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**EXAMINATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES
ON VOTERS REGISTRATION AND ELECTION MANAGEMENT:
ASSESSING THE ELECTORAL ACT AMENDMENT 2026**

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Abstract

The adoption of artificial intelligence technologies has become a critical development in enhancing the accuracy, efficiency, and transparency of electoral processes worldwide. In Nigeria, voter registration and election management have historically faced challenges such as multiple registrations, identity fraud, delays in result collation, and electoral disputes, which undermine public confidence in democratic governance. This study examines the implications of artificial intelligence technologies on voter registration and election management, with particular reference to the legal framework provided by the Nigerian Constitution and the Electoral Act. The research employed a doctrinal methodology, analyzing statutes, judicial decisions, scholarly literature, and policy documents to assess how artificial intelligence can be integrated into electoral processes without compromising citizens' constitutional rights. The study identifies the benefits of artificial intelligence, including automated biometric verification, real-time monitoring, data analysis, and improved transparency in election management. The research also highlighted legal challenges, such as data privacy, algorithmic accountability, and ensuring adherence to constitutional guarantees such as freedom of expression, the right to privacy, and fair participation in governance. The findings reveal that artificial intelligence significantly improves the reliability of voter registration, enhances the integrity of election management, strengthens compliance with electoral laws, and boosts public confidence in the democratic process. Based on these findings, the study recommends that Independent National Electoral Commission (INEC) adopt artificial intelligence systems in registration and election management, implement transparent and auditable procedures, update legal frameworks to address technological advancements, and provide training for electoral officials on the ethical and effective use of these technologies.

Keywords: Artificial Intelligence, Voter Registration, Election Management, Electoral Act.

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1.1 Introduction

In many countries around the world, electoral processes have evolved from manual and paper-based systems to more technology-driven approaches aimed at enhancing transparency, efficiency, and accuracy. Before the digital era, voter registration and election management heavily depended on paper registries, manual counting, and human verification, which often resulted in delays and electoral disputes. Traditional systems were vulnerable to errors, manipulation, and logistical challenges, especially in large and diverse electorates.¹ With the emergence of information and communication technologies, countries began experimenting with computerized voter databases and electronic result transmission systems to reduce these challenges. The introduction of artificial intelligence technologies into electoral processes represents the latest wave of innovation, offering capabilities such as automated biometric verification, intelligent fraud detection, and predictive analytics for voter turnout.² In Nigeria, debates around the Electoral Act Amendment 2026 reflect a growing interest in integrating modern technologies into the management of voter registration and election administration. The amendment seeks to address persistent issues such as multiple registrations, identity verification, and the slow collation of results by exploring technology-based solutions.³

The enactment of the Electoral Act Amendment 2026 creates a new legal environment for the regulation of elections in Nigeria and raises important questions concerning the use of emerging technologies, particularly artificial intelligence, in voter registration and election management.⁴ The major research problem arises from the fact that the amended Act is new and has not yet been substantially tested before electoral tribunals or superior courts in relation to an election conducted under its provisions.⁵ There is limited judicial interpretation to clarify how its provisions should apply to artificial intelligence-assisted voter registration, voter verification, electoral logistics, fraud detection, election monitoring, result management, and other technology-driven electoral processes.⁶ This uncertainty is compounded by existing challenges faced by the Independent National Electoral Commission, including inadequate technological infrastructure, limited technical expertise, data privacy concerns, cybersecurity risks, and difficulties associated with implementing electoral technologies.

¹ Okoro, U. Challenges in Manual Electoral Systems and the Transition to Digital Platforms (2022) *Journal of Electoral Studies* 8, 45–60.

² Salisu, A. Artificial Intelligence and Electoral Processes: Opportunities and Risks (2024) *Technology and Society Review* 12, 101–118.

³ Ojo, T. Reforming Electoral Laws: A Legal Analysis of the Electoral Act Amendment 2026 (2025) *Nigerian Journal of Public Law* 17, 210–230.

⁴ Ibrahim, R. Technology Adoption in Electoral Management in Developing Countries (2023) *International Journal of Democracy and Technology* 5, 77–93.

⁵ Nwachukwu, I. System Failures in Technology-Driven Elections: A Comparative Study (2021) *Electoral Integrity Quarterly* 3, 34–48.

⁶ Eze, K. Algorithmic Bias and Election Law: Legal Implications of Artificial Intelligence in Voting (2025) *Law and Digital Society Journal* 9, 56–74.

The research problem is further demonstrated by the absence of established judicial precedents explaining how disputes involving artificial intelligence should be resolved under the Electoral Act⁷. The problem remains uncertain how electoral tribunals and courts may treat artificial intelligence-generated decisions, automated voter-registration processes, algorithmic errors, digitally generated evidence, or decisions influenced by artificial intelligence during election management.⁸ At the same time, artificial intelligence systems may process significant quantities of personal and biometric information and could potentially produce decisions that affect citizens' ability to participate in elections, thereby creating concerns about privacy, discrimination, accountability, and human oversight.⁹ The study seeks to examine how artificial intelligence technologies can be harmonized with the Electoral Act Amendment 2026 for voter registration and election management while preserving electoral integrity, transparency, inclusiveness, fairness, accountability, data protection, and the fundamental rights of Nigerian voters.

1.2 Conceptual Clarifications

1.2.1 Information and Communication Technology

Information and communication technology is the integrated set of tools, equipment, and systems used to create, store, manipulate, share, and transmit information in digital form. Information and communication technology encompass technologies such as computers, telecommunication networks, multimedia systems, and internet platforms that facilitate the exchange of data and information across distances. Scholars assert that Information and Communication Technology transforms how individuals communicate, learn, and work by enabling real-time interaction and access to information from multiple sources.¹⁰ In the context of education, it enhances teaching and learning processes by providing educators and learners with digital resources and interactive platforms that support collaborative engagement. Information and Communication Technology also plays a vital role in governance, enabling public institutions to deliver services more efficiently and transparently.¹¹ The legal definitions provide that the use of digital systems for public communication and data management falls within the scope of Information and Communication Technology within modern administrative frameworks. Section 46¹² of the Nigerian Constitution recognizes the importance of technological infrastructure in supporting national development and public administration.

Information and Communication Technology is often understood as a bridge between computing devices and communication networks that supports the processing, storage, and dissemination of information for various social needs. In educational research, Information

⁷ Electoral Act Amendment 2026

⁸ Bello, J. *Legal Safeguards for Technology in Elections: Ensuring Democratic Integrity* (2020) *Constitutional Law Review* 15, 89–105.

⁹ Musa, H. *Civil Society and Electoral Technology: Participation, Oversight, and Rights* (2022) *Journal of Governance and Public Policy* 11, 122–139.

¹⁰ Adeyemi, J. *Educational Technology in the Digital Age* (Revised Edition, Lagos Academic Press, 2022) 45.

¹¹ Okonkwo, L. Information systems and social change in the digital era. *Journal of Information Systems and Social Change* (2021) 8(2) 97.

¹² Section 46, *CFRN* 1999 (as amended)

and Communication Technology is described as an enabler of learner-centred instruction through tools such as online learning platforms, digital assessment systems, and collaborative software environments that enhance pedagogical practices.¹³ The adoption of Information and Communication Technology in teaching contexts improves student engagement, knowledge retention, and access to diverse learning materials. The application of Information and Communication Technology therefore extends beyond mere electronic gadgets to encompass pedagogical strategies that promote inclusive and interactive learning environments.¹⁴ Section 14¹⁵ outlines the goals of government, including the promotion of scientific and technological advancement for national development, which indirectly supports the expansion of information and communication technology across sectors.

Information and Communication Technology is frequently defined in legal and policy literature as the convergence of computing, telecommunication, and media technologies that support the efficient management and retrieval of information. Contemporary research in technology studies highlights that Information and Communication Technology facilitates global connectivity by linking individuals, organizations, and governments through digital networks that transcend geographical boundaries.¹⁶ In practice, Information and Communication Technology systems include data processing equipment, networking infrastructure, digital communication protocols, and user interfaces that enable seamless information flow. The use of information and communication technology in community development initiatives has been identified as a key driver of socioeconomic transformation, particularly in sectors such as agriculture, health, and business.¹⁷ Section 1¹⁸ underscores the unity of the federation, which is increasingly reinforced through national investments in technological networks and communication systems that promote integration and shared development goals.¹⁹ From this perspective, information and communication technology is regarded as both a technical and social construct that shapes how individuals access information, connect with others, and participate in civic life. Section 1(2) of the Constitution of the Federal Republic of Nigeria 1999 (as amended) establishes Nigeria as “one indivisible and indissoluble sovereign state,” thereby providing a constitutional foundation for the unity and territorial integrity of the Federation. However, the connection between this constitutional commitment to national unity and the use of information and communication technology is indirect rather than expressly provided by Section 1. The technological dimension is more appropriately derived from other constitutional provisions.

In practical terms, Information and Communication Technology can be described as the use of digital tools, applications, and systems that enable users to solve problems, make decisions, and perform tasks efficiently in different contexts. In business and governance studies, scholars define Information and Communication Technology as essential for the

¹³ Musa, P. *Teaching with Technology for Sustainable Learning* (Ibadan University Press, 2023) 112.

¹⁴ Chukwu, R. *International Journal of Technology in Education* (2024) 10(1) 62.

¹⁵ Section 14, *CFRN* 1999 (as amended)

¹⁶ Bello, G. Influence of Social Media Networking on Usage of Electronic Information Resources in Academic Libraries in Nigeria, *Journal of Information and Social Development* (2020) 5(3) 147.

¹⁷ Agbo, S. *Technology and Community Development in Africa* (Port Harcourt Scholars Press, 2024) 88.

¹⁸ Section 1, *CFRN* 1999 (as amended)

¹⁹ Ajayi, M. *Business Technology and Society* (Kano Academic Press, 2025) 130.

automation of routine tasks, enhancement of productivity, and facilitation of decision-making processes through data collection, analysis, and visualization tools.²⁰ This concept applies to both public and private sectors, where Information and Communication Technology supports service delivery, record keeping, and stakeholder engagement. Information and communication technology also incorporate digital security measures that protect information integrity and privacy within computing and communication systems.²¹ Legal interpretations of technology use in public administration emphasize accountability and citizens' rights to information, as reflected in Section 39²² guarantees freedom of expression and access to information in digital spaces.

1.2.2 Artificial Intelligence

Artificial intelligence refers to the branch of computer science that focuses on creating machines and systems capable of performing tasks that ordinarily require human intelligence. These tasks may include reasoning, learning, problem solving, perception, and decision making. Artificial intelligence is technologies that enable computers to simulate aspects of human thought processes, adapting and responding to new information over time.²³ The application of artificial intelligence in various fields has transformed how information is processed and decisions are made in complex environments. In educational settings, artificial intelligence can support personalized learning, automated feedback, and intelligent tutoring systems that enhance instructional delivery.²⁴ In legal and governance literature, artificial intelligence is increasingly discussed in relation to the rights of citizens and the responsibilities of institutions to ensure fairness and accountability. Section 39²⁵ guarantees the freedom of expression, which intersects with the use of artificial intelligence in managing digital speech and content.

Artificial intelligence can also be defined as the development of computer systems that are capable of interpreting external data, learning from such data, and using those learnings to achieve specific goals and tasks through flexible adaptation. Artificial intelligence systems rely on algorithms that mimic cognitive functions like pattern recognition and logical inference.²⁶ In practice, artificial intelligence encompasses machine learning, neural networks, and cognitive computing that support automated reasoning in dynamic environments. The influence of artificial intelligence extends into governance, where it may improve service delivery, enhance administrative efficiency, and support evidence-based policy formulations.²⁷ In the context of fundamental human rights, Section 41²⁸ affirms the dignity of human persons, which guides the ethical development and deployment of artificial

²⁰ Eze, N. *Digital Security, Law and Public Policy* (Abuja Tech Press, 2023) 205.

²¹ Ibid

²² Section 39, *CFRN 1999* (as amended)

²³ Olatunji, A. *Foundations of Artificial Intelligence* (Lagos Academic Press, 2023) 28.

²⁴ Uche, B. Digital Security, Law and Public Policy, *International Journal of Computer Science and Technology* (2024) 9(1) 55.

²⁵ Section 39, *CFRN 1999* (as amended)

²⁶ Nwosu, C. *Artificial Intelligence and the Future of Computing* (Abuja Tech Press, 2022) 77.

²⁷ Bello, K. op cit. p. 5

²⁸ Section 41, *CFRN 1999* (as amended)

intelligence systems that impact citizens. Therefore, artificial intelligence embodies both technological capacity and ethical considerations that influence its adoption and regulation.

In information technology studies, artificial intelligence is described as the capability of machines to perform tasks that were traditionally thought to require human intellect. This includes natural language understanding, image recognition, decision making under uncertainty, and complex problem solving.²⁹ Authors argue that artificial intelligence represents a convergence of computer science, cognitive psychology, and statistical methods that enable machines to improve performance over time through experience. In many sectors, artificial intelligence systems have been integrated to enhance operational efficiency, productivity, and innovation.³⁰ In public administration, artificial intelligence is leveraged to improve data analysis, strengthen service delivery, and streamline operational workflows. Section 14³¹ emphasizes the promotion of science and technology for national development, which implicitly supports the ethical advancement of artificial intelligence initiatives. As a result, artificial intelligence becomes a significant factor in driving socio-economic advancement and institutional modernization across multiple sectors of society.

Artificial intelligence is further understood as the design and implementation of computational systems that exhibit autonomy and adaptability in their operations. These systems can learn from data inputs and adjust their responses to new scenarios without explicit reprogramming for each new task.³² In the context of research and innovation, artificial intelligence is applied in interdisciplinary fields to solve complex problems, including predictive analytics, autonomous vehicles, and smart decision support systems. The dynamic nature of artificial intelligence has attracted scholarly attention because it challenges traditional models of human labour and decision authority.³³ In governance, artificial intelligence can support electoral processes, public service monitoring, and data analytics that improve transparency and accountability. Section 14(2)(c)³⁴ provides that “the participation by the people in their government shall be ensured in accordance with the provisions of this Constitution.” This is a strong constitutional foundation for democratic participation. Artificial intelligence is not simply a technological phenomenon but also a normative and ethical enterprise with broad implications for legal systems, social institutions, and human development.

1.2.3 Automated Biometric Verification (ABV)

Automated biometric verification refers to the process of using unique biological characteristics of individuals to confirm their identity through computerized systems. These biological characteristics may include fingerprints, facial features, iris patterns, voice

²⁹ Ibrahim, H. *Machine Learning, Neural Networks and Intelligent Systems* (Kano Scientific Publishers, 2021) 42.

³⁰ Musa, P. Information Access and Legal Issues in Library & Information Science, *Journal of Information and Society* (2023) 11(3) 89.

³¹ Section 14, *CFRN* 1999 (as amended)

³² Adeyanju, M. *AI in Practice: Applications and Implications* (Port Harcourt University Press, 2025) 115.

³³ Okeke, J. Artificial Intelligence, Security, and Human Rights Law, *Global Journal of Emerging Technologies* (2022) 7(4) 133.

³⁴ Section 14(2)(c), *CFRN*, 1999 (as amended)

recognition signatures, and other physiological traits that are distinct to each person. In biometric systems, sensors capture the biological data, which is then processed and compared with stored templates to verify identity.³⁵ Biometric verification enhances identity authentication by reducing reliance on traditional identification methods such as personal documents that can be lost or forged. In the context of elections, biometric verification systems are used to ensure that only eligible and registered voters participate in the voting process.³⁶ Such mechanisms can help reduce incidents of multiple registrations and impersonation, which undermine the credibility of electoral outcomes. Legal scholars have linked biometric technology usage to the protection of personal rights and data integrity as implied under the right to privacy in Section 37³⁷ guarantees the right to privacy and family life. It provides that the privacy of citizens, their homes, correspondence, telephone conversations and telegraphic communications is guaranteed and protected. Therefore, automated biometric verification is understood as a technologically driven identification process that improves reliability and accountability in systems that require secure authentication.³⁸

Automated biometric verification systems operate by capturing physiological or behavioural data from individuals and converting the data into digital templates that can be used for identity matching. The process begins with enrollment, where the system records the unique characteristics of an individual, and continues with verification where the captured data is compared with previously stored templates.³⁹ Biometric systems are designed to offer higher accuracy and security compared to traditional authentication approaches, and their adoption has expanded across sectors, including banking, health care, and government services.⁴⁰ In public service delivery, biometric verification is seen as a tool for enhancing transparency, reducing fraud, and promoting efficiency in identity management. Section 15⁴¹ highlights the role of technology in promoting national development and citizen welfare, which supports the integration of biometric systems in governance structures. Automated biometric verification is a critical component in digital identity frameworks that uphold both administrative efficiency and citizen rights. As digital ecosystems continue to expand, biometric verification systems have become essential for secure authentication in socio-economic and political domains.

Automated biometric verification can also be described as a subset of identity management technologies that use computer algorithms to analyse and match biometric data for authentication purposes. These algorithms compare new data with stored biometric templates to determine whether an individual's identity can be authenticated with a high degree of

³⁵ Umar, A. Digital Security, Law and Public Policy, *Biometric Technology and Identity Management* (Abuja Tech Press, 2023) 53.

³⁶ Oladipo, H. Digital governance and security in the contemporary digital environment. *Journal of Digital Governance and Security* (2024) 7(1) 112.

³⁷ Section 37, *CFRN* 1999 (as amended)

³⁸ *Ibid*

³⁹ Ayodele, K. *Principles of Biometric Systems* (Lagos Academic Press, 2022) 79.

⁴⁰ Eze, D. *International Journal of Information Security and Technology* (2025) 9(3) 88.

⁴¹ Section 15, *CFRN* (as amended)

confidence.⁴² According to experts, biometric verification systems improve the integrity of registration and access control processes by reducing human intervention and errors. In sectors such as national security and border control, biometric verification enhances monitoring and identification of individuals moving across regions.⁴³ In the context of legal rights and democratic governance, Section 36⁴⁴ guarantees fair hearing, which encompasses the right of individuals to be treated equally and without discrimination in systems that use biometric data for identification. As such, automated biometric verification must be implemented with respect for legal protections and safeguards, especially when the data collected directly impacts personal freedoms and administrative decisions.

In practical applications, automated biometric verification involves the integration of hardware devices, such as scanners and cameras, with software applications that can process biometric inputs and generate identity matches. The effectiveness of such systems depends on the quality of biometric sensors, the robustness of matching algorithms, and the security of data storage systems used to protect sensitive personal information.⁴⁵ Biometric systems must be designed with built-in cybersecurity measures to prevent unauthorized access and misuse of personal data.⁴⁶ In regulatory contexts, Section 45⁴⁷ protects citizens from unlawful search and seizure, which necessitates that biometric data collection complies with legal standards for privacy and consent. As nations adopt biometric verification across public service sectors, policy frameworks need to ensure that individual rights are not compromised in pursuit of greater efficiency and security.

1.3 Historical Development of Election Management in Nigeria

The historical development of election management in Nigeria can be traced to the colonial period, when electoral administration was initially undertaken largely by colonial administrative authorities. The 1922 Clifford Constitution introduced elective representation in Lagos and Calabar, thereby establishing an early institutional basis for electoral participation in Nigeria.⁴⁸ Subsequent constitutional developments under the Richards Constitution of 1946, Macpherson Constitution of 1951 and Lyttleton Constitution of 1954 progressively expanded representative institutions and electoral participation.⁴⁹ Following the constitutional developments of the late 1950s, the Electoral Commission of Nigeria was established to supervise the 1959 general elections that preceded independence, marking an important transition towards a specialized electoral management institution.⁵⁰ The 1959 elections subsequently ushered Nigeria into independence in 1960, while the Federal Electoral Commission was established thereafter to administer the federal and regional elections of 1964 and 1965. The Federal Electoral Commission was dissolved following the

⁴² Okoro, J. *Advances in Biometric Algorithms and Applications* (Kano Scientific Publishers, 2024) 101.

⁴³ Bello, P. op cit.. 5.

⁴⁴ Section 36, *CFRN* 1999 (as amended)

⁴⁵ Musa, F. *Design and Implementation of Biometric Systems* (Port Harcourt University Press, 2025) 120.

⁴⁶ Nwachukwu, G. op cit. p. 3

⁴⁷ Section 45, *CFRN* 1999 (as amended)

⁴⁸ Independent National Electoral Commission, *Strategic Plan 2017–2021* (2017) 32.

⁴⁹ Independent National Electoral Commission, ‘History of Election Management in Nigeria’, in *Activity Report 2011–2014* (2014) 2.

⁵⁰ Independent National Electoral Commission, *Strategic Plan 2017–2021* (2017) 32.

military coup of 1966, demonstrating the vulnerability of electoral institutions to political and constitutional disruptions.⁵¹

The development of election management continued during subsequent periods of military and civilian rule, with repeated restructuring of electoral institutions. The Federal Electoral Commission was re-established in 1978 and conducted the 1979 elections that ushered in the Second Republic, as well as the 1983 general elections.⁵² In 1987, the National Electoral Commission was established and subsequently administered elections leading to the June 1993 presidential election; following its annulment and subsequent political developments, the National Electoral Commission was replaced by the National Electoral Commission of Nigeria in 1995.⁵³ In 1998, following the transition programme of the military administration, the Independent National Electoral Commission was established and subsequently conducted the transitional elections that produced the Fourth Republic in 1999.⁵⁴ The 1999 Constitution constitutionally established the Independent National Electoral Commission and assigned it responsibility for organizing, undertaking and supervising elections, registering voters and political parties, monitoring political parties and conducting voter and civic education.⁵⁵

1.4 The Implications of Artificial Intelligence Technologies on Voters Registration and Election Management in Nigeria

Artificial intelligence technologies have transformed voter registration and election management by providing more accurate, efficient, and secure identification of eligible voters in Nigeria. Okonkwo⁵⁶ argue that these technologies enhance compliance with electoral laws by reducing multiple registrations and preventing identity fraud. Automated biometric systems, facial recognition software, and intelligent databases help electoral commissions maintain credible voter registers and streamline verification processes.⁵⁷ Section 14(2)(a) and (c)⁵⁸ emphasizes the sovereignty of the people and the requirement for democratic governance, which underpins the legal necessity for accurate voter registration. However, the use of artificial intelligence introduces new legal challenges related to data protection, privacy, and potential misuse of personal information. Ensuring that artificial intelligence systems operate within the framework of existing electoral laws is critical to safeguarding the rights of citizens. Judicial interpretations have begun to address the admissibility of machine-generated data in resolving electoral disputes.⁵⁹ The integration of artificial intelligence must,

⁵¹ Jideofor Adibe, 'Independent National Electoral Commission and the Challenges of Free and Fair Elections in Nigeria' (Independent National Electoral Commission Conference Paper, 2015) 2.

⁵² Nkolika Obiano, 'Independent National Electoral Commission and the Administration of 2015' (Independent National Electoral Commission Conference Paper, 2015) 11.

⁵³ Independent National Electoral Commission, Strategic Plan 2017–2021 (2017) 32.

⁵⁴ Independent National Electoral Commission, 'The Commission: History', Independent National Electoral Commission.

⁵⁵ Independent National Electoral Commission, 'When was the Commission Established?', Independent National Electoral Commission.

⁵⁶ Okonkwo, J. *Artificial Intelligence and Electoral Management in Nigeria* (Lagos Academic Press, 2023) 52.

⁵⁷ Musa, P. *Journal of Technology and Law in Governance* (2024) 6(1) 87.

⁵⁸ Section 14(2)(a) and (c) CFRN, 1999 (as amended)

⁵⁹ Ibrahim, R. *Legal Challenges of Technology in Electoral Disputes* (Abuja Tech Press, 2022) 101.

therefore, balance efficiency in electoral management with compliance to constitutional guarantees and statutory provisions.

From a legal standpoint, artificial intelligence facilitates transparency and accountability in election management by providing verifiable and auditable records of voter registration activities. It enables electoral bodies to track registration trends, monitor anomalies, and prevent irregularities that could undermine election integrity.⁶⁰ The legal framework governing electoral processes must adapt to accommodate the use of advanced technologies, ensuring that technology complements rather than replaces statutory mandates.⁶¹ Section 46⁶² provides for the autonomy of electoral commissions, granting them the authority to adopt technological innovations while remaining accountable to the law. Legal discourse also emphasizes that artificial intelligence should be implemented under clearly defined policies to prevent misuse and ensure compliance with citizens' rights. Properly regulated artificial intelligence can reduce litigation arising from voter registration disputes by providing transparent and accurate records.⁶³

Artificial intelligence technologies have significant implications for election management, particularly in vote counting, collation, and result transmission. Legal scholars argue that these systems can improve accuracy and timeliness, reducing human error and opportunities for manipulation.⁶⁴ Section 31⁶⁵ guarantees freedom of expression, which intersects with digital transmission of electoral information, requiring legal safeguards against misinformation and tampering.⁶⁶ Without clear statutory provisions, disputes over automated result collation may challenge the credibility of elections. Legal frameworks must address issues such as algorithmic transparency, audit trails, and liability in case of system errors. Courts in Nigeria have increasingly considered technology-based evidence in electoral litigation, raising questions about reliability and legal sufficiency.⁶⁷

Artificial intelligence also has implications for electoral compliance and enforcement, as it can be used to detect violations of electoral laws in real time. For instance, systems can flag irregular voting patterns, unauthorized access to voter databases, or manipulation of biometric verification equipment.⁶⁸ The law must define the scope and limits of artificial intelligence surveillance to protect citizens from overreach and potential infringement of constitutional rights.⁶⁹ Section 44⁷⁰ protects the right to privacy, which is directly relevant when collecting and processing biometric data during voter registration. Electoral commissions must ensure that artificial intelligence applications do not violate individual freedoms while promoting lawful compliance. Legal clarity is essential for accountability

⁶⁰ Adeyemi, T. *Journal of Election Technology and Democracy* (2021) 4(2) 44.

⁶¹ Okoro, L. *Electoral Innovations and the Law* (Port Harcourt University Press, 2023) 78.

⁶² Section 46, *CFRN* 1999 (as amended)

⁶³ Eze, D. *Transparency and Technology in Electoral Law* (2024) 9(3) 63.

⁶⁴ Bello, A. *Modern Election Administration in Nigeria* (Ibadan University Press, 2025) 111.

⁶⁵ Section 39, *CFRN* 1999 (as amended)

⁶⁶ Okeke, H. *Journal of Electoral Law and Policy* (2023) 7(4) 97.

⁶⁷ Nwachukwu, G. *Judicial Review of Technology-based Electoral Evidence* (Lagos Tech Press, 2022) 55.

⁶⁸ Umar, F. *Artificial Intelligence in Compliance Monitoring* (Abuja Academic Press, 2024) 82.

⁶⁹ Salisu, K. *Journal of Legal Technology in Governance* (2023) 8(2) 71.

⁷⁰ Section 44, *CFRN* 1999 (as amended)

when disputes arise from algorithmic decisions affecting voter eligibility or election outcomes.⁷¹

Artificial intelligence technologies can enhance legal accountability and strengthen democratic governance by ensuring that electoral processes adhere to constitutional mandates and statutory provisions. They provide tools for real-time auditing, transparency reporting, and evidence-based decision-making that support electoral integrity.⁷² Integrating artificial intelligence into voter registration and election management requires corresponding legal frameworks to ensure compliance with national and international human rights standards.⁷³ Section 14⁷⁴ directs government policies toward scientific and technological advancement, which legitimizes the adoption of artificial intelligence in elections while underscoring the need for ethical safeguards. The legal implication of artificial intelligence, therefore, is the creation of a framework where technological efficiency complements constitutional principles.

1.5 Conclusion

This study examined of artificial intelligence technologies on voter registration and election management, as it applies to Electoral Act Amendment 2026. The research highlighted how artificial intelligence improves the accuracy, efficiency, and security of voter registration through automated biometric verification, intelligent databases, and real-time identity authentication. It also discussed the application of artificial intelligence in election management, including vote collation, result transmission, and compliance monitoring, emphasizing the legal frameworks necessary to ensure integrity, transparency, and fairness. Furthermore, the study identified the potential legal challenges arising from artificial intelligence, including data privacy concerns, algorithmic accountability, and adherence to constitutional rights, particularly those concerning freedom of expression, privacy, and democratic participation. In summary, the research concludes that while artificial intelligence provides transformative opportunities for Nigeria's electoral system, its adoption must be grounded in robust legal frameworks to safeguard citizens' rights and reinforce democratic governance.

Therefore, the following findings were made:

- i. The research found that artificial intelligence enhances the accuracy and reliability of voter registration by reducing human error and preventing multiple registrations.
- ii. The research highlighted that the integration of artificial intelligence in election management improves transparency and accountability by generating verifiable and auditable records of electoral processes.
- iii. The research revealed that legal frameworks and constitutional safeguards are important considerations in addressing potential risks associated with artificial intelligence, including privacy breaches and the misuse of voter information.

⁷¹ Ajayi, M. *Algorithmic Accountability and Electoral Justice* (Kano Scholars Press, 2025) 90.

⁷² Chukwu, R. *Artificial Intelligence, Elections, and Legal Oversight* (Ibadan University Press, 2023) 103.

⁷³ Musa, H. *Journal of Technology, Law, and Human Rights* (2024) 5(1) 66.

⁷⁴ Section 14, *CFRN* 1999 (as amended)

However, the study did not specifically examine the Nigeria Data Protection Act 2023 or its implications for the use of artificial intelligence in electoral processes. This creates an important gap because the Nigeria Data Protection Act 2023 provides the principal statutory framework for regulating the processing of personal data in Nigeria and requires personal data to be processed in a fair, lawful, and accountable manner.

In line with the findings above, the following recommendations were made, viz:

- i. The Election Management Body (EMB) should adopt artificial intelligence technologies such as automated biometric verification systems to enhance the accuracy and credibility of voter registration. This will reduce instances of multiple registrations and identity fraud.
- ii. The Independent National Electoral Commission (INEC) must integrate artificial intelligence in election management processes, including vote collation and result transmission, while ensuring auditable and transparent mechanisms to strengthen accountability.
- iii. The Independent National Electoral Commission should establish and implement a data-protection and artificial intelligence compliance framework that expressly incorporates the requirements of the Nigeria Data Protection Act 2023 into the deployment of artificial intelligence for voter registration and election management. The framework should provide clear procedures for the lawful collection, processing, storage, sharing, and protection of voters' personal and biometric information, while requiring appropriate privacy assessments, accountability mechanisms, human oversight, and safeguards against unauthorized access and misuse of voter data.