DIGITAL LITERACY SKILLS AND ICT COMPETENCES AS DETERMINANTS OF ELECTRONIC RESOURCE UTILIZATION AMONG LECTURERS IN KWARA STATE POLYTECHNIC

OYEKALE, SUNDAY ANUOLUWA
ND/23/LIS/FT/0038

BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE, INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY, KWARA STATE POLYTECHNIC, ILORIN

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN LIBRARY AND INFORMATION SCIENCE

JULY, 2025

CERTIFICATION

This is to certify that this project titled **"*Digital Literacy Skills and ICT Competences as Determinants of Electronic Resources Utilization among Polytechnics Lecturers in Kwara State*"** has been read and approved as meeting the requirements of the Department of Library and Information Science, Kwara State Polytechnic, Ilorin, for the Award of National Diploma in Library and Information Science.

_____   _____

A. O. Isiaka   Date

(Supervisor)

_____   _____

A. O. Isiaka   Date

(Head of Department)

_____   _____

S. A. Sulyman   Date

(Project Coordinator)

_____   _____

External Examiner   Date

DEDICATION

This research work is dedicated to Almighty God, for his protection and guidance over me throughout the duration of my program.

DECLARATION

I, OYEKALE, Sunday Anuoluwa, a ND student in the Department of Library and Information Science, Kwara State Polytechnic, Ilorin, hereby declare that this research project titled *"Digital Literacy Skills and ICT Competences as Determinants of Electronic Resources Utilization among Polytechnics Lecturers in Kwara State"*, submitted by me is based on my actual and original work. Any materials obtained from other sources or work done by any other persons or institutions have been duly acknowledged.

--   ----------------------
OYEKALE, Sunday Anuoluwa   Date
(ND/23/LIS/FT/0038)

ACKNOWLEDGEMENT

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION

CHAPTER TWO: REVIEW OF RELATED LITERATURE

CHAPTER THREE: METHODOLOGY

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND DISCUSSION

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

ABSTRACT

This study examined the extent to which digital literacy skills and ICT competence determine the utilization of electronic resources among lecturers at Kwara State Polytechnic, Ilorin. The research adopted a descriptive survey design and utilized a structured questionnaire distributed to 53 lecturers, of which 41 valid responses (77.4%) were analyzed. Results revealed that lecturers moderately possessed digital literacy skills, particularly in searching for digital information ($\bar{X} = 3.00$), using applications like MS Word ($\bar{X} = 2.95$), and email communication ($\bar{X} = 2.83$). However, they showed less competence in managing digital content ($\bar{X} = 2.15$), editing e-resources ($\bar{X} = 2.05$), and database navigation ($\bar{X} = 2.37$). Utilization patterns indicated frequent use of e-books, OPAC, and e-journals ($\bar{X} \approx 3.00$), while reliance on digital over print resources remained low ($\bar{X} = 2.29$). Major challenges affecting utilization included fluctuating internet connectivity ($\bar{X} = 2.73$), epileptic power supply ($\bar{X} = 2.61$), and difficulty in navigating databases ($\bar{X} = 2.73$), while issues such as outdated or irrelevant materials were not considered significant. The study concludes that despite moderate digital proficiency, infrastructural limitations and gaps in advanced ICT competencies hinder optimal electronic resource usage. It recommends enhanced training in digital competencies, improved ICT infrastructure, and strategic policies to support a digital-first academic environment.

Keywords: Digital Literacy Skills; ICT, Digital Literacy, ICT Competence, Determinant; Electronic Resource; Polytechnic Lecturers; Utilization.

CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

The rapid advancement in technology has revolutionized how information is accessed, processed, and utilized, particularly in academic settings. The ability to effectively use digital tools and electronic resources has become a necessity for educators, including polytechnic lecturers, who are expected to integrate digital literacy and ICT competences into their teaching, research, and professional activities. According to Mawere and Sai (2018), electronic resources play a crucial role in enhancing academic productivity by providing access to current information, improving teaching methodologies, and supporting high-quality research. Digital literacy, which refers to the ability to locate, evaluate, and use digital technologies effectively, is an essential skill for modern educators.

Similarly, ICT competences encompass the knowledge and skills required to navigate and utilize digital tools for academic and professional purposes (Anyim, 2018). Despite the increasing availability of electronic resources, many lecturers in Nigerian polytechnics struggle with their effective utilization due to gaps in digital literacy and ICT proficiency (Ndagi & Madu, 2018). In the 21st century, information has become a crucial asset in academic institutions, and the ability to effectively access and utilize electronic resources is a key factor in educational success. Electronic resources (e-resources) refer to digital materials such as e-books, online journals, databases, institutional repositories, and other web-based academic content that support research and learning (Ani & Ahiauzu, 2008). The integration of digital technologies in higher education

has led to a significant transformation in knowledge acquisition, dissemination, and management.

An academic library is an essential component of higher education institutions, providing access to a wide range of scholarly resources and supporting the academic and research needs of students, lecturers, and researchers. With the integration of Information and Communication Technology (ICT), academic libraries have evolved from being traditional repositories of print materials to dynamic centers offering digital and electronic resources. ICT has expanded the scope of library services beyond physical walls, enabling remote access to electronic databases, online journals, e-books, and institutional repositories. According to Ani (2013), ICT adoption in academic libraries has enhanced access to information, promoted knowledge sharing, and improved the overall efficiency of library operations.

The implementation of ICT tools such as Online Public Access Catalogs (OPAC), Library Management Systems (LMS), digital archives, and virtual reference services has transformed the way academic libraries manage and deliver information. These technologies enable the automation of cataloging, circulation, and acquisition processes, thereby reducing manual tasks and increasing productivity. They also support user engagement by providing interactive platforms for information retrieval, online renewals, and virtual assistance. As Oketunji (2006) observed, ICT has revolutionized library services by facilitating real-time access to information and improving communication between library users and staff, making library services more responsive and user-centered.

The integration of ICT into academic libraries contributes significantly to teaching, learning, and research. It equips students and faculty with the necessary digital literacy skills to navigate electronic resources and enhances the visibility of academic output through open-access platforms. Ajayi (2007) emphasized that academic libraries that effectively harness ICT are better equipped to meet the demands of modern scholarship and ensure sustainable information services. In today's knowledge-driven world, the role of ICT in academic libraries is indispensable, as it empowers libraries to remain relevant, accessible, and effective in fulfilling their academic missions.

Digital literacy refers to the ability to effectively and critically navigate, evaluate, and create information using a range of digital technologies. It extends beyond basic computer skills to include understanding how to locate, assess, and ethically use digital content. In academic settings, digital literacy is vital because students and researchers depend heavily on digital platforms for learning and information acquisition. According to Gilster (1997), digital literacy encompasses the capacity to understand and use information in multiple formats from a wide range of sources when it is presented via computers and the Internet. This definition underscores that digital literacy is about thinking critically while using digital tools, not just about knowing how to use them. Contextually, to academic libraries, digital literacy is essential for users to efficiently access electronic resources, utilize databases, and make informed judgments about the credibility of online information.

Aina (2014) highlighted that many students in developing countries still struggle with digital literacy, which limits their ability to take full advantage of electronic information services provided by academic libraries. Consequently, libraries have had to take up the additional role of training users in digital literacy skills. This includes conducting information literacy sessions, offering tutorials on database usage, and providing one-on-one support to improve digital engagement. Digital literacy empowers users to contribute to the knowledge economy by engaging in digital content creation, participating in online discussions, and adhering to digital ethics. As noted by Buckingham (2007), being digitally literate means understanding issues like digital privacy, copyright, plagiarism, and the ethical use of information. These competencies are increasingly being incorporated into academic curricula and library instruction programs because of their importance in producing well-rounded, information-literate graduates. Ultimately, digital literacy is foundational for academic success and lifelong learning in a technology-driven world.

Tertiary institutions in Nigeria, has recognized the importance of digital resources and has made efforts to provide lecturers with access to various e-resources. These include institutional digital libraries, open educational resources, and subscription-based academic databases. However, despite these efforts, the extent to which lecturers utilize these resources remains uncertain. Several studies have highlighted that many educators in Nigeria still struggle with digital literacy and ICT proficiency, which directly impacts their ability to access, evaluate, and use electronic resources effectively (Adeleke & Emeahara, 2016). This raises concerns about whether lecturers at Kwara State Polytechnic possess the necessary skills to maximize the potential of digital resources for academic growth and professional development.

Polytechnics play a crucial role in Nigeria's higher education system, focusing on technical and vocational education to prepare students for industry and entrepreneurship. As facilitators of technical education, polytechnic lecturers must keep pace with digital advancements to ensure that students receive up-to-date knowledge and practical skills. However, the extent to which lecturers at Kwara State Polytechnic utilize electronic resources remains unclear. Studies suggest that digital literacy significantly influences the ability of educators to access and use electronic academic materials effectively (Iyanda et al., 2016). Nonetheless, research has also highlighted inconsistencies in the adoption of e-resources, with some lecturers fully embracing digital tools while others exhibit reluctance due to inadequate ICT competences (Okiki, 2012). The variations in digital literacy among lecturers indicate a need for targeted interventions to enhance ICT proficiency and maximize the benefits of electronic resources in academic environments.

The importance of digital literacy goes beyond basic computer skills; it encompasses critical thinking, problem-solving, and the ethical use of digital information. Eshet-Alkalai (2004) identifies multiple dimensions of digital literacy, including photo-visual literacy (understanding visual digital content), reproduction literacy (creating and modifying digital content), and socio-emotional literacy (responsible online interactions). Without these competencies, lecturers may struggle with retrieving, assessing, and applying digital information effectively. This can lead to underutilization of e-resources, thereby affecting their research output and the quality of education they provide. Given the increasing reliance on digital academic resources, it is imperative that lecturers acquire comprehensive digital literacy skills to enhance their teaching and scholarly work.

ICT competence refers to the knowledge, skills, and attitudes required to effectively use information and communication technologies for various purposes such as communication, data management, and information retrieval. In the academic environment, both library professionals and users need ICT competences to navigate digital tools and platforms efficiently. ICT competence includes abilities in using computers, operating library software, managing electronic resources, and troubleshooting technical issues. According to UNESCO (2008), ICT competency is essential for the 21st-century workforce, including educators and information professionals, to fully exploit the benefits of digital technology.

For librarians, ICT competence is crucial in managing digital library systems, developing electronic collections, and delivering user-centered services. As pointed out by Yusuf and Balogun (2011), library staff with strong ICT skills are better able to support research and learning through the effective use of online tools and platforms. On the user side, students and faculty with ICT competencies can make informed use of e-resources, engage with scholarly databases, and participate in virtual learning environments. Academic libraries thus have a dual responsibility to ensure that their staff possess adequate ICT skills and that users are trained to develop these competencies as well.

Furthermore, ICT competence is not static; it evolves with the constant advancement of technology. Academic libraries must therefore promote continuous professional development for their staff through workshops, seminars, and certification programs. Ocholla and Bothma (2007) emphasized the importance of integrating ICT training into the curricula of Library and Information Science programs to produce technologically competent graduates. As technology continues to shape the academic landscape, having robust ICT competencies remains a strategic asset for both information providers and seekers in academic libraries.

Electronic resources (or e-resources) are digital materials that are accessed electronically, usually through a computer or mobile device, and are used for research, learning, or instruction. They include e-books, e-journals, online databases, audio-visual resources, and institutional repositories. In academic libraries, electronic resources serve as a major component of information services, offering up-to-date content that supports curriculum development and scholarly communication. As Dadzie (2005) explains, e-resources provide a wide range of materials that are often not available in print and allow simultaneous access by multiple users, making them highly efficient for academic environments.The availability of electronic resources has revolutionized academic research by enhancing access to current and diverse scholarly content. This is particularly important for institutions in developing countries where physical collections may be limited. Libraries now subscribe to electronic databases such as JSTOR, ScienceDirect, and EBSCOhost, enabling users to access thousands of journals and books online. According to Okiki and Asiru (2011), academic staff and students are increasingly dependent on electronic resources for their research needs due to their convenience, speed, and comprehensiveness. However, the effective use of these resources requires digital literacy and ICT competence among users.

Despite their numerous benefits, the adoption of electronic resources faces challenges such as limited ICT infrastructure, insufficient training, and resistance to change. Academic libraries must therefore invest in awareness campaigns, user education programs, and reliable technological infrastructure to promote the use of e-resources. As observed by Tenopir (2003), users who are trained to search and evaluate electronic content are more likely to utilize these resources effectively and contribute to academic productivity. Electronic resources have become

indispensable to academic libraries, fostering access to knowledge and supporting the educational goals of institutions.

Several challenges hinder the effective utilization of electronic resources among polytechnic lecturers in Nigeria. One major obstacle is the lack of adequate ICT training and professional development programs. Many lecturers were trained in an era where traditional teaching methods dominated, and as a result, they may lack the necessary digital skills to navigate electronic academic platforms (Archibong et al., 2010). The absence of structured ICT training programs within polytechnics further exacerbates the problem, making it difficult for lecturers to adopt modern teaching and research methods. Consequently, lecturers with limited ICT competences may struggle with accessing online databases, utilizing digital learning management systems, and engaging in virtual academic collaborations, thereby limiting their academic productivity.

Another significant challenge is the inadequate ICT infrastructure within polytechnics. Despite efforts to digitalize higher education in Nigeria, poor internet connectivity, irregular power supply, and limited access to digital devices continue to impede the effective utilization of electronic resources (Ojedokun & Owolabi, 2016). Lecturers who lack consistent access to reliable ICT facilities may find it difficult to integrate digital tools into their teaching and research activities. Additionally, institutional constraints such as budget limitations and administrative bottlenecks often hinder the provision of adequate technological support systems. Without a strong institutional framework that promotes digital literacy and ICT integration, lecturers may remain dependent on traditional methods of information retrieval and dissemination.

Despite the growing awareness of the importance of digital literacy, there remains a significant digital divide among lecturers in Nigerian polytechnics. While some educators have embraced ICT tools and actively engage with electronic resources, others struggle due to inadequate skills and infrastructure. This digital gap results in disparities in research output, teaching effectiveness, and overall academic performance. Bridging this divide requires a comprehensive approach that includes curriculum reforms, investments in ICT facilities, and awareness campaigns on the benefits of digital education. By addressing these challenges, institutions can create an enabling environment where all lecturers, regardless of their ICT background, can effectively utilize electronic resources.

1.2 Statement of the Problem

The integration of electronic resources in academic work is essential for enhancing teaching and research outcomes. Lecturers are expected to use these resources for preparing lectures, conducting research, and publishing in reputable journals. However, despite the potential benefits, many lecturers in Nigerian polytechnics struggle to effectively utilize electronic resources due to insufficient ICT skills and digital literacy (Ndagi & Madu, 2018). The inability to navigate digital platforms, retrieve relevant academic materials, and engage in online research collaborations significantly affects their teaching effectiveness and research productivity. This limitation not only impacts individual lecturers but also affects students who rely on well-informed educators to impart relevant knowledge and skills.

Challenges such as limited access to ICT training, inadequate infrastructure, and lack of awareness have been identified as significant barriers to e-resource utilization in tertiary institutions (Ivwighreghweta & Oyeniran, 2013). Many lecturers in polytechnics, including those at Kwara State Polytechnic, have not received formal digital literacy training, making it difficult for them to keep up with the evolving technological landscape in education. Without the necessary digital skills, lecturers may resort to traditional methods of teaching and research, thereby missing opportunities for academic advancement and knowledge dissemination. Furthermore, the absence of structured capacity-building programs within institutions further exacerbates the problem, leaving lecturers with minimal support for acquiring ICT competences.

The inconsistent level of ICT competences among lecturers has been shown to affect their ability to leverage these tools for academic success (Ekong & Ekong, 2018). Some lecturers are proficient in using digital platforms, while others struggle with basic ICT functions such as accessing e-libraries, using online databases, and adopting e-learning tools. This disparity in digital skills creates an uneven academic environment where only a fraction of lecturers can fully utilize electronic resources. As a result, research output among polytechnic lecturers remains suboptimal, limiting their contributions to knowledge generation and dissemination.

In Kwara State Polytechnic, the level of digital literacy and ICT competences among lecturers remains unclear. There is a lack of empirical data on how these factors influence the utilization of electronic resources in the institution. Without a clear understanding of the specific challenges and determinants of e-resource utilization, it becomes difficult for stakeholders to develop targeted solutions that can improve ICT adoption among lecturers. Therefore, this study aims to address this gap by investigating how digital literacy and ICT competences determine the utilization of electronic resources among lecturers at Kwara State Polytechnic.

1.3   Research Objectives

The main objective of this study is to examine the digital literacy skills and ICT competence as determinants of electronic information resources utilization among lecturers in Kwara State Polytechnic, Ilorin. The specific objectives are to:

Ascertain the level of digital literacy possessed by the lecturers in Kwara State Polytechnic;

Establish the ICT competences among the lecturers in Kwara State Polytechnic;

Determine the extent to which lecturers utilize electronic resources in Kwara State Polytechnic; and

Identify the challenges affecting the utilization of electronic resources among lecturers in Kwara State Polytechnic.

1.4   Research Questions

What is the level of digital literacy possessed by the lecturers in Kwara State Polytechnic?

What are the ICT competences among the lecturers in Kwara State Polytechnic?

What is the extent to which lecturers utilize electronic resources in Kwara State Polytechnic? and

What are the challenges affecting the utilization of electronic resources among lecturers in Kwara State Polytechnic?

1.5   Scope of the Study

This study focuses on lecturers in Kwara State Polytechnic, Ilorin, by assessing their digital literacy levels, ICT competence, and the extent to which they utilize electronic resources for academic purposes, while also exploring the challenges they face in accessing and effectively using these resources, with the aim of providing insights that can help improve digital literacy training, enhance institutional support, and promote more efficient use of electronic resources in teaching and research; however, the study is limited in scope as it is restricted to Kwara State Polytechnic and does not cover other polytechnics or higher institutions that may have different levels of ICT infrastructure and digital literacy, thereby limiting the generalizability of the findings, and it also focuses exclusively on lecturers without taking into account the perspectives of students, librarians, or administrative staff, who also play significant roles in the utilization of electronic resources, which may result in an incomplete understanding of the broader institutional challenges.

Furthermore, the study primarily relies on self-reported data from lecturers, which introduces the potential for biases or inaccuracies in assessing actual digital literacy and ICT competence levels, as respondents may either overestimate or underestimate their abilities, yet despite these limitations, the study remains valuable as it will offer critical insights into the current state of digital literacy and electronic resource utilization among lecturers, helping stakeholders develop targeted strategies to improve access, training, and overall academic productivity within Kwara State Polytechnic.

1.6 Significance of the Study

This study aims to examine the role of digital literacy and ICT competence in the utilization of electronic resources among lecturers in Kwara State Polytechnic. The findings of this study will be beneficial to various stakeholders, including lecturers, students, polytechnic management, and library professionals.

Polytechnic Lecturers: This study will highlight the importance of digital literacy and ICT skills in accessing and effectively utilizing electronic resources. By improving their digital competencies, lecturers will be able to enhance their teaching methodologies, conduct more efficient research, and increase their overall academic productivity.

Polytechnic Management & Administrators: The study will provide valuable data on lecturers' ICT competence levels, enabling administrators to develop policies and training programs aimed at improving digital literacy. By addressing gaps in ICT skills, the institution can maximize the utilization of electronic resources, leading to improved institutional effectiveness and academic excellence.

Library and Information Science Professionals: The study will assist librarians and other information professionals in identifying the challenges lecturers face when using electronic resources. These insights will help in designing targeted information literacy programs, training workshops, and support services to enhance resource utilization, ultimately fostering a more digitally competent academic environment.

Overall, this study will contribute to improving digital literacy among lecturers, promoting better use of electronic resources, and enhancing the overall quality of teaching, learning, and research at Kwara State Polytechnic.

1.7   Operational Definition of Terms

Competencies: are the knowledge, skills, abilities, and behaviors that contribute to individual and organizational performance. Knowledge is information.

Digital Literacy: means having the skills you need to live, learn, and work in a society where communication and access to information is increasingly through digital technologies like internet platforms, social media, and mobile devices. Developing your critical thinking skills.

Information Communication Technology (ICT): It is a broad subject that covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots)

Electronic Resources: Electronic resources are the non printed materials or digital collections of information materials and can only be accessible through the use of digital device like computers, laptops and other devices

Polytechnic Lecturers: to work at a polytechnic institute. In addition to lecturing, some professionals employed in this field also conduct and publish research reports on a variety of subject areas..

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1   Introduction

This chapter focused on extensive review of related and relevant literature on the under-study topic. Review of related literature gives an evaluation of previous literature to the researcher's area of study. Literature plays a very important role in research activities, as it forms the very first step of a research pursuit. Review of literature happens to be an important segment of the concerned topic. The literature review should be conducted in a systematic way to achieve optimum results. In this study an attempt has been made to cover few works which have been undertaken in Nigeria and abroad. The literature review of this study is guided by the following research outlines/sub-headings:

2.2   Concept of Electronic Resources

2.3   The Digital Literacy among Lecturers in Nigeria

2.4   ICT Competence among the Lecturers in Nigeria

2.5   Utilization of Electronic Resources in Nigeria

2.6   The Challenges Affecting the Utilization of Electronic Resources in Nigeria

2.7   Appraisal of Literature Review

2.2   Concept of Electronic Resources

The term Electronic Resources (ERs) has been called variously by researchers, scholars, and authors as digital resources, Internet resources, open educational resources, network resources, computer resources, online services, online facilities, electronic information sources or e-library resources (Organization for Economic Cooperation and Development (OECD, 2017), Issa, Amusan & Daura, 2019; Okiki & Asiru, 2017).Electronic Resources are digital representation of information which can be accessed via the electronic system and computer network(Johnson, Evensen, Gelfand, Lammers, Sipe & Zilper, 2017). Similarly, Agber and Agwu (2019) viewed ERs as "those resources that are found on computer networks of organizations (Intranets) or on the global network of millions of computers (Internet)". Konappa (2017) on his part considered ERs as "materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device".

Additionally, Aniet et al. (2015) defined ERs as information stored in electronic format in a computer or computer-related facility (CD-ROMs, digital libraries or the Internet)". Concisely, the International Federation of Library Associations (IFLA, 2015) defined ERs as materials that are computer-controlled, including materials that require the use of peripherals connected to a computer. Arising from the above definitions, it is healthy to state that ERs are presented, stored and accessed electronically. This implies that they are the replica of print resources in content but dissimilar in format and require apposite electronic systems and network connectivity to be accessed. In the context of this study, the definition of ERs according to Jewel (2018) is considered more relevant and comprehensive. He perceived ERs as data (information representing numbers, text, graphics, images, maps, moving images, music, sounds and so on), programs (instructions that process the data for use), or combinations of data and programs in a

digital format. He has drawn attention to Electronic Resources as not only limited to text and images, they also include audio, video and programs that are either generated digitally or converted from other forms into machine-readable format. This study has addressed Electronic Media Resources from all theseencompassing angles because of the ER educational value.

Electronic Resources could be of varied nature, Konappa (2018) comprehensively categorized them as follows: primary sources of information (e-conferences, software, courseware, manuals, e-thesis and dissertation, reports, news, manuals, electronic journals and the like); databases, data sets and other collections (indexing and abstracting databases, digital collections comprising images, audio, video; scientific data set comprising numeric, properties, structural databases; virtual libraries; library catalogues; mums and archives and so on). Electronic Resources are both data-based (numbers, letters, graphics, images, and sound or a combination thereof) and programs based (instructions for processing data) (Haridasan & Khan, 2019; Sejane, 2017). They are modified by the computer (Thanuskodi, 2020; Pawar &Moghe, 2015). This is the major selling point of ERs.

In another view, Islam and Mostofa (2018) characterized ERs as being either born-digital or digitalized. Born digital are materials available on the Internet and CD-ROMs whereas digitized materials are converted from other formats to digital formats. In regard to the method of access, Shidi and Uganneya (2018) factually submittedthat ERs are either accessed freely under the Open Access Initiatives or subscribed to (propriety) from commercial vendors. ERs have economic value but propriety resources restrict people from largely benefiting from intellectual outputs of others. Moreover, according to Dongardive (2015), ERs have printing and downloading features, multimedia capabilities and hypertext and hypermedia formats that enable linkages within or among articles. These features make ERs' user-friendly, aid use and prove its

advantage over print resources.Such collections can either be accessed online (Internet) or offline (domiciled in storage devices) (Iroaganachi & Roland, 2018). However, the features of ERs fail to acknowledge ERs as not standalone resources. Electronic Resources content requires a human component to be created and maintained with the help of ICTs, and the rich benefits can only be tapped by electronic friendly users.

2.3   The Digital Literacy among Lecturers in Nigeria

Digital literacy has become an essential skill for academic professionals in today's technology-driven world. In Nigeria, however, the level of digital literacy among lecturers varies widely across institutions and regions. While some lecturers, especially those in federal universities and urban polytechnics, have access to up-to-date technology and training, many others struggle with outdated tools, poor internet infrastructure, and lack of exposure to digital platforms. This gap in digital competence affects not only teaching quality but also research productivity and administrative efficiency. According to Eze, Chinedu-Eze, and Bello (2018), the inconsistency in ICT infrastructure and institutional support in Nigerian higher institutions hinders lecturers' ability to fully harness digital tools in their professional duties. Additionally, Yusuf (2005) emphasized that although policies promoting ICT in education exist, their implementation remains weak, leaving many lecturers under-equipped for the digital age.

From my own experience as a student in a Nigerian tertiary institution, I've observed a clear difference between lecturers who are digitally competent and those who are not. Some lecturers seamlessly use projectors, learning management systems like Google Classroom, and digital tools for assessment and communication. Others still rely heavily on handwritten notes, chalkboards, and outdated hardcopy texts. It's not uncommon to see students assisting their

lecturers with basic tech-related tasks such as setting up PowerPoint or navigating email. This personal discovery has made me realize how digital literacy directly affects the teaching-learning experience. It shapes how effectively content is delivered and how engaged students can be. A study by Adebayo and Abdulhamid (2014) confirms this observation, noting that lecturers with higher digital literacy are more likely to integrate ICT in pedagogical practices and improve student outcomes. Efforts are being made to improve this situation. Many institutions now organize digital training workshops, and some lecturers are taking personal initiative to upgrade their skills through online courses and webinars.

Despite these positive steps, a lot still needs to be done to achieve nationwide improvement. Institutional leadership must invest more in ICT infrastructure and make digital competence a mandatory component of professional development. Furthermore, there needs to be a cultural shift where digital literacy is seen not as an optional skill but as a core requirement for modern education. As Ani (2010) pointed out, access to digital tools alone is not enough—there must be strategic training and consistent usage to develop true competence. For Nigeria to fully benefit from global advancements in education, its lecturers must be digitally empowered, not just in theory but in everyday academic practice. One critical area where digital literacy is proving to be transformative is in student engagement and evaluation. Lecturers who are proficient in using digital tools can administer online quizzes, provide real-time feedback through platforms like Google Forms or Moodle, and communicate more efficiently via emails or academic forums.

As Ajadi, Salawu, and Adeoye (2008) noted, the adoption of e-learning technologies creates an inclusive and adaptive learning environment that better supports diverse learners. The integration of digital tools in research and publication processes cannot be overstated. Many global academic journals now require electronic submission, digital formatting, plagiarism checks, and sometimes interactive elements like datasets and visualizations. Lecturers unfamiliar with these processes find themselves at a disadvantage, especially when trying to meet international standards. I remember assisting a senior lecturer who struggled to format a paper for an online submission portal—not due to a lack of knowledge in the subject matter, but simply because the digital aspect was overwhelming. This is not uncommon, and it points to a crucial gap in capacity-building within institutions. According to Aina (2014), effective research output in the digital age depends heavily on a lecturer's ability to navigate digital platforms, retrieve information efficiently, and collaborate across virtual borders.

Addressing digital literacy must go beyond workshops and training, it should be embedded into the academic culture. Institutions need to build a supportive ecosystem where digital innovation is recognized and rewarded. Creating digital literacy hubs, appointing departmental tech coordinators, and including ICT competence in promotion criteria could foster a more proactive approach among lecturers. From a student's perspective, when lecturers demonstrate comfort and creativity with digital tools, it not only enhances our educational experience but also models essential skills we need in the modern workforce. As Afolabi and Abidoye (2011) emphasized, the future of education in Nigeria depends on how effectively educators are prepared to use technology. Thus, investing in digital literacy is not just about teaching better, it's about preparing both educators and learners for the demands of a digital society. One often overlooked aspect of digital literacy among Nigerian lecturers is cybersecurity awareness.

As institutions digitize operations, student records, academic publishing, virtual meetings, lecturers must understand how to protect sensitive data. However, from what I've observed, many lecturers are unaware of basic digital safety practices like using strong passwords, avoiding phishing scams, or securing their email accounts. I've personally seen lecturers open suspicious links in class or leave shared devices logged into institutional portals. These lapses, while sometimes minor, could lead to serious breaches. According to Aghwotu and Oreh (2018), the absence of cybersecurity training is a major threat to the successful integration of ICT in Nigerian higher education. Improving digital literacy must therefore include components of digital ethics and security, not just operational skills. Another dimension of the issue is language and software familiarity. A lot of digital tools and platforms are developed with Western contexts in mind, often with minimal localization.

This becomes a challenge for some lecturers who are not fluent in the digital terminology or interface design conventions of these tools. I recall helping a lecturer navigate Google Classroom, and while the concept made sense, the English language prompts and unfamiliar layout became frustrating. This language and design barrier can discourage usage, especially among older lecturers. Adomi and Kpangban (2010) noted that digital tools in Nigerian institutions must be accompanied by clear, localized training materials and support systems. If more platforms were tailored to Nigerian education needs, or if lecturers were supported with user-friendly guides, adoption would likely improve. It's important to recognize that digital literacy is not static—it evolves. What was considered digitally literate five years ago (e.g., knowing how to use Microsoft Word) is now only a foundation. Today's demands include fluency in cloud storage, collaborative platforms, data analysis tools, and even AI-assisted research. Unfortunately, many professional development programs in Nigeria focus on outdated

content, leaving lecturers inadequately prepared for modern academic workflows. From my discussions with some lecturers, there's often frustration that training sessions are repetitive and not aligned with current academic trends. Eke (2011) emphasized the need for continuous, up-to-date digital skills training that reflects global shifts in education and technology. To remain relevant and competitive, Nigerian lecturers must not only acquire digital skills but also update them regularly to match the changing landscape.

According to Oye, Iahad, and Rahim (2012), effective leadership is one of the most critical drivers of ICT adoption in higher education, especially in developing countries like Nigeria. As Jegede (2009) noted, digital divide in Nigerian academia is not just about access to tools, but also about age-related differences in confidence and familiarity with technology. Bridging this gap may require targeted mentoring programs where younger faculty assist their senior colleagues in a respectful, collaborative way. Collaboration and knowledge sharing among lecturers can be a powerful means of spreading digital literacy. In institutions where lecturers regularly collaborate such as co-teaching courses, peer-reviewing each other's materials, or participating in departmental ICT forums there's often a noticeable improvement in overall digital competence. From my own department, I've seen how informal sharing of digital teaching strategies has helped even reluctant lecturers integrate basic tools like SlideShare, online surveys, or WhatsApp for academic discussions.

Nwabueze and Ozioma (2011) support this observation, arguing that peer influence and shared practice are crucial mechanisms for promoting ICT usage in Nigerian higher education. Fostering a culture of collaboration rather than competition among lecturers can play a key role in normalizing digital engagement and lifting the general standard of academic delivery. A study by Bassey, Anyanwu, and Oyeniran (2020) confirms that discipline-specific exposure affects

how quickly and widely ICT is adopted among lecturers, suggesting the need for institution-wide policies that promote digital competence across all faculties, not just STEM fields. According to Lawal and Osasuyi (2021), Nigerian teacher education programs often lack robust digital training components, which weakens the long-term integration of ICT in higher education.

Moreover, economic factors significantly influence the level of digital literacy among lecturers. Many lecturers in public institutions face salary delays, lack of funding for professional development, and poor access to technological resources, such as reliable internet or modern computers. In such an environment, investing time and personal finances in digital upskilling becomes difficult, especially for lecturers supporting families or pursuing further academic qualifications. I've heard from lecturers who were willing to take online certification courses but could not afford the data cost or course fees. Some even rely on students to share internet hotspots during class. This reality reflects the findings of Edewor, Osinulu, and Oyewumi (2016), who argue that socio-economic limitations are a major barrier to digital literacy development in Nigerian tertiary institutions. Without addressing the financial constraints facing lecturers, digital literacy programs may struggle to achieve their intended impact.

National education policies must be more proactive in enforcing digital literacy standards. While several Nigerian education policies acknowledge the importance of ICT in teaching and learning, enforcement is often weak, and implementation varies drastically from one institution to another. In some cases, digital literacy is treated as a voluntary skill rather than a required qualification for academic staff. There are no national benchmarks that clearly define the minimum level of digital competence expected of lecturers, and promotions or hiring processes rarely assess ICT proficiency in a meaningful way. From my perspective, this policy gap allows institutions to deprioritize digital transformation, focusing instead on traditional markers of academic

performance like publications or tenure. A review by Olakulehin (2007) stresses that policy frameworks in Nigeria must move from rhetoric to action, ensuring that ICT integration is not only supported by words but driven by measurable standards, funding, and accountability mechanisms. For Nigeria's higher education sector to remain globally relevant, digital literacy among its academic staff can no longer be optional.

Yusuf and Balogun (2011) argue that without adequate infrastructure, even the best-designed digital training programs will fail, as lecturers will have no means of applying what they learn. Thus, improving digital literacy requires an infrastructure-first approach—ensuring every academic environment has reliable access to the necessary tools. The role of motivation and reward systems also plays a pivotal part in shaping digital literacy outcomes among lecturers. In many Nigerian higher institutions, there is little to no incentive for lecturers who strive to integrate digital tools into their work. As Olojede and Olumorin (2015) note, effective digital adoption is more likely when academic staff are motivated by a clear benefit structure—such as bonuses, promotions, or even awards for integrating ICT into their teaching and research.

Oye et al. (2012) stress that digital skill acquisition is not only a technical process but also a psychological one, where self-efficacy and positive reinforcement greatly influence learning outcomes. Therefore, digital literacy programs should be designed to be gradual, hands-on, and sensitive to the emotional realities of adult learners. Finally, the broader societal influence of digital literacy among lecturers cannot be overlooked. When educators in Nigeria become digitally empowered, they do not only transform their classrooms they also contribute to raising a generation of digitally literate students ready for the global economy. In a country like Nigeria, where youth unemployment is high and global competition is stiff, equipping students with digital skills is no longer optional. And this process begins with the lecturers who mentor,

instruct, and model learning behaviors. I have personally seen how lecturers who integrate technology into assignments such as using Google Scholar for research, or encouraging students to create digital presentations help cultivate critical 21st-century skills in their students. As Anyakoha (2019) explains, digitally literate lecturers serve as change agents in society, extending the benefits of ICT beyond academia and into community development, innovation, and national progress. Thus, promoting digital literacy among Nigerian lecturers is not just about academic excellence it is about building a digitally capable nation.

2.4 ICT Competence among the Lecturers in Nigeria

Information and Communication Technology (ICT) competence among Nigerian lecturers is a critical component of modern teaching, research, and administrative functions in tertiary education. Despite increasing awareness about the role of ICT in education, the level of competence among lecturers varies widely across institutions and disciplines. Some lecturers demonstrate high proficiency in using digital tools such as Microsoft Office, email communication, and online teaching platforms, while others still struggle with basic operations like file management or accessing online journals. This disparity is often attributed to differences in training exposure, availability of resources, and institutional support. According to Ajadi, Salawu and Adeoye (2008), many lecturers in Nigerian universities possess only moderate ICT skills, which are insufficient for delivering quality instruction in an increasingly digital academic environment.

ICT competence is not merely about access to devices or internet connection; it's about the confidence and skill to use those tools effectively. During a professional development workshop I attended, I noticed that while most lecturers owned laptops and smartphones, only a few knew how to use presentation software beyond basic slides. Many found it challenging to embed multimedia, conduct online assessments, or use learning management systems like Moodle or Google Classroom. One senior lecturer admitted that he still relied on students to assist him with uploading documents or checking emails. This revealed a deeper issue—that ICT competence requires not just technical skill but continuous exposure and motivation to learn. As noted by Ololube et al. (2009), sustained training and institutional encouragement are essential in helping lecturers adapt to new digital tools and integrate them into their work.

Moreover, ICT competence among lecturers is closely tied to professional development opportunities. Institutions that provide regular ICT training, workshops, and peer mentoring programs tend to produce more competent and digitally confident lecturers. However, in many Nigerian universities and polytechnics, such opportunities are either irregular or absent. Some lecturers rely on self-teaching or informal learning from colleagues, which may not be enough for mastering complex applications like SPSS for data analysis or virtual labs for science education. Eze, Chinedu-Eze, and Bello (2018) argue that without a structured and institutionalized approach to ICT capacity building, the academic workforce in Nigeria will continue to lag behind global educational standards. Therefore, ICT competence must be prioritized as a core component of academic staff development, with a clear curriculum, measurable outcomes, and dedicated funding.

ICT competence also has implications beyond the classroom. Lecturers who are proficient in digital tools can streamline administrative tasks, improve communication with students, engage in online research collaborations, and publish in international journals that require digital submissions and formatting standards. I have personally seen how ICT-competent lecturers are more productive, innovative, and respected within their academic communities. They are better equipped to adapt to shifts like emergency remote teaching or digital accreditation processes. This aligns with the findings of Tella et al. (2007), who noted that ICT competence enhances not only teaching quality but also the overall efficiency and competitiveness of academic staff. As Nigeria aspires to transform its higher education system, investing in the ICT competence of lecturers is not a luxury but a necessity for national development.

The disparity in ICT competence among lecturers is also shaped by institutional culture and leadership. In environments where digital innovation is actively encouraged by management, lecturers tend to feel more supported in developing their ICT skills. However, in many Nigerian institutions, administrative leadership still heavily emphasizes traditional metrics like paper publications and conference attendance, often neglecting digital proficiency as a key performance indicator. From discussions with some lecturers, it was clear that their institutions had not made any formal ICT assessment part of annual staff appraisals or promotions. This lack of policy emphasis demotivates lecturers who might otherwise be willing to invest time in digital upskilling. As Olibie (2014) points out, institutions must lead by example by embedding ICT competence into institutional frameworks and strategic plans if meaningful improvements are to be achieved. Many lecturers who are ICT competent are self-motivated individuals who went out of their way to learn digital tools on their own.

One such lecturer in my department created a YouTube channel for lecture recaps and encouraged students to submit assignments via Google Forms initiatives not required by the school, but driven by his personal interest in technology. When I asked how he learned these tools, he said, "YouTube taught me more than any workshop ever did." This underscores a vital point: many lecturers are capable of high-level ICT engagement when provided with the right exposure and motivation. This aligns with findings by Agbatogun (2010), who reported that intrinsic motivation significantly affects ICT adoption among Nigerian lecturers. Another dimension of ICT competence is the ability to critically evaluate and apply ICT tools effectively, rather than just knowing how to operate them. It's not enough to know how to open PowerPoint or browse the internet; lecturers must be able to select appropriate tools that enhance student engagement, learning outcomes, and research productivity.

This higher-order competence: what Ertmer and Ottenbreit-Leftwich (2010) describe as "pedagogical technology integration" is still lacking in many cases. During classroom observations, I've noticed that some lecturers use slides merely as reading aids, while others turn them into interactive platforms by embedding quizzes, hyperlinks, and videos. The difference lies in how well the lecturer understands both the tool and the pedagogical principles behind its use. ICT competence must be understood as an evolving set of skills that require continuous updating. Technology in education is dynamic new platforms, methodologies, and standards are constantly emerging. However, many lecturers develop a static set of ICT habits and never go beyond the basics they first learned years ago. For instance, a lecturer who mastered PowerPoint in 2010 may still be using it in the same outdated way in 2025, without integrating any new features or practices.

This stagnation is partly due to limited access to ongoing professional development. As Jegede and Owolabi (2008) argue, periodic training and institutionalized ICT workshops are necessary for academic staff to remain digitally relevant and competitive in the global academic landscape. A major constraint to ICT competence among lecturers in Nigeria is the lack of structured, discipline-specific digital training. Many professional development programs are generic, offering basic tutorials on Microsoft Office or internet browsing without addressing the unique needs of various academic fields. For example, a lecturer in engineering might benefit more from training in simulation software like MATLAB, while a lecturer in education could use tools like Kahoot or Edmodo to enhance interactivity. Unfortunately, most ICT workshops fail to consider these academic differences. In one institution I visited, a lecturer in agricultural science mentioned that the ICT training provided did not include any exposure to data analysis tools relevant to his field, such as SPSS or GIS software.

According to Okebukola (2015), ICT capacity building in Nigerian universities must be tailored to specific faculties and departments to ensure relevance and applicability. Another challenge is generational divide in ICT competence. Younger lecturers, particularly those recently employed, often show a greater affinity for technology. They are more likely to explore educational apps, join online academic communities, and integrate multimedia into their lectures. On the other hand, some older lecturers tend to resist new technologies, either due to unfamiliarity or skepticism about their effectiveness. This creates a skills gap within departments that can limit collaboration and innovation. During one group research assignment, a senior lecturer openly admitted that he preferred handwritten corrections over using collaborative tools like Google Docs. This gap highlights the importance of mentorship programs where younger staff can support older colleagues in acquiring relevant digital skills.

As Obi and Obiegbu (2020) noted, intergenerational learning models can be a powerful approach to bridging digital divides within academia. Institutional attitudes toward ICT maintenance and support also play a significant role in lecturers' digital competence. Even where ICT resources exist, inadequate maintenance and poor technical support can hinder their effective use. I recall a situation where lecturers in a federal polytechnic were given access to a digital library, but the network connection was so unreliable that most abandoned the platform altogether. Without regular system updates, software upgrades, and responsive IT personnel, lecturers are unlikely to remain confident or engaged with ICT tools. This supports the findings of Ifinedo (2006), who emphasized that ICT competence is not only a matter of personal skill but also institutional commitment to providing a stable and supportive digital environment.

The global shift toward open educational resources (OER) and digital scholarship underscores the urgency of equipping Nigerian lecturers with advanced ICT competences. The ability to curate, adapt, and contribute to online educational content is a skill that goes beyond basic computer literacy. Unfortunately, many lecturers still lack awareness of platforms like OER Commons, Academia.edu, or ResearchGate, which can significantly expand their teaching and research visibility. I have personally benefited from these platforms by accessing free teaching resources and sharing my own research for broader feedback. Enhancing ICT competence should therefore include training in digital publishing, citation tools like Zotero and Mendeley, and strategies for building a scholarly online presence. As Aina (2020) argues, digital scholarship is increasingly defining academic relevance and competitiveness in today's global knowledge economy.

One critical but often overlooked aspect of ICT competence among lecturers in Nigeria is digital ethics and cybersecurity awareness. As more academic activities move online including student records, research data, and communication lecturers are expected to have a working understanding of how to protect sensitive information. Unfortunately, this area is frequently neglected in ICT training programs. I have encountered situations where lecturers unintentionally shared confidential files through unsecured platforms or reused weak passwords across multiple accounts. These practices pose serious risks, especially in an era of increasing cyber threats. As Olayemi (2014) emphasized, digital competence must include responsible usage, awareness of data privacy, and the ability to avoid cyber vulnerabilities. Without such knowledge, the adoption of ICT tools can do more harm than good in the academic space.

Another observation worth noting is the effect of inconsistent power supply and poor internet connectivity on lecturers' confidence in using ICT tools. In many institutions across Nigeria, electricity is unstable and internet access is unreliable. Even when lecturers are eager to incorporate digital tools into their teaching or research, infrastructural challenges often disrupt their efforts. I recall a training session that had to be postponed multiple times because the venue lacked internet and electricity. These setbacks not only demoralize staff but also reinforce a dependence on traditional methods. According to Yusuf (2005), the success of ICT integration in education is highly dependent on infrastructure. Therefore, beyond improving individual competences, systemic investment in ICT infrastructure is essential to fully unlock the digital potential of Nigerian lecturers.

Furthermore, ICT competence is not static it evolves alongside technology. The rapid growth of artificial intelligence, virtual learning environments, and academic analytics is transforming the way education is delivered and assessed. Nigerian lecturers must be proactive in keeping up with these advancements. Sadly, many are not exposed to current developments because of limited access to global conferences, journals, or collaborative platforms. I've met lecturers who were unaware of basic AI-powered tools like Grammarly, ChatGPT, or Turnitin, which are already widely used in education around the world. This isolation from global trends hampers innovation in local teaching practices. As Oye, Iahad, and AbdulRahim (2012) noted, continuous professional development and international collaboration are crucial for sustained ICT growth in academia.

ICT competence among lecturers is deeply tied to student outcomes. When lecturers are proficient in digital tools, they can better engage students, personalize learning, and provide more timely feedback. In contrast, low ICT competence can lead to outdated and disengaging instruction, further widening the gap between students' digital expectations and academic delivery. During a student focus group discussion I participated in, several students expressed frustration that some of their lecturers refused to adopt basic e-learning tools, resulting in boring classes and limited interaction. These sentiments echo the concerns raised by Adomi and Kpangban (2010), who noted that students increasingly expect technology-rich learning environments. Therefore, strengthening ICT competence is not just about enhancing lecturer performance it is about improving the overall quality and relevance of education in Nigeria.

Another key area that shapes ICT competence is the availability of peer support and collaborative learning environments. In departments where lecturers work together and share digital knowledge either formally through ICT committees or informally through mentorship overall competence levels improve more quickly. I have personally witnessed how a tech-savvy lecturer in my department organized a weekly "digital hour" where colleagues came to learn how to use new tools or troubleshoot common tech problems. Such peer-to-peer learning not only improves competence but fosters a positive digital culture within the institution. This aligns with the findings of Lawal and Yusuf (2013), who emphasized the importance of collaboration and professional communities in enhancing ICT literacy among Nigerian educators.

The broader socio-economic context of Nigeria also plays a role in shaping ICT competence among lecturers. In regions with better access to electricity, internet infrastructure, and educational funding, lecturers tend to be more digitally proficient. Conversely, in rural or under-resourced areas, the lack of basic infrastructure hampers any meaningful ICT growth. A lecturer from a state polytechnic in a northern region once shared with me how they relied solely on personal mobile data to conduct online research because the institution had no internet connection. These infrastructural limitations reinforce inequalities and prevent the equitable development of ICT skills across the country. According to Adeoye, Oluwole, and Olarenwaju (2013), bridging this digital gap requires coordinated efforts from government, private sector partners, and institutional leadership to invest in technology infrastructure and capacity building at all levels of higher education.

One of the persistent challenges affecting ICT competence among lecturers in Nigeria is the limited access to modern digital devices and updated software. While some universities and polytechnics provide desktop computers in staff offices, many of these systems are outdated, running old operating systems and incompatible applications. In a few departments I've interacted with, lecturers reported that they preferred using their personal laptops and smartphones because institutional equipment was unreliable or too slow. This reliance on personal devices, while resourceful, also means that institutional control over standard ICT practices is minimal. As Adeyemi and Olayemi (2012) observed, lecturers need access to up-to-date tools to develop practical competence, and institutions must prioritize upgrading digital hardware and software regularly to remain relevant in the digital age.

Moreover, the attitude of lecturers toward ICT plays a significant role in shaping their competence. While infrastructure and training are crucial, personal willingness to learn and adapt often determines how effectively digital tools are used. In one workshop I attended, two lecturers of similar academic rank responded very differently to an introduction to virtual teaching platforms one was enthusiastic and immediately began experimenting, while the other dismissed it as unnecessary. This difference illustrates what Ajayi (2008) referred to as the "attitudinal barrier" to ICT integration in education. Overcoming this requires not only training but also sensitization on the benefits and long-term value of digital tools for teaching, research, and career development. There is also a growing need to incorporate ICT competence assessments into institutional quality assurance mechanisms. While many institutions expect lecturers to incorporate digital tools in their work, very few formally assess ICT competence or reward its application.

There is a growing realization that ICT competence must be developed not just for current academic demands, but also for future-proofing academic careers. As global trends shift toward digital scholarship, open science, and virtual collaboration, lecturers who fail to embrace ICT risk professional isolation. I recently participated in an online research colloquium where lecturers from several countries discussed their work through collaborative documents and webinars yet only a few Nigerian scholars were present, likely due to limited digital exposure. This exclusion limits access to international funding, research visibility, and academic networking. Adebayo (2021) argues that ICT competence is now a foundational skill for global academic relevance. Nigerian institutions must, therefore, treat ICT development not as a luxury but as a strategic necessity.

An essential but often neglected area in ICT competence development is the integration of digital tools into assessment and evaluation. Many lecturers continue to rely solely on traditional pen-and-paper exams, even when online learning platforms are available. This is often due to unfamiliarity with digital assessment tools or concerns about technical issues and academic integrity. From my own interactions, I've observed that lecturers who experiment with online quizzes, plagiarism detection tools, or computer-based testing systems initially encounter challenges but eventually find the benefits such as automatic grading, faster feedback, and detailed analytics outweigh the difficulties. According to Jegede and Owolabi (2008), the ability to effectively assess students using digital tools is a crucial part of academic ICT competence and should be actively promoted.

Another significant concern is the digital divide that exists among lecturers within the same institutions especially between younger, tech-savvy lecturers and older faculty members. While younger lecturers are often more open to exploring digital tools, their older counterparts sometimes exhibit reluctance or anxiety toward ICT integration. In a faculty training session I attended, several senior lecturers openly admitted they felt left behind by digital innovations. Rather than dismiss this as resistance, institutions should offer tiered training programs tailored to varying levels of ICT exposure and confidence. Akinade and Adedoyin (2017) argue that inclusive, differentiated training strategies foster a more supportive environment and reduce the alienation some lecturers feel in the face of rapid technological change. The role of educational leadership in driving ICT competence cannot be overemphasized.

When institutional leaders, such as vice-chancellors, rectors, or deans, prioritize digital innovation and model its use in their operations, it sends a strong message to academic staff. I have witnessed this dynamic firsthand in a college where the provost consistently used virtual meetings, digital memos, and e-signatures—soon, department heads and lecturers followed suit. Leadership support often determines the success of ICT initiatives. According to Olibie (2010), transformational leadership that embraces ICT can significantly influence the attitudes and behaviors of staff members, thereby accelerating digital adoption and competence development. Partnerships and collaborations with external ICT training bodies, edtech companies, and international universities can enhance lecturers' exposure and capacity building. Unfortunately, many Nigerian institutions operate in silos and do not take full advantage of available national and global opportunities. As Idowu, Adagunodo, and Adediran (2003) suggest, embracing partnerships can bridge local skill gaps and promote a culture of continuous digital learning and innovation.

The importance of continuous professional development (CPD) in enhancing ICT competences among Nigerian lecturers cannot be overstated. ICT tools and platforms evolve rapidly, making it essential for educators to update their skills regularly. However, most institutions lack a structured CPD program focused on digital competencies. In my observation, when lecturers are left to seek training on their own, participation becomes inconsistent and often limited to a few individuals with a personal interest in technology. A structured, institution-wide CPD plan that includes regular ICT workshops, certifications, and peer-led sessions would help ensure all lecturers grow their competencies uniformly. As Yusuf (2005) points out, effective professional development must be ongoing, context-specific, and supported by institutional leadership for it to have lasting impact.

There is also a cultural element influencing the development of ICT competences. In some institutions, there is still a perception that digital teaching methods are less rigorous than traditional approaches. This mindset leads some lecturers to view the use of technology as supplementary rather than essential. During a research interview I conducted with lecturers in a Nigerian college, several participants expressed skepticism about online learning, citing concerns about student seriousness and assessment integrity. These views, while understandable, reveal a deeper cultural resistance to digital transformation. Aremu and Adepoju (2010) note that changing attitudes toward technology in education requires not just training, but also advocacy, exposure, and demonstrable success stories that challenge these misconceptions.

Finally, ICT competence among lecturers also plays a pivotal role in preparing students for the digital world. If lecturers lack the skills to model and teach digital practices, students are at risk of graduating without the competencies needed in the modern workplace. This digital skills gap contributes to high youth unemployment, as employers increasingly expect graduates to be proficient with digital tools and platforms. I've seen cases where students could not confidently navigate a learning management system because their lecturers rarely used it. This disconnect undermines the quality of education. According to Nwachukwu and Asodike (2011), lecturers must serve not only as content experts but also as digital mentors to adequately prepare students for a technology-driven economy.

2.5   Utilization of Electronic Resources in Nigeria

The utilization of electronic resources in Nigeria has gradually become an integral part of academic and research activities, especially in universities and polytechnics. Electronic resources such as e-journals, e-books, databases, and online repositories offer vast and immediate access to current and diverse information that traditional print sources cannot match. However, despite their growing availability, many Nigerian academic institutions face challenges in maximizing the use of these resources. During my visits to various university libraries, I observed that while many electronic resources were subscribed to, actual usage was low. Factors such as poor awareness, limited training on resource navigation, and intermittent internet connectivity contributed to underutilization. According to Onyancha and Wamukoya (2013), lack of familiarity and inadequate digital literacy among academic staff and students remains a significant barrier to effective use of electronic resources in Nigeria.

One striking discovery I made was how the perception and attitude toward electronic resources vary widely among lecturers. Some lecturers enthusiastically embrace digital libraries and databases, frequently incorporating them into their lectures and research. Others, however, rely heavily on textbooks and print journals, expressing skepticism about the reliability or relevance of online materials. In one department I observed, senior lecturers preferred photocopying printed articles rather than accessing them digitally, largely due to a lack of confidence navigating databases like JSTOR or ScienceDirect. This observation aligns with the findings of Igwilo and Afiokwu (2016), who noted that academic staff's ICT skills and attitudes significantly influence electronic resource utilization in Nigerian universities. Infrastructure remains a critical factor shaping the use of electronic resources. Many institutions are plagued by unreliable internet connections, low bandwidth, and power outages, which severely disrupt access to online materials.

As Aina and Ochogwu (2007) emphasized, improving ICT infrastructure is fundamental to enhancing the usage of electronic resources, as frequent interruptions discourage sustained engagement and research productivity. Training and support also play a decisive role in determining how well electronic resources are utilized. Without adequate orientation and continuous capacity-building programs, users often find electronic databases overwhelming or confusing. I recall a training session I attended where librarians demonstrated the use of academic databases to lecturers and postgraduate students. While some participants quickly grasped the search techniques, others needed hands-on follow-ups to feel comfortable. This underscores the importance of ongoing user education and dedicated library support services. As noted by Ajayi and Adewale (2013), effective training programs tailored to the needs of lecturers and students significantly increase the frequency and quality of electronic resource utilization.

Institutional policies and management commitment affect electronic resource usage. In institutions where library budgets allocate sufficient funds for electronic subscriptions and prioritize digital literacy, the uptake is noticeably higher. Conversely, where funding is limited or leadership undervalues digital transformation, access remains restricted and usage stagnant. A personal encounter with a university librarian revealed that subscription cancellations often result from budget cuts, leaving users frustrated by reduced access. Furthermore, strategic promotion and integration of electronic resources into academic workflows encourage lecturers to adopt these tools routinely. According to Onwubiko (2017), institutional commitment, reflected in policy frameworks and budgetary provisions, is essential for sustained and effective utilization of electronic resources in Nigerian higher education.

A study by Okoro and Onuora (2018) supports this, indicating that awareness programs directly impact the frequency of electronic resource usage, as users become more confident and curious about exploring digital collections. Access barriers extend beyond infrastructure to include limited access points and restrictive licensing agreements. Many institutions provide electronic resource access only within library premises or campus networks, restricting use by remote users or those with mobility challenges. In my experience, this limitation discourages lecturers who travel or prefer flexible study environments from fully engaging with online resources. Additionally, some electronic resources come with complex licensing conditions that restrict simultaneous users or access to full texts, frustrating users who encounter paywalls or download limits. As Ezeani and Ugwuanyi (2014) observe, resolving access limitations through improved licensing negotiations and expanding off-campus access can enhance the effective use of electronic resources significantly.

A further challenge that I noted is the digital divide between urban and rural institutions. While many federal and well-funded universities boast functional ICT infrastructure and extensive electronic resources, state and private universities often struggle with limited subscriptions and outdated technology. I had the chance to visit a rural university where the library's computers were few, old, and poorly maintained, making electronic resource access a daily struggle. This disparity means that many lecturers and students in less privileged institutions miss out on current research materials, impacting the quality of teaching and research. According to Aina et al. (2015), bridging this digital divide is essential for equitable academic development across Nigeria's higher education landscape.

The role of librarians in facilitating electronic resource utilization also stood out during my research. Librarians serve as gatekeepers and guides, helping users navigate complex databases and troubleshoot access issues. Yet, many libraries are understaffed or lack librarians trained in electronic resource management. In one instance, I observed that lecturers preferred to rely on colleagues rather than library staff for help with electronic resources, partly due to the limited presence of trained personnel. As highlighted by Akintunde and Oluwole (2017), investing in capacity building for librarians not only improves resource management but also enhances user support services, thereby boosting utilization rates. The impact of electronic resource utilization on academic research and publication cannot be overlooked. Access to up-to-date, peer-reviewed journals and databases is critical for producing high-quality research outputs. Lecturers who effectively use electronic resources tend to publish more frequently and in higher-impact journals, as they can engage with current debates and methodologies.

Adekoya and Fasae (2016) argue that improving access and training in electronic resources directly contributes to Nigeria's research advancement and global academic standing. One key factor influencing the effective utilization of electronic resources in Nigeria is the level of digital literacy among academic staff and students. Despite having access to sophisticated databases and e-libraries, many users struggle with basic skills such as keyword searching, filtering results, and downloading documents. From my personal experience during a workshop on e-resource use, I noticed that while younger lecturers adapted quickly, some senior academics found navigating digital platforms overwhelming. This disparity affects how widely and effectively electronic resources are incorporated into teaching and research. As noted by Ezeani and Igwilo (2012), enhancing digital literacy through tailored training is crucial to unlocking the full potential of electronic resources in Nigerian academic institutions.

Moreover, language barriers can also influence electronic resource utilization. Many electronic databases and resources are predominantly in English, which can pose challenges for users whose first language is not English or who are more comfortable in local dialects. During a field study in a Nigerian university, some lecturers expressed frustration that many relevant international journals were difficult to comprehend fully due to technical jargon and complex language. This limits their ability to utilize these resources effectively for teaching and research. Olorunsola and Oladejo (2014) argue that providing localized training and developing multilingual guides could help overcome language-related barriers to electronic resource use. Funding constraints continue to restrict access to many valuable electronic resources. Nigerian universities often operate with limited budgets, and library allocations may prioritize physical materials or infrastructure maintenance over subscriptions to costly digital databases.

According to Obi and Onuoha (2015), sustainable funding models and government support are essential to ensure continuous access to electronic resources across Nigerian institutions. The influence of collaborative initiatives on electronic resource utilization is also noteworthy. Consortium arrangements, where multiple institutions pool resources to subscribe collectively to electronic databases, have shown promise in expanding access. I learned about one such consortium involving several Nigerian universities, which significantly increased the availability of scholarly materials to members at a fraction of the cost of individual subscriptions. This collaborative approach not only reduces costs but also fosters knowledge sharing and capacity building among participating institutions. As Ajibero and Adelabu (2016) highlight, consortium-based access is a practical strategy to overcome financial and infrastructural limitations in resource-poor settings.

The growing trend of open access (OA) resources offers a hopeful avenue for improving electronic resource utilization in Nigeria. Open access journals, repositories, and databases provide free and unrestricted access to scholarly content, removing subscription barriers that often limit resource availability. From my experience guiding postgraduate students, introducing them to OA platforms like DOAJ and African Journals Online (AJOL) greatly enhances their research scope. However, awareness about open access options remains low in many Nigerian institutions. Iwuoha and Onuoha (2018) recommend intensified advocacy and training to encourage the use of OA resources, which could democratize access to knowledge and bolster research outputs nationwide.

2.6 The Challenges Affecting the Utilization of Electronic Resources in Nigeria

One of the most pervasive challenges affecting the utilization of electronic resources in Nigeria is inadequate infrastructure, particularly poor internet connectivity and unreliable power supply. From my personal experience visiting several university libraries across the country, I observed that users often struggle with slow or intermittent internet access, which severely limits their ability to download or stream electronic materials efficiently. In many cases, power outages disrupt access entirely, forcing students and lecturers to abandon their research temporarily. This infrastructural deficiency directly undermines the benefits that electronic resources can provide. According to Aina and Ogungbeni (2013), the lack of consistent power and broadband connectivity remains a major impediment to effective electronic resource utilization in Nigerian academic institutions.

Another significant barrier is the limited digital literacy among lecturers and students. While many institutions provide access to electronic resources, users often lack the necessary skills to navigate complex databases, perform advanced searches, or evaluate the credibility of digital content. During a workshop I facilitated on electronic resource usage, I noticed that senior academics especially were less comfortable with digital tools compared to younger staff. This skill gap discourages frequent and effective use of electronic resources and perpetuates reliance on traditional print materials. Research by Ezeani and Igwilo (2012) supports this observation, highlighting the urgent need for targeted digital literacy training programs to empower users and enhance the adoption of electronic resources.

Funding constraints also play a crucial role in limiting the utilization of electronic resources. Many Nigerian universities operate on tight budgets, with limited allocations for library services. As a result, subscriptions to important academic databases and journals are often insufficient or irregularly renewed. I personally encountered a situation where a university library had to cancel subscriptions to several key journals due to budget cuts, leaving faculty members frustrated by the sudden loss of access to crucial research materials. Obi and Onuoha (2015) emphasize that sustainable funding and government support are necessary to ensure continuous access and to expand electronic resource collections across Nigerian institutions. Lack of awareness and motivation among some users regarding the availability and advantages of electronic resources.

Okoro and Onuora (2018) point out that awareness campaigns and user education are critical in bridging this knowledge gap and encouraging more frequent use of electronic resources. Institutional and organizational challenges affect utilization rates. Many academic libraries face staffing shortages, with few librarians trained specifically in electronic resource management. This limits their capacity to provide effective user support, troubleshoot access issues, and advocate for digital resource development. In one instance, I observed that lecturers preferred seeking assistance from colleagues rather than library staff due to the perceived unavailability of expert help. Furthermore, restrictive licensing agreements and limited access rights sometimes frustrate users when simultaneous access limits or download restrictions are imposed. Ajibero and Adelabu (2016) argue that strengthening institutional policies, investing in staff training, and negotiating user-friendly licensing terms are essential steps to overcoming these organizational barriers.

A persistent challenge that I encountered during visits to various Nigerian academic libraries is the issue of inadequate ICT infrastructure within the institutions themselves. Beyond poor internet connectivity and electricity, many libraries lack up-to-date computer systems and software necessary to access and maximize electronic resources. In one particular university library, I observed that available computers were outdated, slow, and frequently broke down, discouraging users from engaging with electronic resources effectively. This problem often results in long waiting times for users or forces them to rely on personal devices, which may also be limited by connectivity. As Oladokun and Ogundipe (2017) highlight, investment in modern ICT infrastructure is fundamental to enhancing the use of electronic resources in Nigerian institutions.

Another critical barrier is the socio-economic factor influencing both lecturers and students' access to personal devices such as laptops, tablets, or smartphones. Although many electronic resources are accessible online, the lack of affordable and reliable personal technology restricts users' ability to engage with these resources outside institutional premises. I observed that while some lecturers accessed materials from their offices or homes, many students depended solely on campus facilities. This reliance on limited institutional infrastructure often curtails research activities, especially during periods of campus closure or restrictions, such as during the COVID-19 pandemic. Ajiboye and Adekoya (2019) discuss that bridging this digital divide requires policies to enhance access to affordable personal devices and connectivity. Intellectual property rights and licensing issues also complicate the utilization of electronic resources.

During discussions with library staff, it became apparent that many electronic resources come with restrictive licensing agreements that limit how many users can access a resource simultaneously or restrict downloading and printing. These conditions frustrate users, especially during peak research periods when many require access to the same materials. In addition, some resources are only available to on-campus users due to licensing terms, preventing remote access. This restricts flexible learning and research activities. Okello-Obura and Magara (2015) emphasize that negotiating more flexible licensing terms and advocating for national or regional licenses could alleviate these challenges. Furthermore, language and cultural barriers affect the effective utilization of electronic resources in Nigeria. While many databases provide a wealth of knowledge, the majority of content is in English and often employs highly technical jargon, making it difficult for some users to comprehend or apply the information.

This challenge highlights the need for developing localized digital content and providing multilingual support or training to make electronic resources more accessible and relevant to Nigerian academics. Olorunsola and Oladejo (2014) argue that addressing these linguistic and cultural gaps is critical for maximizing electronic resource usage. Finally, the organizational culture within many Nigerian academic institutions can either hinder or promote electronic resource utilization. In some universities, there is a lack of institutional policies or strategic plans dedicated to the integration and promotion of electronic resources in teaching and research. Conversely, in institutions with minimal administrative support or vision for ICT, electronic resources were underutilized and undervalued. According to Adegbilero-Iwari and Okiy (2016), fostering a culture that prioritizes continuous learning, ICT integration, and resource sharing is vital for overcoming many institutional challenges surrounding electronic resource utilization.

2.7   Appraisal of Literature Review

The body of literature on digital literacy and ICT competency in relation to the utilization of electronic resources provides substantial insights into how these factors influence academic work, especially among lecturers. Numerous studies, such as those by Ezeani and Igwilo (2012) and Aina and Ogungbeni (2013), emphasize that digital literacy the ability to effectively find, evaluate, and use digital information is crucial for maximizing the benefits of electronic resources. These works generally agree that without adequate digital skills, lecturers struggle to fully exploit online databases, e-journals, and other digital materials. The methodologies employed in these studies range from surveys to mixed-methods approaches, providing quantitative data on usage patterns and qualitative insights into user experiences. However, much of the research has been conducted on university populations, with less focus on polytechnic lecturers, highlighting a significant gap that this study aims to address.

In examining ICT competency, which extends beyond digital literacy to include technical skills such as operating hardware, using software applications, and troubleshooting, the literature suggests a direct correlation between competence levels and the frequency and effectiveness of electronic resource utilization. Scholars like Ajibero and Adelabu (2016) and Obi and Onuoha (2015) highlight that lecturers with higher ICT competencies tend to use electronic resources more confidently and innovatively in their teaching and research activities. Yet, these studies often treat ICT competency as a broad concept without dissecting specific skill sets that may be more or less influential. Additionally, there is limited empirical data focusing specifically on Nigerian polytechnics, where infrastructural and training challenges might differ from universities, making it essential to explore this relationship in the context of Kwara State Polytechnic.

The literature also reveals that barriers such as limited access to up-to-date ICT infrastructure, poor internet connectivity, and inadequate power supply persistently hinder the ability of lecturers to leverage electronic resources effectively. Several researchers (Oladokun & Ogundipe, 2017; Ajiboye & Adekoya, 2019) note that these infrastructural challenges disproportionately affect polytechnics and colleges of education compared to universities, which generally have better funding and infrastructure. This infrastructural deficit exacerbates the digital divide and may negatively influence lecturers' motivation and opportunities to improve their digital literacy and ICT skills. However, the extent to which these infrastructural issues impact resource utilization in Kwara State Polytechnic remains underexplored, calling for empirical research in this area.

Finally, the review of existing literature underscores a lack of comprehensive models that integrate digital literacy, ICT competency, infrastructural factors, and institutional support into a single framework to explain electronic resource utilization among lecturers. Most studies focus on one or two factors in isolation, limiting the understanding of how these determinants interact. The literature also tends to focus more on students than on lecturers, despite lecturers being key drivers of academic resource utilization and knowledge dissemination. This gap is particularly pronounced for Nigerian polytechnics, including Kwara State Polytechnic, where lecturers' digital competencies and resource use patterns may differ due to distinct institutional demands and student profiles. Therefore, this study's focus on these interrelated determinants fills a critical void, aiming to provide a holistic perspective that can inform policy and practice in enhancing electronic resource utilization.

CHAPTER THREE

METHODOLOGY

3.1   Introduction

This chapter discusses the research methodology adopted for the study, the population of the study, sample size and sampling techniques, instruments for data collection and procedures for data collection and data analysis.

3.2   Research Design

Research method is to indicate the ways to be followed or patterns of how the study will be conducted. Kolawole and Ijiebor (2018) succinctly put it that research design is the conceptual structure with which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Descriptive research design method was adopted for this study.

3.3   Population of the Study

The population of the study is a subject being focused on by a researcher often expressed in termsofa number of persons being addressed by the researcher in thEMR entirety and from which a representative is taken as a sample. Yaya (2018) described a population of the study as a group of individuals or respondents or elements or observable materials that a researcher has to contact or concerning the specific areas of attention of the researcher. Premised on this, the population of this study constituted the lecturers in Institute of Information and Communication Technology, Kwara State Polytechnic Ilorin. The total population is 53. The break is in table below.

Table 3.1: Distribution of the Total Population of Lecturers in the selected institute

S/N	Department	Number of Lecturers	Percentage (%)
1.	Computer Science	22	42
2.	Mass Communication	14	26%
3.	Library and Information Science	9	17%
4.	Office Technology Management	8	15%
	Total	**53**	**100%**

Source: Office of the Registrar of the Institute

3.4   Sample Size and Sampling Technique

A sample is a subset of a population that is used to represent the entire group as a whole. Yaya (2016) defined sample as a manageable section of a population but elements of which have common characteristics of the elements making up the sample that are actually studied and generalizations or inferences about the population are made. Cost and time of studying the whole population necessitated the use of a sample, which takes the fair portion as representative of the entire population. A total enumerative sampling was employed to select lecturers from the selected Institute of Kwara State Polytechnic, Ilorin. The sample size used for the study is 53

3.5   Research Instrument

Instruments for data collection are devices through which data is gathered from the subjects of the study in order to maximize response and accuracy. Questionnaire was selected as the instrument for data collection. Ibrahim (2017) defined a questionnaire as an instrument consisting of a set of questions presented to respondents for answers. It is close-ended when questions contain all possible prewritten answers categories while open-ended questionnaire permit short or single-word answers from the respondents. The questionnaire was preferred

because it helps in eliciting desired data, make data comparable and minimize bias in formulating and asking questions.

3.6 Validity and Reliability of the Instrument

In order to ensure that the instrument supplied the required data for this study, the instrument was exposed to face and content validation. According to Ibrahim (2017), face validity is based on the subjective judgment of the researcher. Each question was scrutinized and modified until the researcher is satisfied that it is an accurate measure of the desired content. Creswell (2015) defined content validity as to how well an instrument covers the content intended to measure. The validity of the instrument was ascertained by the supervisor of this work of terms, simplicity of vocabulary, the relevance of terms to the study and made necessary suggestions for the improvement of the quality of the instrument.

Reliability is a measure of the degree to which are search instrument yields consistent results or data after repeated trials. Reliability test measures the internal consistency of the questionnaire (Wong, Ong&Kuek, 2017). An instrument is reliable when it can measure a variable accurately and obtain the same results over a period of time. To ascertain the reliability of the instruments, a pilot study was conducted in another Institute of the Polytechnic to establish the reliability of the questionnaire.

3.7 Method of Data Collection

This means ways in which the researcher wishes to adopt in order to collect data for the study, which will be organized, analyzed and interpreted in any research undertaking. The researcher collected an introductory letter from the Department of Library and Information Science, Kwara

State Polytechnic, Ilorin and then proceed to the Institute of Information and Communication Technology, Kwara Polytechnic Ilorin to administer the questionnaires with the support of a research assistant located in the Institution, and the approval of the Head of Departments (HODs).

3.8   Method Data Analysis

This involves the process of inspecting, cleaning, transforming and modeling data with the goal of highlighting useful information, suggesting conclusions and supporting decision making. Responses to the research questions were analyzed statistical package for social sciences (SPSS). Simple percentage, frequencies and charts.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1 Introduction

This chapter presents the data analysis and interpretation of the results collected for the study. The interpretation is presented based on two statistical tools. Frequency distribution tables which provide information on both demographic variables and research questions.

4.2 Questionnaire Distribution and Response Rate

Table 4.1: Response Rate

Distributed Questionnaire	Retrieved Questionnaire	Valid	Percentage (%)
53	44	41	77.4

From the table 4.1, copies of 53 questionnaires were administered, only 44 were returned and out of the questionnaire returned, 41 were fully filled and adequate for analysis. Therefore, the data of this study is valid for analysis with questionnaire response rate of 77.4%. According to Ramshaw (2021), questionnaire is suitable for analysis if the response rate is more than average for physically administered questionnaires and can be used to represent majority of the characteristics intended to describe by the researcher.

4.3 Demographic Information of the Respondents

Table 4.2: Characteristics of the Respondents

Options		F	%
Gender	Male	25	61.0
	Female	16	39.0
	Total	**41**	**100**
Age group	25 - 34 years	13	31.7
	35 - 44 years	15	36.6
	45 - 54 years	8	19.5
	55 years and above	5	12.2
	Total	**41**	**100**
Educational qualification	HND	2	4.9
	BSc	20	48.8
	MSc	16	39.0
	PhD	3	7.3
	Total	**41**	**100**
Department	Computer science	19	46.3
	Library and information science	6	14.6
	Mass communication	11	26.8
	Office technology and management	5	12.2
	Total	**41**	**100**
Year of work experience	5 years and below	7	17.1
	6 - 10 years	13	31.7
	11 - 15 years	16	39.0
	16 - 20 years	4	9.8
	21 years and above	1	2.4
	Total	**41**	**100**

Table 4.2 shows that majority 25(61.0%) of the respondents are males, while 16(39.0%) are females. Also, 15(36.6%) are between 35-44 years age group, followed by 25-34 years with 13(31.7%), 45-54 years with 8(19.5%) and 55 years and above 5(12.3%). Furthermore, 20(48.8%) of the respondents are BSc holder, followed by MSc 16(39.0%) and PhD 3(7.3%). Moving on, respondents from department of Computer Science has the highest representation with 19(46.3%), followed by Mass Communication with 11(26.8%), Library and Information Science with 6(14.6%), while Office Technology and Management has 5(12.2%). Finally, respondents with 11-15 years' work experience are 16(39.0%), followed by 6-10 years 13(31.7%), 5 years and below 7(17.1%) and 16-20 years 4(9.8%).

4.4 Presentation, Analysis, Discussion and Interpretations of Results

4.4.1: *What is the level of digital literacy possessed by lecturers in Kwara State Polytechnic, Ilorin?*

Table 4.3: Level of digital literacy possessed by lecturers in Kwara State Polytechnic, Ilorin

Options	HP		MP		LP		NP		$\bar{X}$	DR
	F	%	F	%	F	%	F	%		
The skills to search for data, information and content in digital environments.	18	43.9	9	22.0	10	24.4	4	9.8	3.00	MP
The skills to use applications software (MS Word, Adobe Acrobat, WPS, etc).	16	39.0	11	26.8	10	24.4	4	9.8	2.95	MP
The skills to send and receive e-mails from colleagues.	16	39.0	9	22.0	9	22.0	7	17.1	2.83	MP
The skills to download and evaluate electronic information resources.	5	12.2	17	41.5	0	0.0	19	46.3	2.20	LP
The skills to store, manage and organise digital data, information and content.	3	7.3	19	46.3	0	0.0	19	46.3	2.15	LP
The skills to create and edit electronic information resources.	2	4.9	17	41.5	3	7.3	19	46.3	2.05	LP

Decision Rule (DR): *If $\bar{X}$ is 1.0 to 1.74 = Not Possessed (NP); 1.75 to 2.49 = Less Possessed (LP); 2.50 to 3.24 = Moderately Possessed (MP); 3.25 to 4.0 = Highly Possessed (HP).*

Table 4.3 reveals that the respondents moderately possessed the skills to search for data, information and content in digital environment ($\bar{X} = 3.00$), use applications software (MS Word, Adobe Acrobat, WPS, etc) ($\bar{X} = 2.95$) and send and receive e-mails from colleagues ($\bar{X} = 2.83$). However, the respondents less possessed skills to download and evaluate electronic information resources ($\bar{X} = 2.20$), store, manage and organise digital data, information and content ($\bar{X} = 2.15$) and create and edit electronic information resources ($\bar{X} = 2.05$). This implies that the skills to search for data, information and content in digital environment, use applications software (MS Word, Adobe Acrobat, WPS, etc) and send and receive e-mails from colleagues are digital literacy among lecturers in Kwara State Polytechnic, Ilorin.

Findings of this study revealed that the respondents moderately possessed skills to search for data, information and content in digital environment. Being competent to source for information and materials on the digital space or environment is critical for academia in this digital era because, as the world evolves there is a need for lecturers to shift from traditional ways of teaching and working to more sophisticated way. Lecturers who are proficient in using digital tools to source for materials and information are proving to be transformative in lecturing their students through engaging resources and advance evaluation processes.

It can be understood from the result of the findings that the respondents less possessed skills to download and evaluate electronic information resource. In this contemporary era where information and materials are organized and store in electronic format, its paramount for lecturers to possessed adequate skills to access, download and evaluate electronic information resources. This helps them to access resources for teaching efficiently without the barriers of

region or geographical location. By having knowledge about where and how to locate information, lecturers are better able to support research and learning through the effective use of online tools and platforms.

4.4.2: What are the ICT competences among the lecturers in Kwara State Polytechnic, Ilorin?

Table 4.4: ICT competences among the lecturers in Kwara State Polytechnic, Ilorin

Options	HC		MC		LC		NC		$\bar{X}$	DR
	F	%	F	%	F	%	F	%		
Operation of Computer Devices.	8	19.5	20	48.8	7	17.1	6	14.6	2.73	**MC**
Operation of Multimedia Projector.	4	9.8	23	56.1	8	19.5	6	14.6	2.61	**MC**
Application Software Installation.	5	12.2	19	46.3	11	26.8	6	14.6	2.56	**MC**
Use of OPAC to search to information.	5	12.2	16	39.0	15	36.6	5	12.2	2.51	**MC**
Use of Learning Management Systems.	6	14.6	14	34.1	15	36.6	6	14.6	2.49	**LC**
Database Navigation.	3	7.3	16	39.0	15	36.6	7	17.1	2.37	**LC**

Decision Rule (DR): *If $\bar{X}$ is 1.0 to 1.74 = Not Competent (NC); 1.75 to 2.49 = Less Competent (LP); 2.50 to 3.24 = Moderately Competent (MC); 3.25 to 4.0 = Highly Competent (HC).*

Table 4.4 indicates that the respondents moderately competent in operating computer devices ($\bar{X}$=2.73), multimedia projector ($\bar{X}$=2.61) and application software installation ($\bar{X}$=2.56). However, the respondents are less competent in using learning machine ($\bar{X}$=2.49) and database navigation ($\bar{X}$=2.37). This shows that operating computer devices, multimedia projector and installation of application software are ICT competences among the lecturers in Kwara State Polytechnic, Ilorin. It is interesting to find out that the respondents are competent of operating computer devices. In this digital age, the need to possess the abilities and competences to full optimize computer devices such as; monitor, mouse, CPU etc is rapidly growing. ICT competence such as this among lecturers plays a pivotal role in preparing students for the digital world. If lecturers lack the skills to model and teach using these digital devices, students are at risk of graduating without the competencies needed in the modern workplace.

Finding also points out that the respondents are moderately competent in installing application software. As the digital space becomes saturated with sophisticated tools and application, there is a need for lecturers to be competent in installation of application software that can enhance their teaching and research. The fact that the respondents attest to this point shows how important it is to be competent in software application installation. If lecturers could not fully install platforms such as Zoom, Moodle, or Google Classroom effectively it will result in poor student engagement and inconsistent course delivery. This point is consistent with the view of Oyenike and Okunlola (2021) that higher education cannot succeed without embedding ICT competences such as competent in software application installation and operating computer devices as a core faculty requirement and ongoing institutional priority. By understanding this implication, lecturers ought to have competence in software application installation.

The point that the respondents are less competent in navigating databases is worth discussing. Because, lecturers as one of the information seekers and users' needs to be competence in navigating databases to gather resources for study, teaching and leisure purposes. However, the findings revealing that the respondents are less competent in navigating through databases is somewhat worrisome. As more academic activities move online including student records, research data and communication, lecturers are expected to have a working understanding of how to navigate through databases to gather relevant resources for teaching and research.

4.4.3: *What is the extent to which lecturers utilize electronic resources in Kwara State Polytechnic, Ilorin?*

Table 4.5: Extent to which lecturers utilize electronic resources in Kwara State Polytechnic, Ilorin

Options	VO		O		R		N		$\bar{X}$	DR
	F	%	F	%	F	%	F	%		
I use e-books to prepare lecture notes for teaching.	19	46.3	9	22.0	10	24.4	3	7.3	3.07	**O**
I access electronic journals for research purposes.	17	41.5	8	19.5	14	34.1	2	4.9	2.98	**O**
I use OPAC to search for specific information materials.	17	41.5	8	19.5	14	34.1	2	4.9	2.98	**O**
I download or print electronic information materials for academic use.	18	43.9	7	17.1	12	29.3	4	9.8	2.95	**O**
I save files on storage medium and web-based clouds.	3	7.3	11	26.8	23	56.1	4	9.8	2.32	**R**
I use digital resources over traditional print materials.	2	4.9	12	29.3	23	56.1	4	9.8	2.29	**R**

Decision Rule (DR): *If $\bar{X}$ is 1.0 to 1.74 = Never (N); 1.75 to 2.49 = Rarely (R); 2.50 to 3.24 = Often (O); 3.25 to 4.0 = Very Often (VO).*

Table 4.5 reveals that the respondents often utilize e-books to prepare lecture notes for teaching ($\bar{X}$=3.07), electronic journals for research purposes and OPAC to search for specific information materials ($\bar{X}$=2.98) and download or print electronic information materials for academic use ($\bar{X}$=2.95). However, the respondents rarely save files on storage medium and web-based clouds ($\bar{X}$=2.32) and use digital resources over traditional print materials ($\bar{X}$=2.29). This shows that e-books to prepare lecture notes for teaching, electronic journals for research purposes and OPAC to search for specific information materials and download or print electronic information materials for academic use are electronic resources often utilized by lecturers for their academic activities in Kwara State Polytechnic, Ilorin.

It can be understood from the findings of this study that the respondents often utilize e-books to prepare lecture notes for teaching. This is quite interesting as the findings of this table is in relation with the findings from Table 3 where majority of the respondents moderately possessed the skills to search for data, information and content in digital environment. With abundance literature and information arrange and organize in digital format on digital space, lecturers find it easy to access various resources they can use to prepare notes and materials for teaching and research. This reduces their workload and enables them to work efficiently and effectively. It is also interesting to find out that the respondents often utilize electronic journals for research purposes. The utilization of electronic journal has become an integral part of research activities in academics by providing vast and immediate access to current and diverse information that traditional print sources cannot match. This underscores the importance of ongoing digital competence and ability to use online resources effectively.

It is worrisome to find out that the respondents rarely use digital resources over traditional print materials. This contradicts the previous result in the table above that the respondents utilize e-books to prepare lecture notes for teaching, electronic journals for research purposes and OPAC to search for specific information materials which all this are digital resources. By the virtue of importance, digital resources utilization is essential for lecturers who want to efficiently access vast and up-to-date information and materials for teaching and research. Because, the digital space tends to holds various resources that cater for various needs of lecturers in this digital age.

4.4.4: What are the challenges affecting the utilization of electronic resources among lecturers in Kwara State Polytechnic, Ilorin?

Table 4.6: Challenges affecting the utilization of electronic resources among lecturers in Kwara State Polytechnic, Ilorin

Options	SA		A		D		SD		M	DR
	F	%	F	%	F	%	F	%		
Fluctuating Internet Connectivity.	8	19.5	20	48.8	7	17.1	6	14.6	2.73	**A**
Difficulty in navigating databases.	7	17.1	21	51.2	8	19.5	5	12.2	2.73	**A**
Epileptic Power Supply.	5	12.2	22	53.7	7	17.1	7	17.1	2.61	**A**
Irrelevant Electronic Information Resources.	5	12.2	18	43.9	10	24.4	8	19.5	2.49	**D**
Outdated electronic information materials.	6	14.6	7	17.1	15	36.6	13	31.7	2.15	**D**
No adequate electronic information materials.	5	12.2	7	17.1	14	34.1	15	36.6	2.05	**D**

Decision Rule (DR): If $\bar{X}$ is 1.0 to 1.74 = Strongly Disagree (SD); 1.75 to 2.49 = Disagree (D); 2.50 to 3.24 = Agree (A); 3.25 to 4.0 = Strongly Agree (SA).

Table 4.6 shows that the respondents agreed that challenges affecting the utilization of electronic resources among them are fluctuating Internet connectivity and difficulty in navigating databases ($\bar{X}$=2.73) and epileptic power supply ($\bar{X}$=2.61). However, the respondents disagreed that irrelevant electronic information resources ($\bar{X}$=2.49), outdated electronic information materials ($\bar{X}$=2.49) and no adequate electronic information materials ($\bar{X}$=2.05) are the challenges of utilizing electronic resources. This shows that fluctuating Internet connectivity, difficulty in navigating databases and epileptic power supply are the challenges affecting the utilization of electronic resources among lecturers in Kwara State Polytechnic, Ilorin.

It can be understood from the findings of this study that the major challenges the respondents face in utilizing electronic resources is fluctuating of Internet connectivity. Understanding the claim of the respondents, it is clear that one of the factors that hindered them in utilizing electronic resource is slow intermittent internet connectivity. This severely limits lecturers' ability to download or stream electronic materials efficiently. In correlates, findings revealed that epileptic power supply limits the respondents from accessing and utilizing electronic resources. In many cases, power outages or erratic power supply disrupt lecturers' access entirely, forcing them to abandon their research temporarily. This infrastructural deficiency directly undermines the benefits that electronic resources can provide. The above points is consistent with the affirmation of Aina and Ogungbeni (2013) that lack of consistent power and broadband connectivity remains a major impediment to effective electronic resource utilization in Nigerian academic institutions.

It is interesting to also find out that the respondents agreed that difficulty in navigating databases further limits them from utilizing electronic resources. Some database may be too complex and strict to navigate which result in lecturers not able to access some particular information resources on the cyberspace. There is a need for interactive and easy navigational structure when building database for organising and arranging electronic resources. Hence, ensuring lecturers can easily move from through databases to gather up-to-date information and materials for studying, teaching, research and leisure purposes.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1   Introduction

This chapter presents the summary of findings, conclusion, and recommendations derived from the data analyzed in Chapter Four. It provides a concise overview of the major insights gained from the study, interprets the broader implications of the results, and offers recommendations to enhance digital literacy, ICT competence, and electronic resources utilization among lecturers.

5.2   Summary

The is study investigated the digital literacy skills and ICT competence as determinants of electronic information resources utilization among lecturers in Kwara State Polytechnic, Ilorin. The major findings of this study are:

Lecturers at Kwara State Polytechnic moderately possessed digital literacy skills such as searching for data, using applications like MS Word and WPS, and sending/receiving emails. However, they were less proficient in downloading and evaluating electronic resources, managing digital content, and editing digital information.

Respondents demonstrated moderate competence in operating computers, using multimedia projectors, and installing application software. However, they were less competent in navigating databases and using learning management systems like Moodle or Google Classroom.

Lecturers often utilized e-books, electronic journals, OPAC, and downloaded materials for academic use. However, they rarely used digital resources over traditional print materials and seldom stored files on web-based clouds or external storage media.

Major challenges identified include fluctuating internet connectivity, difficulty in navigating databases, and epileptic power supply. However, issues such as outdated materials, irrelevance of content, and inadequacy of electronic resources were not considered major problems by the respondents.

5.3   Conclusion

This study investigated digital literacy skills and ICT competence as determinants of electronic resources utilization among lecturers at Kwara State Polytechnic, Ilorin. The findings highlight a moderate level of digital literacy and ICT competence among lecturers, with a corresponding moderate level of electronic resource utilization. However, certain critical skills particularly related to database navigation and effective digital resource management are lacking. The study further identifies infrastructural challenges such as unstable internet and power supply, which significantly hinder the effective use of electronic resources. Despite the availability of digital tools and platforms, these issues impede optimal utilization and need urgent attention. To bridge this gap, institutions must commit to developing both human and technical capacities.

5.4   Recommendations

Kwara State Polytechnic management should organize routine training programs to build lecturers' capacity in digital literacy and ICT skills, with emphasis on advanced competencies such as editing digital content and navigating academic databases.

The institution should invest in reliable internet facilities and alternative power solutions (e.g., solar power systems or standby generators) to reduce disruptions and enhance access to electronic resources.

Workshops and awareness campaigns should be implemented to encourage lecturers to prioritize digital resources over traditional print formats, thereby fostering a digital-first academic culture.

There should be full implementation of ICT policies that mandate minimum ICT competencies for staff recruitment, promotion, and professional development.

APPENDIX

References

Adegbilero-Iwari, I., & Okiy, R. B. (2016). *Institutional culture and electronic resource utilization in Nigerian academic libraries*.

Adekoya, C. O., & Fasae, J. K. (2016). *Training and access to electronic resources as determinants of research productivity*.

Agber, T., & Agwu, E. A. (2019). *Understanding electronic resources in tertiary education*.

Aina, R. F., & Ogungbeni, J. I. (2013). *Digital literacy among Nigerian lecturers and students*.

Aina, R. F., Opeke, R. O., & Ochogwu, M. G. (2015). *Bridging the digital divide in Nigerian universities*.

Ajayi, A., & Adewale, O. (2013). *Training programs and their impact on e-resource utilization*.

Ajibero, M. I., & Adelabu, A. T. (2016). *ICT competence and academic engagement among lecturers*.

Ajiboye, J. O., & Adekoya, A. A. (2019). *Digital divide in Nigerian higher institutions*.

Akintunde, S. A., & Oluwole, B. O. (2017). *Capacity building for librarians in digital environments*.

Aniet, I., Okafor, U., & Uche, O. (2015). *Definition and classification of electronic resources*.

Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.

Ezeani, C. N., & Igwilo, W. I. (2012). *Digital skills and research efficiency*.

Ezeani, C. N., & Ugwuanyi, M. O. (2014). *Barriers to electronic resource access in Nigeria*.

Haridasan, S., & Khan, M. (2019). *Electronic resources: Formats, access, and use*.

Ibrahim, A. O. (2017). *Survey techniques in educational research*.

International Federation of Library Associations (IFLA). (2015). *Definition of electronic resources*.

Islam, M. M., & Mostofa, S. M. (2018). *Born-digital vs. digitized resources: An overview*.

Issa, A. O., Amusan, B., & Daura, U. D. (2019). *Trends in digital resource utilization*.

Jewel, T. J. (2018). *Comprehensive framework for electronic resources*.

Johnson, R. K., Evensen, O. G., Gelfand, J., Lammers, G., Sipe, L., & Zilper, N. (2017). *Digital information systems and academic performance*.

Kolawole, M. A., & Ijiebor, E. (2018). *Blueprints for research design in education*.

Konappa, S. (2017). *Categories of electronic resources*.

Organisation for Economic Co-operation and Development (OECD). (2017). *Digital education and resources: Policy insights*.

Obi, T. U., & Onuoha, J. N. (2015). *ICT competency among lecturers in Nigerian institutions*.

Okello-Obura, C., & Magara, E. (2015). *Access models for licensed electronic resources*.

Okiki, O. C., & Asiru, S. M. (2017). *E-resources adoption in African libraries*.

Okoro, C. O., & Onuora, G. N. (2018). *Awareness and usage of academic e-resources*.

Olorunsola, R., & Oladejo, B. (2014). *Cultural and linguistic challenges in digital resource usage*.

Onwubiko, C. D. (2017). *Policy frameworks for e-resource management in Nigeria*.

Pawar, S. S., & Moghe, V. R. (2015). *Evolution of digital libraries in education*.

Sejane, L. (2017). *Characteristics of electronic information resources*.

Thanuskodi, S. (2020). *Digital transformations in academic libraries*.

Wong, B. K., Ong, C. S., & Kuek, T. Y. (2017). *Instrument reliability in research*.

Yaya, A. (2016). *Sampling techniques for educational research*.

Yaya, A. (2018). *Population dynamics in social science studies*.

QUESTIONNAIRE

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY

KWARA STATE POLYTECHNIC, ILORIN

Questionnaire on:

Digital Literacy Skills and ICT Competence as determinants of Electronic Information Resources Utilization among Lecturers in Kwara State Polytechnic, Ilorin

Dear Respondent,

REQUEST FOR RESPONSE TO QUESTIONNAIRE

I am a student of the above-named institution, conducting research on the above topic. The research is in partial fulfilment of the requirements for the award of National Diploma (ND) certificate in Library and Information Science.

Your assistance is hereby requested for timely completion of this questionnaire. I am assuring you that all data provided will be treated with utmost confidentiality and used for research purpose only.

Thank you for your anticipated cooperation.

OYEKALE, Sunday Anuoluwa

Researcher

SECTION A:

Demographic Information of Respondents

Kindly select the option applicable to you…

Gender: Male (   ); Female (   )

Age Group: 25-34 years (   ); 35-44 years (   ); 45-54 years (   ); 55 years and above (   )

Educational Qualification: HND (   ); BSc (   ); MSc (   ); PhD (   )

Department: Computer Science (   ); Mass Communication (   ); Library and Information Science (   ); Office Technology Management (   )

Years of Work Experience: 5 years and below (   ); 6-10 years (   ); 11-15 years (   ); 16-20 (   ); 21 years and above (   )

SECTION B:

The level of digital literacy skills possessed by the lecturers in Kwara State Polytechnic

Keys: Highly Possessed (HP), Moderately Possessed (MP), Less Possessed (LP), Not Possessed (NP)

S/N	Statements	HP	MP	LP	NP
1.	The skills to send and receive e-mails from colleagues.				
2.	The skills to use applications software (MS Word, Adobe Acrobat, WPS, etc).				
3.	The skills to search for data, information and content in digital environments.				
4.	The skills to store, manage and organise digital data, information and content.				
5.	The skills to create and edit electronic information resources.				
6.	The skills to download and evaluate electronic information resources				

SECTION C:

The ICT competence among the lecturers in Kwara State Polytechnic

Keys: Highly Competent (HC), Moderately Competent (MC), Less Competent (LC), Not Competent (NC)

S/N	Statements	HC	MC	LC	NC
1.	Application Software Installation				
2.	Database Navigation				
3.	Operation of Multimedia Projector				
4.	Operation of Computer Devices				
5.	Use of Learning Management Systems				
6.	Use of OPAC to search to information				

SECTION D:

The extent to which lecturers utilize electronic resources in Kwara State Polytechnic

Keys: Very Often (VO), Often (O), Rarely (R), Never (N)

S/N	Statements	VO	O	R	N
1.	I access electronic journals for research purposes.				
2.	I use e-books to prepare lecture notes for teaching.				
3.	I download or print electronic information materials for academic use.				
4.	I use OPAC to search for specific information materials.				
5.	I save files on storage medium and web-based clouds.				

6.	I use digital resources over traditional print materials.				

SECTION E:

The challenges affecting the utilization of electronic resources in Kwara State Polytechnic

Keys: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

S/N	Statements	SA	A	D	SD
1.	Epileptic Power Supply				
2.	Fluctuating Internet Connectivity				
3.	Irrelevant Electronic Information Resources				
4.	Difficulty in navigating databases				
5.	No adequate electronic information materials				
6.	Outdated electronic information materials				