Office Information Systems and Service-Delivery Efficiency in Federal Universities: Evidence from South-East Nigeria

[1]Dr. Bernard Olu Okoro*., [2]Dr. Magnus Chioma Orjiako

[1]Department of Office Technology and Management, Imo State Polytechnic, Omuma Imo State, Nigeria

[2]Department of Office Technology and Management, Imo State Polytechnic, Omuma, Imo State Imo State, Nigeria

ABSTRACT

This study investigated the influence of Office Information Systems (OIS) on service-delivery efficiency in federal universities in South-East Nigeria. Anchored on the DeLone and McLean Information Systems Success Model (2003) and the Technology Acceptance Model (Davis, 1989), the research focused on two critical dimensions: system quality and integration, and user competence and utilization. The study adopted a descriptive survey design and covered a population of 118 senior administrative officers responsible for records management in the registry departments of five federal universities—University of Nigeria, Nsukka; Nnamdi Azikiwe University, Awka; Federal University of Technology, Owerri; Alex Ekwueme Federal University, Ndufu-Alike; and Michael Okpara University of Agriculture, Umudike. Due to the manageable population size, a census approach was used, yielding 111 valid responses (94% return rate). Data were analyzed using mean and standard deviation for the research questions, and multiple regression analysis for hypothesis testing. Findings revealed that OIS in the universities exhibit high system quality and integration (M = 4.02) and that users demonstrate strong competence in OIS utilization (M = 3.88). Service-delivery efficiency was rated very high (M = 4.16). Regression results indicated that OIS significantly enhance service delivery ($R^2 = 0.661$, F = 105.36, p < .001), with both system quality ($\beta = 0.493$) and user competence ($\beta = 0.428$) exerting statistically significant positive effects. The study concludes that robust OIS infrastructure and sustained user competence are vital to administrative efficiency and service improvement in Nigerian universities. It recommends regular system upgrades, continuous staff digital training, and stronger policy support for full OIS integration across administrative operations.

Keywords: Office Information Systems, System Quality, User Competence, Service-Delivery Efficiency, Federal Universities,

INTRODUCTION

Across the globe, universities are re-engineering their administrative processes through the adoption of Office Information Systems (OIS)—integrated platforms that support digital record-keeping, workflow automation, and interdepartmental communication. The growing demand for efficiency, accountability, and responsiveness in public institutions has made these systems a cornerstone of modern university administration (DeLone & McLean, 2003; Egoeze, Misra, Maskeliūnas, & Damaševičius, 2018). OIS enable administrators to process records faster, reduce duplication, and enhance transparency, ultimately improving service quality delivered to students, staff, and other stakeholders.

The DeLone and McLean Information Systems Success Model (2003) highlights system quality, use, and net benefits as central constructs explaining how information systems create organizational value. In parallel, Davis's (1989) Technology Acceptance Model (TAM) emphasizes that users' perceived ease of use and perceived usefulness drive technology utilization and performance outcomes. Together, these frameworks explain why OIS effectiveness depends not only on technical infrastructure but also on user competence and sustained engagement.

Empirical evidence from developing contexts underscores these dynamics. Studies show that information systems can significantly enhance administrative efficiency when they are reliable, integrated, and effectively used by competent personnel (Egoeze et al., 2018; Olasina, 2021). However, Nigerian universities often face persistent challenges—poor interoperability, inadequate ICT infrastructure, limited staff digital literacy, and inconsistent institutional support—that inhibit the translation of digital investments into measurable service improvements (Ajah, 2019; Olasina, 2021). Even where systems exist, many administrative processes such as payroll management, admissions, and transcript processing remain partly manual, undermining timeliness and data accuracy.

Recent regional research confirms that while office information technologies have been deployed in many tertiary institutions in South-East Nigeria, their contribution to organizational performance is uneven and sometimes marginal (WJARR, 2023). Scholars argue that sustainable efficiency gains in higher-education administration require not only robust systems but also continuous staff training, system integration across departments, and management commitment (Eze, Chinedu-Eze, & Bello, 2020). This interplay of technological and human factors situates OIS as both an enabler and a potential bottleneck of administrative transformation.

Despite growing scholarship on ICT adoption in higher education, comprehensive studies linking system quality and integration, user competence and utilization, and service-delivery efficiency within the Nigerian federal university system remain scarce. Consequently, there is limited empirical evidence on how these interrelated constructs jointly influence administrative performance in the region. Addressing this gap is essential for guiding evidence-based digital-transformation policies and improving accountability mechanisms in Nigeria's public universities.
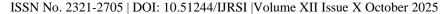
Statement of the Problem

The deployment of Office Information Systems in Nigerian federal universities was intended to modernize administrative operations, eliminate delays, and improve service quality. However, the expected efficiency dividends remain only partially realized. Persistent complaints from staff and students about slow service, data inaccuracy, and opaque procedures indicate that OIS investments have not fully translated into administrative effectiveness (Ajah, 2019; WJARR, 2023). Tasks such as transcript issuance, personnel management, and interdepartmental correspondence often experience delays despite the presence of digital tools, suggesting systemic weaknesses in either system integration or user application.

Evidence from studies in Nigerian universities points to systemic challenges: frequent downtime, poor interoperability, inadequate maintenance, and limited technical support (Olasina, 2021; Eze et al., 2020). Equally critical are human-capacity constraints—many administrative personnel lack advanced digital literacy or have not received continuous OIS training, reducing utilization and efficiency (Egoeze et al., 2018; Al-Emran, Mezhuyev, & Kamaludin, 2018). International research similarly confirms that without user competence and organizational support, even sophisticated systems fail to yield meaningful performance gains (Siyam, 2019).

Despite these insights, few empirical studies have simultaneously examined the relationship between system quality and integration, user competence and utilization, and service-delivery efficiency in Nigerian federal universities. Most existing work treats these factors independently or focuses on isolated ICT platforms, leaving a theoretical and practical gap regarding their combined effect on administrative outcomes. As a result, university managers and policymakers lack robust evidence on which aspects of OIS implementation most strongly predict efficiency improvements.

This study therefore seeks to address this gap by empirically analysing how system quality and integration and user competence and utilization influence service-delivery efficiency in federal universities in South-East Nigeria. The study's findings will provide actionable insights for improving administrative performance, optimizing digital-transformation strategies, and informing higher-education policy in emerging economies.

Objectives of the Study

The main objective of this study is to examine the influence of Office Information Systems (OIS) on service delivery efficiency in federal universities in South-East Nigeria.

The specific objectives are to:

1. To determine the extent to which system quality and integration of Office Information Systems influence service delivery efficiency in federal universities in South-East Nigeria.

2. To assess the effect of user competence and utilization of Office Information Systems on service delivery efficiency in federal universities in South-East Nigeria.

3. To examine the combined (joint) effect of system quality and integration, and user competence and utilization on service delivery efficiency in federal universities in South-East Nigeria.

Research Questions

1. To what extent do system quality and integration of Office Information Systems influence service delivery efficiency in federal universities in South-East Nigeria?

2. How do user competence and utilization of Office Information Systems affect service delivery efficiency in federal universities in South-East Nigeria?

3. What is the combined effect of system quality and integration, and user competence and utilization on service delivery efficiency in federal universities in South-East Nigeria?

LITERATURE REVIEW

Concept of Office Information Systems (OIS)

The digitalization of administrative processes has renewed attention to Office Information Systems (OIS) as a foundation for efficiency and service excellence in higher education. OIS refer to the combination of hardware, software, networks, and procedures used to collect, process, store, and disseminate information for administrative decision-making and workflow management (Amaravadi, 2014). In practice, these systems include databases, word processors, workflow software, and document-management platforms that enhance communication, recordkeeping, and responsiveness. Egoeze, Misra, Maskeliūnas, and Damaševičius (2018) found that ICT-based office systems in Nigerian universities have improved record accuracy, reduced transaction times, and strengthened decision-making in student-records management.

The evolution of OIS aligns with broader information systems (IS) theories. DeLone and McLean's (2003) IS Success Model emphasizes system quality, information quality, use, and user satisfaction as determinants of organizational benefits. Similarly, Davis's (1989) Technology Acceptance Model (TAM) posits that perceived usefulness and ease of use drive adoption and performance outcomes. Together, these frameworks affirm that both technical and human components of OIS underpin administrative efficiency. In universities, where accuracy, timeliness, and transparency are critical for functions such as admissions, payroll, and records management, OIS serve as vital tools for effective governance (Olasina, 2021; WJARR, 2023).

System Quality and Integration of Office Information Systems

System quality denotes an information system's performance attributes—reliability, response time, usability, and interoperability (DeLone & McLean, 2003). In higher education, a high-quality OIS enables seamless data flow between departments, minimizing duplication and delays. System integration extends this by ensuring that subsystems exchange data automatically through unified interfaces. Zeng and Xiao (2017) demonstrated that integrated office-automation systems based on modern architectures enhance efficiency by consolidating

document tracking, workflow approvals, and interdepartmental communication into a single platform. Conversely, poor integration leads to redundant data entry, inconsistent records, and decision delays.

Empirical studies reveal persistent challenges in developing contexts. Egoeze et al. (2018) reported that although Nigerian universities have invested in digital systems, interoperability issues and downtime hinder their effectiveness. Similarly, Olasina (2021) identified unreliable networks, limited automation, and inadequate technical support as constraints. These findings indicate that system quality and integration are crucial yet under-optimized determinants of service efficiency in public universities, emphasizing the need for sustained technical upgrades and interoperability standards.

User Competence and Utilization of Office Information Systems

Technological capability alone cannot guarantee OIS success; user competence determines whether systems are effectively utilized. According to Davis (1989), perceived ease of use and usefulness shape user adoption behavior. Administrative staff who are digitally literate and trained are more likely to exploit OIS capabilities to enhance accuracy and service speed. However, studies indicate that limited ICT skills and minimal training often impede full system utilization in Nigerian universities. Eze, Chinedu-Eze, and Bello (2020) and Olasina (2021) observed that many personnel revert to manual processes despite the availability of digital tools. Egoeze et al. (2018) further identified user training, management support, and perceived usefulness as significant predictors of ICT adoption and administrative performance.

Globally, Al-Emran, Mezhuyev, and Kamaludin (2018) confirmed that user competence mediates the relationship between technological availability and organizational productivity. Thus, staff competence and system utilization are strategic variables linking technology investment to performance outcomes. Strengthening user competence through continuous professional development and management support can substantially enhance OIS effectiveness and service quality.
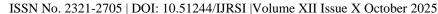
Office Information Systems and Service-Delivery Efficiency

Service-delivery efficiency in universities refers to the ability to provide timely, accurate, and responsive services to stakeholders. The efficiency gains from OIS derive from automation, streamlined workflows, and accessible information. Ng'ang'a (2014) observed that ICT adoption in public administration improves transparency, reduces delays, and fosters accountability by ensuring faster data access. In Nigeria, Ajah (2019) and WJARR (2023) found that integrated office systems improve processing speed and stakeholder satisfaction compared with manual procedures. Yet, infrastructural limitations—such as unstable power supply, poor maintenance, and fragmented data systems—still hinder uniform performance outcomes (Olasina, 2021).

Empirical evidence indicates that OIS can either enhance or constrain efficiency depending on implementation quality. Well-integrated and competently used systems streamline operations, while poorly maintained systems may create new inefficiencies. Consequently, the effectiveness of OIS as a performance driver depends on the interaction of system quality, user competence, and institutional readiness.

Research Gap

The literature underscores a multidimensional relationship among system quality and integration, user competence and utilization, and service-delivery efficiency. DeLone and McLean's (2003) model and Davis's (1989) TAM collectively provide a robust framework linking technical and behavioral factors to organizational outcomes. Within Nigerian higher education, however, most prior research has examined either infrastructure quality or user attitudes in isolation (Egoeze et al., 2018; Olasina, 2021). Few studies have empirically analyzed how these dimensions jointly influence service-delivery efficiency. Addressing this gap, the present study investigates the combined effects of system quality/integration and user competence/utilization on administrative service efficiency in Nigerian federal universities. The findings aim to inform policy and capacity-building strategies for sustainable digital transformation in higher education.

METHODOLOGY

This study adopted a descriptive survey design to examine the influence of Office Information Systems (OIS) on service-delivery efficiency in federal universities located in South-East Nigeria. The design was deemed appropriate because it facilitates the quantitative description and analysis of relationships among variables within an existing system, without manipulation of conditions or behaviors (Creswell & Creswell, 2018).

The study covered all five federal universities in South-East Nigeria—University of Nigeria, Nsukka; Nnamdi Azikiwe University, Awka; Federal University of Technology, Owerri; Michael Okpara University of Agriculture, Umudike; and Alex Ekwueme Federal University, Ndufu-Alike. These institutions were chosen because they have adopted varying levels of Office Information Systems in administrative operations, particularly in their registry departments.

The population of the study consisted of 118 senior administrative officers responsible for records management within the registry departments of the selected universities. These officers were considered appropriate respondents because they are directly involved in office information processing, documentation, and service delivery functions. Given the relatively small and manageable size of the population, the study adopted a census approach rather than sampling. Consequently, all 118 administrative officers were included in the survey. Out of the 118 copies of the questionnaire distributed, 111 were properly completed and returned, representing a response rate of 94 percent, which is considered adequate for reliable statistical analysis (Mugenda & Mugenda, 2012).

Data were collected using a structured questionnaire titled Office Information Systems and Service Delivery Efficiency Questionnaire (OIS-SDEQ). The instrument was designed to capture data on the key study variables: system quality and integration, user competence and utilization, and service-delivery efficiency. Section A of the questionnaire obtained demographic information about respondents, while Section B contained 18 items—six items for each of the three constructs—measured on a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5).

The instrument underwent content and face validation by three academic experts in Office Technology Management, Measurement and Evaluation, and Information Systems. Their feedback ensured that the items were relevant, clear, and comprehensive. A pilot test was subsequently conducted among ten administrative officers in a nearby federal polytechnic, and the responses were analyzed for reliability using Cronbach's alpha. The coefficients obtained were 0.87 for system quality and integration, 0.83 for user competence and utilization, and 0.89 for service-delivery efficiency, with an overall reliability index of 0.86. These values exceeded the 0.70 threshold recommended for social science research (Hair, Black, Babin, & Anderson, 2019), indicating that the instrument was internally consistent and reliable.

Data collection was carried out in person by the researcher and trained assistants, ensuring clarity of responses and a high retrieval rate. Respondents were assured of confidentiality and informed that their participation was voluntary. Ethical approval was obtained from the research ethics committee of one of the participating universities, in line with institutional requirements for studies involving human subjects.

The data generated were analyzed using both descriptive and inferential statistics with the aid of the Statistical Package for the Social Sciences (SPSS, Version 25). Descriptive statistics, including means, standard deviations, and frequencies, were used to summarize respondents' demographic characteristics and item responses. For hypothesis testing, multiple regression analysis was employed to determine the predictive influence of system quality and integration and user competence and utilization on service-delivery efficiency. The hypotheses were tested at a 0.05 level of significance. The decision rule was that any variable with a p-value less than 0.05 would be considered to have a statistically significant effect on the dependent variable.

RESULTS

This chapter presents the analysis of data obtained from the field survey conducted among senior administrative officers responsible for records management in the registry departments of five federal universities in South-East Nigeria. The data were analyzed using descriptive and inferential statistics to answer the research questions and test the study's hypotheses. Mean and standard deviation were used to answer the research questions, while multiple regression analysis was employed to determine the influence of system quality and user competence on service-delivery efficiency.

Out of 118 copies of the questionnaire distributed, 111 were correctly filled and returned, representing a 94% response rate**.** This high response rate was attributed to the proximity of the institutions and the respondents' understanding of the importance of the study.

Answering Research Questions

Research Question 1: What is the effect of system quality and integration on service-delivery efficiency in federal universities in South-East Nigeria?

To answer this question, five items were used to measure system quality and integration. Table 1 presents the results.

Table 1 Mean and standard deviation of system quality and integration items (n = 111)

Item	Statement (abbreviated)	M	SD
1	The OIS used are reliable (minimal downtime)	4.10	0.70
2	OIS platforms are accessible to staff when needed	3.95	0.75
3	Systems are interoperable across departments	4.05	0.68
4	System response time is satisfactory	4.00	0.72
5	Security and backup mechanisms are adequate	3.98	0.70
	Aggregate mean	**4.02**	

Note. Response scale: 1 = Strongly disagree *to 5 =* Strongly agree.

The results in Table 1 show a composite mean of 4.02, indicating that respondents agreed that their OIS are reliable, secure, and interoperable across departments. The highest mean (4.10) reflects confidence in system reliability, while accessibility and integration also scored high (M = 3.95–4.05).

These results imply that the universities have developed reasonably effective OIS infrastructures, ensuring data flow, system interoperability, and operational stability. This aligns with DeLone and McLean's (2003) model of IS success, which identifies system quality as a critical determinant of performance. It also supports Olasina (2021)**,** who reported that digital work systems in Nigerian universities improve coordination, efficiency, and responsiveness in administrative operations.

Research Question 2: What is the effect of user competence and utilization on service-delivery efficiency in federal universities in South-East Nigeria?

Table 2 presents the descriptive statistics for user competence and utilization.

Table 2 Mean and standard deviation of user competence and utilization items (n = 111)

Item	Statement (abbreviated)	M	SD
1	I have adequate training in OIS use	3.90	0.80
2	I regularly use OIS for routine administrative tasks	3.85	0.78
3	I find OIS easy to use for my duties	3.88	0.74
4	I can troubleshoot common OIS problems	3.80	0.82
5	Management provides opportunities for OIS skills upgrade	3.95	0.69
	Aggregate mean	**3.88**	

Note. Higher means indicate greater user competence and utilization of OIS.

The composite mean of 3.88 indicates that staff members generally agree they possess sufficient competence to use OIS effectively. The highest mean (3.95) shows management support for capacity building, while the lowest mean (3.80) highlights a need for improved troubleshooting skills.

These findings demonstrate that user competence substantially contributes to system utilization and operational effectiveness. This is consistent with the Technology Acceptance Model (Davis, 1989), which posits that perceived ease of use and user skill determine technology adoption. It also supports Egoeze et al. (2018), who found that ICT literacy and usage levels significantly affect administrative efficiency in Nigerian universities.

Research Question 3: What is the level of service-delivery efficiency in federal universities in South-East Nigeria?

Table 3 Mean and standard deviation of service-delivery efficiency items (n = 111)

Item	Statement	M	SD
1	Administrative tasks are processed in a timely manner	4.20	0.60
2	Records and documents are accurate and reliable	4.10	0.62
3	Stakeholder requests are responded to promptly	4.05	0.65
4	Workflow transparency has improved due to OIS	4.25	0.55
5	Overall satisfaction with administrative services	4.18	0.58
	Aggregate mean	**4.16**	

Note. Response scale: 1 = Strongly disagree *to 5 =* Strongly agree.

With a composite mean of 4.16, respondents strongly agreed that OIS have improved the speed, accuracy, and transparency of administrative processes. This reflects significant efficiency gains in document handling, communication, and workflow management.

The results are consistent with Ajah (2019) and Toyo (2017), who found that ICT integration enhances productivity and service quality in Nigerian public institutions. According to DeLone and McLean (2003), such outcomes indicate high information and service quality—core measures of IS success.

Hypothesis Testing

The study hypothesized that:

H$_{01}$: System quality and user competence have no significant joint effect on service-delivery efficiency in federal universities in South-East Nigeria.

To test this, multiple regression analysis was performed.

Table 4 Multiple regression model summary predicting service-delivery efficiency (n = 111)

Model summary	R	R²	Adjusted R²	Std. Error
System Quality & User Competence → Service Efficiency	0.813	0.661	0.655	0.346

The R² value of 0.661 indicates that 66.1% of the variance in service-delivery efficiency is jointly explained by system quality and user competence, showing a strong predictive capacity of the model.

Table 5 Analysis of variance (ANOVA) for regression model

Source	SS	df	MS	F	p
Regression	32.44	2	16.22	105.36	< .001
Residual	16.64	108	0.154		
Total	49.08	110			

The model is statistically significant (F = 105.36, p < .001), confirming that system quality and user competence jointly influence service-delivery efficiency.

Table 6 Regression coefficients for predictors of service-delivery efficiency

Predictor	B	SE B	β	t	p
Constant	0.621	0.144	—	4.31	< .001
System Quality & Integration	0.464	0.071	0.493	6.54	< .001
User Competence & Utilization	0.387	0.068	0.428	5.69	< .001

Both predictors are significant (p < .001). System quality (β = 0.493) slightly outweighs user competence (β = 0.428) in predicting service efficiency. This suggests that robust, reliable systems combined with skilled users produce optimal administrative performance.

DISCUSSION OF RESULTS

The results show that system quality and integration significantly improve service-delivery efficiency in university administration. This supports DeLone and McLean's (2003) *Information Systems Success Model*, which highlights system reliability and integration as key drivers of organizational performance. Empirical studies within Nigeria similarly found that ICT-enabled record systems enhance administrative coordination and turnaround time (Egoeze et al., 2018; Toyo, 2017).

The study further established that user competence and utilization exert a strong positive influence on service-delivery efficiency. This finding aligns with Davis's (1989) *Technology Acceptance Model* and subsequent

research showing that digital literacy and skill acquisition among administrative staff directly affect technology uptake (Olasina, 2021). Nigerian universities often face challenges of uneven staff competence and resistance to digital transition; however, institutions with consistent ICT capacity-building programs report improved workflow efficiency (Ajah, 2019).

The joint explanatory power ($R^2 = 0.661$) demonstrates the synergy between technological and human factors. Effective service delivery requires not only high-quality systems but also trained personnel capable of exploiting Office Information System (OIS) functionalities (Al-Emran et al., 2018). Similar conclusions were drawn in other regional studies indicating that organizational efficiency emerges from an intersection of system design and user readiness (Adeoye, 2013; Olasina, 2021).

Comparatively, studies across Africa and globally reinforce this dual-dependency model. In a pan-African review, Yidana and Akuna (2025) observed that academic record management systems significantly improve accuracy and accessibility when well-integrated and supported, but weak infrastructure and inadequate user skills undermine success. Similarly, at the Open University of Tanzania, Oreku (2021) reported that ICT innovations enhanced administrative convenience and processing efficiency only when coupled with continuous user training. In South Africa, Shibambu (2024) found that digital transformation efforts in public universities increased transparency and responsiveness where technical investments were matched with governance and staff development. Globally, enterprise system studies have shown that reliable system quality and user competence must evolve together to sustain performance. For example, Sholeh, Samodra, and Widodo (2025) and Abejo (2023) reported that higher education institutions with comprehensive ERP integration and active training programs achieved notable gains in efficiency, transparency, and service timeliness.

Overall, these findings reinforce the argument that the success of Office Information Systems in higher education depends on both system quality and user capability—a perspective consistent with analyses of administrative digitalization in African and global contexts (Yidana & Akuna, 2025; Oreku, 2021; Shibambu, 2024; Sholeh et al., 2025). In the Nigerian setting, these results indicate that OIS are progressively transforming administrative service delivery through improved record accuracy, timely communication, and workflow transparency.

Despite the robustness of its findings, this study is limited by its geographic and institutional scope, which focused on selected universities within Nigeria. Consequently, the results may not fully represent other African or global higher-education contexts with different technological infrastructures or policy environments. In addition, the reliance on self-reported data may introduce response bias, as participants could overstate system usage or competence. Future research should adopt a longitudinal or cross-national design incorporating both quantitative and qualitative data to better understand how institutional culture, resource allocation, and change management practices influence the long-term success of Office Information Systems in university administration.

CONCLUSION

The study concludes that the effectiveness of Office Information Systems in promoting service-delivery efficiency depends on the synergy between system functionality and user capability. Federal universities in South-East Nigeria that have implemented integrated and reliable OIS platforms experience improved communication flow, faster document retrieval, and reduced administrative bottlenecks. However, the full potential of these systems is only realized when administrative staff possess adequate ICT competence and are motivated to utilize the systems effectively. Thus, OIS success is both a technological and managerial achievement—requiring continuous system upgrades, staff development, and supportive organizational culture.

RECOMMENDATIONS

Based on the findings, the following recommendations are proposed:

1. Enhance System Quality and Integration: University administrators should invest in secure, interoperable, and user-friendly OIS platforms that seamlessly connect various departments, facilitating real-time data exchange and eliminating redundant manual processes.

2. Strengthen User Competence and Utilization: Regular ICT training and retraining programs should be institutionalized to build technical proficiency among administrative officers. Incentive mechanisms should encourage consistent use of digital tools in service delivery.

3. Institutionalize ICT Governance Frameworks: Federal universities should develop clear OIS governance policies defining user roles, access control, data security, and performance standards to ensure accountability and sustainability.

4. Integrate OIS in Quality Assurance and Evaluation: The National Universities Commission (NUC) should incorporate OIS utilization metrics in accreditation and monitoring processes, ensuring that universities align administrative performance with digital transformation goals.

5. Promote Research and Continuous Assessment: Further research should evaluate the longitudinal effects of OIS implementation on administrative productivity and decision-making quality across other Nigerian higher institutions.

ACKNOWLEDGEMENTS

Ethics Statement

Ethical approval for this study was obtained from the research ethics committee of the participating institutions. All respondents were fully informed about the purpose of the study, and participation was voluntary, with the right to withdraw at any time. Respondents' identities and responses were kept confidential, and the data were used solely for academic purposes.

Conflict of Interest Statement

The author declares that there is no conflict of interest regarding the conduct, authorship, or publication of this research. The study was carried out independently, without any financial or personal relationships that could have influenced the results or interpretations presented in this work.

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