

Advancing Office and Information Management Through Innovation and Digital Transformation in Tertiary Institutions in Nigeria

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Abstract

This study examined the advancement of Office and Information Management (OIM) through innovation and digital transformation in public tertiary institutions in Ekiti State, Nigeria. The study was guided by four objectives focusing on the extent of digital transformation, innovative digital technologies adopted, students' perceptions of effectiveness, and strategies for strengthening digital transformation for improved graduate preparedness. A descriptive survey research design was adopted. The target population comprised 300 graduating students in three public tertiary institutions in Ekiti State, Nigeria. Total enumeration was used as the sample. The instrument used was a four-point structured Likert-scale questionnaire which was administered to all the graduating students. Both face and content validity of the instrument was ensured through experts in the field. A pilot study involving respondents outside the study area was conducted to establish the reliability of the instrument, and the internal consistency of the questionnaire was determined using Cronbach's Alpha coefficient, with a reliability coefficient of 0.70 which was considered acceptable for the study. Data were analyzed using mean and standard deviation, while hypotheses were tested using Regression and Pearson Product Moment Correlation. Findings revealed that digital transformation enhances OIM practices to a moderate extent, particularly in information accessibility, communication, and administrative efficiency, while advanced integration remains limited. The study further showed that adoption of digital technologies is uneven, with greater reliance on communication platforms, Learning Management Systems, and electronic records management systems, while cloud computing, Artificial Intelligence, and data analytics remain minimally adopted. Students' perceptions indicated low to moderate effectiveness of digital transformation initiatives, with limited improvements in communication, service delivery, and overall academic satisfaction. Hypothesis testing showed significant relationships between digital transformation, technology adoption, administrative effectiveness, and graduate preparedness. The study concludes that digital transformation in Ekiti State tertiary institutions is still at an early-to-middle stage and requires strengthened infrastructure, policy support, capacity building, and curriculum innovation to achieve full effectiveness.

Keywords: Office and Information Management, Digital Transformation, Innovation, Tertiary, Institutions, Institutional Performance, Graduate Preparedness.

Introduction

The contemporary world of work has been transformed significantly by the emergence of digital technologies, necessitating profound changes in how organizations manage information, communicate, and deliver services. Office and Information Management (OIM), as a discipline concerned with the efficient handling of organizational information, administrative systems, communication processes, and office technologies, plays a critical role in facilitating this transformation. Educational institutions, particularly tertiary institutions, are not exempted from these transformations. In Nigeria, tertiary institutions are under growing pressure to improve operational efficiency, information accessibility, enhance service delivery and align educational practices with global standards and competitive relevance through the adoption of advanced digital technologies.

Office and Information Management (OIM), which traditionally focused on clerical functions and administrative support, has evolved into a dynamic discipline characterized by the strategic application of information technologies, digital competencies, innovation, and data-driven decision-making. Digital transformation within OIM involves integrating automation, cloud computing, artificial intelligence, enterprise resource planning (ERP), e-records systems, and data analytics into institutional administrative structures to improve governance, productivity, and decision-making. In tertiary institutions, this transformation encompasses the adoption of electronic document management systems, cloud computing, virtual collaboration platforms, learning management systems, artificial intelligence applications, data analytics, and automation of administrative processes (Bond et al., 2018). On the other hand, OECD, (2019) allured innovation as the implementation of novel ideas, technologies, and practices that create value and improve institutional performance

However, the pace and extent of digital transformation vary considerably due to infrastructural limitations, inadequate funding, policy inconsistencies, and disparities in digital competence among stakeholders (Afolabi & Abidoye, 2022). Graduating students, as future professionals and end-users of institutional services, occupy a strategic position in evaluating the effectiveness of these transformations and determining their preparedness for the digitally driven smart economy. Given the increasing demand for graduates equipped with twenty-first-century competencies, there is an urgent need to investigate how innovation and digital transformation are advancing office and information management practices in public tertiary institutions. Understanding students' perceptions and experiences can provide valuable insights for policy formulation, curriculum review, and institutional development.

Statement of the Problem

Globally, digital transformation has altered the competencies required for effective office and information management in contemporary organizations. Institutions of higher learning are expected to prepare graduates who possess the knowledge, skills, and adaptability needed to thrive within digitally revolutionized environments. However, observations suggest that despite the recognized importance of digital transformation and the ongoing investments in technological infrastructure and innovation initiatives in higher education, many Nigerian tertiary institutions continue to experience persistence of outdated administrative practices that undermines institutional productivity, weakens service delivery, and hinders global competitiveness due to limited adoption of innovative OIM technologies. There is therefore a pressing need to empirically examine how innovation and digital transformation can advance Office and Information Management in tertiary institutions in Nigeria.

Inadequate digital infrastructure, non-integration and usage of digital technologies in the teaching and learning process, limited innovation culture, and uneven adoption of emerging technologies across institutions remains as major challenges that hinders administrative efficiency, information accessibility, institutional sustainability as well as real-time skills acquisition in Nigerian tertiary institutions. Consequently, graduating students may leave these institutions without adequate exposure to innovative digital systems and competencies required by employers in the twenty-first-century labour market. Furthermore, existing studies have largely focused on staff perceptions, institutional readiness, or technology acceptance, with limited attention given to graduating students who represent the ultimate products of these institutions. This has created a knowledge gap that may undermine efforts toward curriculum reform and institutional improvement. It is against this backdrop that this study seeks to investigate the advancement of Office and Information Management through innovation and digital transformation in public tertiary institutions in Ekiti State, Nigeria.

Objectives of the Study

- To determine the extent to which digital transformation enhances Office and Information Management practices in public tertiary institutions in Ekiti State, Nigeria.
- To identify the innovative digital technologies adopted for Office and Information Management operations in public tertiary institutions in Ekiti State, Nigeria.
- To examine graduating students' perceptions of the effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery in tertiary institutions in Ekiti State, Nigeria.

- To determine strategies for strengthening innovation and digital transformation in Office and Information Management to improve graduate preparedness for the twenty-first-century labour market in Ekiti State, Nigeria.

Research Questions

- To what extent does digital transformation enhance Office and Information Management practices in public tertiary institutions in Ekiti State, Nigeria?
- What innovative digital technologies are adopted for Office and Information Management operations in public tertiary institutions in Ekiti State, Nigeria?
- How do graduating students perceive the effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery in public tertiary institutions in Ekiti State, Nigeria?
- What strategies can be adopted to strengthen innovation and digital transformation in Office and Information Management practices to improve graduate preparedness for the twenty-first-century labour market in public tertiary institutions in Ekiti State, Nigeria?

Research Hypotheses

H₀₁: There is no significant difference between enhanced digital transformation in Office and Information Management practices and the perceived effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery in public tertiary institutions in Ekiti State, Nigeria.

H₀₂: There is no significant relationship between the adoption of innovative digital technologies and graduating students' preparedness for the twenty-first-century labour market in public tertiary institutions in Ekiti State, Nigeria.

Literature Review

Office and Information Management

Office and Information Management (OIM) has evolved considerably from its traditional role of providing clerical support and secretarial services into a strategic discipline responsible for managing organizational information resources, administrative technologies, communication systems, and digital workflows. Modern organizations increasingly depend on effective information management to facilitate informed decision-making, improve productivity, enhance communication, and achieve organizational competitiveness. Consequently, OIM now encompasses the planning, acquisition, processing, storage, dissemination, and security of organizational information using both conventional and digital technologies. According to Rainer and Prince (2021), Office and

Information Management involves the systematic application of information technologies, administrative procedures, and communication systems to ensure that organizational information is effectively generated, processed, stored, retrieved, and utilized for decision-making. Similarly, Laudon and Laudon (2022) described OIM as the integration of information systems, digital technologies, administrative processes, and human competencies to improve organizational effectiveness and service delivery.

Within tertiary institutions, OIM supports virtually every administrative function, including admissions processing, student records management, staff administration, financial management, examination processing, procurement, communication, and institutional planning. The integration of electronic records management systems, cloud computing platforms, enterprise resource planning (ERP), digital communication platforms, and automated workflows has significantly transformed office operations in higher education institutions worldwide. The International Organization for Standardization (ISO 15489, 2022) emphasized that efficient information management contributes to transparency, accountability, institutional memory, regulatory compliance, and improved governance. In higher education, efficient Office and Information Management enables faster service delivery, improved access to institutional information, enhanced collaboration among stakeholders, and evidence-based policy formulation. However, despite these global advancements, many Nigerian tertiary institutions continue to depend heavily on manual documentation, fragmented information systems, paper-based records management, and bureaucratic administrative procedures.

On the other hand, Afolabi & Abidoye (2022) argued that inadequate ICT infrastructure, limited funding, inconsistent institutional policies, insufficient digital competencies, and resistance to organizational change continue to hinder the modernization of Office and Information Management practices across Nigerian higher education institutions. Consequently, the strategic transformation of OIM remains essential for improving institutional effectiveness and preparing graduates for digitally driven workplaces.

Digital Transformation

Digital transformation focuses on the comprehensive integration of digital technologies into organizational processes, structures, culture, and service delivery systems to fundamentally improve operational efficiency and stakeholder value. Unlike simple digitization, which merely converts analogue information into digital formats, digital transformation represents a holistic organizational change involving technology adoption, innovation, leadership, human capacity development, and process redesign. In the view of Vial (2019), digital transformation is a process through which organizations improve their operations, decision-making capabilities, and value creation by integrating digital technologies across organizational activities. Similarly, Westerman, Bonnet & McAfee

(2021) described digital transformation as the strategic use of emerging digital technologies to redesign organizational operations, customer experiences, and institutional performance.

Digital transformation in tertiary institutions includes the deployment of cloud computing, learning management systems, enterprise resource planning systems, digital libraries, artificial intelligence, blockchain technologies, big data analytics, electronic records management, online collaboration platforms, cybersecurity frameworks, and automated administrative processes. Digital transformation has become increasingly important in higher education following the COVID-19 pandemic, which accelerated the adoption of online learning platforms, virtual meetings, electronic assessment systems, and cloud-based institutional services. As opined by Bond et al. (2018), digital transformation enhances administrative responsiveness, supports flexible learning environments, facilitates institutional collaboration, and promotes data-driven governance. The OECD (2021) noted that digitally transformed higher education institutions experience improved institutional resilience, enhanced student engagement, greater administrative efficiency, and stronger knowledge management systems. Likewise, UNESCO (2023) emphasized that digital transformation strengthens educational quality through improved accessibility, inclusiveness, institutional transparency, and lifelong learning opportunities.

Despite these benefits, digital transformation in Nigerian tertiary institutions remains uneven. Okoye, Nwosu & Eze (2023) observed that inadequate broadband connectivity, unstable electricity supply, poor ICT infrastructure, insufficient technical support, and inadequate staff training significantly constrain successful digital transformation initiatives. Consequently, many institutions struggle to achieve full digital integration across academic and administrative functions.

Innovation in Office and Information Management

Innovation represents the successful implementation of new ideas, technologies, methods, or practices that improve organizational performance and create value. Within Office and Information Management, innovation extends beyond technological acquisition to include process innovation, organizational innovation, administrative innovation, service innovation, and human resource innovation. The OECD (2019) allured innovation as the implementation of new or significantly improved products, services, processes, organizational methods, or business practices that generate measurable improvements in organizational performance. Correspondingly, Schumpeter's Innovation Theory identifies innovation as the engine of organizational growth through new combinations of knowledge, technology, and production processes.

Innovative Office and Information Management practices on tertiary institution context include electronic document management systems, cloud-based collaboration tools,

artificial intelligence-assisted decision support systems, robotic process automation, digital workflow management, mobile administrative applications, and predictive analytics for institutional planning. Davenport and Ronanki (2018), posited that organizations that successfully integrate artificial intelligence into administrative functions experience improved productivity, faster decision-making, reduced operational costs, and enhanced service quality. Also, Brynjolfsson & McAfee (2020) argued that continuous innovation enables organizations to remain competitive in rapidly changing digital environments. Innovation also promotes organizational learning, adaptability, knowledge sharing, and continuous improvement. Nonaka and Takeuchi (2021) maintained that knowledge creation and innovation are mutually reinforcing processes that enable organizations to sustain competitive advantage through continuous learning.

In Nigerian tertiary institutions, innovation remains constrained by inadequate research funding, limited institutional autonomy, poor technological infrastructure, resistance to organizational change, and weak innovation ecosystems. Adebayo & Ojo (2022) argued that strengthening innovation culture requires visionary leadership, strategic investment in digital infrastructure, staff development programmes, and supportive institutional policies.

Digital Technologies Supporting Office and Information Management

Contemporary Office and Information Management depends on numerous emerging digital technologies that improve organizational efficiency and institutional effectiveness. Among the most widely adopted technologies are Enterprise Resource Planning (ERP) systems, Electronic Records Management Systems (ERMS), Cloud Computing, Artificial Intelligence (AI), Big Data Analytics, Learning Management Systems (LMS), Internet of Things (IoT), Blockchain Technology, Virtual Collaboration Platforms, Cybersecurity Systems and Robotic Process Automation (RPA). According to Laudon & Laudon (2022), ERP systems integrate multiple organizational functions into unified information systems that improve coordination, transparency, and decision-making. Cloud computing enables institutions to provide flexible, scalable, and cost-effective information services while supporting remote access and institutional collaboration. Artificial Intelligence increasingly supports automated scheduling, chatbot services, predictive analytics, intelligent document processing, examination management, and decision support systems. Davenport and Ronanki (2018) noted that AI significantly improves administrative efficiency by automating repetitive tasks and supporting data-driven decisions.

Equally, blockchain technology enhances records security, certificate verification, and institutional transparency, while big data analytics enables institutions to analyze student performance, resource utilization, and institutional trends for evidence-based planning.

Institutional Performance

Institutional performance denotes the extent to which organizations achieve their objectives efficiently and effectively while satisfying stakeholder expectations. Within tertiary institutions, institutional performance encompasses administrative efficiency, service quality, academic excellence, research productivity, financial accountability, stakeholder satisfaction, innovation capacity, and graduate employability. Kaplan & Norton (2020) postulated that institutional performance be evaluated using multiple dimensions, including internal processes, stakeholder satisfaction, innovation, learning, and financial sustainability while OECD (2021) argued that digitally transformed institutions demonstrate higher operational efficiency, improved governance, enhanced transparency, and better educational outcomes.

Modern Office and Information Management contributes significantly to institutional performance by reducing processing time, minimizing administrative errors, improving communication, strengthening information security, enhancing institutional accountability, and supporting strategic planning. Alenezi (2023) found out in his study that institutions with advanced digital administrative systems achieved significantly higher levels of operational efficiency, employee productivity, and stakeholder satisfaction than institutions relying on traditional administrative methods.

Innovation, Digital Transformation and Graduate Preparedness

Graduate preparedness is concerned with the acquisition of competencies, skills, knowledge, attitudes, and digital capabilities required for successful employment and lifelong learning. Employers increasingly demand graduates who possess digital literacy, problem-solving abilities, innovation competencies, communication skills, adaptability, critical thinking, and collaborative skills. As opined by the World Economic Forum (2023), technological advancement continues to redefine labour market requirements, making digital competencies among the most valuable employability skills globally. Consequently, tertiary institutions must integrate digital transformation into both academic and administrative processes to adequately prepare graduates for Industry 4.0 and the emerging digital economy. Also, UNESCO (2023), further emphasizes that digitally transformed educational institutions produce graduates who demonstrate stronger technological competence, innovation capability, information literacy, and adaptability to changing workplace environments.

In Nigeria, however, graduate employability remains affected by inadequate exposure to emerging technologies during university education. Nwosu and Eze (2024) report that many graduates possess theoretical knowledge but lack practical digital competencies required by employers due to limited integration of innovative technologies into institutional operations.

Strengthening innovation within Office and Information Management therefore contributes not only to institutional effectiveness but also to producing graduates capable of functioning effectively in knowledge-driven economies.

Theoretical Review

This study is anchored on the Technology Acceptance Model (TAM) and complemented by the Diffusion of Innovation Theory (2003). The Technology Acceptance Model explains that users' adoption of digital technologies depends primarily on perceived usefulness and perceived ease of use. Within tertiary institutions, students and staff are more likely to embrace innovative Office and Information Management technologies when they perceive these technologies as improving administrative efficiency, academic performance, and service delivery.

The Diffusion of Innovation Theory explains how innovations spread across organizations through communication, social systems, organizational culture, leadership support, and institutional readiness. The theory provides a useful framework for understanding variations in the adoption of digital transformation initiatives across Nigerian tertiary institutions. Together, these theories provide a robust framework for explaining the relationships among innovation, digital transformation, Office and Information Management practices, and institutional performance.

Methodology

The study adopted a descriptive survey research design. The study was conducted in three selected public tertiary institutions offering office and information programme in Ekiti State, Nigeria. The target population comprised 300 graduating students in the selected institutions. Graduating students constituted the human participants for this study because they had spent considerable time within their institutions and had sufficient exposure to both academic and administrative processes through industrial attachment thereby placing them in a suitable position to provide informed responses on the extent to which innovation and digital transformation practices had influenced Office and Information Management activities. Data were collected using four-point structured Likert-scale questionnaire titled "Advancing Office and Information Management through Innovation and Digital Transformation Questionnaire (AOIMIDTQ)." The instrument development process involved an extensive review of relevant literature, existing empirical studies, and the specific objectives and research questions guiding the study to generate items that adequately captured the constructs under investigation. To ensure the validity of the instrument, face and content validation were done through experts in Office and Information Management as well as specialists in Measurement and Evaluation, who examined the instrument for clarity, relevance, appropriateness, and adequacy of coverage

of the study variables. A pilot study involving respondents outside the study area was conducted to establish the reliability of the instrument, and the internal consistency of the questionnaire was determined using Cronbach's Alpha coefficient, with a reliability index of 0.70 which was considered acceptable for the study. Ethical considerations were strictly observed throughout the research process. Approval to conduct the study was obtained from the relevant institutional authorities, and informed consent was sought from all participants before data collection. Confidentiality, anonymity, and privacy of the respondents were safeguarded by ensuring that no personally identifiable information was collected or disclosed and that the information obtained was used solely for academic purposes. Data collected were analyzed using descriptive statistics. Specifically, mean scores were used to answer the research questions by determining respondents' levels of agreement with each item, while standard deviation was employed to ascertain the degree of variability in respondents' opinions. The hypotheses were tested using Regression and Pearson moment correlation coefficient. A decision benchmark of 2.50 was adopted such that mean scores of 2.50 and above indicated agreement, whereas mean scores below 2.50 indicated disagreement.

Analysis of Result

Research Question One: To what extent does digital transformation enhance Office and Information Management practices in public tertiary institutions in Ekiti State, Nigeria?

Extent to which Digital Transformation Enhances Office and Information Management Practices

Scale: Very High Extent (VHE) = 4, High Extent (HE) =3, Moderate (M) =2, Low Extent (LE)=1

S/N	Item statement	Mean	SD	Decision
1	Digital technologies have improved electronic records management in my institution.	3.28	0.84	High Extent
2	Digital transformation has enhanced communication between students, lecturers and administrative staff.	3.28	0.78	High Extent
3	The use of online administrative systems has improved the speed of service delivery in my institution.	3.25	0.82	High Extent
4	Digital technologies have made institutional information more accessible to students.	3.32	0.88	High Extent
5	Automation has improved the efficiency of Office and Information Management operations in my institution.	3.23	0.81	High Extent

6	Digital transformation has improved decision-making through effective information management.	3.22	0.80	High Extent
7	Digital transformation has significantly enhanced Office and Information Management practices in my institution.	3.30	0.85	High Extent
	Grand Mean	3.27		
	Grand SD		0.83	

Threshold: Any mean score of 2.50 and above was regarded as Accepted (High Extent), while any mean below 2.50 was regarded as Rejected (Low Extent).

The findings indicated that graduating students perceived digital transformation as having a high positive influence on Office and Information Management practices. The highest-rated item was "Digital technologies have made institutional information more accessible to students" (Mean = 3.32, SD = 0.88), suggesting that respondents acknowledged improvements in accessing academic records, online registration, examination results, and institutional communications through digital platforms. Also, respondents agreed that digital technologies have improved electronic records management (Mean = 3.28) and enhanced communication among students, lecturers, and administrative staff (Mean = 3.28). This implies that digital communication platforms, institutional portals, electronic filing systems, and online collaboration tools have contributed significantly to more efficient administrative processes. The result showed that respondents also perceived online administrative systems improved service delivery (Mean = 3.25) and that automation enhanced Office and Information Management operations (Mean = 3.23). These findings suggest that automation has reduced delays associated with manual processing while improving operational efficiency. Although digital transformation has improved decision-making through effective information management recorded the lowest mean (3.22), it still exceeded the acceptance benchmark, indicating respondents' recognition of the role of digital technologies in facilitating data-driven administrative decisions.

The standard deviations (0.78–0.88) indicated that respondents' opinions were fairly homogeneous, suggesting a high level of agreement among graduating students regarding the positive contributions of digital transformation to Office and Information Management. The grand mean of 3.27 demonstrates that digital transformation enhances Office and Information Management practices to a high extent within public tertiary institutions in Ekiti State, Nigeria.

Research Question Two: What innovative digital technologies are adopted for Office and Information Management operations in public tertiary institutions in Ekiti State, Nigeria?

Innovative Digital Technologies Adopted for Office and Information Management Operations.

Scale: Very High Extent (VHE) =4, High Extent (HE) =3, Moderate (M) =2, Low Extent (LE)

=1

S/N	Item statement	Mean	SD	Decision
1	Electronic Records Management Systems (ERMS) are adopted for managing institutional records and documents.	2.91	0.86	High Extent
2	Cloud computing technologies (e.g., cloud storage and cloud-based collaboration platforms) are adopted for Office and Information Management activities.	2.43	0.92	Low Extent
3	Learning Management Systems (LMS) are integrated into administrative and academic information management processes.	3.08	0.81	High Extent
4	Enterprise Resource Planning (ERP) or Student Information Management Systems are adopted to coordinate institutional administrative functions.	2.38	0.95	Low Extent
5	Digital communication and collaboration platforms (e.g., Microsoft Teams, Google Workspace, Zoom, institutional email) are widely adopted for official communication and office operations.	3.29	0.77	High Extent
6	Artificial Intelligence (AI)-enabled applications (e.g., chatbots, automated scheduling, intelligent document processing) are adopted for Office and Information Management activities.	1.94	0.89	Low Extent
7	Data analytics and business intelligence tools are adopted to support institutional planning and decision-making.	2.08	0.91	Low Extent
	Grand Mean (SD)	2.59	0.87	

Threshold: Mean scores of 2.50 and above were regarded as High Extent, while mean scores below 2.50 were regarded as Low Extent.

The results indicated that the adoption of innovative digital technologies for Office and Information Management operations in public tertiary institutions in Ekiti State is moderate, with a grand mean of 2.59, which is only slightly above the benchmark of 2.50. Among the technologies examined, digital communication and collaboration platforms

recorded the highest mean score ($M = 3.29$, $SD = 0.77$). This suggests that institutional email services, WhatsApp groups, Zoom, Google Meet, and similar communication platforms are the moderately utilized digital technologies for administrative communication and collaboration. Similarly, Learning Management Systems ($M = 3.08$, $SD = 0.81$) and Electronic Records Management Systems ($M = 2.91$, $SD = 0.86$) were adopted to a high extent. These technologies are increasingly adopted for online teaching, course administration, student registration, examination processing, and electronic storage of institutional documents, although implementation varies considerably across institutions. Conversely, respondents indicated a low extent of adoption for cloud computing technologies ($M = 2.43$, $SD = 0.92$) and Enterprise Resource Planning systems ($M = 2.38$, $SD = 0.95$). This suggests that while some cloud-based services and integrated management systems exist, their deployment remains limited and fragmented.

The least adopted technologies were Artificial Intelligence applications ($M = 1.94$, $SD = 0.89$) and data analytics/business intelligence tools ($M = 2.08$, $SD = 0.91$). These findings indicated that advanced digital technologies are still largely absent from Office and Information Management operations in most public tertiary institutions within the study area. The standard deviation values, ranging from 0.77 to 0.95, indicate relatively close agreement among respondents regarding the current level of technology adoption.

Research Question Three: How do graduating students perceive the effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery in public tertiary institutions in Ekiti State, Nigeria?

Graduating Students' Perceptions of the Effectiveness of Innovation and Digital Transformation Initiatives

Scale: Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2, Strongly Disagree (SD) =1

S/N	Item statement	Mean	SD	Decision
1	Innovation and digital transformation initiatives have improved administrative efficiency in my institution.	2.78	0.92	Agree
2	Digital transformation has made institutional information easily accessible to students whenever needed.	2.65	0.88	Agree
3	The use of digital technologies has improved the quality and speed of service delivery in my institution.	2.70	0.90	Agree

4	Digital platforms have enhanced communication and collaboration between students, lecturers, and administrative staff.	2.55	0.95	Agree
5	Innovation in Office and Information Management has increased transparency and accountability in institutional administrative processes.	2.62	0.89	Agree
6	The digital services provided by my institution have positively improved my overall academic experience and satisfaction.	2.40	0.97	Disagree
7	Overall, innovation and digital transformation initiatives have effectively enhanced Office and Information Management practices in my institution.	2.68	0.91	Agree
	Grand Mean (SD)	2.62	0.92	

Threshold: Mean scores of 2.50 and above were regarded as Agree, while mean scores below 2.50 were regarded as Disagree.

The findings showed a moderate to low perception of effectiveness, with a grand mean of 2.62, indicating that while digital transformation exists in public tertiary institutions in Ekiti State, its functional impact on students' experiences is limited and uneven. The highest-rated item, administrative efficiency ($M = 2.78$), suggests that some improvements are noticeable, particularly in isolated functions such as online registration or result checking. However, these improvements are not system-wide. Importantly, communication and collaboration through digital platforms recorded one of the lowest mean scores ($M = 2.55$), reflecting the reality that institutional email systems, LMS platforms, and virtual meeting tools are irregularly used, poorly maintained, or not fully integrated into daily academic life. More critically, students' academic experience and satisfaction recorded a mean below the acceptance threshold ($M = 2.40$), indicating dissatisfaction and minimal perceived benefit. This suggests that digital tools have not yet translated into meaningful academic or administrative value for most students. The value of the standard deviations (0.88–0.97) indicate divergent experiences, meaning that while a small group of students in better-served departments or institutions experience some benefits, a larger proportion do not.

Research Question Four: What strategies can be adopted to strengthen innovation and digital transformation in Office and Information Management practices to improve graduate preparedness for the twenty-first-century labour market in public tertiary institutions in Ekiti State, Nigeria?

Strategies for Strengthening Innovation and Digital Transformation in Office and Information Management Practices

Scale: Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2, Strongly Disagree (SD) =1

S/N	Item statement	Mean	SD	Decision
1	Public tertiary institutions should invest more in modern digital infrastructure to improve Office and Information Management practices.	3.50	0.72	Agree
2	Regular digital literacy and professional development programmes should be organized for students, lecturers, and administrative staff.	3.47	0.73	Agree
3	Emerging digital technologies such as Artificial Intelligence (AI), cloud computing, and data analytics should be fully integrated into Office and Information Management operations and curricula.	3.43	0.76	Agree
4	Government and institutional management should provide adequate funding to support innovation and digital transformation initiatives.	3.52	0.71	Agree
5	Strong institutional policies should be developed to promote continuous digital innovation, cybersecurity, and effective information management.	3.42	0.77	Agree
6	Collaboration between tertiary institutions and industry should be strengthened to expose students to emerging workplace technologies and digital skills.	3.47	0.74	Agree
7	Office and Information Management curricula should be regularly reviewed to align with twenty-first-century labour market demands and digital transformation trends.	3.53	0.70	Agree
	Grand Mean (SD)	2.62	0.92	

Threshold: A mean score of 2.50 and above was regarded as Agreed, while a mean score below 2.50 was regarded as Disagreed.

The results indicated a grand mean of 3.48 and a standard deviation of 0.73, showing that respondents strongly agreed that the identified strategies are essential for strengthening innovation and digital transformation in Office and Information Management practices. The proposed strategies, regular review of the Office and Information Management curriculum to align with twenty-first-century labour market demands and digital

transformation trends recorded the highest mean score (Mean = 3.53, SD = 0.70). This suggests that respondents consider curriculum modernization essential for equipping graduates with contemporary digital competencies and workplace skills. The second strategy was adequate funding by government and institutional management to support innovation and digital transformation initiatives (Mean = 3.52, SD = 0.71). This reflects respondents' recognition that sustainable financial investment is necessary for acquiring digital infrastructure, upgrading technological facilities, and implementing innovation projects. Respondents also highly rated investment in modern digital infrastructure (Mean = 3.50, SD = 0.72), indicating the perceived importance of reliable internet connectivity, computer laboratories, cloud computing facilities, smart classrooms, digital libraries, and integrated information systems.

Similarly, regular digital literacy and professional development programmes (Mean = 3.47, SD = 0.73) and stronger collaboration between tertiary institutions and industry (Mean = 3.47, SD = 0.74) were highly endorsed, suggesting that continuous capacity building and practical industry exposure are considered vital for enhancing graduate employability. The integration of Artificial Intelligence, cloud computing, and data analytics into Office and Information Management operations and curricula also recorded a high mean score (Mean = 3.43, SD = 0.76), reflecting respondents' recognition of the growing importance of emerging technologies in modern workplaces. The strategy relating to institutional policies promoting continuous digital innovation, cybersecurity, and effective information management also received strong support (Mean = 3.42, SD = 0.77), emphasizing the importance of governance frameworks in sustaining digital transformation initiatives. The standard deviation values (0.70–0.77) indicated a high level of consensus among respondents regarding the relevance of these strategies.

Testing of Hypothesis

H₀₁: There is no significant difference between enhanced digital transformation in Office and Information Management practices and the perceived effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery in public tertiary institutions in Ekiti State, Nigeria.

Multiple regression analysis showing the effect of enhanced digital transformation on perceived effectiveness of innovation and digital transformation initiatives

Variable	Coefficients (β)	Standard Error (S.E)	t-value	p-value	95% Confidence Interval	Decision
Intercept (Constant)	6.84	2.21	3.09	0.00	[2.47, 11.21]	Significant
Enhanced Digital Transformation in OIM Practices	0.68	0.11	6.18	0.000	[0.46, 0.90]	Significant

Model Summary: $R^2 = 0.58$

Adjusted $R^2 = 0.57$

$F(1, 298) = 38.22, p < 0.05$

$N = 300$

Decision: Since the p-value (0.000) is less than the 0.05 level of significance, the null hypothesis (H_{01}) is rejected.

The regression analysis revealed that enhanced digital transformation in Office and Information Management practices has a significant positive effect on students' perceived effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery. The beta coefficient ($\beta = 0.68$) indicates that a unit increase in digital transformation practices leads to a corresponding increase in perceived effectiveness of institutional digital initiatives. The coefficient of determination ($R^2 = 0.58$) shows that 58% of the variation in perceived effectiveness is explained by enhanced digital transformation in Office and Information Management practices, while the remaining 42% is attributed to other external factors such as infrastructure, staff competence, and institutional policy. The finding supports the view that although digital transformation is not fully mature in many institutions, it still plays a statistically meaningful role in shaping user perceptions of administrative effectiveness.

H_{02} : There is no significant relationship between the adoption of innovative digital technologies and graduating students' preparedness for the twenty-first-century labour market in public tertiary institutions in Ekiti State, Nigeria.

Correlation analysis between adoption of innovative digital technologies and graduate preparedness

Variables	Adoption of Digital Technologies	Graduate Preparedness
Adoption of Digital Technologies	1.00	0.61**
Graduate Preparedness	0.61**	1.00
N	300	300

Note: Correlation is significant at the 0.01 level (2-tailed)

Decision: The correlation coefficient ($r = 0.61$) is positive and statistically significant ($p < 0.01$). Therefore, the null hypothesis (H_{02}) is rejected.

The result indicated a moderate positive relationship between the adoption of innovative digital technologies and graduating students' preparedness for the twenty-first-century labour market. This implies that as institutions adopt more digital tools such as Learning Management Systems, electronic records systems, and communication platforms, students gradually develop stronger digital competencies, workplace readiness, and adaptability. However, the relationship is not very strong ($r = 0.61$), suggesting that digital technology adoption alone is not sufficient to guarantee full graduate preparedness. Other contributing factors such as quality of instruction, digital literacy training, infrastructure stability, and curriculum relevance also play significant roles.

Discussion of Findings

The findings indicated that digital transformation enhances Office and Information Management practices in public tertiary institutions to a moderate extent, with noticeable improvements in information accessibility, communication, and basic administrative processes. This is consistent with Bond et al. (2018), Laudon & Laudon (2022), and Vial (2019), who emphasized that digital technologies improve organizational efficiency by strengthening information flow, communication systems, and decision-making processes. Similarly, improvements in electronic records management aligned with ISO 15489 (2022), which highlighted the role of digital record systems in enhancing accountability, transparency, and institutional memory, although the OECD (2021) noted that such benefits are often constrained in developing contexts by infrastructural and capacity limitations.

Furthermore, the findings revealed that the adoption of digital technologies is uneven and largely concentrated on basic systems while advanced technologies remain minimally adopted. This pattern is supported by Bond et al. (2018) and UNESCO (2023), who observed

that institutions tend to adopt simpler technologies first due to affordability and ease of use, while more complex systems require stronger infrastructure and institutional readiness. Studies by Davenport & Ronanki (2018) and OECD (2021) further explained that limited technical expertise, financial constraints, and weak ICT infrastructure account for the slow adoption of advanced digital innovations in many developing countries, including Nigeria. From a theoretical and contextual standpoint, the findings aligned with the Technology Acceptance Model (TAM) by Fred Davis (1989), which explained that technology adoption is driven by perceived usefulness and ease of use. This is reflected in the higher acceptance of simpler digital tools such as email systems and LMS platforms, compared to more complex technologies like AI and data analytics, which require higher technical competence and institutional support. The findings also corroborated the view of Okoye, Nwosu, & Eze (2023), who reported that digital transformation in Nigerian tertiary institutions remains uneven, with many institutions still at the early stage of adoption. Overall, the evidence suggests that while digital transformation is progressing, it remains partial, fragmented, and constrained by structural and institutional challenges.

Additionally, the findings aligned with Everett Rogers' Diffusion of Innovation Theory, which explains that innovations spread gradually within social systems depending on their complexity, cost, and compatibility with existing structures. The results suggest that public tertiary institutions in Ekiti State are still at the early-to-middle stage of digital transformation, where simpler and more affordable technologies such as communication platforms and basic records systems have diffused more rapidly than complex systems requiring higher investment and technical capacity. This gradual adoption pattern reflects uneven institutional readiness and limited integration of advanced digital tools.

The findings indicated that strengthening innovation and digital transformation in Office and Information Management requires a combination of strategic interventions, including improved infrastructure, curriculum reform, adequate funding, policy development, staff development, and industry collaboration. The finding is in agreement with UNESCO (2023) and the World Economic Forum (2023) that stressed the importance of curriculum modernization and the development of digital literacy, analytical thinking, and adaptability as core graduate competencies. Similarly, OECD (2021) and Laudon and Laudon (2022) highlighted that sustainable digital transformation depends on adequate funding and robust ICT infrastructure, which form the backbone of effective information management systems. The importance of continuous training and industry collaboration is also reinforced by Rainer and Prince (2021) and Adebayo and Ojo (2022), who emphasized that digital skills development and real-world exposure are critical for bridging the gap between academic training and workplace expectations.

From a technological and theoretical standpoint, the findings align with Davenport and Ronanki (2018), who argued that emerging technologies such as Artificial Intelligence,

cloud computing, and data analytics are reshaping organizational processes and improving decision-making efficiency. The recommendation for strong institutional policies is supported by ISO 15489:2022, which underscores the importance of governance frameworks for cybersecurity, records management, and information integrity. The findings also aligned with Fred Davis' Technology Acceptance Model, which suggested that adoption of digital systems is enhanced by perceived usefulness and ease of use, and with Rogers' Diffusion of Innovation Theory, which explains that effective diffusion depends on leadership, readiness, and supportive institutional structures. Overall, the results indicated that successful digital transformation in tertiary institutions requires a holistic, coordinated, and well-supported approach.

The result revealed that enhanced digital transformation in Office and Information Management practices has a significant positive effect on students' perceived effectiveness of innovation and digital transformation initiatives in enhancing administrative efficiency, information accessibility, and service delivery. The result agrees with Vial (2019), who conceptualized digital transformation as a driver of operational improvement through the integration of digital technologies into administrative systems. It also aligns with Laudon and Laudon (2022), who emphasized that even partial digital system integration improves organizational efficiency and service delivery outcomes. However, the moderate R^2 value (0.58) reflects the reality observed in many Nigerian tertiary institutions where digital transformation is not fully integrated, meaning its impact is significant but not comprehensive. The finding is also consistent with UNESCO (2023) which noted that digital transformation improves administrative responsiveness and access to information, but outcomes depend heavily on infrastructure and implementation quality. From a theoretical standpoint, the result supports the Technology Acceptance Model (TAM) by Fred Davis, which suggested that perceived usefulness of digital systems increases positive evaluation of institutional processes.

The result indicated a moderate positive relationship between the adoption of innovative digital technologies and graduating students' preparedness for the twenty-first-century labour market. The finding aligned with World Economic Forum (2023) which emphasized that digital exposure in education improves employability skills such as critical thinking, digital literacy, and problem-solving. It is also in agreement with the view of UNESCO (2023) which reported that institutions integrating digital technologies into learning environments enhance student readiness for modern labour markets. Similarly, Rainer and Prince (2021) noted that exposure to digital tools in academic environments strengthens students' adaptability to workplace technologies. The result is also consistent with OECD (2021) which found that digital technology adoption in higher education improves graduate outcomes, but effectiveness depends on depth of integration and institutional readiness. From a theoretical perspective, the result supports the Diffusion of Innovation Theory by

Everett Rogers, which explains that the benefits of innovation become stronger as adoption becomes more widespread and effectively implemented. The moderate correlation reflects a system still in the early-to-mid diffusion stage.

Conclusion

The study established that digital transformation has contributed positively to Office and Information Management practices in public tertiary institutions by improving records management, communication systems, information accessibility, administrative efficiency, service delivery, and decision-making processes. However, these improvements are not yet fully optimized, as institutions still require continuous investment in ICT infrastructure, digital competencies, institutional policies, and emerging technologies to achieve more comprehensive and sustainable transformation aligned with global standards. Public tertiary institutions however, was found to have made noticeable but uneven progress in adopting innovative digital technologies for Office and Information Management operations. With the integration of basic digital tools into administrative and academic processes, the adoption of advanced technologies remains limited, necessitating stronger investment in infrastructure, staff development, funding, and innovation-driven policies. These measures are essential for deepening digital transformation and improving overall institutional efficiency and competitiveness. In addition, graduating students now perceive innovation and digital transformation initiatives as beneficial, particularly in enhancing administrative efficiency, information access, communication, transparency, and service delivery. Nevertheless, the impact on overall student experience and graduate preparedness remains moderate, indicating the need for sustained improvements and consequently, a holistic approach involving curriculum modernization, capacity building, industry collaboration, and strategic policy implementation for optimize digital transformation and better preparedness of graduates for the demands of the twenty-first-century labour market.

Recommendations

- Government and institutional authorities should strengthen digital infrastructure and ensure improved system integration to enhance the extent to which digital transformation supports Office and Information Management practices in public tertiary institutions.
- Institutions should also prioritize the consolidation and effective utilization of innovative digital technologies such as ERP systems, learning management platforms, cloud-based services, and electronic records systems to improve administrative efficiency, information accessibility, and service delivery.

- Regular capacity building and digital literacy training should be implemented for both staff and students by institutions, as this will improve users' competence and positively influence graduating students' perceptions of the effectiveness of innovation and digital transformation initiatives.
- Curriculum review should be done regularly by curriculum planner while adequate funding should be institutionalized as strategic measures to strengthen innovation and digital transformation in Office and Information Management
- Strong policy support by government and industry/institution collaboration should be enforced to improve graduate preparedness for the twenty-first-century labour market.

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