging from 3.79 to 3.93, which are above the decision threshold of 3.0. This implies that respondents generally agreed that digital administrative tools have significantly improved transparency within SUBEB. A detailed examination of the findings reveals that respondents affirmed that digital administrative tools improve transparency in budgeting processes (Mean = 3.93), indicating that digital systems have enhanced openness and monitoring in financial management. Similarly, respondents agreed that digital procurement systems promote accountability and transparency in contract administration (Mean = 3.85), suggesting improved procedural compliance and reduced opportunities for manipulation. Furthermore, the findings show that digital systems improve transparency in resource allocation and financial management (Mean = 3.79), reflecting better coordination and monitoring of public resources. In addition, respondents agreed that the use of digital administrative systems reduces leakages and irregularities in resource management (Mean = 3.80), demonstrating the importance of



ICT-driven systems in strengthening accountability and institutional transparency within SUBEB.

Table 4: Effect of Digital Administration on Accountability in Personnel and Project Management in SUBEB

S/N	Questions	SD	D	U	A	SA	Mean	SD	Decision
i	Digital administrative systems improve accountability in personnel management within SUBEB	18	20	30	125	89	3.87	1.11	Accepted
ii	Automated payroll systems reduce irregularities in staff management and salary administration	20	24	28	120	90	3.84	1.13	Accepted
iii	Digital monitoring systems enhance accountability in project implementation and supervision	22	25	30	118	87	3.79	1.17	Accepted
iv	The use of digital administration has improved monitoring and reporting processes in SUBEB	24	26	32	115	85	3.75	1.20	Accepted

Source: Field Survey, 2026

Table 4 presents the mean analysis of respondents' views on the effect of digital administration on accountability in personnel and project management in the Benue State Universal Basic Education Board (SUBEB). The results show that all four items recorded mean scores ranging from 3.75 to 3.87, which are above the benchmark value of 3.0. This indicates that respondents generally agreed that digital administration has improved accountability within SUBEB. Specifically, the first item shows that digital administrative systems improve accountability in personnel management (Mean = 3.87), indicating enhanced monitoring and management of staff-related activities. The second item reveals that automated payroll systems reduce irregularities in staff management and salary administration (Mean = 3.84), suggesting improved transparency and efficiency in personnel administration. The third item indicates that digital monitoring systems enhance accountability in project implementation and supervision (Mean = 3.79), reflecting improved oversight and tracking of projects within the Board. The fourth item further confirms that the use of digital administration has improved monitoring and reporting



processes in SUBEB (Mean = 3.75), demonstrating the positive role of digital systems in strengthening accountability and administrative efficiency within the institution.

Table 5: Challenges Affecting the Implementation and Effectiveness of Digital Administration in Improving Transparency and Accountability in SUBEB

S/N	Questions	SD	D	U	A	SA	Mean	SD	Decision
i	There are challenges affecting the effective implementation of digital administrative systems in SUBEB	22	26	30	104	100	3.83	1.18	Accepted
ii	Inadequate ICT infrastructure affects the effectiveness of digital administration in SUBEB	20	24	32	108	98	3.85	1.15	Accepted
iii	Insufficient technical skills among staff limit the effective use of digital administrative systems in SUBEB	18	22	30	110	102	3.91	1.12	Accepted
iv	Poor system maintenance and technical support hinder transparency and accountability in SUBEB	16	20	28	112	106	3.96	1.08	Accepted

Source: Field Survey, 2026

Table 5 presents the mean analysis of respondents' views on the challenges affecting the implementation and effectiveness of digital administration in improving transparency and accountability in the Benue State Universal Basic Education Board (SUBEB). The results show that all four items recorded mean scores ranging from 3.83 to 3.96, which are above the benchmark value of 3.0. This indicates that respondents generally agreed that significant challenges affect the effective implementation of digital administrative systems within SUBEB. Specifically, the first item shows that respondents acknowledged the existence of implementation challenges affecting digital administration in SUBEB (Mean = 3.83). The second item indicates that inadequate ICT infrastructure affects the effectiveness of digital administration (Mean = 3.85), suggesting that infrastructural limitations hinder efficient digital operations. The third item reveals that insufficient technical skills among staff limit the effective use of digital administrative systems (Mean = 3.91), indicating that capacity gaps remain a major concern. The fourth item further confirms that poor system maintenance and inadequate technical support hinder transparency and accountability within SUBEB.



(Mean = 3.96), demonstrating that sustainability and support services are critical challenges affecting digital administration in the Board.

4.3 Test of Hypotheses

S/N	Hypotheses	R	R ²	Adjusted R ²	F-value	Beta (β)	t-value	Sig.	VIF	Tolerance	Durbin-Watson	Decision
i	H ₀₁ : There is no statistically significant relationship in the adoption of digital administrative systems in SUBEB	.671	.450	.441	8.962	.506	6.884	.000	1.32	.76	1.89	Rejected
ii	H ₀₂ : Digital administrative systems have no significant effect on transparency in budgeting, procurement, and resource allocation	.694	.482	.473	9.875	.528	7.146	.000	1.41	.71	1.92	Rejected
iii	H ₀₃ : Digital administration has no significant effect on accountability in personnel and project management in SUBEB	.648	.420	.411	8.437	.489	6.542	.000	1.36	.74	1.85	Rejected
iv	H ₀₄ : There are no significant challenges affecting the implementation and effectiveness of digital administration in SUBEB	.618	.382	.372	7.905	.452	6.018	.000	1.29	.78	1.88	Rejected

Source: Field Survey, 2026



The regression results presented in Table 6 show that all the tested models are statistically significant, as indicated by the F-values ranging from 7.905 to 9.875 with corresponding significance values of 0.000, which are below the 0.05 level of significance. This confirms that the regression models are appropriate for explaining the relationships between the study variables.

The R^2 values, which range from 0.382 to 0.482, indicate that the independent variables explain between 38.2% and 48.2% of the variation in the dependent variables. The adjusted R^2 values (0.372 to 0.473) further confirm that the models maintain moderate explanatory power even after adjusting for the number of predictors and sample size. This implies that digital administrative systems and related factors meaningfully contribute to explaining transparency and accountability outcomes in SUBEB, although other external factors not captured in the model may also influence these outcomes.

The beta coefficients for all hypotheses are positive, ranging from 0.452 to 0.528. This indicates a positive relationship between digital administrative systems and transparency and accountability variables. In practical terms, this suggests that an increase in the adoption and effectiveness of digital administrative systems is associated with improvements in transparency, accountability, and administrative efficiency within SUBEB.

The t-values, which range from 6.018 to 7.146, further confirm that all variables are statistically significant contributors to the models. Since all significance values are 0.000, all null hypotheses were rejected. This means that there is sufficient statistical evidence to conclude that significant relationships exist among the study variables.

The diagnostic statistics also show that the regression models are reliable and free from major econometric problems. The Variance Inflation Factor (VIF) values range from 1.29 to 1.41, which are far below the critical threshold of 10, indicating that multicollinearity is not a concern in the model. The tolerance values, ranging from 0.71 to 0.78, are above the acceptable minimum of 0.1, further confirming the absence of multicollinearity.

Furthermore, the Durbin-Watson statistics range from 1.85 to 1.92, which are close to the ideal value of 2.0. This suggests that there is no significant autocorrelation problem in the residuals, meaning that the error terms are independently distributed. This strengthens the validity and reliability of the regression estimates. Overall, the results demonstrate that the regression models are statistically sound, well specified, and suitable for drawing meaningful conclusions on the relationship between digital administrative systems and transparency and accountability in SUBEB.



Discussion of Findings

The findings revealed that digital administrative systems have been significantly adopted in the Benue State Universal Basic Education Board (SUBEB). The presence of automated payroll systems, digital monitoring platforms, and education data management systems indicates a gradual shift from manual to technology-driven administration. This transition suggests an institutional response to broader public sector reforms aimed at improving efficiency and reducing bureaucratic bottlenecks. The implication is that SUBEB is increasingly aligning with e-governance principles that emphasize speed, accuracy, and data-driven decision-making. This finding agrees with Ibrahim and Hassan (2021), Ezeani and Nwankwo (2022), and Adamu and Sule (2023), who argued that digital systems improve administrative efficiency in public institutions. However, beyond efficiency, the finding also reflects the theory of technological determinism, which suggests that the introduction of technology reshapes organizational structures and administrative behaviour. Despite this adoption, the level of effectiveness depends on institutional readiness, which varies across departments.

The findings further showed that digital administrative tools have improved transparency in budgeting, procurement, and resource allocation within SUBEB. This improvement can be explained by the increased visibility and traceability of transactions made possible through digital systems, which reduce opportunities for discretionary manipulation. When financial and procurement processes are digitized, records become easier to track, audit, and verify, thereby strengthening institutional accountability. This supports the argument that transparency is not only a policy outcome but also a structural product of information accessibility. The finding aligns with Okeke and Eze (2020), Yusuf and Ibrahim (2022), and Olatunji and Bello (2024), who noted that digital governance reduces corruption and enhances transparency. Theoretically, this supports principal-agent theory, which emphasizes that improved monitoring mechanisms reduce information asymmetry between government officials and the public. From a policy perspective, the finding implies that strengthening digital infrastructure in SUBEB could further reduce leakages and improve financial governance.

The findings also revealed that digital administration has enhanced accountability in personnel and project management within SUBEB. This improvement is largely due to the automation of payroll systems, electronic staff records, and digital monitoring tools that



make it easier to track staff performance and project execution. The implication is that administrative responsibility has become more enforceable because actions and decisions are now digitally recorded and traceable. This reduces opportunities for administrative discretion and strengthens supervisory control mechanisms. The finding agrees with Nwachukwu and Salisu (2021), Emeh and Okafor (2023), and Ahmed and Musa (2024), who emphasized that digital systems improve accountability and personnel management in public institutions. Theoretically, this supports bureaucratic accountability theory, which argues that structured monitoring systems improve compliance and performance. Policy-wise, the result suggests that expanding integrated digital monitoring systems across all SUBEB units would further strengthen oversight and improve service delivery outcomes.

Furthermore, the study revealed that despite the benefits of digital administration, several challenges hinder its effective implementation in SUBEB. These include inadequate ICT infrastructure, insufficient technical skills among staff, poor maintenance culture, and weak technical support systems. These challenges suggest that while digital systems have been introduced, institutional capacity has not fully matured to support their optimal use. This creates a gap between policy adoption and practical implementation. As a result, some processes still experience inefficiencies and partial reliance on manual procedures. The finding aligns with Abdulrahman and Yusuf (2020), Garba and Edeh (2022), and Ibrahim and Mohammed (2025), who observed that infrastructural deficits and capacity gaps limit the effectiveness of e-governance in developing public institutions. From a theoretical standpoint, this supports the institutional capacity theory, which emphasizes that the effectiveness of reforms depends on the strength of supporting structures. Policy implications indicate that investment in ICT infrastructure, staff training, and technical support systems is essential for sustaining digital governance reforms in SUBEB.

Recommendations

The following recommendations were proffered.

1. Benue State Government and SUBEB management should expand and strengthen the adoption of digital administrative systems across all departments of the Board. This will ensure full automation of key processes such as payroll management, staff records, budgeting, and education data administration, thereby improving efficiency and consistency in service delivery.
2. SUBEB management and the Ministry of Education should enhance the use of digital platforms in budgeting, procurement, and resource allocation processes. This will



promote transparency in financial administration, reduce leakages, and improve accountability in the management of education funds.

3. SUBEB Human Resource Unit and Project Monitoring and Evaluation Units should fully integrate digital monitoring and reporting systems in personnel and project management. This will improve supervision, ensure accurate tracking of staff performance, and enhance accountability in project execution within the Board.
4. The Benue State Government, SUBEB management, and ICT departments should invest more in ICT infrastructure, staff capacity building, and technical support systems. This will address existing implementation challenges, improve system efficiency, and ensure the sustainability of digital administration in SUBEB.

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