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Artificial intelligence and the paradox of electoral integrity in Nigeria's 2023 presidential election

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ABSTRACT

Nigeria's 2023 Presidential Election represented the country's most technologically ambitious electoral exercise, with the deployment of the Bimodal Voter Accreditation System (BVAS) and the INEC Result Viewing Portal (IReV) to enhance voter accreditation, transparency, and public confidence. Yet the election revealed a fundamental contradiction: technologies introduced to strengthen electoral integrity became, in practice, sources of suspicion and contestation. Existing scholarship has largely examined electoral technologies and AI-driven disinformation as separate phenomena, leaving insufficient attention to how their interaction shapes perceptions of electoral integrity. This study addresses that gap by examining the paradoxical relationship between Artificial Intelligence, digital technologies, and electoral integrity in Nigeria, using the 2023 Presidential Election as a case study. Guided by the Cyber-Elections framework and employing a qualitative content analysis, the study analyses official reports, judicial decisions, election observer reports, fact-checking evidence, and relevant academic literature. The findings reveal two interrelated paradoxes. First, the infrastructural paradox demonstrates that although BVAS significantly improved voter accreditation, IReV's failure to upload presidential election results in real time, together with inconsistent official explanations for the failure, weakened public confidence in the results collation process. Second, the informational paradox shows that the same digital platforms that expanded civic participation also enabled AI-generated deepfakes, coordinated disinformation, and misinformation, creating competing narratives among state institutions, political actors, and citizens regarding the credibility of the election. The paper argues that electoral integrity in the digital era depends not only on technological innovation but also on the interaction between infrastructural reliability, institutional transparency, effective communication, political trust, and digital literacy. It concludes with five policy recommendations aimed at strengthening electoral technology, legal and regulatory frameworks, institutional communication, digital literacy, and independent oversight to enhance the credibility of future elections in Nigeria.

1. INTRODUCTION

Since Nigeria's return to democratic rule in 1999, the country has recorded its longest uninterrupted period of civilian governance since independence. This achievement represents a significant milestone in a political history characterized by military interventions, constitutional disruptions, and governance instability. Despite this progress, concerns regarding the consolidation of democracy remain persistent. As Osaghae (1998) aptly described, Nigeria continues to function as a "crippled giant": a state endowed with enormous human and material resources but constrained by institutional weaknesses, elite domination, and recurrent governance challenges. More than two decades after the transition from military rule, scholars continue to debate the extent to which democracy has become consolidated in Nigeria. While important milestones such as the peaceful transfer of power from the People's Democratic Party (PDP) to the All-Progressives Congress (APC) in 2015 have strengthened optimism, enduring concerns relating to electoral credibility, political

accountability, and inclusive representation continue to challenge democratic governance. As Jega (2017), Omotola (2010), and Ezeibe (2021) argue, credible elections constitute the foundation of democratic legitimacy because they provide the mechanism through which citizens confer authority on political leaders. Yet, elections in Nigeria continue to be undermined by vote buying, voter intimidation, electoral violence, ballot manipulation, and allegations of result tampering, all of which erode public confidence in democratic institutions.

In recent years, the global integration of digital technologies and Artificial Intelligence (AI) into electoral processes has introduced new dimensions to debates on electoral integrity. These technological innovations have transformed voter engagement, political communication, and information dissemination. AI, in particular, has enhanced data management, voter verification, electoral logistics, and campaign communication. Simultaneously, these technologies have generated unprecedented challenges, including misinformation, disinformation, algorithmic bias, and AI-generated deepfakes capable of manipulating public opinion and distorting political discourse. Consequently, a growing body of scholarship has begun to question whether technological innovation necessarily strengthens democratic processes or simultaneously creates new threats to electoral integrity, especially in emerging democracies characterized by institutional fragility and low public trust.

Against this backdrop, the Independent National Electoral Commission (INEC) has increasingly embraced technological reforms as part of broader efforts to improve election credibility in Nigeria. The introduction of the Smart Card Reader (SCR) in 2015 marked an important step toward reducing voter impersonation and multiple voting. Building on this foundation, INEC deployed the Bimodal Voter Accreditation System (BVAS) and the INEC Result Viewing Portal (IReV) during the 2023 General Elections. These innovations were designed to strengthen voter accreditation, improve transparency in result management, minimize human interference, and enhance public confidence in the electoral process.

The 2023 Presidential Election represented Nigeria's most technologically ambitious electoral exercise to date, involving more than 93 million registered voters and approximately 176,000 polling units nationwide. The deployment of BVAS recorded notable successes in voter accreditation and helped reduce incidents of over-voting in many polling units. However, the election also exposed critical institutional and technical vulnerabilities. Difficulties associated with uploading the presidential election results to the IReV portal generated widespread controversy and public concern. Severe delays, incomplete uploads, and communication failures raised serious questions regarding transparency and accountability, thereby undermining confidence in the very technologies introduced to enhance electoral credibility (INEC, 2023; EU-EOM, 2023).

Beyond the challenges associated with electoral infrastructure, the election was characterized by an unprecedented proliferation of AI-enabled disinformation. Manipulated videos, images, deepfakes, and misleading narratives circulated extensively across digital platforms such as X (formerly Twitter), Facebook, WhatsApp, TikTok, and YouTube. These materials often exploited existing ethnic, religious, and political divisions, heightening political tensions and fueling competing interpretations of electoral outcomes. Election observation missions, including the European Union Election Observation Mission and Yiaga Africa (2023), noted that the spread of digital misinformation and disinformation significantly shaped public perceptions of the electoral process's credibility and legitimacy.

Although scholarly interest in electoral technologies and digital politics in Nigeria has expanded considerably, important gaps remain within the literature. Existing studies mostly examined electoral technologies such as BVAS and IReV in isolation from the broader phenomenon of AI-driven disinformation and digital manipulation. Consequently, limited attention has focused on how these dual dimensions (the infrastructural and the informational) interact to shape perceptions and outcomes of electoral integrity. This study addresses this gap by examining the paradoxical

relationship between Artificial Intelligence, digital technologies, and electoral integrity in Nigeria, using the 2023 Presidential Election as a case study.

1.1 Statement of the Problem

Despite over two decades of uninterrupted civilian rule, public confidence in Nigeria's electoral system remains fragile. Successive governments and the Independent National Electoral Commission (INEC) have introduced technological innovations to address longstanding electoral challenges, including voter impersonation, multiple voting, result manipulation, and electoral violence. The deployment of the Bimodal Voter Accreditation System (BVAS) and the INEC Result Viewing Portal (IReV) during the 2023 General Elections represented the most ambitious technological reform initiative in Nigeria's electoral history.

However, these innovations produced a significant contradiction. While BVAS generally improved voter accreditation and reduced opportunities for multiple voting and impersonation, the IReV portal's performance generated widespread controversy. Technical failures, delays in result uploads, and operational inconsistencies created uncertainty during the result collation process and fueled allegations of manipulation. Consequently, technologies introduced to improve transparency became sources of public suspicion and political contestation. At the same time, the election saw a surge in AI-driven disinformation and digital misinformation. Deepfakes, manipulated images, videos, and coordinated false narratives circulated widely across social media platforms, often exploiting existing ethnic, religious, and political divisions. These developments complicated citizens' ability to distinguish factual from fabricated information, undermining confidence in electoral outcomes and weakening perceptions of electoral legitimacy.

The Nigerian experience therefore reveals a broader paradox within contemporary electoral governance. Technologies designed to strengthen electoral integrity may also create new vulnerabilities shaped by institutional weaknesses, infrastructural limitations, political polarization, and low public trust; rather than resolving longstanding challenges of electoral credibility, technological innovations created additional avenues for contesting electoral legitimacy. The core problem this study addresses is the paradox of electoral technology in Nigeria: while innovations have curtailed traditional forms of fraud at the polling stage, they have introduced new threats, particularly through failures in digital infrastructure and AI-enabled disinformation, that erode overall electoral legitimacy and public confidence. This paradox raises fundamental questions about the capacity of electoral institutions in Nigeria to manage complex technological systems and the regulatory frameworks needed to govern emerging technologies such as Artificial Intelligence in elections, using Nigeria's 2023 Presidential Election as a case study. This study seeks to fill this gap.

1.2 Research Objectives

This study is guided by the following objectives:

1. To examine how Artificial Intelligence-driven disinformation and digital misinformation shaped public perceptions of the integrity of Nigeria's 2023 Presidential Election.
2. To assess the extent to which the technical and operational challenges of the INEC Result Viewing Portal (IReV) influenced perceptions of the credibility of the 2023 Presidential Election.
3. To identify the institutional, political, and socio-cultural factors that explain the paradoxical effects of digital electoral technologies on electoral integrity during Nigeria's 2023 Presidential Election.
4. To propose practical measures Nigeria can adopt to mitigate the risks associated with Artificial Intelligence while strengthening electoral integrity in future elections.

1.3 Research Questions

The following questions guide this study:

1. How did Artificial Intelligence-driven disinformation and digital misinformation shape public perceptions of the integrity of Nigeria's 2023 Presidential Election?
2. To what extent did the technical and operational challenges of the INEC Result Viewing Portal (IReV) influence perceptions of the credibility of the 2023 Presidential Election?
3. What institutional, political, and socio-cultural factors explain the paradoxical effects of digital electoral technologies on electoral integrity during Nigeria's 2023 Presidential Election?
4. What practical measures can Nigeria adopt to mitigate the risks associated with Artificial Intelligence while strengthening electoral integrity in future elections?

2. LITERATURE REVIEW

2.1 Conceptualising Electoral Integrity

The concept of electoral integrity has evolved from a narrow emphasis on "free and fair elections" to a comprehensive framework for evaluating the entire electoral cycle. This broader approach encompasses legal frameworks, institutional performance, voter registration, campaigning, voting procedures, result management, transparency, accountability, technological reliability, and post-election dispute resolution. Electoral integrity is therefore understood as the cumulative outcome of institutional and procedural performance rather than as the product of isolated polling-day events. A foundational contribution to this literature comes from Pippa Norris, founding director of the Electoral Integrity Project. Norris (2014) defines electoral integrity as adherence to international conventions and global norms governing elections across the full electoral cycle, and the Electoral Integrity Project operationalized this idea through a multi-stage framework covering electoral laws, boundary delimitation, voter and candidate registration, campaign regulation, voting, result collation and declaration, and dispute resolution. Its strength lies in its systematic and process-oriented approach, which recognises that democratic legitimacy depends on the credibility of the full electoral system.

Similarly, the Kofi Annan Foundation (2012) situates electoral integrity within a normative commitment to universal suffrage, political equality, transparency, professionalism, and impartiality. This perspective underscores the centrality of institutional competence and administrative neutrality. Within the Nigerian context, Fatai (2022) links electoral integrity to procedural credibility, public trust, and the perceived legitimacy of outcomes, while also drawing attention to familiar challenges such as fraud, vote buying, violence, and institutional inefficiency. While these frameworks provide strong normative and institutional foundations, they have important limitations. They often assume that improvements in electoral administration automatically generate legitimacy, and they pay limited attention to the disruptive role of emerging technologies and artificial intelligence. In contexts of weak institutions and low trust, such as Nigeria's 2023 General Elections, procedural and technological reforms do not always translate into enhanced public confidence. This study therefore adopts the comprehensive framework of the Electoral Integrity Project while grounding it in Nigeria's socio-political and technological realities. Electoral integrity is conceptualised here as the extent to which electoral processes conform to democratic norms, institutional transparency, technological reliability, and public legitimacy across the electoral cycle.

2.2 Electoral Technology, Cyber-Elections, and Electoral Integrity in Global Perspective

The increasing digitisation of elections has transformed electoral administration into a hybrid physical-digital process. Electoral technology refers to the deployment of digital systems for voter

registration, biometric accreditation, electronic result transmission, and automated monitoring. Closely related is the concept of cyber-elections, which describes elections that operate simultaneously in physical and digital environments. Garnett and James (2020) argue that contemporary elections now constitute a "dual ontological reality," shaped by digital infrastructures, expanded data flows, accelerated communication, commoditisation of electoral data, and the proliferation of new actors, including technology companies, hackers, and foreign interests. Heeks and Dunleavy (2017) further contend that digital governance systems can improve administrative efficiency, reduce human error, and strengthen transparency and accountability in public services, including elections. Norris (2014) similarly views biometric verification and electronic transmission as tools capable of reducing traditional malpractices such as ballot stuffing and multiple voting. Howard (2020) complements these perspectives by showing how AI-driven digital platforms reshape political communication through algorithmic targeting, automated messaging, and data-driven influence.

Global experiences illustrate both the opportunities and the risks. Estonia's e-voting system is frequently cited as a model of accessibility, efficiency, and voter convenience (Solvak & Vassil, 2016; Ehin, 2022). In contrast, the United States continues to face cyber security threats and foreign interference concerns in its elections (Office of the Director of National Intelligence, 2021), while India's Electronic Voting Machines have generated persistent debates over verifiability, auditability, and potential manipulation. These cases show that electoral technologies can improve speed and reduce certain human-induced irregularities, but they also create new challenges related to cybersecurity, transparency, and public trust. However, much of this literature remains technologically optimistic and under-theorises the structural constraints common in developing democracies, including weak infrastructure, political mistrust, institutional fragility, and the digital divide. In Nigeria's 2023 Presidential Election, the introduction of BVAS and IReV exposed this gap: technologies intended to enhance transparency were undermined by operational delays and technical inconsistencies, thereby eroding public confidence

2.3 Artificial Intelligence, Deepfakes, and Digital Manipulation in Elections

Artificial Intelligence (AI) is conventionally defined as the branch of computer science concerned with designing systems capable of tasks that ordinarily require human intelligence, including pattern recognition, natural language processing, and autonomous decision-making (Russell & Norvig, 2021). In electoral contexts, AI includes generative content tools, algorithms, and micro-targeting platforms that reshape how political information is produced and consumed (Howard, 2020). Deepfakes, that is, synthetic audio, video, or image content depicting people saying or doing things they never did, are among AI's most consequential electoral applications. Chesney and Citron (2019) also identify the liar's dividend: once audiences recognise that convincing fabrications exist, genuine evidence becomes easier to dismiss as fake, enabling wrongdoers to evade accountability by discrediting authentic material. Closely related are misinformation and disinformation, which Wardle and Derakhshan (2017) distinguish by intent: misinformation is false information shared without intent to deceive, whereas disinformation is deliberately created and disseminated for harm or political advantage. Digital manipulation is the broader umbrella that includes both, as well as coordinated inauthentic behaviour such as bot networks. Nigerian fact-checkers documented extensive, and often difficult-to-distinguish, misinformation and disinformation during the 2023 elections.

This study therefore operationalized AI as an umbrella construct encompassing this broader spectrum of digital technologies and digitally enabled manipulation, rather than limiting the term to machine-learning techniques alone. In practice, voters rarely distinguish AI-generated content from algorithmically amplified disinformation or conventional manipulation, and these forms are not easily separable within the platforms that circulate them. This operational choice follows Howard's (2020)

systemic view of AI-driven political communication and the Cyber-Elections framework's emphasis on interconnected digital threats. Applied to Nigeria, deepfakes and manipulated content proliferated during the 2023 elections, intensifying polarisation. Odinkalu and Ezeibe (2023) attribute this vulnerability to weak regulation and low digital literacy, while Madueke and Enyiazu (2024) describe a dual digital reality in which official technologies coexisted with informal, AI-driven ecosystems that produced competing fraud narratives.

This tension between technological optimism and democratic vulnerability constitutes the paradox of electoral integrity in the age of AI. Existing frameworks such as normative, cyber-electoral, and manipulation-focused remain fragmented and rarely explain how AI-mediated technologies can simultaneously strengthen and undermine legitimacy within the same environment. Nigerian scholarship acknowledges the dual role of BVAS and IReV (Madueke & Enyiazu, 2024), but it still lacks an integrated framework for theorising the co-production of enhancement and fragility. This study addresses that gap by examining AI-driven disinformation's effect on epistemic trust and by analysing how IReV's technical failures interacted with institutional vulnerabilities, thereby reconceptualising electoral integrity as a dynamic interaction among technology, institutions, information, and public perception.

2.4 Theoretical Framework

This study is anchored on the Cyber-Elections framework developed by Garnett and James (2020) in their influential work, *Cyber Elections in the Digital Age: Threats and Opportunities of Technology for Electoral Integrity*. The framework offers a valuable theoretical lens for understanding how digital technologies are reshaping electoral processes and redefining electoral integrity in contemporary democracies. Garnett and James (2020) argue that elections have entered a new era characterised by the pervasive digitalisation of electoral processes. Rather than existing solely within the physical domain of polling stations, paper ballots, and electoral officials, contemporary elections now operate simultaneously within both physical and digital environments. In this emerging reality, electoral integrity depends not only on the security of physical voting processes but also on the reliability, transparency, and trustworthiness of digital infrastructures, algorithmic data flows, and online communication networks.

The Cyber-Elections framework identifies five interrelated features:

1. **New Ontological Existence of the Digital:** Elections now possess a parallel digital existence. Electoral activities are increasingly represented through biometric databases, electronic voter registers, digital result transmission systems, and online information platforms. Consequently, digital records acquire the same political significance as traditional paper-based electoral artefacts. In Nigeria's 2023 presidential election, this digital dimension was reflected in the deployment of BVAS for biometric accreditation and IReV for online publication of polling-unit results. These digital systems became central indicators through which citizens assessed the electoral process's credibility and transparency.
2. **New Flows of Data and Communication:** Contemporary elections generate and process unprecedented volumes of digital data, including biometric voter information, electronic accreditation records, real-time result transmissions, campaign analytics, and social media interactions. Electoral integrity is therefore closely tied to managing, transmitting, and securing these digital information flows. In Nigeria, the delayed transmission of presidential election results through the IReV disrupted these data flows, creating uncertainty and fuelling competing interpretations of electoral outcomes across digital platforms.
3. **Rapid Acceleration of Pace:** Digital technologies dramatically increase the speed at which electoral information is produced, disseminated, and consumed. Election results, political messages, and campaign narratives now circulate almost instantaneously, frequently outpacing

institutional verification and independent fact-checking. This feature was evident during Nigeria's 2023 election, where public expectations of real-time result uploads through the IReV contrasted sharply with transmission delays. The resulting information vacuum was rapidly exploited through misinformation, AI-assisted content, and competing political narratives circulating on WhatsApp, X (formerly Twitter), Facebook, TikTok, and YouTube.

4. **Commoditisation of Electoral Data:** Electoral data has become a valuable political and economic resource. Voter information, behavioural patterns, online engagement metrics, and demographic data can be collected, analysed, monetised, and strategically deployed for micro-targeted political influence. This trend was evident during Nigeria's 2023 election, where digital campaign strategies, algorithm-driven dissemination of political messages, and AI-assisted content increasingly shaped voter engagement and public discourse across social media platforms.
5. **Expansion of Electoral Actors:** The electoral arena has expanded beyond traditional actors such as voters, political parties, candidates, and electoral management bodies. Technology companies, social media platforms, cybersecurity firms, AI developers, independent fact-checking organisations, online influencers, and other digital actors increasingly shape electoral outcomes and perceptions of legitimacy. During Nigeria's 2023 election, organisations such as FactCheckHub, Yiaga Africa, and international election observers played critical roles in verifying election-related information and countering misinformation, while digital platforms simultaneously served as channels for democratic participation and coordinated disinformation campaigns.

Collectively, these transformations alter the nature of electoral integrity. While digital technologies can reduce traditional forms of electoral malpractice, they also introduce new vulnerabilities tied to technological reliability, information disorder, and institutional trust. Electoral integrity in the digital age therefore depends not only on the successful deployment of digital technologies but also on the resilience of the broader digital and institutional ecosystem within which those technologies operate.

2.4.1 Application of the Framework to Nigeria's 2023 Presidential Election

The Cyber-Elections framework provides an appropriate analytical lens for interpreting the paradoxical outcomes of AI and digital technologies during Nigeria’s 2023 presidential election. As already noted, BVAS and IReV represented a significant expansion of the digital dimension of electoral administration, and applying the framework to their performance clarifies why technical success and public suspicion coexisted so closely in the same election. The findings indicate that these technologies produced mixed outcomes. BVAS substantially improved biometric verification and reduced opportunities for voter impersonation and multiple voting, thereby strengthening the procedural integrity of voter accreditation. However, operational and technical challenges associated with the IReV (including delayed result uploads, server timeouts, and transmission failures), exposed significant weaknesses in Nigeria's digital electoral infrastructure. Rather than reinforcing transparency, these failures generated widespread public suspicion and intensified political contestation over the credibility of the presidential election results.

At the same time, Nigeria's 2023 election experienced an unprecedented proliferation of AI-assisted disinformation, digitally manipulated images, synthetic videos, fabricated audio recordings, and coordinated misinformation campaigns across social media platforms. These developments reflected the accelerated information flows and the growing influence of non-traditional digital actors identified by Garnett and James (2020). They also demonstrated how digital communication technologies can simultaneously enhance political participation while creating opportunities for information manipulation capable of undermining democratic legitimacy.

The Nigerian experience therefore validates the explanatory value of the Cyber-Elections framework: the deployment of BVAS and IReV alone did not determine electoral legitimacy, since public confidence hinged instead on the resilience of the surrounding digital and institutional ecosystem. This study extends the framework by showing that Nigeria's 2023 presidential election was characterised by two interconnected outcomes. First, an infrastructural paradox emerged whereby the success of BVAS in voter accreditation was undermined by operational failures in the IReV during presidential result transmission. Second, an informational paradox emerged whereby the same digital platforms that expanded political participation also accelerated AI-driven disinformation and competing narratives that weakened public confidence in the electoral process. Consequently, the study argues that technological innovation alone cannot guarantee electoral integrity. Rather, credible elections require reliable digital infrastructure, effective institutional communication, resilient information ecosystems, and sustained public trust operating together within a coherent democratic governance framework.

2.4.2 Critique of the Cyber-Elections Framework

Despite its applicability, the Cyber-Elections framework has several shortcomings when applied to developing democratic contexts:

1. Technological Determinism: The framework's emphasis on the transformative power of digital technologies can understate the critical importance of political agency, institutional behaviour, and pre-existing power relations in shaping electoral outcomes. In the Nigerian context, the efficacy of BVAS and IReV was determined not merely by technical capacity, but by institutional decision-making, political incentives, and deep-rooted governance structures.
2. Western-Centric Assumptions: The framework was developed primarily from the experiences of advanced and consolidating democracies. Consequently, it offers limited engagement with the severe infrastructural constraints, institutional fragility, and unique socio-political complexities that characterise many African states. Structural factors such as unstable electricity grids, uneven internet penetration, low digital literacy, widespread poverty, and intense ethno-religious polarisation fundamentally alter how electoral technologies operate in practice.
3. Underdeveloped Political Economy: The framework pays insufficient attention to the political economy of digital technologies. Issues relating to the corporate control of global digital platforms, predatory data extraction, commercial monetisation incentives, and regulatory asymmetries between African states and multinational technology firms remain underdeveloped despite their growing significance in contemporary elections.
4. Accountability in Weak Institutional Contexts: Although the framework acknowledges the expansion of electoral actors, it offers limited guidance regarding accountability and enforcement mechanisms in contexts where domestic regulatory institutions are weak, state capacity is limited, and judicial independence is contested.
5. The Generative AI Gap: The original framework emerged just before the global explosion of generative Artificial Intelligence. The rapid emergence of highly accessible deep fakes, synthetic media, and large language models has altered the scale, sophistication, and velocity of electoral disinformation far beyond what was envisaged in the framework's original formulation.

These limitations and the Generative AI Gap in particular, suggest that the Cyber-Elections framework requires refinement before it can be applied to the Nigerian case. Accordingly, this study distinguishes analytically between two dimensions of digital electoral performance that the framework treats together: infrastructural integrity, concerning the reliability of the technical

machinery of the election, and informational integrity, concerning the trustworthiness of the surrounding information environment. This distinction organises the empirical analysis that follows and is revisited as a theoretical implication in the concluding discussion.

3. METHODOLOGY

3.1 Research Design

This study adopted a qualitative research design. In the Nigerian context, where elections often generate heated debates, conflicting narratives, and competing claims of success or fraud, this approach allows for a deeper understanding of how technology, politics, and public trust interact.

3.2 Data Sources and Sampling

The study relied on secondary data drawn from various relevant sources. These include peer-reviewed journal articles, academic books, official reports from the Independent National Electoral Commission (INEC), election observation reports, international observers, policy documents, and credible media analyses covering Nigeria's 2023 Presidential Elections. Materials were selected because they directly address the core issues of this research: the use of BVAS and IReV, the role of Artificial Intelligence, deepfakes, digital disinformation, and the broader question of electoral integrity in Nigeria. The focus was on documents that reflect the realities of conducting elections in a country with weak infrastructure, high political tension, and widespread public suspicion.

3.3 Data Analysis

The data were analysed using thematic analysis. This involved repeated reading of the documents, coding key ideas, and grouping them into major themes such as technological improvement, institutional failures, AI-driven misinformation, public distrust, and the gap between official claims and people's perceptions. This process helped the study move beyond simply describing what happened in 2023 to critically examining why certain things happened and what they mean for Nigeria's democracy

4. RESULT AND DISCUSSION

4.1 Artificial Intelligence-Driven Disinformation, Digital Misinformation and Public Perceptions in Nigeria's 2023 Presidential Election

The first objective of this study was to examine how artificial intelligence-driven disinformation and digital misinformation influenced public perceptions of Nigeria's 2023 presidential election. The findings show that AI-assisted disinformation significantly shaped citizens' perceptions of electoral credibility, often independently of the election's actual conduct. Rather than merely spreading false information, digital platforms created competing interpretations of electoral reality, thereby transforming information itself into a major arena of electoral contestation.

This finding corroborates previous studies that identify social media as an increasingly influential determinant of political opinion formation. It also supports the observations of the European Union Election Observation Mission (EU EOM, 2023), which reported widespread circulation of manipulated electoral content during Nigeria's 2023 elections. The emergence of AI-assisted deepfakes, synthetic audio recordings, altered photographs, and fabricated electoral narratives represents an evolution from conventional misinformation to technologically enhanced disinformation that exploits the speed, reach, and emotional appeal of digital platforms. However, this study extends the literature by showing that AI-driven disinformation cannot be understood solely as a technological phenomenon. Instead, its effectiveness depended largely on prevailing political and social conditions. In states such as Lagos, online misinformation reinforced existing ethnic and political tensions during an intensely competitive election. Similarly, in Kaduna State, digitally

circulated falsehoods amplified longstanding religious and communal divisions, while in parts of the South-East and North-East, misinformation resonated with pre-existing scepticism towards state institutions. These findings suggest that AI-assisted disinformation does not create political distrust in isolation but rather amplifies existing social cleavages and institutional weaknesses.

The findings further reveal what this study conceptualises as the informational paradox. Digital communication technologies simultaneously expanded democratic participation by facilitating access to political information while also enabling unprecedented dissemination of manipulated content. Consequently, greater access to information did not necessarily produce a better-informed electorate. Instead, voters encountered multiple competing narratives from INEC, political parties, civil society organisations, international observers, and social media influencers, making it increasingly difficult to distinguish verified information from fabricated content. This finding broadens existing scholarship on computational propaganda by demonstrating that technological innovation may simultaneously strengthen democratic participation and weaken public confidence in democratic outcomes.

The study therefore argues that combating electoral disinformation requires more than technological regulation. Sustainable electoral integrity depends upon strengthening institutional communication, improving digital literacy, expanding fact-checking capacity, and enhancing collaboration between electoral management bodies, technology companies, civil society organisations, and independent media. Without such complementary measures, future technological innovations are likely to reproduce similar informational vulnerabilities.

Table 1: Selected Verified Cases of Manipulated Media and Electoral Disinformation in Nigeria (2017–2023)

Period	Content	Context	AI Involvement	Fact-Checker/ Outcome
June 2017 (resurfaced 2019–2022)	Fake audio recording allegedly featuring Kashim Shettima and Governor Amosun discussing Biafra and the agitation of the South-East.	Used to promote ethnic division and anti-Shettima narratives.	Not AI-generated, but human impersonation	PRNigeria identified the recording as an impersonation
November 2022	Doctored video suggesting that Hollywood stars endorsed Peter Obi.	Circulated as pro-Obi celebrity propaganda and to suggest	Not AI, but digital video editing	Africa Check and Dubawa established that the footage had been edited from original clips.
August–November 2022 / Early 2023	Synthetic videos allegedly showing Elon Musk and Donald Trump endorsing Peter Obi.	Promoted a narrative of Western and international endorsement for Obi's candidacy.	Yes – AI-generated audiovisual.	Africa Check identified the videos as AI-generated.

February 2023	Audio allegedly featuring Atiku Abubakar, Ifeanyi Okowa, and Aminu Tambuwal discussing plans to manipulate the election.	Circulated as an attack against the PDP and its presidential candidate.	Yes – alleged AI-assisted audio manipulation/deepfake techniques.	TheCable, and CDD identified the recording as manipulated and deepfaked.
April 2023	Purported phone conversation between Peter Obi and Bishop David Oyedepo in which the election was allegedly described as a "religious war."	Intensified post-election religious and political tensions.	No confirmed AI involvement.	Dubawa reported that they did not establish the recording as AI-generated. But still controversial

Source: Author's compilations (Tobi, 2024)
Note: This table focuses on selected, verified manipulated-media cases on AI and electoral disinformation before and during the 2023 Nigerian presidential election cycle

4.2 Technical and Operational Challenges of the INEC Result Viewing Portal (IReV) and the Credibility of the 2023 Presidential Election

The second objective examined the relationship between the technical and operational performance of the Independent National Electoral Commission (INEC) Result Viewing Portal (IReV) and perceptions of electoral credibility. The findings reveal that while the Bimodal Voter Accreditation System (BVAS) substantially improved voter accreditation and reduced identity-related electoral fraud, IReV's operational failures significantly undermined public confidence in the presidential election results.

They agree with INEC's post-election report (INEC, 2024), which acknowledged the successful deployment of BVAS for voter verification while recognising technical challenges associated with presidential result uploads, an acknowledgement also reported in the domestic press (Punch, 2024). Similarly, the European Union Election Observation Mission (2023) concluded that delays in uploading presidential election results weakened public confidence in the transparency of the electoral process despite the relative success of voter accreditation, a conclusion corroborated by domestic election monitors (CDD–West Africa, 2023).

This finding extends beyond technical performance alone. Rather than evaluating individual technologies separately, citizens assessed the electoral process as an integrated system. Consequently, the operational failure of one technological component overshadowed the success of another. This study conceptualises this phenomenon as the infrastructural paradox, whereby technological improvement at one stage of election administration generated diminished public confidence because of failure at another stage. Evidence from Lagos, Rivers, and Kano States illustrates this dynamic. In Lagos State, many voters experienced a largely successful accreditation process but became increasingly suspicious when presidential results failed to appear on the IReV portal as publicly promised. In Rivers State, transmission delays were interpreted through the lens of existing political competition, generating immediate allegations of result manipulation. In Kano State, infrastructural limitations, including inconsistent internet connectivity, further complicated result uploads and reinforced perceptions of administrative failure. These state-level experiences demonstrate that

citizens evaluated technological credibility through observable outcomes rather than technical explanations provided after the election.

The findings also demonstrate that institutional communication played an equally important role in shaping perceptions of credibility. Before the election, INEC repeatedly assured Nigerians that presidential election results would be uploaded to the IReV portal in real time. However, following the technical failures, the Commission's explanations evolved from describing a database-mapping problem to emphasising that electronic transmission was not legally mandatory. Although the Supreme Court ultimately upheld INEC's position and affirmed that IReV was not the legally recognised collation platform, the Court nevertheless acknowledged that the portal's malfunction diminished public confidence in the electoral process (Supreme Court of Nigeria, 2023). This suggests that legal legitimacy and public legitimacy are not necessarily identical. While judicial interpretation resolved the legal dispute, it did not completely address the broader crisis of public trust generated by unmet technological expectations.

The findings therefore support broader theories of electoral integrity, which argue that public confidence depends not only upon compliance with electoral laws but also upon transparency, consistency, predictability, and institutional responsiveness. Digital technologies can enhance electoral administration only when supported by reliable implementation, coherent institutional communication, and realistic public expectations.

4.3 Institutional, Political, and Socio-Cultural Factors and the Paradoxical Effects of Digital Electoral Technologies in Nigeria's 2023 Presidential Election

The third objective investigated the institutional, political, and socio-cultural factors shaping the paradoxical effects of digital electoral technologies during Nigeria's 2023 presidential election. The findings demonstrate that the effectiveness of electoral technologies was strongly conditioned by the broader political and institutional environment within which they operated. Technology alone neither guaranteed electoral credibility nor automatically restored public trust. Institutionally, the findings reveal that pre-election confidence generated through technological innovation was weakened by inadequate post-election communication regarding the operational failures experienced by the IReV. Although INEC invested substantially in electoral technology, its post-election explanations failed to reassure many citizens and political stakeholders. This finding aligns with the European Union Election Observation Mission (2023), which emphasised that transparency and communication remain essential components of electoral integrity regardless of technological sophistication.

Politically, digital technologies became deeply embedded within partisan competition. Political parties, candidates, civil society organisations, and online activists interpreted identical technological events through competing political narratives. Consequently, technical failures quickly became contested claims about electoral legitimacy, showing that digital technologies increasingly function as instruments of political communication as much as tools of electoral administration. Socio-culturally, existing ethnic, religious, and regional identities significantly influenced public responses to both technological failures and digital misinformation. In communities characterised by longstanding distrust of public institutions, operational challenges within the IReV were readily interpreted as evidence of political bias or institutional exclusion. Conversely, in locations where confidence in electoral administration remained relatively stronger, identical technological disruptions generated less severe political reactions. These findings indicate that technology interacts dynamically with existing patterns of institutional trust rather than operating independently of them.

Taken together, these findings reinforce the central argument of this study that digital electoral technologies generate paradoxical outcomes when introduced into environments characterised by fragile institutions and intense political competition. While technologies such as BVAS enhanced administrative efficiency and reduced accreditation fraud, deficiencies in result management and

digital information governance simultaneously undermined broader perceptions of electoral legitimacy. Electoral reform should therefore be understood as an institutional rather than merely technological process. Overall, the study shows that meaningful digital electoral reform in Nigeria requires a comprehensive approach that integrates technological innovation with institutional transparency, effective communication, legal certainty, digital literacy, and proactive strategies to counter AI-driven disinformation. Without these complementary reforms, future technological advancements may continue to improve isolated aspects of election administration while failing to achieve their broader objective of strengthening public confidence in democratic governance.

5. CONCLUSION

This study examined the paradoxical effects of artificial intelligence and digital electoral technologies on electoral integrity during Nigeria's 2023 presidential election. Guided by the Cyber-Elections Framework, it found that while the Bimodal Voter Accreditation System (BVAS) substantially improved voter accreditation and reduced identity-related electoral fraud, the operational failures of the INEC Result Viewing Portal (IReV), combined with AI-driven disinformation and digital misinformation, undermined public confidence in the transparency and credibility of the electoral process.

The study argues that electoral integrity in the digital age depends not only on the technical performance of electoral technologies but also on the institutional and informational environments within which those technologies operate. It advances this argument through two complementary concepts: the infrastructural paradox**,** in which technological success in voter accreditation was offset by failures in result transmission, and the informational paradox, in which digital platforms simultaneously expanded political participation and facilitated the rapid spread of misleading and AI-assisted content that weakened public trust. The findings further demonstrate that technology alone cannot guarantee credible elections. Effective digital electoral reform requires reliable technological infrastructure, transparent institutional communication, robust legal and governance frameworks, and coordinated strategies to counter disinformation while strengthening digital literacy. These complementary conditions are essential if technological innovation is to translate into sustained public confidence in electoral outcomes.

Overall, the Nigerian experience highlights that the success of digital electoral reforms should be evaluated not simply by the deployment of advanced technologies but by their ability to enhance transparency, institutional legitimacy, and citizens' trust throughout the electoral process. Absent the reforms proposed below, warnings that similar technical disruptions could recur in the 2027 general election are unlikely to be misplaced (Fasan, 2026). This insight contributes to the growing literature on AI, digital democracy, and electoral integrity, while offering lessons for Nigeria and other emerging democracies pursuing technology-driven electoral reforms.

6. RECOMMENDATIONS

The study proposes five targeted reforms.

1. **Technical and infrastructure upgrades:** INEC should adopt a hybrid result-transmission system that combines digital uploads with reliable offline backups and verifiable paper trails. Rather than testing equipment on election day, INEC should institutionalise rigorous nationwide stress-testing of both BVAS and IReV well before any major election. The federal government should also prioritise stable electricity supply and cellular network expansion in rural and underserved communities to reduce the digital divide that delays result transmission.
2. **Legal and regulatory reform:** The National Assembly should enact a comprehensive legal framework governing the use of artificial intelligence in Nigerian elections. This legislation

should: Mandate clear watermarking or labelling of all AI-generated campaign content; Criminalise the malicious creation and distribution of political deepfakes during election periods; Establish enforceable penalties for social media platforms that fail to flag or remove coordinated harmful disinformation networks promptly.

3. **Institutional crisis communication:** INEC should move from reactive post-election damage control to proactive communication infrastructure. The Commission should establish a Real-Time Electoral Communication and Crisis Response Unit staffed by technical experts and strategic communicators. During technical disruptions, such as the 2023 IReV downtime, this unit should provide immediate and transparent public updates to limit the spread of conspiracy theories and misinformation.
4. **Digital literacy and conduct rules:** The effectiveness of electoral technology depends heavily on public digital literacy. Civil society organisations, educational institutions, and media outlets should collaborate on sustained national digital literacy campaigns to help citizens identify deepfakes, verify information, and report disinformation. At the same time, political parties should adopt a binding code of conduct that prohibits generative AI distortions, coordinated bot networks, and targeted ethnic disinformation campaigns.
5. **Establishing a National Observatory:** As a longer-term measure, Nigeria should establish an independent National AI-Electoral Integrity Observatory. Operated jointly by universities, technology experts, civil society organisations, and INEC, this body should work continuously, not only during election periods. It should use AI-assisted monitoring tools to identify emerging digital threats, conduct independent post-election technical audits, and provide early-warning assessments to protect democratic institutions.

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