E-ISSN: 1116 - 2619 P-ISSN: 3026-8524
MPRI-JHLAR | INTERNATIONAL JOURNAL OF HUMANITIES, LITERATURE AND ART RESEARCH
VOL. 10 NO. 6 – OCTOBER, 2025

ASSESSMENT OF THE EFFECTS OF E-GOVERNANCE IN TERTIARY EDUCATIONAL SYSTEM IN NIGERIA

***OGEDENGBE ENEJINOR SAKA; **OGEDENGBE OZAVIZE BARIKISU; & ***ABDULKADIR OGEDENGBE**

*Department of Public Administration, Gombe State University. **Department of Education, National Open University of Nigeria. ***Parliament International School, Abuja

Corresponding Author: ogedengbeson@gmail.com

DOI: https://doi.org/10.70382/mejhlar.v10i6.080

Abstract

This study is an assessment of the effects of e-governance on tertiary educational system in Nigeria. The objective of the study is examine how e-governance influences transparency and accountability in Nigerian tertiary institutions. The study focused on e-governance, scope of e-governance, relevance of e-governance, challenges of e-governance, tertiary educational system in Nigeria, application of e-governance in Nigerian tertiary institutions. The theoretical framework of the study is rooted in Technology Acceptance Model by Davis (1989). The research work adopted qualitative research methods, relying primarily on secondary data from textbooks, academic journals, government reports and online sources. A content analysis approach was employed to interpret various conceptual themes. The study found out that e-governance has significantly improved transparency in Nigerian tertiary institutions by digitalization of administrative functions. The study recommended that stakeholders must invest in reliable internet access, modern hardware and updated software to support e-governance across institutions.

Key words:
Assessment, effects, e-governance, tertiary education system

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Introduction

Over the past four decades, there has been a growing global interest in reforming public sector operations through the use of Information and Communication Technology (ICT), particularly to improve communication and service delivery to both citizens and businesses.

Sweden stands out as a global leader in the implementation of e-government initiatives (United Nations, 2012). The Swedish government has long pursued a strong policy direction in this area. As early as 1999, Sweden expressed its ambition to become a leading information society accessible 24/7 to all citizens while aiming to enhance efficiency (Government Bill, 1999/2000). User-centered development has been a cornerstone of this ambition (Regeringskansliet, 2008). In 2010, a national policy titled "As simple as possible for as many as possible – from strategy to actions for e-administration" was proposed (SOU, 2010). This policy emphasized that e-government should not merely adopt ICT, but also bring about necessary organizational changes and staff training within public administration. The guiding principles of this policy include simplicity, openness, accessibility, efficiency, and security (SOU, 2010). Sweden's high internet penetration (Findahl, 2011; 2012) has both enabled and necessitated the continued development of online public services.

Today, e-governance has become a prominent topic among development scholars and globally aware citizens. ICT is increasingly viewed as a powerful tool to address challenges in both developed and developing countries (Mittal et al., 2006).

In Nigeria, the implementation of an ICT policy began in April 2001 following its approval by the Federal Executive Council. This led to the establishment of the National Information Technology Development Agency (NITDA), tasked with executing the policy. NITDA was empowered to form strategic alliances with the private sector to realize Nigeria's vision of becoming an ICT-capable nation in Africa and a significant player in the global information society by 2005. One of the core goals of Nigeria's ICT policy is to make ICT resources widely accessible in order to support efficient national development and integrate ICT into mainstream education and training.

The introduction of e-governance in Nigeria's education sector is driven by the need to build a more sustainable education system. Advances in internet and communication technologies present new opportunities for transforming the interaction between government authorities, educational institutions, and their stakeholders- management, staff, and students- thereby promoting the broader goals of good governance. ICT enables greater citizen participation in governance processes by facilitating online forums and communication among stakeholders in tertiary education. Furthermore, it can reduce transaction costs and improve access to government services.

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In today's rapidly evolving world, no country can achieve sustained development without incorporating e-governance into its growth strategy. However, in Nigeria, the education sector has not received sufficient attention from policymakers and academics regarding the integration of ICT in institutions of learning. From a development perspective, it is essential to investigate the potential impact and underlying factors influencing the successful adoption of e-governance in the educational sector.

E-governance, in this context, refers to the application of ICT by government agencies to deliver faster and more effective services to stakeholders- students, for instance, through improvements in learning, registration, housing and campus security.

As microelectronics continue to evolve and push the boundaries of ICT, the future of e-governance holds even more promise. Many developed and rapidly developing nations are exploring and benefiting from emerging technologies. Unfortunately, several African countries, including Nigeria, are still in the early stages- often limited to establishing websites and official email communication. One significant barrier is the high initial investment required, which must compete with other pressing needs like clean water, healthcare, power, basic education, and housing. This challenge is even more pronounced in countries with large populations and vast territories (UN E-Government Survey, 2012), such as Nigeria.

Nonetheless, these challenges should not prevent progress. When effectively implemented, e-governance can help Nigeria make significant developmental strides and potentially leapfrog into the league of advanced nations. It is on this basis that this research explores the impact of e-governance within tertiary educational institutions in Nigeria.

Statement of the Problem

Although the adoption of e-governance tools is gradually increasing in Nigeria, there remains limited empirical evidence on their effectiveness in the education sector. Key challenges including inadequate infrastructure, a shortage of skilled personnel and resistance to change continue to impede the full realization of the benefits of e-governance.

This study aims to fill these knowledge gaps by evaluating the current impact of e-governance initiatives on educational outcomes and administrative efficiency within Nigerian tertiary institutions.

Research Questions

1. To what extent does e-governance improve transparency and accountability in Nigeria's educational sector?

2. How has e-governance influenced students' access to information and enhanced learning within educational institutions in Nigeria?
3. Has e-governance contributed to reducing administrative costs for students in Nigerian tertiary institutions?

General Objective

The general objective to assess the impact of e-governance on the tertiary education system in Nigeria while the specific objectives are:

i. To examine how e-governance influences transparency and accountability in Nigerian tertiary institutions.
ii. To evaluate the effect of e-governance on students' access to academic and administrative information.
iii. To determine how e-governance contributes to reducing the cost of administrative services provided to students in Nigerian higher education institutions.

E-Governance

E-governance is a fusion of the terms "electronic" and "governance," where "electronic" refers to the automation of processes using digital technologies, and "governance" denotes the systems, relationships, and mechanisms through which institutions and citizens interact. Thus, e-governance refers to the use of digital technologies to automate governance processes and enhance service delivery, accountability, and citizen engagement.

Though the concept of e-governance has gained wide acceptance, there is still no universally agreed-upon definition. Related terms such as digital governance, smart governance, net-governance, and cyber management often overlap with e-governance (Haque, 2002).

Savic (2006) defines e-governance as the use of ICT by governments and other institutions to interact with citizens, encouraging participation and dialogue in governance. Dwivedi and Bharti (2005) see it as the effective use of ICT to improve governance and service delivery. Patil (2011) emphasizes the automation of both internal government functions and external interactions with citizens and businesses.

E-governance can also be viewed as a continuum, ranging from basic information dissemination to full-scale digital transactions and integrated online services (Savic, 2006). The Council of Europe (as cited in Savic, 2006) categorizes e-governance into three main domains: public authority-society relations, internal functioning of public institutions, and service delivery.

Backus (2001) highlights e-governance as a means of enhancing democratic governance by streamlining interactions between government, citizens, and businesses. While there

is no singular definition due to diverse institutional and cultural contexts (NISG, 2012), e-governance generally refers to the deployment of ICT in governance processes to ensure efficiency, transparency, and accountability.

Scope of E-Governance

Unlike its definition, the scope of e-governance is more widely agreed upon. Scholars and organizations such as Monga (2008), the Indian Planning Commission (IPC), NISG (2012), and Kariuki & Kiragu (2011) agree that e-governance spans four primary domains:

1. Government to Government (G2G)
2. Government to Business (G2B)
3. Government to Citizen (G2C)
4. Government to Employee (G2E)

Additionally, Sachdeva (2002) includes the interaction between government and non-governmental organizations (G2NGO).

Relevance of E-Governance in Education

Although Nigeria is still in the early stages of fully adopting e-governance, it has become a growing focus across multiple sectors, including education. The Nigerian government has initiated ICT-based systems in tertiary institutions to enhance transparency, accountability, and educational quality. E-governance has enabled institutions to automate processes such as result processing, curriculum updates, and teaching methodologies. This digital transformation is making education more accessible, time-efficient, and skill-driven (Nwankwo, 2013).

Balasubramanian (2009) notes that ICT has significantly advanced the research capabilities in higher education, enabling complex data analysis and increased access to academic resources. Ranjeeta Kapoor and Nisthakelkar (2013) further argue that e-governance provides innovative platforms for communication, education delivery, and service organization, improving administrative efficiency and student engagement. ICT-based systems like online libraries, e-registration portals, and fee payment platforms reduce administrative burdens and streamline operations. For instance, platforms such as Questia offer 24/7 access to extensive academic resources, enhancing both teaching and learning.

Moreover, the adoption of open and distance learning (ODL) methods, such as those employed by the National Open University of Nigeria (NOUN), leverages ICT to deliver education to individuals unable to participate in traditional campus-based programs. This has broadened access to education, especially for working adults and geographically distant learners.

Challenges of E-Governance

Despite its potential, e-governance in Nigeria's tertiary education sector faces several challenges:

1. **Resistance to Change:** Institutional inertia and resistance to adopting new technologies, especially among older, less tech-savvy government personnel, hinder implementation. This is partly due to long-standing employment freezes which have limited the recruitment of digitally literate staff.
2. **Inadequate Funding and Skilled Personnel:** Low salaries for ICT personnel, insufficient maintenance budgets, and a shortage of qualified technical staff undermine system functionality. Power outages and outdated backup systems further exacerbate these issues.
3. **Poor Network Connectivity:** Intermittent or unreliable internet access limits students' ability to use portals for registration or information access, undermining the goals of e-governance.
4. **Social Inequality:** The digital divide between socio-economic groups poses a barrier to equitable access to e-governance services. Many students lack personal access to digital devices or the internet.
5. **Literacy and Legal Challenges:** Low literacy levels, weak foundational education, and a brain drain of ICT talent impair the effectiveness of e-governance initiatives. Furthermore, the legal and regulatory framework for ICT governance remains underdeveloped.

Tertiary Education System in Nigeria

Tertiary education in Nigeria refers to all forms of post-secondary education pursued after completing senior secondary school. This level of education plays a vital role in national development by fostering skilled manpower, innovation, research, and socio-economic progress. It comprises universities (federal, state, and private), polytechnics, monotechnics, and colleges of education. Despite challenges such as inadequate funding, frequent industrial actions, and poor infrastructure, Nigeria's tertiary education sector continues to grow in size and diversity. Reforms such as the introduction of student loan schemes and the proliferation of private universities signal a promising future. However, realizing the full potential of the sector requires sustained investment, policy consistency, and innovation-driven leadership.

Application of E-Governance in Nigerian Tertiary Institutions

A growing number of tertiary institutions in Nigeria have adopted e-governance tools to enhance efficiency in academic and administrative processes. Universities such as the

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University of Ilorin and the Federal University of Technology, Minna were among the pioneers, introducing online examinations (CBT) for first-year students.

Today, most federal, state, and private institutions employ digital platforms to conduct exams, register students, provide academic information, and facilitate online payments. Institutional websites now host interactive platforms for communication between administrators and students. While private universities generally exhibit more advanced e-governance adoption, some public institutions are also making notable progress.

Additionally, e-governance is increasingly being used in admission processes. Entrance exams into tertiary institutions, especially the Unified Tertiary Matriculation Examination (UTME), are now conducted as Computer-Based Tests (CBT), ensuring greater transparency and efficiency.

Empirical Review

Several empirical studies support the growing relevance and challenges of e-governance in Nigerian tertiary education:

1. Adavbiele (2016) examined ICT adoption in universities, revealing that both staff and students often lacked direct access to connected devices, relying instead on commercial cybercafés. The study recommended improved funding and technical infrastructure.
2. Amara (2019) focused on e-governance in the public sector using Abia State Polytechnic as a case study. While the study found improved transparency and convenience, it noted minimal impact on reducing corruption or significantly increasing revenue.
3. Olusola (2019) investigated the impact of e-governance on service delivery in tertiary institutions in Oyo Township. The study revealed that e-governance significantly improved administrative effectiveness and recommended further infrastructural support.
4. Ushie (2020) explored ICT availability in business education in Cross River State. Although ICT tools were somewhat available, regular usage was hindered by limited infrastructure. The study urged public-private partnerships to enhance ICT access.
5. Desmond, Ifeyinwa, and Uloma (2023) assessed e-governance in Nigeria's public sector. The study concluded that while e-governance enhances transparency and accountability, institutional adoption is inconsistent. It advocated for structured e-governance policies across public agencies.
6. None of the reviewed literature holistically addresses the impact of e-governance across the entire Nigerian tertiary education sector. This study aims to fill that gap.

Technology Acceptance Model (TAM)

This study adopts the Technology Acceptance Model (TAM) developed by Davis (1989). TAM posits that individuals are more likely to adopt a new technology if they perceive it as useful (Perceived Usefulness) and easy to use (Perceived Ease of Use). The model draws from the Theory of Reasoned Action, which links attitudes to behavioral intentions. TAM is widely accepted because of its simplicity and adaptability. However, it has limitations. It overlooks variables such as age, education level, and personality traits, which can influence technology acceptance. Moreover, behavioral intentions, often shaped by social influence, can be difficult to quantify objectively.

Applicability to This Study

TAM is particularly relevant for analyzing the adoption of e-governance in Nigerian tertiary institutions. It helps assess how students and staff interact with digital platforms and systems. The model enables analysis of the user-friendliness of these systems, their integration into institutional workflows, and their overall perceived value.

By applying TAM, this research can evaluate both the functional effectiveness of e-governance systems and users' willingness to embrace them.

Methodology

This study utilized qualitative research methods, relying primarily on secondary data from textbooks, academic journals, government reports, and online sources. A content analysis approach was employed to interpret various conceptual themes related to e-governance and its implementation in higher education institutions globally and in Nigeria.

Findings

E-governance has significantly improved transparency in Nigerian tertiary institutions. The digitization of administrative functions- such as publishing financial records, academic results, and institutional policies- has reduced opportunities for corruption. Platforms for online grievance reporting and digital audit trails have also strengthened accountability mechanisms. This aligns with the findings of Umar and Ikechukwu (2022), who observed enhanced information security and transparency in processes like JAMB registration through e-governance.

Digital platforms have transformed information access for students and staff. Academic calendars, exam results, course materials, and institutional updates are now available online. Tools like Learning Management Systems (LMS) and digital libraries have expanded educational access, enabling remote learning and virtual collaboration- especially during disruptions like the COVID-19 pandemic. This supports the view of Yusuf (2000), who emphasized ICT's role in improving the quality of education.

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Automation of core administrative processes- such as registration, exam scheduling, fee payment, and grading- has led to more efficient operations, reduced paperwork, and quicker service delivery. Students no longer need to be physically present to carry out basic academic transactions, thereby saving time and money. These findings corroborate Modibbo and Fashola (2022), who observed a widespread shift to online platforms for administrative tasks across Nigerian tertiary institutions.

Conclusion

E-governance has become a transformative tool in Nigeria's tertiary education sector. It has enhanced administrative efficiency, improved access to academic resources, and promoted greater transparency and accountability. However, widespread adoption is still limited by challenges such as poor infrastructure, inconsistent internet connectivity, limited technical skills, and stakeholder resistance. To fully harness the benefits of e-governance, strategic investments in infrastructure, capacity building, and policy enforcement are imperative.

Recommendations

1. **Infrastructure Development:** Stakeholders must invest in reliable internet access, modern hardware and updated software to support e-governance across institutions.
2. **Training and Capacity Building:** Comprehensive training programs should be designed for both educators and administrators to ensure optimal use of digital tools.
3. **Monitoring and Evaluation:** Regular assessments should be conducted to evaluate the performance of e-governance initiatives and identify areas for improvement.
4. **Stakeholder Collaboration:** Partnerships between government agencies, educational institutions, and tech providers can help overcome resistance and drive adoption.
5. **Legal and Regulatory Framework:** A strong legal framework should be developed to guide the effective and secure implementation of e-governance in education.

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