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BIMODAL VOTER ACCREDITATION SYSTEM (BVAS) AND THE 2023 PRESIDENTIAL ELECTION IN BAYELSA

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ABSTRACT

This study examined the effects of the Bimodal Voter Accreditation System (BVAS) on the integrity, transparency, and voter turnout in the 2023 presidential elections in Bayelsa State, Nigeria. The research focuses on the sociopolitical and cultural factors influencing the system's implementation and its broader implications for the electoral process. A quantitative method in which the cross-sectional design was employed. The sample size for this study is 3,200 respondents randomly sampled from the eight local governments of the State. The data from the research instrument was analyzed using one-way ANOVA, to test the hypotheses. The findings reveal that BVAS significantly enhanced the transparency and integrity of the election by curbing electoral malpractice, such as multiple voting and ballot stuffing. However, challenges including inadequate infrastructure, insufficient training of electoral officials, and limited public awareness about BVAS hindered its full potential. Additionally, the socio-political climate in Bayelsa, marked by electoral violence and voter intimidation, negatively impacted voter turnout, particularly in rural and marginalized areas. Despite these setbacks, BVAS contributed to restoring public confidence in the electoral process by improving the credibility of the results. The study recommended among others that enhanced investment in technological infrastructure, comprehensive training for electoral officials, and targeted voter education campaigns should be provided to ensure broader acceptance of BVAS. Furthermore, measures to address electoral violence and intimidation are critical for fostering a safer environment that encourages voter participation. These findings underscore the need for a holistic approach to implementing electoral technologies to strengthen Nigeria's democratic processes.

Keywords: BVAS, 2023 Presidential election, transparency, integrity, voter turnout, voting Rigging, voter intimidation

1. INTRODUCTION

The Bimodal Voter Accreditation System (BVAS) was introduced by the Independent National Electoral Commission (INEC) of Nigeria as part of a broader strategy to enhance the electoral process and ensure the credibility of elections in the country. BVAS utilizes both biometric and electronic methods to authenticate voters, effectively addressing long-standing issues of electoral fraud, identity verification, and voter disenfranchisement. The 2023 presidential elections in Nigeria, particularly in states like Bayelsa, marked a critical implementation phase for BVAS, aiming to mitigate historical challenges such as vote buying, ballot box snatching, and violence that have characterized past electoral cycles (Nwafor & Okeke, 2023).

Historically, Bayelsa State has been embroiled in a complex political landscape shaped by its socio-cultural dynamics, predominantly driven by the Ijaw ethnic group. This region has witnessed various forms of electoral malpractices, largely fueled by political patronage, local power struggles, and systemic corruption. Previous elections in Bayelsa have been marred by violence and intimidation, leading to widespread voter apathy and distrust in the electoral system (Ajayi & Olorunfemi, 2023). The introduction of BVAS was seen as a turning point, aiming to restore public confidence in the electoral process and ensure that the outcomes accurately reflect the will of the electorate.

The implementation of BVAS in the 2023 elections was met with a mix of optimism and skepticism. Proponents argued that the system would significantly improve voter accreditation efficiency and transparency. Studies indicated that BVAS could potentially increase voter turnout by simplifying the accreditation process and reassuring voters about the integrity of the electoral system (Obasi, 2023). However, challenges such as inadequate training for electoral officials, technical malfunctions, and insufficient voter education were significant concerns that could hinder the successful deployment of the system (Nigerian Civil Society Situation Room, 2023).

In addition to technical aspects, the socio-political environment in Bayelsa plays a crucial role in the effectiveness of BVAS. Political actors often engage in activities designed to undermine electoral reforms, such as manipulating public perception and resisting changes that threaten their power (Fawole, 2023). Understanding the interplay between technological advancements and political dynamics is essential for evaluating the overall effectiveness of BVAS in the electoral process. The lack of comprehensive studies focusing on the specific challenges and successes of BVAS in Bayelsa creates a significant gap in the literature. While some studies have addressed the general challenges of BVAS

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implementation across Nigeria, few have explored the unique socio-political context of Bayelsa and how it influences the deployment and functionality of BVAS during elections. Research by Ibrahim and Nwosu (2023) highlights the need for localized studies that account for regional differences in electoral processes, emphasizing that the effectiveness of electoral technology cannot be fully understood without considering the local context.

In light of the challenges faced by the electoral process in Nigeria, the introduction of BVAS was a significant step towards modernization and greater electoral integrity. Previous systems had been plagued by a lack of transparency, making it easy for unscrupulous individuals to manipulate results and engage in practices that undermined the democratic process. BVAS incorporates biometric data, such as fingerprints and facial recognition, to ensure that only verified voters can access polling units. This technological advancement aims to enhance the accuracy of voter identification and minimize instances of multiple voting (Transition Monitoring Group, 2023).

The socio-political context of Bayelsa also significantly influences the electoral landscape. The state has a history of politically motivated violence and manipulation, which has created an environment of fear among voters. As a result, voter turnout has often been lower than national averages, indicating a critical need for reforms that can reassure the public about the integrity and safety of the electoral process. Studies show that in the 2019 elections, for instance, voter turnout in Bayelsa was recorded at just 36%, a figure that underscores the necessity for reforms aimed at encouraging participation (Centre for Democracy and Development, 2023). The introduction of BVAS was seen as a potential remedy to these issues, providing voters with a sense of security and trust in the electoral process. While BVAS presents a promising solution to past electoral challenges, its effectiveness is contingent upon various factors. The infrastructure necessary for its deployment, including reliable power supply and internet connectivity, is crucial for its successful implementation. Reports indicated that in many regions of Nigeria, including Bayelsa, the infrastructure required to support BVAS was either lacking or inadequate, leading to concerns about the system's reliability during elections (Human Rights Watch, 2023).

The level of education and awareness among voters about how BVAS works plays a crucial role in determining its effectiveness. Despite efforts by INEC to educate voters on the new system, many still remained unaware of its functionalities or the benefits it offers. As noted by Adebayo (2023), voter education campaigns are critical to ensure that citizens understand the importance of their participation and how new technologies can protect their rights. Without proper education, there is a risk that potential voters may not fully engage with the process, thereby limiting the system's effectiveness.

The introduction of the Bimodal Voter Accreditation System (BVAS) in the 2023 presidential elections in Nigeria was aimed at addressing widespread electoral malpractice and enhancing the integrity of the democratic process. However, its implementation in Bayelsa State, in particular, faced several challenges that undermined its potential effectiveness. One significant issue was the inadequate technological infrastructure, including unreliable power supply and poor internet connectivity at polling units, which hindered the smooth operation of BVAS and caused delays, disenfranchisement, and frustration among voters (Nigerian Civil Society Situation Room, 2023). The technical training of electoral officials was insufficient, leading to errors in voter accreditation that may have contributed to confusion and voter frustration (Ibrahim & Nwosu, 2023). This lack of competence not only affected the efficiency of the use BVAS but also raised doubts about the credibility of the election results, as any accreditation errors were perceived as potential attempts to manipulate the outcome.

The socio-political environment in Bayelsa, characterized by electoral violence and intimidation, further complicated the use of BVAS. The presence of political thugs at some polling stations discouraged voter participation, as many citizens feared for their safety (Adebayo, 2023). This volatile atmosphere hindered the acceptance of BVAS in some areas, as voters were reluctant to engage with a system they did not fully understand in an unsafe environment. Despite efforts by INEC to educate the public on the use of BVAS, many voters in Bayelsa remained unaware of its functionalities, leading to a lack of confidence in the system (Obasi, 2023). This lack of public awareness, coupled with political patronage and misinformation, affected the broader acceptance of BVAS. Additionally, there is a need for empirical research to assess the impact of BVAS on voter turnout and electoral outcomes in Bayelsa. Preliminary reports suggest that the system may have positively influenced participation, but further studies are required to provide concrete evidence of its effectiveness (Nwafor & Okeke, 2023).

Election

Elections are a cornerstone of democracy, enabling citizens to select their leaders, influence governance, and ensure accountability. They legitimize political authority, provide a platform for policy debates, and facilitate peaceful power transfer. As Dahl (1998) emphasizes, elections are essential for democratic systems, fostering citizen participation and ensuring that leaders remain accountable, knowing their mandates can be revoked in subsequent cycles. In Nigeria,

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elections have been pivotal to the country's democratic evolution, particularly since the return to civilian rule in 1999. However, the process has been plagued by challenges such as electoral violence, voter suppression, fraud, and result manipulation. These issues undermine democratic principles and often fall short of international standards (Ojo, 2014). Vote-buying, ballot-stuffing, and the influence of political thugs are persistent problems, but elections remain central to Nigeria's political framework.

Elections also shape national policies by allowing voters to choose leaders based on competing policy proposals. Norris (2015) argues that this competition influences governance and ensures inclusivity, particularly in diverse societies like Nigeria, where representation across ethnic and social groups is critical. Elections offer a platform for marginalized voices, helping to reduce political exclusion and potential conflicts (Kew, 2010). However, elections alone do not guarantee democracy or good governance. Collier and Vicente (2014) note that electoral manipulation can undermine democratic outcomes, especially in the context of weak institutions. In Nigeria, where elections are often described as a "do-or-die" affair (Ibrahim, 2020), high stakes lead to violence and fraud. Strengthening electoral institutions, enhancing voter education, and ensuring impartiality among security agencies are vital for addressing these challenges and consolidating democracy (Adigun, 2022). While imperfect, elections remain a critical mechanism for political accountability and democratic governance in Nigeria.

Technology

Technology refers to the application of scientific knowledge, tools, and techniques to solve practical problems and improve human life. It encompasses innovations designed to enhance efficiency and productivity across sectors, from agriculture to healthcare and education. Historically, technology has evolved from simple tools to sophisticated digital systems, profoundly shaping societal functions. According to Brynjolfsson and McAfee (2014), technology transforms industries by automating tasks, optimizing processes, and introducing novel modes of production and service delivery. Arthur (2009) notes that such advancements address societal challenges, driving economic and social progress. In the modern era, technology is closely associated with digital innovations, such as computers, the internet, and mobile devices, which have revolutionized global communication and commerce. Castells (2010) highlights the emergence of a "network society," where information flow and digital networks drive socio-economic and political processes. Technology's integration into governance has also grown, improving transparency and efficiency through innovations like biometric identification and online government services (Norris, 2001).

In Nigeria, adopting the Bimodal Voter Accreditation System (BVAS) during the 2023 presidential elections exemplifies the transformative potential of technology in governance. BVAS enabled biometric verification and real-time result transmission, addressing long-standing issues of electoral malpractice and improving electoral credibility (Agbaje & Okechukwu, 2023). Such innovations underscore technology's role in advancing societal goals, ensuring accountability, and fostering trust in democratic processes.

Bimodal Voter Accreditation System (BVAS)

The Bimodal Voter Accreditation System (BVAS) is a technological innovation by Nigeria's Independent National Electoral Commission (INEC) to improve the integrity, transparency, and credibility of the electoral process. BVAS addresses longstanding issues like voter impersonation, multiple voting, and over-voting by integrating biometric verification-fingerprint and facial recognition-with real-time result transmission. It was first used during the 2021 Anambra gubernatorial election and later in the 2023 general elections, marking a transformative shift in Nigeria's electoral framework. According to the European Union Election Observation Mission (2023), BVAS has significantly reduced electoral fraud and increased public trust in the voting process. The system's key feature is voter accreditation, which ensures that only registered individuals can vote. By verifying voter details against INEC's central database, BVAS eliminates impersonation and unregistered voting. Additionally, its ability to transmit results directly from polling units to collation centers enhances transparency and minimizes human interference. As Agbaje and Okechukwu (2023) note, BVAS has improved the speed and accuracy of election results, reducing disputes over manual result collation. Despite these advantages, BVAS faces challenges such as technical glitches, delays in voter accreditation, and limited infrastructure in remote areas. During the 2023 general elections, some devices malfunctioned, causing delays in the voting process (Premium Times, 2023). These issues underscore the need for better logistical planning and technical support. Nevertheless, the introduction of BVAS has reduced electoral violence and fraud, fostering confidence in Nigeria's democratic process. Its success aligns with global trends in modernizing electoral systems, as seen in countries like Ghana, where biometric verification has enhanced election credibility since 2012 (Gyimah-Boadi, 2021). BVAS builds on previous reforms by INEC, such as the Permanent Voter Card (PVC) and Smart Card Readers (SCR), providing a more integrated solution. According to Adekunle (2023), the positive impact of BVAS could pave the way for further advancements in electoral technology, strengthening Nigeria's democratic practices.

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The Effects of the BVAS on the Integrity and Transparency of the 2023 Presidential Elections in Bayelsa State The introduction of the Bimodal Voter Accreditation System (BVAS) during Nigeria's 2023 presidential elections marked a turning point in addressing historical issues of electoral malpractice, especially in Bayelsa State. The Independent National Electoral Commission (INEC) deployed BVAS to enhance the credibility, transparency, and integrity of the electoral process. This technological innovation helped to mitigate persistent challenges such as voter fraud, over-voting, and result manipulation, which have often plagued elections in the state. One of the primary benefits of BVAS was its robust voter accreditation system, utilizing both fingerprint and facial recognition to ensure only eligible voters participated. Bayelsa State, previously riddled with impersonation, underage voting, and multiple voting, experienced a significant reduction in these malpractices. According to Agbaje and Okechukwu (2023), BVAS created a more secure process by verifying voter identity against biometric records, reducing the likelihood of fraud. This ensured that the election outcomes were more reflective of the voters' will, fostering confidence in the electoral process. BVAS was particularly effective in curbing over-voting, a frequent challenge in Bayelsa State. The system automatically limited the number of votes in a polling unit to the number of accredited voters. This innovation drastically reduced opportunities for ballot manipulation. As Ojo (2023) noted, this contributed significantly to the integrity of election results, making it more difficult for political actors to inflate voter numbers or tamper with outcomes. Transparency was another area where BVAS had a transformative impact. The system enabled the electronic transmission of results directly from polling units to INEC's central server. In previous elections, manual result collation provided opportunities for tampering during transit, eroding public trust. BVAS addressed this by ensuring real-time and secure transmission, thereby reducing the likelihood of result alterations. The European Union Election Observation Mission (2023) described this capability as a "game-changer," noting its role in enhancing trust in the electoral process in Bayelsa State. By eliminating delays and potential human interference, BVAS ensured that election results were seen as more credible and reflective of the voters' preferences.

The introduction of BVAS also contributed to reducing electoral violence. Historically, disputes over election results and allegations of malpractice have been major triggers for violence in Bayelsa State. BVAS's transparent processes diminished the need for violent tactics by political actors attempting to influence outcomes. According to Adekunle (2023), the system's credibility fostered greater trust among voters and political stakeholders, leading to a more peaceful electoral environment. Despite these successes, the deployment of BVAS faced some challenges. Technical glitches and logistical issues were reported in certain areas, leading to delays in accreditation and, in a few cases, the failure of machines to capture voter biometrics. Where BVAS malfunctioned, manual accreditation was used, creating the risk of reverting to traditional issues of fraud. However, INEC swiftly responded by providing technical support and replacement devices, minimizing the impact of these problems (Premium Times, 2023).

The Socio-cultural and political factors and the use of BVAS in the 2023 presidential elections in Bayelsa State

The 2023 presidential elections in Bayelsa State were profoundly shaped by socio-cultural and political factors, which influenced the effectiveness and reception of the Bimodal Voter Accreditation System (BVAS). Bayelsa, located in the Niger Delta region, is known for its unique political dynamics, ethno-cultural diversity, and history of electoral irregularities, all of which intersected with the introduction of BVAS by Nigeria's Independent National Electoral Commission (INEC).

Social Factors

Socially, BVAS faced challenges related to voter education and public trust. Uneven literacy levels and limited access to information in rural communities meant that many voters were unfamiliar with BVAS technology. This gap in understanding created skepticism and confusion, with some fearing disenfranchisement due to potential technical difficulties. Aniche (2022) notes that inadequate voter education campaigns by INEC left many voters unprepared, which likely contributed to lower voter turnout in some areas. Additionally, public trust in the electoral system was a significant concern. Given Bayelsa's history of electoral malpractice, skepticism about whether BVAS could genuinely enhance transparency was widespread. Ibekwe (2023) argues that while BVAS was a technological advancement, its effectiveness depended on comprehensive public sensitization, particularly in rural areas where mistrust of government initiatives was higher.

Cultural Factors

Bayelsa cultural landscape, dominated by the Ijaw ethnic group, added complexity to the acceptance of BVAS. Ethnic solidarity and local communal politics often play a central role in elections, influencing voter behavior and attitudes toward federal interventions. Eze (2022) highlights that in some areas, BVAS was perceived as an imposition by the federal government, which some communities viewed with suspicion. Overcoming this mistrust required a deeper engagement with local leaders and stakeholders, a step that was inadequately addressed in the lead-up to the elections.

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Political Factors

Politically, Bayelsa has long been a hotspot for intense competition and electoral malpractice, with practices such as vote-buying, ballot box snatching, and voter intimidation common in past elections. BVAS was introduced to mitigate these issues by ensuring accurate voter accreditation and transparent result transmission. However, its reception among political elites was mixed. Agbaje and Okechukwu (2023) note that while some viewed BVAS as a threat to their ability to manipulate outcomes, others saw it as a necessary step toward credible elections. The 2023 elections in Bayelsa were fiercely contested, particularly between the All Progressives Congress (APC) and the People's Democratic Party (PDP). BVAS played a crucial role in reducing over-voting and impersonation, leveling the playing field in a state where dominant actors had historically exploited loopholes to their advantage. Adigun (2023) asserts that by minimizing these malpractices, BVAS enhanced the credibility of the process, though political tensions and instances of violence persisted.

BVAS had a dual impact on voter turnout. On one hand, its ability to ensure that votes were counted encouraged participation, especially among voters who had previously been disillusioned by fraudulent processes. On the other hand, technical glitches and logistical challenges discouraged some voters. Osuji (2023) observes that unreliable power supply, poor internet connectivity, and insufficient training for electoral officials in rural areas led to delays, frustrating both voters and officials. Regarding inclusivity, BVAS contributed to a reduction in electoral violence, creating a safer environment for women and youth to participate. However, entrenched practices like vote-buying and political thuggery remained barriers to full inclusiveness. While BVAS mitigated some forms of malpractice, broader structural reforms are necessary to address these persistent issues.

The introduction of BVAS in the 2023 presidential elections in Bayelsa State marked a significant step toward improving electoral integrity and transparency. However, its impact was mediated by socio-cultural and political factors, including voter education, ethnic dynamics, and entrenched political interests. While BVAS reduced some forms of malpractice and increased trust in the process, challenges such as technical glitches and limited public sensitization highlighted areas for improvement. Overall, BVAS demonstrated its potential to foster credible elections but underscored the need for comprehensive reforms to address the Effects of the BVAS and Voter Turnout in the 2023 Presidential Elections in Bayelsa State.

The Bimodal Voter Accreditation System (BVAS) significantly influenced voter turnout during the 2023 presidential elections in Bayelsa State. Introduced by Nigeria's Independent National Electoral Commission (INEC), BVAS aimed to enhance electoral credibility by addressing irregularities like multiple voting and impersonation. While it improved transparency, the system also faced challenges that impacted voter turnout due to technical, infrastructural, and socio-political factors, BVAS helped restore confidence in Bayelsa's electoral process, a state with a history of vote manipulation and violence. By ensuring that only accredited voters participated, BVAS curbed ballot stuffing and other malpractices. According to Osuji (2023), its introduction reassured voters that their votes would count, fostering trust in the process. This was particularly significant in Bayelsa, where previous elections were marred by fraudulent activities.

Despite its benefits, BVAS encountered technical issues that discouraged voter participation. In rural areas with limited internet access and unreliable power supply, BVAS devices frequently experienced glitches, causing delays in accreditation. Eze (2023) reports that long wait times and unresolved technical failures led some voters to leave polling stations without voting. Additionally, biometric verification—requiring fingerprint and facial recognition—posed difficulties for voters with worn fingerprints, such as elderly individuals or manual laborers, leading to further disenfranchisement (Adebayo, 2023). Logistical challenges exacerbated these issues, especially in Bayelsa's difficult terrain of creeks and rivers. Transporting BVAS machines and election materials to remote polling stations often resulted in delays, causing late opening of polling units. As noted by Eze (2023), these delays discouraged voters who had limited time or were unwilling to wait for extended periods.

Voter education on BVAS was unevenly distributed, with rural communities receiving inadequate sensitization. Many rural voters arrived at polling stations without a clear understanding of how BVAS worked, leading to confusion and frustration. Ibekwe (2023) argues that this knowledge gap diminished voter enthusiasm, particularly in remote areas where access to information was limited. Furthermore, Bayelsa's volatile political environment, characterized by rivalry and intimidation, suppressed voter turnout despite BVAS's ability to reduce electoral fraud. Reports of violence and threats from political thugs discouraged participation, particularly among women and youth, who are often the most vulnerable in such situations (Nwafor, 2023).

While BVAS reduced electoral malpractice, its implementation highlighted the need for improved infrastructure, better voter education, and stronger measures to address voter intimidation. Despite these challenges, BVAS enhanced

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the integrity of the elections, reducing opportunities for result manipulation. Onwe (2023) emphasizes that this improvement in transparency was a significant step toward credible elections, even if logistical and technical setbacks affected voter turnout. The use of BVAS in the 2023 presidential elections in Bayelsa State marked progress in improving electoral transparency but also exposed critical gaps in voter education, infrastructure, and security. Addressing these challenges in future elections will be essential to maximize the potential of BVAS in fostering both integrity and inclusiveness in Nigeria's electoral processes.

Technological Determinism Theory

Technological Determinism Theory is a philosophical and sociological concept that posits technology as the primary force driving social and cultural changes. This theory suggests that technological innovation fundamentally shapes human interactions, behaviors, and institutions, with technology serving as the determinant of societal progression. The theory was introduced by Thorstein Veblen in the early 20th century, though it gained prominence through the works of Marshall McLuhan in the 1960s, who famously asserted that "the medium is the message," reflecting the belief that the form of communication technology itself shapes society as much as the content it delivers. Technological determinism, as articulated by Veblen and later by McLuhan, frames technology as the engine of historical change, suggesting that societies adapt their structures, norms, and operations in response to technological developments. In this view, technological advancements dictate the direction of social, economic, and political developments, often creating new possibilities while rendering older modes of operation obsolete. McLuhan's interpretation particularly emphasized media technologies like print and television, while more recent scholars apply the theory to digital technologies and innovations like the internet and artificial intelligence (AI).

The theory has two primary strands: hard determinism and soft determinism. Hard determinism claims that technology develops autonomously and inevitably shapes human society with minimal resistance or influence from human agency. In this view, social structures, cultural values, and human choices are ultimately shaped by technological forces. On the other hand, soft determinism acknowledges that while technology is a major influence, human beings and social contexts also interact with and shape the direction of technological development.

The theory of technological determinism provides a useful framework for understanding how the introduction of BVAS influenced electoral practices and voter behaviors. The introduction of BVAS can be seen as a technological intervention aimed at transforming the Nigerian electoral system, curbing fraud, and ensuring greater transparency. By applying the principles of technological determinism, it becomes clear that the BVAS technology reshaped not only the conduct of elections but also the political culture in which these elections occurred.

According to McLuhan's perspective, the mere introduction of a new communication or operational technology, such as BVAS, transforms society by altering the ways in which individuals interact with the system and with one another. In Bayelsa State, BVAS altered the electoral landscape by shifting the focus from manual, easily manipulated systems to a more secure, technologically driven process. This transformation influenced voter trust in the process, reduced opportunities for traditional electoral fraud, and ultimately changed the behavior of political actors who could no longer rely on outdated methods to manipulate results. The technology's ability to validate voters biometrically, ensure real-time transmission of results, and prevent vote inflation became a significant factor in determining the integrity of the election. The application of technological determinism to this study also helps to explain how BVAS influenced societal behaviors, particularly regarding voter turnout and trust in the electoral system. The theory suggests that technology alters human behavior by introducing new capabilities and constraints. BVAS, by ensuring only accredited voters could participate, changed the dynamics of voter participation. It simultaneously encouraged trust among voters who saw it as a tool for transparency while also creating logistical and technical challenges that, as earlier mentioned, could have deterred some voters. As technology took center stage, traditional practices, such as ballot stuffing and vote buying, were mitigated, shifting the power dynamics within the political landscape. Several scholars have argued that the implementation of new technology, like BVAS, not only reshapes the procedural aspects of elections but also alters perceptions of legitimacy. For instance, Ibekwe (2023) highlights that BVAS restored a level of public confidence in the electoral process by ensuring that votes were more reflective of the actual choices of the electorate. This aligns with the determinist perspective that the introduction of technology imposes new frameworks on social and political systems, which in turn drive behavioral and institutional changes.

However, the technological determinism theory also points to the limitations and risks inherent in over-reliance on technology. For instance, the technical difficulties that emerged during the accreditation process in some areas of Bayelsa State underscore the fact that while technology can drive positive change, it is also prone to challenges that can undermine its intended impact. Eze (2023) discusses how technological glitches, such as BVAS malfunctions, and delayed voting in rural areas, lead to voter frustration. This illustrates the determinist view that technological systems, once introduced, will significantly influence the outcome of human activities—both positively and negatively.

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2. OBJECTIVES OF THE STUDY

The general objective of this study is to examine the use of the Bimodal Voter Accreditation System (BVAS) in the 2023 Presidential elections in Bayelsa State. The specific objectives are to:

- examine the effects of the BVAS on the Integrity of the 2023 presidential elections in Bayelsa State.
- examine the effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State.
- examine the effect of the BVAS on voter turnout in the 2023 presidential elections in Bayelsa State.

3. RESEARCH QUESTIONS

Three (3) research questions were answered in this study:

- 1. What is the effect of the BVAS on the integrity of the 2023 presidential elections in Bayelsa State?
- 2. What is the effect of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State?
- 3. What is the effect of BVAS on voter turnout in the 2023 presidential elections in Bayelsa State?

NULL HYPOTHESES

The following hypotheses were formulated to guide the study:

- 1. There is no significant difference between the effects of the BVAS on the Integrity of the 2023 presidential elections in Bayelsa State
- 2. There is no significant difference between the effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State
- 3. There is no significant difference between the effects of the BVAS and voter turnout in the 2023 presidential elections in Bayelsa State

4. METHODOLOGY

The cross-sectional research design was adopted to examine BVAS and the 2023 presidential election in Bayelsa State. The total registered voters for the 2023 presidential elections in Bayelsa state was used as the main population of the study. The registered voters are estimated to be One Million, fifty-six thousand, and eight hundred and sixty-two (1,056, 862) below is the breakdown of the population of the study from which a sample of 400 is selected from each Local Government Area.

Research questions were answered using simple percentage of response to the categorized items in the questionnaire while Analysis of variance (ANOVA) was used to analyse the hypotheses.

S/NO	LGAs in Bayelsa State	Population	Sample
1	Brass LGA	94,040	400
2	Ekeremor LGA	137, 225	400
3	Kolokuma/ Opokuma LGA	65,364	400
4	Nemebe LGA	99, 035	400
5	Ogbia LGA	119,571	400
6	Sagbama LGA	138,832	400
7	Southern Ijaw LGA	184, 401	400
8	Yenagoa LGA	218,394	400
	Total	1, 056, 862	3, 200

Table 1: The Population of registered voters in the 2023 presidential elections in Bayelsa states

Source: (Bayelsa State Independent Electoral Commission, 2023)

The random sampling technique was used to pick 400 respondents from each local government area with the help of the Taro Yamme sample determination formula.

A questionnaire instrument was used to get first-hand information from direct participants. The copies of the questionnaires were administered by the researcher with the help of three research assistants. 3, 200 copies of the questionnaires were administered to the 8 local government areas in Bayelsa state, and 2,600 copies were duly retrieved because most communities were flooded with water making it difficult to retrieve more than the stated number of questionnaires across the state.

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5. RESULTS AND DISCUSSION OF FINDINGS

Research Question One

What is the effect of BVAS on the integrity of the 2023 presidential elections in Bayelsa State?

Table 2: Percentage responses on the effect of BVAS on the integrity of the 2023 Presidential elections in Bayelsa

 State

S/N	Integrity of BVAS	Options			
		SA	Α	D	SD
	Items	%	%	%	%
1.	BVAS as a technology was generally accepted by Nigerians	34	54	6	6
2.	BVAS significantly reduced ballot box stuffing during the 2023 presidential Elections in Nigeria.	33	57	5	5
3.	BVAS reduced the menace of vote buying during the 2023 presidential elections	30	38	20	12

Table 2 presents percentage responses on the effect of BVAS on the presidential elections in Bayelsa State. 88% of the respondents agreed that the BVAS technology was generally accepted by the people of Bayelsa during the 2023 presidential election while 12% did not agree to the acceptability.

90% of the respondents agreed that BVAS significantly reduced ballot box stuffing during the 2023 presidential election in Nigeria while 10% disagreed. 68% of respondents agreed that BVAS reduced the menace of vote buying during the 2023 presidential elections while 32% disagreed that vote buying still occurred during the 2023 presidential elections.

Research Question Two

What is the effect of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State? **Table 3:** Effect of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State

S/N	Transparency of BVAS	Options			
		SA%	A %	D %	SD %
	Items				
1.	The BVAS adoption is a welcome development in Nigeria's electoral process	39	61	0	0
2.	The use of BVAS technology brought transparency during the 2023 presidential elections in Nigeria.	35	60	5	0
3.	The use of BVAS contributed positively to the conduct of the 2023 presidential elections in Nigeria.	44	45	6	5

Table 3 shows the effect of BVAS on the transparency of the 2023 presidential elections in Bayelsa State. 100% of the respondents agreed that the BVAS adoption was a welcome development in the 2023 presidential elections.

95% of the respondents agreed that the use of BVAS technology brought transparency during the 2023 presidential elections in Nigeria and 89% of the respondents agreed that the use of BVAS contributed positively to the conduct of the 2023 presidential elections while 11% disagreed to that.

Research Question Three

What is the effect of BVAS on voter turnout in the 2023 presidential elections in Bayelsa State?

Table 4: Effect of BVAS on voter turnout in the 2023 general elections in Bayelsa State

S/N	BVAS on Voter turnout	Options			
	Items	SA	Α	D	SD
		%	%	%	%
1.	The adoption of BVAS gave confidence to voters during the 2023 presidential elections	41	56	3	0
2.	The BVAS technology significantly increased voter turnout during 2023 presidential elections.	48	45	7	0



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3.	The use of BVAS is timely and should be sustained.	45	55	0	0
4.	The BVAS technology was very effective in guaranteeing smooth election process throughout the period of voting during the 2023 presidential elections	40	50	7	3
5.	The BVAS technology did stop disruptions and violence during the 2023 presidential elections.	31	33	20	16

Table 4 provides information on the responses of respondents on the effect of BVAS on voter turner turnout in the 2023 presidential elections. 97% of the respondents agreed that the adoption of BVAS gave confidence to voters during the 2023 presidential elections, though 3% of the respondents disagreed. 93% agreed that the BVAS technology significantly increased voter turnout during 2023 presidential elections, also 7% disagreed. 100% says The use of BVAS was timely and should be sustained. 90% of the respondents says the BVAS technology was very effective in guaranteeing smooth election process throughout the period of voting during the 2023 presidential elections though 10% disagreed. Lastly 64% agreed that the BVAS technology did stop disruptions and violence during the 2023 presidential elections, while 36% disagreed.

Null Hypotheses

The research hypotheses formulated were tested using the ANOVA Statistical tool to determine the significant mean difference between the study variables.

Hypothesis One

There is no significant difference between the effects of the BVAS on the Integrity of the 2023 presidential elections in Bayelsa State

Table 5: One-way ANOVA between the effects of the BVAS on the Integrity of the 2023 presidential elections in

Bayelsa State

Source of Variation	SS	Df	MS	F	Sig
Between Groups	13.486	7	1.927	.285	.960
Within Groups	17542.754	2592	6.768		
Total	17556.240	2599			

Source: Author's computation using SPSS version 25

The one-way ANOVA table assesses whether there is a significant difference between the effects of the BVAS on the integrity of the 2023 presidential elections in Bayelsa State. The analysis provides a summary of the corresponding statistical results. The between groups Sum of Squares (SS) value is 13.486, degree of freedom (Df) is 7 and Mean sum of square (MS) is 1,927. the Within groups (SS) is 17542.754, Df is 2592 and MS is 6.768. the F-value is .285 and the Sig value is .960. since the Sig value of 0.960 is greater than 0.05 level of significance we accept the null hypothesis, that is, There is no significant difference between the effects of the BVAS on the Integrity of the 2023 presidential election.

Hypothesis Two

There is no significant difference between the effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State

Table 5: One-way ANOVA of the effects of the BVAS on the transparency of the 2023 presidential elections in

Bayelsa State

Source of Variation	SS	Df	MS	F	Sig
Between Groups	8.393	7	1.199	.177	.990
Within Groups	17577.663	2592	6.782		
Total	17586.055	2599			

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Source: Author's computation using SPSS version 25

Table 5 presents the one-way ANOVA results of the mean difference of the effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State. The between groups Sum of Squares (SS) is 8.393, Df, 7 and Mean Sum of squares (MS) is 1.199. the Within Groups Sum of Squares (SS) is 17577.663, Df, 2592, Mean Sum of Square (MS). The value is .177 and **p-value** (Sig.) of .990 which is more than 0.05. the findings show that there is no significant difference between the effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State.

Hypothesis Three

There is no significant difference between the effects of the BVAS and voter turnout in the 2023 presidential elections in Bayelsa State.

One-way ANOVA of the effects of the BVAS and voter turnout in the 2023 presidential elections in Bayelsa State

Source of Variation	SS	Df	MS	F	Sig
Between Groups	267.904	7	38.272	5.437	.000
Within Groups	18245.610	2592	7.039		
Total	18513.514	2599			

Source: Author's computation using SPSS version 25

The one-way ANOVA of the effects of BVAS and voter turnout in the 2023 presidential elections in Bayelsa State. The Between Groups Sum of Square (SS) is 267.904 Df 7 and Mean Sum of Square (MS) 38.272. the Within Groups Sum of Square (SS) is 18245.610, Df, 2592 and MS, 7.039.The p-value (Sig.) of 0.000 is well below the standard significance level of 0.05, indicating that the effects of BVAS and voter turnout is statistically significant. Given these results, we reject the null hypothesis, which suggests that there is significant difference between the effects of BVAS and voter turnout. The data indicates that the introduction and use of BVAS had a measurable impact on voter turnout in the 2023 elections in Bayelsa State, reinforcing the notion that BVAS influenced electoral participation by addressing issues like voter fraud and electoral manipulation.

6. DISCUSSION

Effects of the BVAS on the Integrity of the 2023 presidential elections in Bayelsa State

Findings from the analysis of research question one reveal that 90% of the respondents agreed that BVAS significantly reduced ballot box stuffing during the 2023 presidential election in Nigeria. The ANOVA analysis also reveal that, there is no significant difference between the effects of the BVAS on the Integrity of the 2023 presidential elections in Bayelsa State. Meaning all the eight local governments of the state had same perception on the integrity of the 2023 presidential election.

The use of BVAS played a crucial role in enhancing the integrity of the election. This result aligns with previous research by Agbaje and Okechukwu (2023), who highlighted the effectiveness of BVAS in eliminating voter impersonation and fraud, leading to a more secure and trustworthy electoral process. The improved transparency and reduction of electoral malpractice, as noted by the European Union Election Observation Mission (2023), were also key elements contributing to the public's trust in the electoral system.

Effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa State

Responses from research question two indicates that 100% of the respondents agreed that the BVAS adoption was a welcome development in the 2023 presidential elections. 95% of the respondents agreed that the use of BVAS technology brought transparency during the 2023 presidential elections in Nigeria and 89% of the respondents agreed that the use of BVAS contributed positively to the conduct of the 2023 presidential elections.

The second hypothesis, regarding the difference between the responses in all the local government areas and the use of BVAS shows that there is not significant difference between the effects of the BVAS on the transparency of the 2023 presidential elections in Bayelsa state. This outcome is consistent with observations by Ibekwe (2023) and Eze (2022), who argued that local political and cultural dynamics, particularly in ethnically diverse areas like Bayelsa, influence the acceptance and use of new electoral technologies. Despite initial resistance in some communities, BVAS was ultimately embraced as it helped address long-standing concerns of electoral manipulation.

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Effects of the BVAS and voter turnout in the 2023 presidential elections in Bayelsa State.

In research question three, it shows that 93% agreed that the BVAS technology significantly increased voter turnout during 2023 presidential elections, though null hypothesis was rejected in the ANOVA analysis.

That is, there is significant difference between the effects of BVAS and voter turnout in all the eight local areas of the state. The data indicates that the introduction and use of BVAS had a measurable impact on voter turnout in the 2023 elections in Bayelsa State, though impact was different in all the local government areas as seen in the ANOVA analysis reinforcing the notion that BVAS influenced electoral participation by addressing issues like electoral fraud and electoral manipulation to a large extent.

The BVAS had a substantial effect on voter turnout in the 2023 presidential election. This finding is corroborated by Osuji (2023), who noted that the credibility brought by BVAS increased voter confidence, which, in turn, encouraged greater participation in the election. However, technical challenges, such as slow accreditation and infrastructure issues in rural areas, were factors that slightly dampened this positive effect. Nevertheless, the overall trend suggested that BVAS positively impacted voter turnout, as voters were more likely to participate when they believed their votes would be counted accurately.

MAJOR FINDINGS

- The study found that the use of BVAS significantly enhanced the integrity of the 2023 presidential elections in Bayelsa State. This was reflected in the reduction of electoral malpractices such as voter impersonation, multiple voting, and ballot stuffing, aligning with studies by Agbaje and Okechukwu (2023), who emphasized BVAS's role in improving credibility.
- The study found that BVAS brought transparency into the electioneering process in the 2023 presidential elections in Bayelsa State. While some communities exhibited resistance due to cultural attitudes towards external interventions, the technology was ultimately embraced due to its ability to curb electoral fraud, as noted by Eze (2022) and Ibekwe (2023).
- The study revealed that the introduction of BVAS positively impacted voter turnout, as it increased voter confidence by ensuring that only accredited voters could cast ballots. However, technical issues, including slow accreditation and logistical problems in rural areas, slightly hindered the full impact of BVAS on turnout, a challenge highlighted by Osuji (2023).

7. CONCLUSION

The analysis and testing of hypotheses regarding the use of BVAS in the 2023 presidential elections in Bayelsa State have provided significant insight into the role of technology in enhancing electoral integrity, transparency, and voter participation. The findings reveal that the introduction of BVAS positively influenced the electoral process, despite challenges related to socio-cultural dynamics, political factors, and technical limitations. The results support the view that BVAS contributed to reducing electoral fraud and increasing voter confidence, ultimately fostering a more credible electoral process. However, the challenges faced, such as slow accreditation, inadequate voter education, and infrastructural issues, highlight the need for improvements in the implementation of electoral technologies to ensure their full potential is realized.

8. RECOMMENDATIONS

Based on the analysis and conclusion drawn, the following recommendations were made:

- To maximize the effectiveness of BVAS, it is crucial to invest in widespread voter education, particularly in rural and remote areas where access to information is limited. Targeted sensitization campaigns should focus on ensuring that all voters understand how to use the BVAS system and the importance of biometric verification to avoid confusion on election Day.
- Addressing the infrastructural and technical challenges associated with BVAS, such as power outages, internet connectivity issues, and slow accreditation processes, is essential. Ensuring that BVAS devices are supported by reliable infrastructure and that electoral officials are well-trained to troubleshoot issues can significantly improve the voter experience and reduce frustration during elections.
- Understanding and addressing the cultural and political dynamics of regions like Bayelsa State is essential for the smooth implementation of electoral technologies like BVAS. Efforts should be made to engage local leaders and stakeholders to foster acceptance and reduce resistance, particularly in areas where technology is perceived as an imposition by external authorities.

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9. REFERENCES

- [1] Adekunle, A. (2023). The role of BVAS in enhancing electoral integrity in Nigeria. Journal of Political Technology, 18(2), 45–59.
- [2] Adekunle, T. (2023). Technological innovations and the future of elections in Nigeria: The role of BVAS. Journal of Electoral Studies, 15(2), 123–135.
- [3] Adigun, A. (2023). The role of technology in electoral reform: Nigeria's BVAS experience. African Political Review, 12(3), 41–56.
- [4] Adigun, F. (2022). Strengthening electoral reforms in Nigeria: A pathway to democratic consolidation. Journal of African Political Studies, 15(3), 45–62.
- [5] Agbaje, A., & Okechukwu, C. (2023). The impact of BVAS on Nigeria's electoral process: A case study of the 2023 general elections. African Journal of Democracy and Governance, 10(1), 56–72.
- [6] Agbaje, T., & Okechukwu, N. (2023). Technology and electoral integrity in Nigeria: The BVAS innovation. Journal of Democratic Studies, 15(2), 23–38.
- [7] Agbaje, T., & Okechukwu, N. (2023). Technology and electoral reform: The case of Nigeria's BVAS system. African Governance Review, 11(1), 22–36.
- [8] Agbaje, T., & Okechukwu, U. (2023). The impact of BVAS on electoral integrity in Nigeria's 2023 elections. Journal of African Political Studies, 12(4), 123–138.
- [9] Aniche, E. (2022). The challenges of voter education in Nigeria's rural areas. Nigerian Electoral Journal, 10(1), 77–92.
- [10] Arthur, W. B. (2009). The nature of technology: What it is and how it evolves. Free Press.
- [11] Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. W. W. Norton & Company.
- [12] Castells, M. (2010). The rise of the network society. Wiley-Blackwell.
- [13] Collier, P., & Vicente, P. C. (2014). Violence, bribery, and fraud: The political economy of elections in Sub-Saharan Africa. Public Choice, 153(1–2), 117–147.
- [14] Dahl, R. A. (1998). On democracy. Yale University Press.
- [15] European Union Election Observation Mission. (2023). Final report on Nigeria's presidential and national assembly elections. Brussels: EU EOM.
- [16] European Union Election Observation Mission. (2023). Final report on Nigeria's 2023 general elections. Brussels: EU Commission.
- [17] Eze, C. (2022). Ethnicity and electoral politics in Bayelsa State. Journal of African Governance, 9(4), 19–31.
- [18] Gyimah-Boadi, E. (2021). Biometric verification and election integrity in Africa: Lessons from Ghana. Electoral Innovations in Africa, 8(3), 245–261.
- [19] Ibekwe, S. (2023). INEC and the adoption of BVAS: Lessons from the 2023 elections. Election Monitoring Digest, 8(2), 12–28.
- [20] Ibrahim, J. (2020). Electoral violence in Nigeria: Causes, consequences, and the way forward. African Journal of Political Science, 18(2), 123–141.
- [21] Independent National Electoral Commission (INEC). (2023). Official report on the 2023 general elections. Abuja: INEC Publications.
- [22] Kew, D. (2010). The role of elections in consolidating democracy in Africa: The Nigerian experience. Journal of Modern African Studies, 48(4), 619–645.
- [23] Norris, P. (2001). Digital divide: Civic engagement, information poverty, and the internet worldwide. Cambridge University Press.
- [24] Norris, P. (2015). Why elections fail. Cambridge University Press.
- [25] Ojo, A. (2023). Election technologies and democratic consolidation in Africa. International Journal of Electoral Studies, 9(4), 56–72.
- [26] Ojo, E. O. (2014). Electoral fraud and the democratic process: Lessons from Nigeria. African Journal of Political Science and International Relations, 8(3), 55–64.
- [27] Ojo, J. (2023). Enhancing electoral transparency through technology: The case of Nigeria's BVAS. Nigerian Journal of Political Science, 18(4), 98–114.

	INTERNATIONAL JOURNAL OF PROGRESSIVE	e-ISSN :
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- [28] Osuji, O. (2023). Technological innovations in Nigerian elections: The case of BVAS. West African Political Journal, 14(1), 65–79.
- [29] Premium Times. (2023). 2023 Elections: BVAS performance and the challenges of implementation. Retrieved from www.premiumtimesng.com.
- [30] Premium Times. (2023). Challenges and successes of BVAS in Nigeria's 2023 elections. Retrieved from www.premiumtimesng.com.