

DIGITAL TRANSFORMATION INITIATIVES FOR EFFECTIVE DIGITAL LITERACY SKILLS AMONG FACULTY MEMBERS IN IBRAHIM BADAMASI BABANGIDA UNIVERSITY, LAPAI, NIGER STATE, NIGERIA

By

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Abstract

This study investigated the digital transformation initiatives for effective digital literacy skills among faculty members in Ibrahim Badamasi Babangida University, (IBBU), Lapai. The objectives were to examine the types of digital transformation initiatives implemented, assess the level of digital literacy skills among faculty members, evaluate the influence of digital transformation on skill acquisition, and identify challenges faced in utilizing digital tools and platforms. A descriptive survey design was adopted, and data were collected from 228 faculty members using a structured questionnaire. Findings revealed a moderate level of digital transformation implementation (overall mean = 2.65), with strong adoption in areas such as electronic examinations and administrative digitalisation, but low implementation in systems like automated library management and institutional repositories. Faculty members demonstrated a high level of digital literacy (mean = 3.28), particularly in using Microsoft Office tools, managing digital files, and conducting digital research. A significant positive correlation ($r = 0.71$, $p < 0.05$) was found between digital transformation initiatives and the acquisition of digital literacy skills. However, several challenges were identified, including inadequate internet access, insufficient training, poor power supply, and limited access to personal digital devices. The study concludes that while digital transformation at IBBU has positively influenced faculty digital competence, uneven implementation and infrastructural challenges must be addressed to ensure sustainable digital integration in higher education. Recommendations include expanding digital training programs, investing in ICT infrastructure, and enhancing institutional support systems.

Keywords: *Digital transformation, digital literacy skills, faculty members, higher education, IBBU Lapai, ICT integration*

Introduction

Digital transformation has emerged as a critical driver of innovation and efficiency in higher education institutions worldwide.

It encompasses the integration of digital technologies into all aspects of institutional operations, particularly in teaching, learning, research, and administrative

services (Yemini, 2021). In this digital era, the development of digital literacy skills has become indispensable for faculty members who are at the forefront of knowledge dissemination and scholarly activities. The types of digital literacy skills are as follows: Information Literacy: The ability to locate, evaluate, and use digital information effectively. It involves identifying credible sources, recognizing misinformation, and synthesizing digital content; Media Literacy: Understanding how digital media is created and consumed, including interpreting messages in videos, social media, and news, and recognizing bias, propaganda, or manipulation; ICT Literacy (Information and Communication Technology Literacy): Proficiency in using digital tools such as computers, mobile devices, and software to access, manage, and communicate information; and Digital Safety and Security: Understanding how to protect personal data, avoid cyber threats such as phishing, malware, use strong passwords, and maintain privacy online (Ng, 2012).

Digital literacy refers to the ability to effectively locate, evaluate, use, and create information using digital technologies (Ng, 2012). The implementation of digital transformation initiatives in universities, therefore, has profound implications on the digital competencies of academic staff. In Nigeria, universities are increasingly adopting digital transformation strategies such as Learning Management Systems (LMS), virtual classrooms, electronic libraries, digital research platforms, and institutional repositories to enhance academic processes and service delivery (Adeleke & Oyelude, 2020). These initiatives aim not only to modernize institutional frameworks but also to foster digital fluency among faculty members.

However, the success of such initiatives largely depends on the digital literacy levels of academic staff, which in turn influence their engagement with digital tools and pedagogical innovations (Obi, 2022).

Thus, there is a growing need to evaluate how digital transformation initiatives impact the digital literacy skills of university faculty. At Ibrahim Badamasi Babangida University (IBBU), Lapai, the administration has made commendable strides in implementing digital technologies, including the deployment of e-learning platforms, digitized administrative services, and access to electronic databases and repositories. These efforts are part of broader digital transformation objectives aimed at improving the quality of education and research output. However, the extent to which these initiatives influence the digital literacy of faculty members remains underexplored. Digital transformation initiatives are as follows:

1. Cloud Computing Adoption: Organisations migrate from traditional on-premises IT systems to cloud-based platforms, examples are Microsoft Azure, and Google Cloud (Marston, et al. 2011).
2. E-Government and E-Services: Governments digitize public services such as tax filing, license applications, and social welfare distribution (United Nations, 2022).
3. Digital Learning Platforms: Educational institutions implement platforms like Moodle, Google Classroom, or Canvas to support online learning and digital pedagogy (OECD, 2020).
4. Cybersecurity Enhancement: Implementing robust security

measures such as firewalls, encryption, and multi-factor authentication to protect digital assets (Bayuk, 2012).

5. Digital Inclusion Programs: Governments and NGOs provide internet access, digital skills training, and affordable devices to underserved communities (UNESCO, 2021).

Understanding this influence is vital, as faculty members are expected to adapt to evolving educational technologies, deliver digital content, and guide students in the responsible use of digital tools. Existing literature highlights that while digital transformation has the potential to enhance teaching efficiency and academic productivity, it also poses challenges related to technological adaptation, digital divide, training gaps, and institutional support (Almarzooq, Lopes, & Kochar, 2020; Adebayo & Abdulrahman, 2021). Faculty members may struggle to harness the full benefits of digital initiatives without adequate digital skills and ongoing professional development. Therefore, investigating the relationship between digital transformation efforts and digital literacy skill acquisition becomes crucial for institutional planning, policy formulation, and capacity-building programs. This study seeks to assess the influence of digital transformation initiatives on the digital literacy skills of faculty members in IBB University, Lapai.

Statement of the Problem

The integration of digital technologies in higher education institutions has become increasingly essential in response to global educational trends, the demands of the digital economy, and the need for more effective teaching and research

methodologies (Yemini, 2021). Digital technology encompasses a wide range of devices and application that use digital signals to perform task, examples are: smartphones, computer and laptops, tablets, smart TVs, and home assistant. In Nigeria, many universities including Ibrahim Badamasi Babangida University (IBBU), Lapai, have embarked on various digital transformation initiatives to enhance academic and administrative operations. These initiatives include the adoption of Learning Management Systems (LMS), digital libraries, institutional repositories, and online communication tools, all of which are expected to improve efficiency and foster a technology-driven academic culture (Adeleke & Oyelude, 2020). However, the success of these digital transformation efforts hinges significantly on the digital literacy skills of faculty members. Without adequate digital competencies, faculty may find it challenging to integrate digital tools into teaching, conduct research using electronic resources, or fully engage with institutional digital platforms (Ng, 2012; Obi, 2022). Despite the fact that digital transformation aims to enhance digital literacy, there is limited empirical evidence on the extent to which these initiatives have actually improved the digital competencies of academic staff, particularly in Nigerian public universities.

Over the years, many Nigerian universities have made a notable investment in ICT infrastructure and digital platforms, however, the anecdotal evidence suggests that many faculty members continue to face challenges related to digital literacy, including limited familiarity with digital teaching tools, lack of confidence in using e-resources, and insufficient training or professional development opportunities

(Adebayo & Abdulrahman, 2021). These gaps may hinder the effective utilisation of digital systems and compromise the intended benefits of digital transformation. Moreover, there is a scarcity of empirical studies that evaluate the impact of digital transformation initiatives on faculty digital literacy within the Nigerian institutions, especially in less urbanized regions such as Lapai. Most existing studies offer broad national perspectives or focus on student populations, leaving a significant gap in understanding the faculty experience. This gap is particularly concerning given the critical role faculty play in implementing digital education strategies and fostering student digital competence. Therefore, it is in the view of this that it becomes imperative to assess the influence of digital transformation initiatives on faculty members' for effective digital literacy skills at IBBU, Lapai.

Objectives of the Study

The broad objective of this study is to examine influence of digital transformation initiatives on digital literacy skills among the faculty members at Ibrahim Badamasi Babangida University, Lapai. The study will specifically:

1. To identify the types of digital transformation initiatives implemented at Ibrahim Badamasi Babangida University, Lapai.
2. To assess the level of digital literacy skills among faculty members at Ibrahim Badamasi Babangida University, Lapai.
3. To determine the influence of digital transformation initiatives on faculty members' acquisition and application of digital literacy skills.
4. To establish the challenges encountered in adopting and

utilizing digital tools through digital transformation initiatives.

Research Questions

The study will provide answer to the following research questions

1. What are the types of digital transformation initiatives implemented at Ibrahim Badamasi Babangida University, Lapai?
2. What is the level of digital literacy skills among faculty members at Ibrahim Badamasi Babangida University, Lapai?
3. What is the influence of digital transformation initiatives on faculty members' acquisition and application of digital literacy skills?
4. What are the challenges encountered in adopting and utilizing digital tools through digital transformation initiatives?

Hypothesis

Ho1 Digital transformation initiatives participation will not have significant influence on the digital literacy skills of faculty members at Ibrahim Badamasi Babangida University, Lapai.

Scope of the Study

This study focused on influence of digital transformation initiatives on the digital literacy skills of faculty members at Ibrahim Badamasi Babangida University (IBBU), Lapai. Geographically, the study is limited to IBBU's main campus in Lapai, Niger State, and does not extend to any of its affiliated institutions or outreach centers. The study covers academic staff across all faculties within the university, including junior and senior lecturers, readers, and professors. It does not include non-teaching staff or students, as the primary concern is

with those directly responsible for academic delivery and research output. The investigation is restricted to full-time faculty members currently employed at the time of data collection. Also, questionnaire is the only instrument used to collect data from the respondents while data collected was analysed using frequency counts, percentages, mean and Pearson Product Moment Correlations.

Review of Related Empirical Literature

Several studies have explored the digital transformation initiatives that Nigerian universities have adopted to enhance academic delivery, research, and administrative functions. For example, Adeoye and Popoola (2020) reported that many Nigerian universities, including federal and state institutions, have integrated platforms such as Moodle, Blackboard, and Google Classroom to facilitate course delivery and student engagement. This move gained further momentum during the COVID-19 pandemic, which necessitated remote teaching and learning (Oyelere, Adeyinka, & Ojo, 2021). These platforms allow faculty to upload lecture materials, administer assessments, and interact virtually with students. In the same vein, Ajiboye and Ekundayo (2019) reported how Nigerian universities have developed digital collections, archives, and repositories that provide faculty and students access to scholarly resources electronically. The adoption of open-source software such as DSpace and Koha is prevalent for managing these resources, improving research accessibility and knowledge sharing (Aina, 2016). Research by Ezeani and Ugwu (2020) identifies the introduction of integrated administrative systems, including student information management systems, staff payroll automation, and electronic document management. These ICT

solutions aim to improve efficiency, transparency, and record-keeping in university operations. These systems also enable online registration, examination processing, and results management, reducing bureaucratic delays. A study by Onyancha and Maluleka (2019) revealed that faculty and students increasingly use social media platforms and collaborative tools such as WhatsApp, Telegram, Zoom, and Microsoft Teams to complement formal teaching and research activities. The researchers explained further that these technologies serve as informal but powerful channels for communication, information dissemination, and academic collaboration in Nigerian universities.

On the on the level of digital literacy skills among faculty members, many empirical studies have investigated the digital literacy skills of faculty members in Nigerian tertiary institutions by highlighting different levels of competence and factors influencing their digital proficiency. For example, Olufunmilayo and Akinola (2019) conducted a study on the digital literacy competencies of university lecturers in southwestern Nigeria. Their findings revealed that while most faculty members demonstrated basic digital skills such as word processing and internet browsing, there was a significant deficiency in advanced digital skills like using Learning Management Systems (LMS) and digital content creation. Similarly, Ibrahim and Bello (2020) assessed digital literacy levels among lecturers in Nigerian universities and reported moderate digital literacy levels overall. The study found that younger faculty members and those in science-related disciplines possessed higher digital literacy compared to their older and humanities counterparts. The researchers attributed this disparity to differences in

exposure and access to digital tools during academic and professional training. In a study focused on faculty members at a federal university in northern Nigeria, Abubakar and Musa (2021) examined digital literacy and its impact on teaching effectiveness. The authors found that while most faculty had functional digital skills, many struggled with integrating digital tools into lecturing. Oyetunde and Adeyemi (2018) explored the digital literacy of lecturers in Nigerian private universities and discovered a moderate level of digital skills. Chukwuemeka and Nwankwo (2017) conducted a survey across multiple Nigerian universities and reported that majority of faculty members were familiar with basic ICT tools (email, word processing, and internet search), and they were competent in using digital platforms for research dissemination, online assessment, or virtual collaboration. Adeyinka and Olaniyan (2022) presented a more optimistic view based on their study at a technologically progressive university in southwestern Nigeria. They found that with targeted digital transformation initiatives, faculty members showed significant improvements in digital literacy, particularly in using e-learning platforms and academic databases.

On the influence of digital transformation initiatives on faculty members' acquisition and application of digital literacy skills, numerous empirical studies have investigated how digital transformation initiatives within higher education institutions impact faculty members' acquisition and application of digital literacy skills. For example, Salmon (2019) found that institutions that invested in structured digital transformation programs reported a statistically significant improvement in faculty digital competencies, particularly in

areas such as online content creation, digital communication, and data management. Similarly, Jain and Kumar (2021) revealed through a survey of 300 faculty members across multiple universities that those engaged in digital transformation initiatives scored higher on digital literacy assessments compared to those in institutions with limited digital infrastructure. This supports the idea that exposure and hands-on involvement with digital tools are critical for skill acquisition. Mishra and Pandey (2020) documented that faculty who participated in digital literacy training as part of a broader transformation effort were more likely to integrate digital tools into their curriculum design, assessment, and student engagement strategies. Their study using mixed methods across five Indian universities demonstrated a positive correlation between digital literacy proficiency and innovative teaching practices, such as flipped classrooms and interactive webinars.

Wang, Liu, and Chen (2022) reported that digital transformation initiatives enhanced faculty members' confidence and motivation to adopt blended and fully online teaching modes. This was associated with improved student learning outcomes and greater faculty satisfaction. Adewale and Akinlade (2021) conducted a survey across federal universities in southwestern Nigeria and reported that digital transformation initiatives were key predictors of faculty members' acquisition of digital literacy skills. They emphasised that such initiatives bridged knowledge gaps, fostering better engagement with digital academic resources. In a study by Okeke and Eze (2021), faculty members who underwent training in digital technologies under their universities' digital transformation projects reported higher utilisation of digital tools

such as LMS, online assessment platforms, and e-journals in their teaching and research. The study, involving 250 faculty from universities in southeastern Nigeria, concluded that digital literacy directly influenced the effective integration of digital tools in curriculum delivery.

The rapid integration of digital transformation in Nigerian universities activities has several challenges that faculty members encounter in adopting and effectively utilizing digital tools and platforms. A major challenge repeatedly cited by Nigerian scholars is the poor ICT infrastructure available to faculty members. This includes insufficient computer hardware, unreliable internet connectivity, limited bandwidth, and frequent power outages, which undermine consistent access to digital tools (Adewale & Adeoye, 2019; Adeoye & Popoola, 2020). For instance, Adeoye and Popoola (2020) found that lecturers often struggle with unstable internet service and lack of adequate digital devices, severely limiting their ability to engage with Learning Management Systems (LMS) and digital research platforms. Many faculty members in Nigerian universities face a skills gap that hampers their ability to effectively use digital platforms. Studies reveal that lecturers often lack formal training in digital literacy, resulting in low confidence and limited competency in utilizing e-learning tools, digital research databases, and online communication technologies (Ojo & Adegoke, 2021; Ajadi & Salawu, 2020). Ajadi and Salawu (2020) emphasized that insufficient professional development opportunities and training programs leave many academics ill-prepared for the demands of digital teaching. Resistance to adopting new digital technologies is another significant barrier.

Some faculty members exhibit reluctance to change due to comfort with traditional pedagogical methods or skepticism about the benefits of digital tools (Owolabi & Ogunlade, 2017). This attitude is compounded by anxiety over the complexity of digital platforms and fear of obsolescence. Oladele and Olaniyi (2018) noted that negative perceptions and low motivation hinder active engagement with digital transformation initiatives. Economic factors also limit faculty members' access to personal digital devices such as laptops or smartphones and the ability to afford internet data plans for off-campus access (Adewale & Adeoye, 2019). Many academics depend on institutional resources that are often insufficient or poorly maintained. Financial limitations at both the individual and institutional levels curtail the full utilisation of digital tools (Olaniyi & Oladele, 2018).

Methodology

This study employed a descriptive survey research design to investigate the influence of digital transformation initiatives on the digital literacy skills of faculty members at Ibrahim Badamasi Babangida University (IBBU), Lapai. The choice of this design is based on its suitability for gathering information from a large population at a particular time and for describing existing conditions without manipulating any variables. The population of the study comprised all academic staff across the various faculties in IBBU, Lapai. These include full-time lecturers from junior to senior cadre, covering diverse disciplines to ensure broad representation. As at 2024/2025 academic session, the total number of faculty members in IBBU, Lapai is 734 (Academic Planning Unit, 2025). A stratified random sampling technique was

employed to select respondents from different faculties. This approach ensured that each faculty was proportionately represented, thus enhancing the generalizability of the findings across the institution. A sample size of 245 faculty members was determined using the Taro Yamane formula for sample size determination, taking into account the total number of academic staff at the university. Out of 245 copies of the questionnaire administered, 228 copies of the question were completely filled and returned which gives 93.1% response rate. Data for the study were collected using a structured questionnaire developed by the researcher. The questionnaire was divided into two parts: Part A covered demographic information of respondents while Part B was further divided into five sections to capture data on the research questions of the study. The questionnaire was validated by experts in educational technology and information

science to ensure content validity, while a pilot study was conducted with 20 academic staff from a Federal University of Technology, Mina to test the reliability of the instrument. The reliability coefficient, determined using Cronbach's Alpha, was 0.83, indicating a high level of internal consistency. Data collected were analysed using both descriptive and inferential statistical techniques. Descriptive statistics such as frequency counts, percentages, and mean were used to summarize respondents' demographic characteristics and responses to questionnaire items. Inferential statistics, specifically Pearson Product Moment Correlation was employed to test the only null hypothesis of the study. All analyses were carried out using the Statistical Package for Social Sciences (SPSS), version 26. A significance level of 0.05 was used to determine the acceptance or rejection of the research hypothesis.

Data Presentation and Analysis

Demographic Information of the Respondents

Table 1: Demographic Information of the Respondents

Gender	Frequency	Percentage
Male	137	60.1
Female	91	39.9
Total	228	100
Age		
20-29	54	23.7
30-39	69	30.3
40-49	82	36.0
50 and above	23	10.1
Total	228	100
Academic Carder		
Professor	2	0.9
Reader	18	7.9
Senior Lecturer	39	17.1
Lecturer I	71	31.1
Lecturer II	47	20.6
Assistant Lecturer	51	22.4
Total	228	100

The results in Table 1 revealed the demographic information of the respondents. The results showed that out of 228 faculty members surveyed, 137 (60.1%) were male while 91 (39.9%) were female. This means that majority of the respondents were male. Based on the age distribution of the respondents. The results showed that majority of respondents fall within the 30–49 age range, representing 66.3% of the sample. This suggests a relatively young to mid-career academic workforce. The smallest group is the 50+ age bracket, implying either fewer older faculty members

or a growing trend of younger academic staff joining the university. This demographic is favorable for digital transformation efforts, as younger academics are generally more receptive to digital tools. On the academic cadre (rank) of the respondents, the results showed that majority of the faculty members are mid-level to junior academic staff, that is, Lecturer I, Lecturer II, and Assistant Lecturer together make up 74.1% of the respondents while only 8.8% (Professor and Reader combined) are in senior academic positions.

Research Question 1: What are the types of digital transformation initiatives implemented at Ibrahim Badamasi Babangida University, Lapai?

Table 2: Types of Digital Transformation Initiatives Implemented at IBBU, Lapai

S/N	Statement	SA	A	D	SD	Mean
1	Learning Management Systems (e.g., Moodle, Canvas)	73 (32.0%)	95 (41.7%)	21 (9.2%)	39 (17.1%)	2.86
2	Deployment of electronic examination and assessment platforms	115 (50.4%)	84 (36.8%)	12 (5.3%)	17 (7.5%)	3.51
3	Digital tools for virtual teaching (e.g., Zoom, Google Meet, Microsoft Teams).	102 (44.7%)	70 (30.7%)	34 (14.9%)	22 (9.7%)	3.37
4	Computerization of administrative services (e.g., student records, payroll, course registration)	138 (60.5%)	67 (29.4%)	23 (10.1%)	-	3.82
5	Automated library management systems (e.g., KOHA).	10 (4.4%)	4 (1.6%)	32 (14.1%)	182 (80.0%)	1.06
6	Availability of online platforms for course material uploads and student engagement.	61 (26.8%)	70 (30.7%)	54 (23.7%)	43 (18.9%)	2.59
7	Institutional repositories for scholarly publications.	3 (1.3%)	23 (10.1%)	82 (36.0%)	120 (52.6%)	1.37

Overall Average Mean= 2.65

The decision rule states that: If the mean is 1.0 - 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4 = Strongly Agree (SA). A criteria mean of 2.5 is calculated as follows; $4 + 3 + 2 + 1 = 10/4 = 2.5$ by implication, any score above 2.5, is considered "Agreed (A)" or "Strongly Agreed (SA)" and vice versa.

The results in Table 2 identify types of digital transformation initiatives implemented at IBBU, Lapai. The results showed that the overall average mean is 2.65 which is above the criteria mean. This means that these initiatives show a strong level of implementation and reflect a moderate level of digital transformation at IBBU, Lapai but uneven across different initiatives. Specifically, the results showed that administrative computerization, electronic examination and assessment

platforms, digital tools for virtual teaching, learning management systems, and online platforms for course material uploads and students' engagement are well implemented while library automation and research repositories are critically underdeveloped. This points to a need for greater investment and attention in library and academic resource digitization, to balance the digital transformation effort across all university services.

Research Question 2: What is the level of digital literacy skills among faculty members at Ibrahim Badamasi Babangida University, Lapai?

Table 3: Level of Digital Literacy Skills among Faculty Members at IBBU, Lapai

S/N	Statement	SA	A	D	SD	Mean
1	Ability to use Microsoft Office tools (Word, Excel, PowerPoint) for academic purposes.	120 (52.6%)	95 (41.7%)	10 (4.4%)	3 (1.3%)	3.62
2	Ability to navigate and use Learning Management Systems (e.g., Moodle, Canvas).	71 (31.1%)	67 (29.4%)	32 (14.0%)	58 (25.4%)	2.60
3	Ability to conduct research by using academic databases (e.g., JSTOR, ScienceDirect).	125 (54.8%)	43 (18.9%)	28 (12.3%)	32 (14.0%)	3.67
4	Ability to evaluate the credibility and relevance of digital information.	139 (61.0%)	82 (36.0%)	7 (3.1%)	-	3.87
5	Ability to create and sharing content using digital platforms (e.g., YouTube, Google Docs).	95 (41.7%)	107 (47.0%)	18 (7.9%)	8 (3.5%)	2.94
6	Ability to use digital referencing tools (e.g., Mendeley, Zotero, EndNote).	46 (20.2%)	77 (33.8%)	39 (17.1%)	65 (28.5%)	2.56
7	Ability to manage digital files and folders securely and efficiently.	128 (56.2%)	94 (41.2%)	5 (2.2%)	1 (0.4%)	3.71

Overall Average Mean= 3.28

The decision rule states that: If the mean is 1.0 - 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4 = Strongly Agree (SA). A criteria mean of 2.5 is calculated as follows; $4 + 3 + 2 + 1 = 10/4 = 2.5$ by implication, any score above 2.5, is considered "Agreed (A)" or "Strongly Agreed (SA)" and vice versa.

The results in Table 3 reflects how proficient faculty members are in various digital competencies essential for teaching, research, and academic productivity. The results revealed that the overall average mean is 3.28 which is above the criteria mean. This indicates a generally high level of digital literacy skills among faculty members at IBBU, Lapai. The results showed that faculty members were highly

skilled in basic office productivity, information evaluation, file management, and academic research which are essential to modern academic functions. However, there are noticeable skill gaps in the use of Learning Management Systems and digital citation tools, suggesting a need for targeted digital literacy training programs in those areas.

Research Question 3: What is the influence of digital transformation initiatives on faculty members' acquisition and application of digital literacy skills?

Table 4: Influence of Digital Transformation Initiatives on Faculty Members' Acquisition and Application of Digital Literacy Skills

S/N	Statement	SA	A	D	SD	Mean
1	Digital transformation initiatives at IBBU have improved my ability to use digital teaching tools.	81 (35.5%)	105 (46.1%)	32 (14.1%)	10 (4.4%)	3.37
2	The availability of online platforms has enhanced my digital content creation skills.	114 (50.0%)	92 (40.4%)	15 (6.6%)	7 (3.1%)	3.55
3	ICT training programs organized by the university have significantly developed my digital competencies.	141 (61.8%)	64 (28.1%)	19 (8.3%)	4 (1.8%)	3.91
4	Digital tools introduced through institutional initiatives have improved my research productivity.	59 (25.9%)	109 (47.8%)	28 (12.3%)	32 (14.0%)	3.24
5	I am now more confident using digital platforms for academic collaboration due to digital transformation efforts.	75 (32.9%)	93 (40.8%)	39 (17.1%)	21 (9.2%)	3.01
6	Digital transformation has enabled me to better access and use electronic academic resources.	126 (55.3%)	81 (35.5%)	19 (8.3%)	2 (0.9%)	3.77
7	My ability to engage students through digital platforms has improved due to institutional transformation.	113 (49.6%)	107 (46.9%)	3 (1.3%)	5 (2.2%)	3.52

Overall Average Mean= 3.48

The decision rule states that: If the mean is 1.0 - 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4 = Strongly Agree (SA). A criteria mean of 2.5 is calculated as follows; $4 + 3 + 2 + 1 = 10/4 = 2.5$ by implication, any score above 2.5, is considered "Agreed (A)" or "Strongly Agreed (SA)" and vice versa.

The results in Table 4 revealed how digital transformation at IBBU, Lapai, has influenced faculty members' development and practical use of digital literacy skills. The results showed that the overall average mean is 3.48. This indicates a strong positive influence of digital transformation initiatives on the acquisition and application of digital literacy skills among faculty

members. The greatest influence was noted in areas of ICT training, access to e-resources, digital teaching, and student engagement. On the other hands, moderate influence was seen in research productivity and digital collaboration which pointed to potential areas for further capacity building or support.

Research Question 4: What are the challenges faculty members face in adopting and utilizing digital tools and platforms introduced through digital transformation initiatives?

Table 5: Challenges Faculty Members Faced in Adopting and Utilizing Digital Tools and Platforms through Digital Transformation Initiatives

S/N	Statement	SA	A	D	SD	Mean
1	Inadequate access to stable internet hinders my80 (35.1%) use of digital platforms.	109 (47.8%)	22 (9.6%)	17 (7.5%)	3.24	
2	Limited availability of training on digital tools11 (4.8%) affects my competence.	31 (13.6%)	87 (38.2%)	99 (43.4%)	1.31	
3	Lack of institutional support makes it difficult28 (12.3%) to integrate digital tools into my work.	16 (7.0%)	102 (44.7%)	82 (36.0%)	1.79	
4	Irregular power supply disrupts the effective91 (40.0%) use of digital technologies.	121 (53.1%)	7 (3.1%)	9 (3.9%)	3.25	
5	Poor technical support services affect my40 (17.5%) ability to resolve digital tool issues.	34 (14.9%)	89 (39.0%)	65 (28.5%)	2.04	
6	Difficulty to balance teaching workload with73 (32.0%) time needed to learn new digital tools.	96 (42.1%)	24 (10.5%)	35 (15.4%)	2.83	
7	Inadequate personal digital devices (e.g.,29 (12.7%) laptops, tablets) pose a barrier to effective use.	17 (7.5%)	61 (26.8%)	121 (53.1%)	1.81	

Overall Average Mean= 2.32

The decision rule states that: If the mean is 1.0 - 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4 = Strongly Agree (SA). A criteria mean of 2.5 is calculated as follows; $4 + 3 + 2 + 1 = 10/4 = 2.5$ by implication, any score above 2.5, is considered "Agreed (A)" or "Strongly Agreed (SA)" and vice versa.

The data presented in Table 5 identify the barriers limiting effective use of digital tools by faculty member at IBBU, Lapai. The results showed that the overall average mean is 2.32. This indicates that a moderate level of challenges faced by faculty members in using digital tools. The primary challenges are unstable power supply, internet

connectivity and time constraints due to teaching workload. However, challenges like lack of institutional support, insufficient devices, poor technical support, and lack of training were rated less significant. This suggests progress in institutional backing and digital resource availability.

Testing of Hypothesis

Ho1 Digital transformation initiatives will not have significant influence on the digital literacy skills of faculty members at Ibrahim Badamasi Babangida University, Lapai.

Table 6: Digital Transformation Initiatives and Digital Literacy Skills of Faculty Members at IBBU, Lapai

Variables	Mean	SD	N	DF	R-cal	P-value	Remark
Digital Transformation Initiatives	3.12	0.29	228	226	0.71	.0000**	Sig.
Digital Literacy Skills	3.35	0.45					

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

The results in Table 6 presents the correlation analysis between digital transformation initiatives and digital literacy skills among faculty members at IBBU, Lapai. The correlation coefficient (r) is 0.71 while the P-value is 0.000 which is less than level of significant (0.05). This confirms that the correlation is statistically significant and there is a strong positive influence of digital transformation initiatives on faculty members' digital literacy skills. Therefore, the null hypothesis is rejected, and the study concluded that digital transformation initiatives have a significant influence on the digital literacy skills of faculty members at Ibrahim Badamasi Babangida University, Lapai.

Discussion of Findings

The rapid advancement of digital technologies has fundamentally reshaped educational setting worldwide, compelling higher education institutions to embark on digital transformation initiatives. These initiatives are aimed at integrating digital tools and processes into academic operations to enhance teaching, learning, research, and administration (Kane et al., 2019). Among the critical outcomes of digital transformation in academia is the acquisition and enhancement of digital literacy skills among faculty members which are essential for effective participation in digitally mediated educational environments (Nguyen et al., 2021). In the view of this, this study was setout to examine influence of digital

transformation initiatives on digital literacy skills among the faculty members at Ibrahim Badamasi Babangida University, Lapai. The first finding of the study revealed that there is a moderate level of digital transformation implementation at Ibrahim Badamasi Babangida University (IBBU), Lapai. This means that the university has made some progress in adopting digital technologies to support administrative, academic, and library functions. This level of implementation is in agreement with previous research on digital transformation initiatives in Nigerian tertiary institutions, which indicates that many universities are in the transitional phase of digital adoption. For instance, Ajadi and Salawu (2020) noted that while some Nigerian universities have begun integrating digital systems into their operations, such efforts are often hindered by infrastructural deficiencies, inadequate funding, and limited technical expertise. The situation at IBBU, Lapai, appears to mirror these broader trends, where digital technologies are partially deployed but not yet fully optimized to achieve strategic transformation across all units.

Based on the level of digital literacy skills among faculty members at IBBU, Lapai, the study found that faculty members at IBBU, Lapai, possess a high level of digital literacy skills. This finding is significant, as it underscores the growing integration of digital competencies among academic staff in Nigerian universities, particularly in a digital age where teaching, research, and academic communication increasingly rely

on digital platforms and tools. Therefore, the high level of digital literacy among IBBU faculty members may be attributed to a number of institutional and contextual factors. First, it may be connected to the fact that IBBU have increasingly embraced the use of digital technologies to enhance academic productivity, especially following the global shift toward remote and blended learning modalities in the aftermath of the COVID-19 pandemic. As Akinola and Osunrinade (2021) noted, the pandemic accelerated the adoption of digital tools in Nigerian higher education, compelling faculty members to enhance their digital skills to maintain effective educational delivery. This finding supports the work Olapade and Afolabi (2020) which found that faculty members in Nigerian universities are increasingly acquiring skills in areas such as information retrieval, digital content creation, communication via digital platforms, and the ethical use of information. These competencies are essential not only for teaching and research but also for collaboration, academic publishing, and student mentorship in a digital environment.

Furthermore, the study found a strong positive influence of digital transformation initiatives on the acquisition and application of digital literacy skills among faculty members. This indicates that deliberate and structured efforts toward the adoption of digital technologies within the academic environment significantly contribute to enhancing the digital competencies of university staff. The implication is that institutional strategies aimed at integrating digital tools and platforms into academic workflows play a pivotal role in equipping faculty members with the skills required to thrive in this digital age. This result corroborates the assertions of Okojie and

Adesina (2021), who emphasized that digital transformation initiatives such as e-learning platforms, digital resource management systems, and virtual communication tools are key drivers of digital literacy in Nigerian universities. Therefore, faculty members who are exposed to such technologies, particularly through institutional mandates or structured training programs, are more likely to engage with digital tools and develop proficiency in their use. At IBBU, Lapai, the strong positive relationship identified between digital transformation initiatives and faculty digital skills may reflect the university's investment in digital infrastructure and the integration of digital tools into academic programs. For instance, the use of learning management systems (LMS), digital libraries, and virtual meeting platforms like Zoom or Google Meet may have increased faculty engagement with digital technologies. This exposure not only facilitates competence in specific tools but also fosters a broader digital culture that promotes continuous learning and innovation among academic staff (Nwachukwu & Udo, 2019).

However, despite the fact that digital transformation initiative has influence on digital literacy skills. The study revealed that the predominant challenges encountered in utilizing digital tools and resources are unstable power supply, poor internet connectivity, and time constraints arising from heavy teaching workloads. These challenges emerged as the most significant impediments, suggesting that infrastructural and operational factors greatly affect the efficiency and effectiveness of technology adoption in academic environments. The issue of unstable power supply is a recurring challenge in many developing countries,

particularly in sub-Saharan Africa, where electricity outages are frequent and unpredictable (Ifijeh & Yusuf, 2020). Also, lack of reliable power disrupts not only day-to-day academic activities but also limits access to and use of digital tools and platforms that require constant electricity. Similarly, poor internet connectivity remains a major barrier to digital engagement. Access to stable, high-speed internet is critical for utilizing e-resources, attending virtual trainings, and conducting online research. A study by Olanrewaju and Osunrinade (2022) support this finding, indicating that limited broadband access significantly hampers academic productivity and the use of digital platforms in Nigerian institutions. Interestingly, the study found that challenges such as lack of institutional support, insufficient digital devices, poor technical support, and lack of training were considered less significant. This may suggest a positive shift in institutional readiness, where some educational institutions may have started investing in infrastructure, devices, and occasional training programs.

The result of the tested hypothesis revealed that digital transformation initiatives have a significant influence on the digital literacy skills of faculty members at IBBU, Lapai. This result highlights the essential role that institutional efforts toward digitalisation play in enhancing the ability of academic staff to effectively use digital tools and platforms for teaching, research, and communication. This finding corroborates the earlier study which established that digital transformation efforts in higher education are positively correlated with improvements in digital competencies among faculty. According to Alami (2016), structured digital transformation initiatives such as the provision of ICT infrastructure,

implementation of e-learning platforms, digital training workshops, and access to online academic resources contribute directly to the development of digital literacy among academic staff. At IBBU, Lapai, such initiatives appear to be actively shaping the digital capabilities of faculty members, empowering them to engage in more innovative and technology-enhanced teaching practices.

Conclusions and Recommendations

This study has established that digital transformation initiatives at Ibrahim Badamasi Babangida University (IBBU), Lapai, are moderately implemented and significantly influence the digital literacy skills of faculty members. Although, the institution is making steady progress in adopting digital technologies, full integration is yet to be achieved. Nonetheless, the findings affirm that ongoing digital initiatives are positively shaping faculty members' ability to engage with modern digital tools for teaching and research. Therefore, by fostering a supportive digital environment, IBBU can advance from a moderate level of implementation to a more robust, institution-wide digital culture that equips both staff and students with the skills necessary for academic and professional success in the 21st century.

Recommendations

Based on the findings and conclusion of this study, the following recommendations are made to enhance digital transformation initiatives and improve digital literacy among faculty members at Ibrahim Badamasi Babangida University (IBBU), Lapai:

1. The university management should demonstrate stronger leadership and

commitment by developing and implementing a comprehensive digital transformation strategy. This strategy should include clear goals, timelines, and resource allocation to ensure full integration of digital technologies across all academic and administrative units.

2. To move beyond a moderate level of implementation, IBBU should prioritize upgrading its ICT infrastructure. This includes expanding internet bandwidth, equipping lecture halls and offices with modern digital devices, and ensuring stable access to e-learning platforms and digital resources.
3. Continuous professional development programs should be organized to improve the digital literacy skills of faculty members. Workshops, seminars, and hands-on training sessions should be designed to address emerging digital tools, online teaching methods, and subject-specific digital applications.
4. A digital transformation support unit should be established within the university to provide technical assistance, monitor digital implementation progress, and offer on-demand support to faculty and staff. This unit can also coordinate digital literacy assessment and tailor training based on individual needs.
5. The university should institute regular assessments of digital transformation outcomes, including periodic evaluations of faculty digital literacy levels. This will help in identifying gaps, measuring progress, and informing future strategies.

References

Abubakar, M. & Musa, S. (2021). Digital literacy skills and teaching

effectiveness among faculty members in Nigerian universities. *Journal of Educational Technology*, 18(2), 45-58.

Adebayo, O., & Abdulrahman, A. (2021). *Challenges of digital transformation in Nigerian higher education institutions*. *Journal of Educational Technology & Society*, 24(2), 67–76.

Adeleke, A. A., & Oyelude, A. A. (2020). *Digital transformation in Nigerian universities: Trends and issues*. *Library Philosophy and Practice*, 4023.

Adeoye, F. A., & Popoola, S. O. (2020). Adoption of learning management systems in Nigerian universities: Opportunities and challenges. *Journal of Educational Technology & Society*, 23(1), 146–158.

Adewale, A. A., & Adeoye, B. S. (2019). Challenges of e-learning adoption in Nigerian universities: A case study of infrastructure and accessibility. *International Journal of Education and Development Using ICT*, 15(3), 35–49.

Adewale, T., & Akinlade, O. (2021). Influence of digital transformation initiatives on faculty digital literacy acquisition in Nigerian federal universities. *International Journal of Digital Education Research*, 9(2), 110-124.

Adeyinka, T. & Olaniyan, O. (2022). Impact of digital transformation on faculty digital literacy in Nigerian universities. *International Journal of Digital Education*, 6(1), 70-85.

Aina, L. O. (2016). The state of digital repositories in Nigerian universities. *Information Development*, 32(4), 1022–1030.

Ajadi, T. O., & Salawu, I. O. (2020). Digital competence and adoption of e-learning technologies among university lecturers in Nigeria. *Nigerian Journal of Educational Technology*, 2(1), 45–59.

- Ajiboye, J. O., & Ekundayo, H. T. (2019). Digital library services and research productivity in Nigerian universities. *Library Philosophy and Practice*, 1(2), 45–60.
- Akinola, A. A., & Osunrinade, O. A. (2021). Post-COVID-19 pedagogy: Digital literacy among lecturers in Nigerian universities. *African Journal of Educational Technology*, 11(2), 45–56.
- Alami, A. (2016). Teachers' digital literacy and the impact of digital transformation in higher education. *Journal of Education and Practice*, 7(21), 36–41.
- Almarzooq, Z. I., Lopes, M., & Kochar, A. (2020). Virtual learning during the COVID-19 pandemic: A disruptive technology in graduate medical education. *Journal of the American College of Cardiology*, 75(20), 2635–2638.
- Chukwuemeka, E. & Nwankwo, L. (2017). Assessing the digital literacy skills of Nigerian university lecturers: Challenges and prospects. *Nigerian Journal of Educational Research*, 12(1), 89–102.
- Ezeani, C. N., & Ugwu, C. A. (2020). ICT adoption and e-governance in Nigerian universities: A study of administrative systems. *International Journal of Information Management*, 50, 272–281.
- Ibrahim, H. & Bello, A. (2020). Digital literacy levels among Nigerian university lecturers: An empirical study. *African Journal of Information Systems*, 12(3), 110–125.
- Ifijeh, G., & Yusuf, F. (2020). Digital inclusion and sustainable development in Nigeria: The role of libraries. *The Journal of Academic Librarianship*, 46(2), 102098.
- Jain, R., & Kumar, S. (2021). Digital literacy and faculty engagement in higher education: An empirical study. *Journal of Educational Technology*, 18(2), 45–59.
- Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., & Ghalsasi, A. (2011). Cloud Computing. The business perspective. *Decision Support Systems*, 51(1), 176–189. <https://doi.org/10.1016/j.dss.2010.12.006>
- Mishra, L., & Pandey, P. (2020). Adoption of digital tools in higher education: Faculty perspectives. *Higher Education Quarterly*, 74(3), 302–318.
- Ng, W. (2012). *Can we teach digital natives digital literacy?*. Computers & Education, 59(3), 1065–1078.
- Nguyen, T., Brown, K., & Tran, L. (2021). Sustaining faculty digital literacy through continuous professional development. *Education and Information Technologies*, 26, 4567–4582.
- Nwachukwu, V. N., & Udo, J. O. (2019). Digital literacy and academic performance: A study of Nigerian university lecturers. *Nigerian Journal of Educational Technology*, 6(2), 55–68.
- Obi, T. C. (2022). *Digital literacy among university faculty: The impact of digital transformation in Nigerian universities*. International Journal of Education and Development using ICT, 18(1), 140–156.
- Ojo, O. F., & Adegoke, A. T. (2021). Digital literacy skills and academic staff readiness for e-learning adoption in Nigerian universities. *Education and Information Technologies*, 26, 7123–7138.
- Okeke, C., & Eze, I. (2021). Faculty digital literacy and online teaching effectiveness in Nigerian universities during COVID-19. *Journal of Educational Technology & Society*, 24(1), 56–68.
- Okojie, M. C., & Adesina, A. O. (2021). Enhancing digital literacy through digital transformation initiatives in

- tertiary education. *International Journal of Educational Management and Information Science*, 3(1), 23–31
- Oladele, D. O., & Olaniyi, O. R. (2018). Faculty attitudes towards digital learning tools in Nigerian universities. *International Journal of Advanced Research in Education & Technology*, 5(3), 12–19.
- Olanrewaju, A. M., & Osunrinade, O. A. (2022). Internet connectivity and digital transformation in Nigerian higher education institutions. *African Journal of Educational Technology*, 12(1), 15–28.
- Olapade, A. A., & Afolabi, M. (2020). *Digital skills acquisition and utilisation by university lecturers in South-West Nigeria. Library Philosophy and Practice*, 2020.
- Olufunmilayo, T. & Akinola, J. (2019). Digital literacy competencies of university lecturers in Nigeria: An appraisal. *Journal of Library and Information Science*, 15(1), 23–35.
- Onyancha, O. B., & Maluleka, J. R. (2019). Social media and academic collaboration: Insights from Nigerian universities. *Journal of Information Science*, 45(5), 674–685.
- Owolabi, J. K., & Ogunlade, O. A. (2017). Attitude of lecturers towards the use of e-learning resources in Nigerian universities. *Journal of Education and Practice*, 8(17), 41–48.
- Oyelere, T. O., Adeyinka, O. A., & Ojo, S. (2021). Impact of COVID-19 on digital learning adoption in Nigerian universities. *Education and Information Technologies*, 26(3), 3029–3048.
- Oyetunde, A. & Adeyemi, K. (2018). Challenges of digital literacy among faculty members in Nigerian private universities. *International Journal of Educational Management*, 32(5), 890–904.
- Salmon, G. (2019). Transforming higher education through digital literacy initiatives. *Education Technology Review*, 24(4), 200–213. UNESCO. (2021). *Digital inclusion for low-skilled and low-literate people: A landscape review*. <https://unesdoc.unesco.org/ark:/48223/pf0000377079>.
- UNITED NATIONS. (2022). *United Nations e-government survey: The future of digitals government*. <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2022>.
- Wang, X., Liu, Y., & Chen, M. (2022). The role of digital transformation in faculty teaching effectiveness. *Journal of Online Learning and Teaching*, 18(1), 15–29.
- Yemini, M. (2021). *Global-local tensions in the digital transformation of higher education*. *Higher Education*, 82(3), 611–627.