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Impact of E-Governance on Accountability in Edo State, Nigeria

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Abstract

This paper examines the impact of electronic governance (e-governance) on accountability in Edo State's public service, within the broader context of Nigeria's quest for transparency and good governance. Grounded in Karl Deutsch's Communication Theory (1963), which underscores the role of effective information flow and feedback in maintaining system coordination and control, the paper adopts a descriptive survey design. Data collected were from a representative sample of public servants and complemented by questionnaire. The analysis combined descriptive statistics with simple percentages and thematic interpretation to provide a holistic understanding of how digital governance influences accountability. Findings indicate that, e-governance has positively transformed accountability practices in Edo State's public service. Respondents generally agreed that digital platforms have enhanced transparency, improved efficiency, and reduced unethical behaviours, thereby fostering greater responsibility and ethical conduct among public officials. However, the paper had equally highlighted some critical challenges such as poor digital infrastructure, limited technical capacity, and inadequate institutional support, which has continued to impede the optimal realization of e-governance objectives in Edo State. The paper concludes and recommends that, while e-governance has significantly advanced accountability, its sustainability depends on strategic investments in information and communication technology infrastructure, continuous training for public officials, and robust policy frameworks. Strengthening these areas will enable Edo State to

consolidate on its digital governance as a vital instrument for ethical, transparent, and accountability in public service.

Keywords: E-governance, Accountability, Information and Communication Technology, Transparency, Public Service.

Introduction

The dawn of the 20th and early 21st centuries ushered in a profound technological revolution that has fundamentally reshaped human society. Among the most transformative developments are the twin pillars of the information age computer technology and communication technology, jointly referred to as Information and Communication Technology (ICT) (Sardana, 2007). These innovations, comparable in historical significance to the invention of the printing press in the fifteenth century, the telegraph in 1844 and the telephone in 1876, have redefined global communication, commerce, and governance (Okwueze, 2010). The introduction of the World Wide Web (WWW) in 1989 by Tim Berners-Lee marked a turning point in global connectivity, laying the foundation for unprecedented access to information and instantaneous communication across geographical boundaries (Noris, 2001).

ICT has since revolutionized virtually every sphere of human endeavor from banking, health, and education to commerce, agriculture, and governance. The pervasive integration of digital tools has transformed how people interact, work, and transact. Governments worldwide have increasingly recognized the potential of ICT to enhance administrative efficiency, transparency, and citizen engagement, giving rise to what is now widely referred to as *electronic governance* (e-governance) (Onuigbo, 2015). E-governance represents a paradigm shift from traditional bureaucratic procedures to digital platforms that facilitate service delivery, public participation, and accountability. It encompasses the use of information technologies such as the internet, intranets, and mobile applications to deliver government services, disseminate information, and promote interaction between the state and its citizens (Monga, 2008).

The benefits of e-governance are multifaceted. It improves service quality by ensuring speed, convenience, and accessibility, while simultaneously fostering transparency,

reducing administrative bottlenecks, and curbing corruption. In developed countries, e-governance initiatives have redefined the relationship between citizens and the state, offering single-window service systems, simplified procedures, and enhanced record management that promote public trust and efficiency (Sardana & Sharma, 2007). However, in developing nations such as Nigeria, the adoption of e-governance remains limited. As Ifinedoby observed (2008), Nigeria lags significantly behind global standards, with an e-government index score of 0.243 compared to the world average of 0.414, reflecting the country's nascent stage in digital governance.

Nnaji, Ojiako, Ukeje and Nwangbo (2022) argues that efficient and effective service delivery requires structures that support merit-based recruitment and performance accountability. The challenge of weak accountability and pervasive corruption in Nigeria's public sector further underscores the urgency of embracing e-governance. Despite numerous anti-corruption reforms, accountability deficits continue to plague public institutions, eroding citizens' trust in government and undermining socio-economic development (Ejere, 2012). The absence of transparent and traceable administrative processes has enabled the diversion of public resources, institutional inefficiency, and policy failures. As Nkwe (2012) and Kaaya (2011) contend, e-governance presents an innovative framework for addressing these systemic flaws by ensuring openness in government transactions, facilitating public monitoring, and enhancing fiscal responsibility.

Against this backdrop, the application of e-governance in Nigeria has become increasingly relevant in efforts to promote good governance and strengthen public sector accountability. Although various states have made modest attempts to digitize administrative functions, implementation has been uneven, constrained by infrastructural inadequacies, low digital literacy, and political resistance. Edo State, one of Nigeria's key administrative hubs, offers a critical case for assessing the extent to which e-governance initiatives contribute to transparency, accountability, and effective public service delivery.

This study, therefore, seeks to examine the impact of e-governance on accountability in Nigeria's public service, using Edo State as a focal point.

Objectives of the Study

The objectives of this paper include;

i. identify the link between e-Governance and Accountability in public service in Edo state;
ii. ascertain the level of the application of e-governance in Edo State public service;
iii. assess the impact of e-governance on accountability in Edo State public service, and;
iv. To identify the challenges of e-Governance in ensuring accountability in Edo State public service and suggest a way forward

The Concept of E-Governance

E-governance refers to the application of Information and Communication Technologies (ICTs) to transform government operations and relationships. Scholars define it as the use of electronic means such as the internet, mobile computing, and other digital tools to enhance efficiency, transparency, and accountability in governance (Chukwuemeka, Okeke, & Onwuchekwa, 2018; Adelana, 2020). Its functions are multifaceted: streamlining internal processes, improving public service delivery, and fostering citizen participation in decision-making (Onuigbo & Eme, 2015). Essentially, it shifts governance from traditional bureaucracy to a more responsive, citizen-centric model. It is not merely computerising services but, fundamentally re-engineering structures and procedures to "bring government closer to the people" (Alshehri & Drew, 2010).

A key debate is whether e-governance is an end in itself or a means to an end. This study adopts the latter view, aligning with scholars and institutions like the European Commission (2003), which regard it as a tool for achieving public service goals. From this perspective, effective public service delivery marks the realization of e-governance's core objectives. It is a "double-lane communication process" that uses ICT to deliver services while ensuring broad citizen access (Adah, 2015). Thus, for this research, e-governance is synonymous with efficient and effective e-public service delivery.

Accountability in Public Service

Accountability is a cornerstone of good governance. It refers to the obligation of individuals or institutions to be answerable for their actions to stakeholders, particularly the public (Asobie, 1991). In the public service, it is the duty of officials and agencies to justify their conduct and resource use (Adebayo,

1981; Olowokere, 1996). The concept involves two stages: answerability the obligation to explain actions; and enforceability the capacity of oversight bodies or the public to impose sanctions for misconduct. Accountability mechanisms include horizontal accountability, where institutions like parliament or the judiciary check others; vertical accountability, through elections, media, or civic advocacy; political accountability, via legislative oversight; legal accountability, through judicial enforcement; and social accountability, through direct citizen participation. Ultimately, accountability ensures the effectiveness of public officials, builds trust, and aligns government action with community needs.

E-Participation and Mobilization in Governance

E-participation is the ICT-supported involvement of citizens in government and governance processes, including administration, service delivery, and policy-making (Bwalya & Zulu, 2012). It is distinct from, though related to, e-government. While e-government often focuses on the administrative interface (service delivery), e-participation facilitates the society-to-political interface, enabling interaction between citizens and government on policy formulation (Peristeras et al., 2009).

The benefits of e-participation are significant. It deepens democracy, makes governance more responsive, and helps align national development strategies with citizens' needs, such as the Sustainable Development Goals (SDGs). It can lead to more informed and targeted policies, mobilize new resources and ideas, and promote innovation through co-creation of public value (OECD, 2014).E-participation operates on a spectrum of engagement, moving from passive to active:Informing: A one-way relationship where the government provides information to citizens; Consulting: A two-way relationship where citizens provide feedback on government-defined issues; and Empowering: A partnership where citizens actively engage in defining the process and content of policy-making (OECD, 2001; Macintosh, 2004).

This shift enables a move from a “government-to-you” model to a “government-with-you” approach, where the state acts as an enabler and platform for collaborative solutions.

E-Consultation and e-Planning in Public Service

E-consultation is a specific tool of e-participation that uses ICTs to facilitate public consultation in the policy-making process. It is the embodiment of a bottom-up approach to governance, contrasting with the traditional top-down method where policies are handed down without adequate citizen input (Xiaodong et al., 2019). In contexts like Nigeria, where policy decisions are often disconnected from citizen preferences, e-consultation offers a veritable platform to bridge this gap. By leveraging growing internet and mobile technology penetration, governments can increase outreach, incorporate public voice, and enhance the transparency and legitimacy of policy outcomes (Whyte & Macintosh, 2001). This can help reverse democratic deficits and rebuild public trust.

However, the successful implementation of e-consultation depends on foundational infrastructural facilities, such as stable electricity, internet access, and computing hardware. Despite technological growth, the maturity of e-governance and level of citizen online engagement in many developing countries remains low, limiting the impact of e-consultation (Gberevbie et al., 2018).

Social Service Delivery in E-Governance in Nigeria's Public Service

Service delivery is the primary responsibility of any government, encompassing the provision of social amenities like healthcare, education, security, infrastructure, and water supply (Badmus, 2017). It is the vital link between the government and the governed, and its quality directly impacts public trust and legitimacy (Omodero & Dandago, 2019). E-governance serves as a powerful vehicle for transforming public service delivery. Its benefits, as highlighted in the literature, are numerous: Efficiency and Cost Reduction: It streamlines processes, reduces manual errors, speeds up transactions, and lowers the cost of government operations (Ibikunle & Sarumi, 2012).Transparency and Accountability: It makes government activities more visible, deterring corruption and building public trust (Sanmukhiya, 2019).Improved Access and Convenience: It provides citizens with single-window access to information and services, saving time and resources (Neelesh, Bhagwati, & Ashish, 2013). And, Citizen Empowerment and Participation: It facilitates smoother interaction, allows citizens to provide feedback, and involves them in decision-making (Ojo, 2014).

In view of these literatures, e-governance had revolutionizes service delivery by making it more efficient, accessible, and transparent, thereby strengthening the very fabric of democracy and fostering a more accountable relationship between the state and its citizens.

Research Methodology

This study adopts a descriptive survey research design to investigate the impact of e-governance on public service delivery and accountability in Edo State. The targeted population was consisted of 48,157 public servants, from whom a sample size of 396 respondents was determined using the Taro Yamane formula and selected via simple random sampling, as thus;

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample Size required

N = Population under Study

e = Margin Error (0.05)

1 = Constant

Therefore:

$$n = \frac{48{,}157}{1+48{,}157(0.05)^2}$$

$$n = \frac{48{,}157}{1+48{,}157\times0.05\times0.05}$$

$$n = \frac{48{,}157}{1+48{,}157\times0.0025}$$

$$n = \frac{48{,}157}{121.3925}$$

$$n = 396$$

Data were collected through a mixed-method approach, utilizing structured questionnaires for quantitative data and semi-structured interviews with 30 participants for qualitative insights. Analyses were combined descriptive statistics using simple percentages for the questionnaire data and thematic content analysis for the interview responses, ensuring a comprehensive examination of both numerical trends and in-depth perspectives.

The paper was anchored on Communication Theory, as proposed by Karl Deutsch, in his seminal work: "*The Nerves of Government: Models of Political Communication and Control*" which formally established communication theory, published in 1963.which conceptualizes communication as the fundamental mechanism for system control and coordination. Rooted in cybernetics, the theory posits that effective information flow facilitated by Information and Communication Technology (ICT) tools is vital for policy implementation, accountability, and improving public service. Key concepts such as the encoding and decoding of messages, the critical role of

feedback loops, and the use of multiple channels are directly relevant to e-governance. The theory provides a framework for understanding how digital communication within the Edo State public service can enhance the flow of information, enable responsive decision-making, and ultimately foster a more accountable and effective system of service delivery.

Assessing the Impact of E-Governance on accountability in Edo State Public Service: The Policy Implication

Before proceeding to the main analysis, it is important to describe the demographic profile of the respondents in order to place the findings on e-governance and accountability within the proper context. The demographic variables considered include gender, age, marital status, educational qualification, and category of respondents. These characteristics are vital because they shape individuals' perceptions, access, and responsiveness to e-governance initiatives, which in turn affect the level of accountability in the public service. Examining the demographic distribution also enhances the validity and reliability of the study by indicating the extent to which the sample represents the wider population of Edo State's public service. The table below therefore, presents the summary of respondents' demographic characteristics as generated from the 2025 field survey.

Table 1: Demographic Characteristics of the Respondents

Gender	**Frequency**	**Percentage**
Male	205	52.56
Female	185	47.47
Age		
18-25	56	14.35
26-30	68	17.43
31-35	86	22.05
36-above	180	46.15
Marital Status		
Single	58	14.87
Married	305	78.20
Divorced	3	0.76
Separated	16	4.10
Widowed	8	2.05

Educational Qualification		
SSCE	21	5.38
ND/NCE	64	16.41
HND/B.Sc	203	52.05
M.Sc/PhD	102	26.15
Category of Respondents		
Civil Servant	308	78.98
Politician	6	1.53
Businessman/Woman	58	14.87
Farmer	18	4.61
Total	**390**	**100**

Source: Field Survey, 2025

The demographic distribution of the respondents indicates a fairly balanced gender representation, with 205 males (52.56%) and 185 females (47.44%). This near parity ensures that perspectives from both sexes are adequately captured, minimizing gender bias in the study. However, the slight male dominance implies that male viewpoints may have a marginally stronger influence on certain perceptions, especially regarding issues such as governance, public policy, and service delivery. The age distribution reveals a respondent pool dominated by mature adults, as 46.15% were aged 36 years and above, followed by 22.05% within 31-35 years, 17.43% between 26-30 years, and only 14.35% within the 18-25 age brackets. This age structure suggests that the study largely reflects the opinions of individuals with greater professional experience and social stability. Although the underrepresentation of the youth may limit insights into innovation and youth-oriented perspectives, the predominance of older respondents enhances the credibility of responses where maturity and professional exposure are essential. Further analysis of marital status and education underscores the demographic maturity and intellectual strength of the sample. A large majority of respondents were married (78.20%), while singles accounted for 14.87%, with minimal representation from divorced (0.76%), separated (4.10%), and widowed (2.05%) individuals. This marital pattern reflects social stability and responsibility, traits that may influence respondents' attitudes toward community and institutional development. Educationally, the respondents are highly qualified, with 52.05% holding HND/B.Sc. degrees, 26.15% possessing postgraduate qualifications (M.Sc./Ph.D.), 16.41% having ND/NCE, and

only 5.38% with SSCE as their highest qualification. This high level of literacy and professional attainment indicates that the participants are well-informed and capable of providing analytical insights into public and institutional matters. Nevertheless, the limited representation of individuals with lower educational attainment suggests that grassroots views may be less reflected in the data, potentially narrowing the scope of interpretation to the more educated segment of society.

In terms of occupation, civil servants formed the overwhelming majority (78.98%), while businessmen and women (14.87%), farmers (4.61%), and politicians (1.53%) constituted smaller groups. This occupational composition highlights the bureaucratic and administrative orientation of the sample and situates the findings within the experiences of public sector workers who are directly involved in policy formulation and implementation. While this strengthens the study's relevance to governance and institutional performance, it may introduce occupational bias by under representing private sector and rural perspectives. Taken together, the demographic profile portrays a mature, well-educated, predominantly married, and professionally active population, typical of Nigeria's formal workforce. The sample's composition enhances the depth and reliability of responses but limits external generalization due to the low representation of younger, less educated, and non-civil service groups. Future research could adopt a more stratified sampling approach to ensure broader inclusivity and more representative insights across societal segments.

Table 2: To identify the link between e-Governance and Accountability in public service in Edo state

Variable	SA	A	SD	D	U	Total
E-governance systems have made public service operations smoothly and more transparent in Edo State.	209 (53.59)	89 (22.82)	70 (17.94)	19 (1.87)	3 (0.76)	390 (100)
E-government platforms have increased the accountability of public servants in Edo State.	106 (26.67)	156 (40.00)	103 (26.41)	20 (5.12)	7 (1.80)	390 (100)

The adoption of e-governance has contributed to minimizing unethical practices in public service delivery in Edo State.	101 (25.90)	109 (27.94)	85 (21.80)	12 (3.07)	3 (0.76)	390 (100)
The use of e-governance has enhanced the systems for ensuring public officials are more accountable in their duties in Edo State.	107 (27.43)	132 (33.84)	106 (27.17)	39 (4.19)	6 (1.53)	390 (100)

Source: Field Survey, 2025

Table 2 presents data showing the perceived relationship between e-governance and accountability within Edo State public service. The responses reveal the extent to which digital governance tools have influenced transparency, responsibility, and ethical conduct among public officials. The analysis reflects the general opinion of the 390 respondents across various categories of public service workers and other stakeholders.

The first item on the table sought to determine whether e-governance systems have made public service operations smoother and more transparent in Edo State. Out of the total respondents, 209 (53.59%) strongly agreed and 89 (22.82%) agreed, giving a combined total of 76.41% who believe that e-governance has positively influenced operational efficiency and transparency. Conversely, only 70 (17.94%) strongly disagreed, 19 (1.87%) disagreed, and 3 (0.76%) were undecided. This shows a dominant perception that digital administrative systems, such as online data management and electronic communication platforms, have significantly improved service delivery and openness in the state's public institutions.

The second statement assessed whether e-government platforms have increased the accountability of public servants in Edo State. A majority of the respondents supported this claim, with 106 (26.67%) strongly agreeing and 156 (40.00%) agreeing, resulting in a combined 66.67% in agreement. Meanwhile, 103 (26.41%) strongly disagreed, 20 (5.12%) disagreed, and 7 (1.80%) were undecided. These figures indicate that most respondents view e-governance as an effective mechanism for promoting accountability among public officials by enabling better monitoring, tracking, and evaluation of administrative actions through digital records and reporting systems.

The third statement explored whether the adoption of e-governance has helped minimize unethical practices in public service delivery in Edo State. The responses show that 101 (25.90%) strongly agreed and 109 (27.94%) agreed, accounting for 53.84% who acknowledged the positive ethical impact of e-governance. However, 85 (21.80%) strongly disagreed, 12 (3.07%) disagreed, and 3 (0.76%) were undecided. This suggests that while the majority recognizes that digital systems reduce opportunities for corruption and maladministration, a notable minority remain skeptical possibly due to perceived loopholes or weak enforcement of digital accountability mechanisms.

The final statement evaluated whether e-governance has enhanced systems that ensure public officials are more accountable in their duties. The table shows that 107 (27.43%) strongly agreed and 132 (33.84%) agreed, representing 61.27% of respondents who believe that the integration of e-governance tools has improved institutional accountability structures. Conversely, 106 (27.17%) strongly disagreed, 39 (4.19%) disagreed, and 6 (1.53%) were undecided. The findings highlight that while a majority appreciate the accountability benefits of digital administration, a significant proportion still question its consistency or implementation effectiveness in Edo State's public institutions.

On the overall, the results in Table 4.2 demonstrate a strong positive perception of the link between e-governance and accountability in the Edo State public service. The majority of respondents acknowledge that digital governance initiatives have enhanced transparency, operational efficiency, and ethical standards.

Table 3: To ascertain the level of the application of e-governance in Edo State Public Service

Variable	SA	A	SD	D	U	Total
Digital governance platforms have made it easier for citizens to monitor the actions of government institutions in Edo State.	64 (16.41)	192 (49.23)	103 (26.41)	29 (7.43)	2 (0.51)	390 (100)
E-governance has led to increased transparency and responsibility among public servants in Edo State.	95 (24.36)	165 (42.31)	86 (22.05)	39 (10.00)	5 (1.28)	390 (100)

The implementation of e-governance has brought about positive changes in how accountability is practiced in Edo State's public service.	209 (53.59)	96 (24.62)	72 (18.46)	11 (2.82)	2 (0.51)	390 (100)

Source: Field Survey, 2025

Table 3 presents data on respondents' perceptions of the level of e-governance application in Edo State's public service. The results highlight how digital platforms have influenced transparency, accountability, and citizen participation in government operations. The first statement examined whether digital governance platforms have made it easier for citizens to monitor government activities. Out of 390 respondents, 64 (16.41%) strongly agreed and 192 (49.23%) agreed, totaling 65.64% who affirmed that e-governance enhances public monitoring and transparency. However, 103 (26.41%) strongly disagreed, 29 (7.43%) disagreed, and 2 (0.51%) were undecided. This pattern indicates that while a majority acknowledge the benefits of digital governance systems in facilitating civic oversight, a notable portion still question their effectiveness, possibly due to limited internet access, inadequate awareness, and infrastructural challenges that restrict citizen engagement, especially in rural areas.

The second statement assessed whether e-governance has increased transparency and responsibility among public servants. Findings show that 95 respondents (24.36%) strongly agreed and 165 (42.31%) agreed, representing a total of 66.67% who believe digital tools have fostered greater accountability and reduced administrative discretion. In contrast, 86 (22.05%) strongly disagreed, 39 (10.00%) disagreed, and 5 (1.28%) were undecided. These figures suggest that while most respondents view e-governance as instrumental in improving official responsibility and transparency through digital records and monitoring systems, about one-third remain skeptical. Their doubts may reflect weaknesses in implementation, limited adoption across all agencies, or resistance from officials accustomed to traditional administrative practices.

The third statement investigated whether e-governance implementation has brought positive changes to accountability practices in Edo State's public service. A total of 209 respondents (53.59%) strongly agreed and 96 (24.62%) agreed, making 78.21% in total who acknowledged significant improvements in accountability due to e-

governance. Conversely, 72 (18.46%) strongly disagreed, 11 (2.82%) disagreed, and 2 (0.51%) were undecided. This strong consensus underscores the transformative impact of digital governance on accountability through tools such as online reporting systems, real-time service tracking, and improved record management. Thus, the findings reveal that the application of e-governance in Edo State's public service is relatively high and has led to measurable gains in transparency and efficiency. Nonetheless, the persistence of dissenting opinions points to existing infrastructural and human resource constraints.

Table 4: Assessing the impact of e-governance on accountability in Edo State Public Service

Variables	SA	A	SD	D	U	Total
Digital platforms have helped curb unethical behaviors and promote responsibility among public officials in Edo State public service.	109 (27.94)	146 (37.43)	88 (22.56)	44 (11.28)	3 (0.76)	390 (100)
Technology-driven governance has improved the ability to identify and address lapses in accountability within public service in Edo State.	112 (28.71)	86 (22.05)	91 (23.33)	98 (25.12)	3 (0.76)	390 (100)
Poor digital infrastructure significantly obstructs the successful implementation of e-governance in Edo State.	152 (38.97)	95 (24.35)	88 (22.56)	46 (11.79)	9 (2.30)	390 (100)

Source: Field Survey, 2025

Table 4 presents respondents' views on the impact of e-governance on accountability in Edo State's public service. The table captures perceptions of how digital systems influence ethical conduct, administrative responsibility, and infrastructural challenges affecting implementation. The first variable examined whether digital platforms have helped curb unethical behaviors and promote responsibility among public officials. Out of 390 respondents, 109 (27.94%) strongly agreed and 146 (37.43%) agreed, giving a total of 65.37% who acknowledged that e-governance has played a positive role in promoting ethical behavior and responsibility in the public service. Conversely, 88 (22.56%) strongly disagreed, 44 (11.28%) disagreed,

and 3 (0.76%) were undecided. This pattern suggests that while a majority believes technology-driven governance enhances accountability and discourages unethical practices through transparency and data traceability, a considerable minority remain doubtful, likely due to inconsistent system application or persistence of traditional administrative bottlenecks.

The second variable assessed whether technology-driven governance has improved the ability to identify and address lapses in accountability within Edo State's public service. The data shows that 112 respondents (28.71%) strongly agreed and 86 (22.05%) agreed, totaling 50.76% in support of the statement, while 91 (23.33%) strongly disagreed, 98 (25.12%) disagreed, and 3 (0.76%) were undecided. This indicates a relatively balanced opinion among respondents. Slightly more than half of the participants believe that digital systems have strengthened accountability mechanisms by enhancing monitoring and evaluation processes. However, nearly half expressed skepticism, which may stem from irregular system updates, poor enforcement of digital monitoring tools, or limited use of data analytics in detecting administrative irregularities. The mixed responses suggest that while technology offers potential for accountability enhancement, its effectiveness depends on proper institutional adaptation and consistent usage across government departments.

The third variable focused on whether poor digital infrastructure significantly obstructs the successful implementation of e-governance in Edo State. Here, 152 respondents (38.97%) strongly agreed and 95 (24.35%) agreed, totaling 63.32% who identified infrastructural limitations as a major barrier to effective e-governance. In contrast, 88 (22.56%) strongly disagreed, 46 (11.79%) disagreed, and 9 (2.30%) were undecided. The overwhelming agreement indicates that the sustainability and success of e-governance initiatives are constrained by weak ICT infrastructure, unstable internet connectivity, inadequate digital facilities, and insufficient funding for technological upgrades. Overall, the results from Table 4 reveal that while e-governance has positively influenced accountability by promoting transparency and ethical conduct, its full impact is undermined by infrastructural and administrative challenges. Strengthening digital capacity, expanding ICT infrastructure, and institutionalizing accountability frameworks are therefore essential for

consolidating the gains of e-governance in Edo State's public service.

Table 5: Identifying the challenges of e-Governance in ensuring accountability in Edo State Public Service

Variables	SA	A	SD	D	U	Total
Poor digital infrastructure significantly obstructs the successful implementation of e-governance in Edo State.	194 (49.74)	109 (27.94)	52 (13.33)	26 (6.66)	9 (2.30)	390 (100)
The lack of sufficient training for public servants limits the effective use of e-governance tools in Edo State.	203 (52.05)	56 (14.35)	94 (24.10)	34 (8.71)	7 (1.79)	390 (100)
Continuous training and technical assistance are essential to enhance the performance of e-governance in Edo State.	209 (53.58)	96 (24.61)	69 (17.69)	11 (2.82)	5 (1.28)	390 (100)

Source: Field Survey, 2025

Table 5 presents respondents' views on the challenges confronting e-governance in ensuring accountability within Edo State's public service. The table identifies critical factors such as poor digital infrastructure, inadequate training for public servants, and the need for continuous capacity building as major impediments to effective e-governance implementation. The first variable assessed whether poor digital infrastructure significantly obstructs the successful application of e-governance in the state. Out of 390 respondents, 194 (49.74%) strongly agreed and 109 (27.94%) agreed, representing a total of 77.68% who recognized infrastructural weakness as a major barrier. Conversely, 52 respondents (13.33%) strongly disagreed, 26 (6.66%) disagreed, and 9 (2.30%) were undecided. This strong consensus highlights that the absence of adequate ICT infrastructure, such as reliable internet connectivity, stable power supply, and modern digital tools, remains a primary obstacle to achieving efficient e-governance and accountability outcomes in the Edo State public service.

The second variable examined whether the lack of sufficient training for public servants limits the effective use of e-governance tools. This show that 203 respondents (52.05%) strongly agreed and 56 (14.35%) agreed, making a total of 66.40% who believe inadequate training is a significant constraint. Meanwhile, 94 respondents (24.10%) strongly disagreed, 34 (8.71%) disagreed, and 7 (1.79%) were undecided. The results indicate that while a majority recognize the importance of capacity building, a substantial minority disagree, possibly reflecting uneven training distribution or differences in departmental exposure to digital systems. Overall, the findings suggest that insufficient technical know-how among staff hinders the smooth operation of digital governance systems and reduces the accountability potential that e-governance seeks to promote.

The third variable investigated whether continuous training and technical assistance are essential to enhance e-governance performance in Edo State. A total of 209 respondents (53.58%) strongly agreed and 96 (24.61%) agreed, representing 78.19% who support ongoing training as vital for improving the efficiency and sustainability of digital governance systems. In contrast, 69 (17.69%) strongly disagreed, 11 (2.82%) disagreed, and 5 (1.28%) were undecided. This overwhelming agreement underscores the recognition that e-governance is a dynamic process requiring constant learning, system updates, and technical support to function effectively. Thus, Table 5 reveal that infrastructural deficiencies, insufficient training, and lack of sustained capacity-building initiatives are the major challenges limiting the effectiveness of e-governance in promoting accountability within Edo State's public service. Addressing these issues through policy intervention, investment in ICT infrastructure, and continuous workforce development will be crucial to consolidating the gains of digital governance reform.

Findings

The analyses and interpretations presented in the tables provide a comprehensive understanding of the relationship between e-governance and accountability in Edo State's public service. Overall findings reveal that e-governance has had a significantly positive impact on administrative transparency, ethical conduct, and efficiency, though these gains are hindered by infrastructural inadequacies, limited technical capacity, and weak institutional support. Data from Table 4.2

show that 76.41% of respondents agreed e-governance has made public service operations smoother and more transparent, while 66.67% confirmed that digital platforms improved accountability among public servants. Similarly, 53.84% agreed that it helped minimize unethical practices, and 61.27% believed it strengthened accountability systems. These findings suggest that digital tools such as electronic records, e-monitoring and online data management enhanced service delivery and transparency while reducing corruption. However, dissenting opinions indicate that uneven implementation, poor infrastructure, and bureaucratic resistance limit the full realization of these benefits.

Similarly, Table 4.3 confirms that the level of e-governance application in Edo State is relatively high but uneven across institutions. About 65.64% of respondents agreed that digital platforms allow citizens to monitor government activities, showing progress toward participatory governance, though limited internet access and digital inequality still pose barriers. Furthermore, 66.67% acknowledged improved transparency among public servants, while 78.21% agreed that e-governance has strengthened accountability practices. Table 4 reinforces these insights, as 65.37% of respondents affirmed that digital platforms curb unethical behavior and promote responsibility, yet nearly 34% disagreed or were undecided, reflecting partial implementation. Meanwhile, 63.32% identified poor digital infrastructure as a major hindrance, underscoring the need for stable internet, reliable electricity, and ICT investment. Table 5 supports this by revealing that 77.68% cited poor infrastructure and 66.40% inadequate training as critical obstacles, while 78.19% emphasized the importance of continuous capacity building. Collectively, these findings highlight that while e-governance has advanced accountability and transparency in Edo State, infrastructural deficiencies, limited training, and weak policy support continue to impede its full potential, necessitating strategic reforms and sustained investment.

Conclusion and Recommendations

Based on the findings, the paper concluded that e-governance has had a substantial positive impact on accountability, transparency, and efficiency within the Edo State public service. The adoption of digital platforms has enhanced public access to information which had reduced unethical practices, and improved administrative responsiveness. However, the effectiveness of

e-governance is still hindered by poor digital infrastructure, inadequate training of public servants, and inconsistent implementation across government institutions. To fully realise the benefits of e-governance in Edo State and beyond, the paper have therefore, outline the following recommendations;

i. The government should prioritize investments in digital infrastructure, including stable internet connectivity, reliable electricity supply, and modern ICT equipment, to ensure seamless implementation of e-governance systems across all public institutions.
ii. Regular training programs should be organized for public servants to improve their digital literacy, technical competence, and ability to utilize e-governance tools effectively for accountability and service delivery.
iii. A centralized digital monitoring framework should be developed to track administrative activities, evaluate compliance, and promote real-time transparency and accountability in all ministries, departments, and agencies.
iv. The Edo State government should enact clear e-governance policies and conduct awareness campaigns to encourage citizen participation, ensuring that digital governance platforms are user-friendly, accessible, and inclusive.

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