INFLUENCE OF DIGITAL LITERACY SKILLS ON DIGITAL TEACHING AMONG LECTURERS IN AL-HIKMAH UNIVERSITY, KWARA STATE, NIGERIA

By

FUNSHO MORENIKEJI MARIAM

ND/23/LIS/FT/0065

SUBMITTED TO
DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE,
INSTITUE OF INFORMATION AND COMMUNICATION TECHNOLOGY,
KWARA STATE POLYTECHNIC, ILORIN

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

JUNE, 2025

CERTIFICATION

This is to certify that this project titled **"*Influence of Digital Literacy Skills on Digital Teaching Among Lecturers in Al-Hikmah University, Kwara State, Nigeria*"** by Funsho Morenikeji Mariam meet the regulations guiding the award in National Diploma in Kwara State Polytechnic Ilorin and is approved.

_____ _____

MR. SULYMAN, A. S. **Date**

Project Supervisor

_____ _____

MR. SULYMAN, A. S. **Date**

Project Coordinator

_____ _____

MR. ISIAKA, A. O. **Date**

Head of Department

_____ _____

External Examiner **Date**

DEDICATION

This project is dedicated to God for being my ultimate source of strength and inspiration. In Him, I derived all powers needed to live, weather the storms and become an embodiment of hope to myself and the people around me.

ACKNOWLEDGEMENT

All praise is to God, the most beneficent, the most merciful. My sincere appreciation goes to my parents for their concern, prayers and words of encouragements towards the completion of this progamme. My utmost gratitude also goes to my supervisors Mr. Sulyman, A. S. for her moral and intellectual guidance and contribution towards the possibility of this project and all other lectures of the department.

To be given the privilege to contribute stream of knowledge make me appreciate the entire management of Kwara State Polytechnic Ilorin, and my noble department of Library and Information Science and my fellow colleagues that made my stay on the citadel more interesting and all my friends without whom this great work could not be achieved.

TABLE OF CONTENTS

Abstract

This study investigates the influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria. It adopts descriptive survey design and its population is 531 lecturers in Al-Hikmah University, Ilorin, Nigeria. 71 respondents were randomly selected to fill the questionnaire administered to them by the student researcher. Response rate for the questionnaire is 71.81%. This study reports that the digital tools used for teaching In the study area include mobile devices/tablets/telephones, computer-based teaching, laptops, multimedia contents, Zoom, smartboards, Google form and classrooms. Furthermore, digital literacy influences the ability of lecturers in the area understudying to creatively apply digital resources for teaching, download files and content needed for teaching, basically operate digital tools for teaching and familiar with the digital tools used for teaching. Results also showed that digital literacy benefits teaching among lecturers in the study area, by equipping them with the skills required to create and share digital contents, enhancing their ability to protect their digital teaching information, helping them to work efficiently in a digital environment and enhancing their productivity of teaching with digital tools. Though, the respondents' opinions indicated that the problems associated with digital literacy skills for teaching, include over reliance on the traditional teaching approaches, students' poor interest in being taught with digital tools, inadequate training on digital teaching, digital divide and inadequate quality of the training on digital teaching. This study concludes that digital literacy has redefined the paradigms by determining what teaching resources teachers and learners can access and maximally utilised. Management of Al-Hikmah University, Ilorin, should be organising adequate training for their lecturers on the use of digital tools for teaching. This will expose the lecturers to different digital tools they can use for teaching and also equip them with the skills to use the digital tools.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

As digitization becomes part of everyday life, policy makers have developed a range of initiatives to try to ensure that all individuals have access to digital contents to benefit from a wide range of online learning, employment, networking, and informational opportunities. Simultaneously, academic research on digital literacy has proliferated rapidly and has had a great deal of research that demonstrates the complexity of factors that helps us understand how and why students used the digital resources.

Today it is true to say that in most parts of the world that we live in a digital society; a society permeated by the digital, in which human actions are frequently mediated by digital tools and the objects they encounter are often shaped by digital intervention (Phuapan, Viriyavejakul & Pimdee, 2016). For the 21st century education, the teachers and learners must have the suitable skills to access, assess, use, manage and enrich the vastness of their knowledge through the digital tools.

Phuapan, Viriyavejakul and Pimdee (2015) posited that the university education format in the present time has changed so much from that of the past. With new knowledge and improved technology, teaching have also changed over time. Digital literacy has become a key element in teaching across the different educational stages that has been addressed since the last decade of the twentieth century within the field of open, distance, and digital education (Lankshear & Knobel, 2016; David-West, 2022).

The education format in the present time has changed so much from that in the past. With new knowledge and improved technology, students' behaviors have also changed over time. The old education system is no longer effective and the final goal of education is no longer just the result of examination. It is necessary that the learning pattern has to be altered just to keep up with this advancement, especially at the time when more technology is used in human life. It is said that the world now is the world of technology. Many tools for education have been created by technology.

With the digital generation, new technology has been quickly developed. The devices belong to so-called “Digital Technology” such as computers, tablets, mobile telephones and the internet and have been used globally in education, business and have become inherently part of the human society and culture for quite some time now. In light of the rapid and continual development of digital technology, individuals are required to use a growing variety of technical, cognitive, and sociological skills in order to perform tasks and solve problems in digital environments. These skills are referred to in the literature as digital literacy (Phuapan, Viriyavejakul & Pimdee, 2015).

Digital literacy is the ability to understand and use information in multiple formats from a wide variety of sources when it is presented via computers and, particularly, through the medium of the Internet (Lankshear & Knobel, 2016). Phuapan, Viriyavejakul and Pimdee (2015) posited that digital literacy is the most recent concept describing technology-related skills. It is the ability to use digital technology and communications tools, and/or networks to access, manage, integrate, evaluate, create and communicate information in order to function in a knowledge society.

In recent years, several terms have been used to describe the skills and competence of using digital technologies, such as ICT skills, technology skills, information technology skills, 21st century skills, information literacy, digital literacy, and digital skills. Digital Literacy has overlapping areas with Information Literacy, Media Literacy, ICT Literacy and Internet Literacy (Phuapan, Viriyavejakul & Pimdee, 2015). In teaching, digital literacy is one of the areas of research and practice in the field of open, distance, and digital education with a longer trajectory and evolution in its history. The interest around it started when the mere reading and writing abilities ceased to be sufficient for participating as full citizens in the new technological and communicative era (Marin & Castañeda, 2023).

Digital literacy involves being skilled at deciphering complex images and sounds as well as the syntactical subtleties of words in digital formats. Digitally literate people are quick on [their] feet in moving from one kind of medium to another, know what kinds of expression fit what kinds of knowledge and become skilled at presenting [their] information in the medium that [their] audience will find easiest to understand. Digital literacy enables people to match the medium we

use to the kind of information we are presenting and to the audience we are presenting it to (Lankshear & Knobel, 2016).

According to Arango-Morales, Tamayo-Salcedo and Delgado-Cruz (2021), digital literacy is not presented in the literature as a concept itself but as a kind of ensemble and joining of cultural and historical understandings and practices regarding the use of information, mediated by digital technologies, on any aspect of daily human life. It includes technological, attitudinal, and cognitive components, linked to the need of humans (as individuals and as groups) to express, explore, question, communicate, and understand ideas in digital formats. This need is also historically engaged with the use of technologies to do tasks, solve problems, and communicate.

Social conditions and happenings made people learn continuously when they meet face-to-face. This learning process always changes because of technological devices and transforms into a multi-structure. Digital literacy appears as effective literacy during this process. Digitalization is originally based on digitizing, multimedia, interaction, and being everywhere. Developed digital technology and integration systems of the 1970s started the formation of the digital world. Digital technology, voice, image, data or packaging, and storing all kinds of messages with coding came with the development of computer technologies and communication devices (Ayhan, 2016).

This becomes the reason for this study to be designed towards investigating the influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria.

1.2 Statement of the Problem

Digital literacy skills are specific abilities of using digital technologies to create, manage, access, manage, integrate and communicate digitally. The use of digital resources is soaring, becoming a force to be reckoned with in the teaching environments. This makes it imperative for both the teachers and learners to develop digital literacy skills because the skills will enable them to make an optimal use of digital tools and contents (Marin & Castan˜eda, 2023).

On the other hand, it has been reported by David-West (2022) that teaching in the digital era has been challenged by many factors which among them include poor awareness of digital skills

among the learners, poor knowledge of digital literacy skills which is affecting the selection of right digital tools for teaching and inadequate digital infrastructure to enhance digital teaching.

The need to ascertain the status of this problem in universities in Kwara State makes this study designed to investigate the influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria.

1.3 Research Objectives

The main objective of this study is to investigate the influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria.

Specific objectives are to:

1. identify the digital tools used for teaching in Al-Hikmah University, Kwara State, Nigeria,
2. examine the frequency of use of digital tools for teaching in Al-Hikmah University, Kwara State, Nigeria,
3. examine the digital literacy skills influencing teaching in Al-Hikmah University, Kwara State, Nigeria,
4. examine the benefits of digital literacy skills on teaching in Al-Hikmah University, Kwara State, Nigeria, and;
5. examine the problems associated with digital literacy skills for teaching in Al-Hikmah University, Kwara State, Nigeria.

1.4 Research Questions

This study seeks to answer the following questions:

1. What are the digital tools used for teaching in Al-Hikmah University, Kwara State, Nigeria?

2. What is the frequency of use of digital tools for teaching in Al-Hikmah University, Kwara State, Nigeria?

3. What are the digital literacy skills influencing teaching in Al-Hikmah University, Kwara State, Nigeria?

4. What are the benefits of digital literacy skills on teaching in Al-Hikmah University, Kwara State, Nigeria?

5. What are the problems associated with digital literacy skills for teaching in Al-Hikmah University, Kwara State, Nigeria?

1.5 Significance of the Study

This study will be important to the aspect of digitization in teaching by contributing to the existing literature and also reveal the state-of-the-art of digital literacy skills of teachers and learners in universities. It will also reveal the digital tools used for teaching in Al-Hikmah University, Kwara State, Nigeria and provide insights into the frequency of use of digital tools for teaching.

Specifically, the management of Al-Hikmah University, Kwara State, Nigeria, will benefit from this study by knowing the digital skills possessed by their lecturers and discover the necessity of investing in the digital skills of their academic staff, so that teaching in the digital environments will be enhanced and effective.

Furthermore, this study will be of high value to the lecturers of Al-Hikmah University, Kwara State, Nigeria, by exposing them to the digital skills they can acquire and equip themselves with in order to efficiently and effectively discharge digital teaching to their students.

1.6 Scope and Limitations of the Study

This study will be concerned with influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria. It will focus on lecturers in Al-Hikmah

University, Ilorin. This means that the lecturers in the aforementioned institution will be respondents that will provide data to be used in answering the questions posed by this study.

1.7 Operational Definition of Terms

Digital literacy skills: These are the abilities to identify, locate, access and exploit digital tools and contents for teaching in Al-Hikmah University, Kwara State, Nigeria.

Digital Teaching: This is the process of exploiting digital literacy skills for educating students online in Al-Hikmah University, Kwara State, Nigeria, on philosophies and practices of particular disciplines.

Lecturers: These are individuals who are expected to exploit digital literacy skills for digital teaching in Al-Hikmah University, Kwara State, Nigeria, on philosophies and practices of particular disciplines.

Al-Hikmah University, Kwara State, Nigeria: This is a higher institution of learning in Kwara State, Nigeria, where digital literacy skills are expected to be exploited for digital teaching among lecturers.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter is structured to review positions, assertions, statements, opinions and conclusions of scholars and researchers on the subject understudying. Kolawole and Ijiebor (2018) asserted that review of related literature involves the collection of ideas, views, positions and opinions expressed in various writings of recognized authorities as well as findings of previous researches in one's area of investigation.

Literature review can be best understood by arranging relevant topics in order of importance or seniority. Therefore, this chapter will be organized in the following order:

2.2 Concept of digital literacy

2.3 Concept of digital teaching

2.4 Digital literacy skills influencing digital teaching

2.5 Digital tools used for teaching

2.6 Benefits of digital literacy skills on teaching

2.7 Problems associated with digital literacy skills for digital teaching

2.8 Summary of the chapter

2.2 Concept of Digital Literacy

Digital literacy means the skills associated with using technology to enable users to find, evaluate, organize, create, and communicate information; and developing digital citizenship and the responsible use of technology. Digital literacy can support or accelerate the acquisition of knowledge and the development of proficiency in a range of academic contexts (Harris, 2015). Digital literacy proficiency is needed to fully participate in the 21st century teaching.

Digital literacy is no longer restricted to the ability to handle computers. It encompasses several skills that teachers and students should master so that effective learning/teaching can take place. Not only does the importance of digital literacy lie in providing and making information more accessible, but it does mainly aim at respecting the tendencies of young learners. A student/ teacher who has not strengthened his/her digital competence will inevitably struggle to succeed in an increasingly digital world (Ouahidi, 2019).

Digital literacy is much more than proficiency with discrete computer skills. Certainly, these foundational skills are critical; however, the crux of what is meant by digital literacy is the recognition of these skills' relevance in specific contexts and one's ability to creatively apply them (International Society for Technology in Education, 2016; Jacobs & Castek, 2018; Vanek, 2017). Possessing these skills and an interpretation of how they are represented in the context of digital literacy are described as follows:

Critical thinking: Students must have the skills and knowledge necessary to draw on inductive and deductive reasoning, systems thinking, and analysis so that one can evaluate evidence, opinions, and information and synthesize, critique, evaluate, and interpret information to draw conclusions, communicate information, or complete a task, employing relevant technologies in support of each step (Partnership for 21st Century Learning, 2019). These skills can be developed in classrooms that weave digital literacy into research projects that scaffold information literacy skills as learners build confidence finding and evaluating information they find online. When handing out directions for an assignment, a teacher may include a list of questions that students should ask themselves about the reliability and validity of various websites they visit as they do their work to remind students to think critically about the information they find online.

Communication: Students must have the skills and knowledge necessary to express oneself creatively for a variety of purposes in diverse contexts using the appropriate platforms, tools, styles, formats, and digital media necessary to reach different communication goals. In the classroom, teachers can teach essential computer skills like using word processing and presentation software (among other technologies) and then help learners discern what technology to use for what purpose, the conventions and

expectations for use, and how to share with others. For example, if teaching Microsoft word, it would be important to not only teach basic formatting, but also how to search for and select templates for different communication purposes (e.g., résumé cover letter, general business letter, brochure).

Processing and analyzing information: This is a 'big tent' skill in the area of digital literacy because information online abounds. Students must have the skills and knowledge necessary to understand how and why digital media and information are constructed, for what purposes, and how individuals interpret messages differently depending on their values and points of view. They also must have the skills and knowledge necessary to recognize how media can influence beliefs and behaviors, how to consciously make decisions about ethical and legal issues surrounding the access and use of technology, and how to synthesize to make connections and draw conclusions based on analysis of information found online (Partnership for 21st Century Learning, 2019). In the classroom, media literacy activities that provide support on identifying bias should be woven into any lessons about internet search. Also important are classroom activities that help learners use software like Excel to organize and analyze numerical data.

Self-awareness: Students must have the skills and knowledge necessary to sense one's own competency in choosing and leveraging technology best suited for demonstrating the achievement of learning goals, problem solving or in working with a new technology; to draw on knowledge of one's own skills; to seek support when needed (International Society for Technology in Education, 2019); and to monitor one's progress toward goal completion and alter course when a new approach or technology is required (Vanek, 2017). Each student in a class might have a folder that contains a checklist of skills and knowledge; the teacher can provide students time to review and update the checklist on a monthly basis, checking off the skills that they gained over the previous month.

Problem-solving: Students must have the skills and knowledge necessary to complete non-routine tasks by drawing on familiar technologies, complete routine tasks by drawing on new technologies or, if needed, new tasks requiring use of new technologies (Vanek, 2017). The classroom should provide opportunities to practice digital problem-solving, to

"navigate and use multiple digital resources in order to accomplish goals across domains including work, personal interests, educational pursuits, social or professional networking, civic participation, and for future uses not yet conceptualized (Jacobs & Castek, 2018). Open-ended problem-based learning activities that support students' use of a broad range of technologies can help them develop problem-solving in the comfort of a classroom. Learners can be asked to identify a problem in their community, guided to use survey technologies to better understand a range of opinions on the issue, and then instructed to collaborate using technology to craft a presentation on the issue and possible solutions. In this example, not only is the goal of activity focused on a problem, but the integration of each technology employed likely requires untangling minor problems caused by use of the technology.

Navigating systems: Students must have the skills and knowledge necessary to understand where to find information and how to use it to accomplish a predetermined goal or solve a problem using digital media and text, online learning tools, and social media resources (Partnership for 21st Century Learning, 2019). As is possible, classroom activities should include authentic internetbased resources. For example, if you are working with an English Language Arts class on social media, have the learners examine their own networks to better understand audience and purpose of each. If you are helping students learn how to use mapping technologies, ask them to identify actual destination and modes of transport they are likely to use, then create worked examples to get them to practice finding places. A teacher might create an activity that requires students to use technology to map public transit routes from their home or school to relevant locations (e.g., doctor's office, American One Stop, library) for arrival at a specific time, for example, "Find the dentist nearest your home; figure out how to get there for an appointment on [date] at [time]."

2.3 Concept of Digital Teaching

Digital teaching is a generic term for all forms of learning that takes place without physical contact. In other words, it is any form of teaching that does not take place in a traditional classroom setting. The alternative names of this form of teaching are e-learning, virtual learning

and distant learning. It involves teachers teaching their students through an electronic system or using the apparatus of the World Wide Web (www) (Oparaji, Nwosu & Oguejiofor, 2022).

Digital technologies have the potential to support and shape a pedagogy which is more active, participatory, personalised, flexible, and inclusive. It is acknowledged that socio-political factors may discourage institution-wide use of technologies in teaching, and it is likely that the factors would not disappear in the short term, but it is believed that at the micro or grass root level, technology use can have an impact on teaching if there is a better understanding of the pedagogic potentials and a wider dissemination of exemplary and creative use of technologies to show how they can be embedded in teaching to improve quality (Lai, 2011).

Digital teaching spans a range of activities, from enrolling in online courses full-time to completing one educational activity on a school computer (Best & Dunlap, 2018). Digital teaching is very important. In fact, it is a necessity in the period physical contact is not necessary in teaching. It opens students to a vast knowledge of virtual learning and at the same time expands teachers' versatility with the use of e-learning facilities. It also helps the schools in the study area to source for or provide online education infrastructure (Oparaji, Nwosu & Oguejiofor, 2022).

In our day to day life, the advancement in technology is increasing all over the world. Many jobs were not having any requirement of technology but now are in dire need of technology. As we all are now living in a digital age, teachers and learners of the 21st century have different needs and requirements. This implies that the learning must not be limited to the classroom only. Digital technology, if effectively used, will result in enhancing the teaching. It has the potential for making a substantial contribution to enriching education for all areas of curriculum that strives for excellence (Kouser & Majid, 2021).

Today's students are often called "digital-age learners"— reflecting their technological savvy and free-agent approach to learning. With their iPods, iPhones, computer games, social media pages, and text messaging, the digital-age students have access to resources and knowledge beyond traditional school structures and practices. Also, the students are less dependent upon traditional education institutions for knowledge acquisition and are much more self-reliant,

exercising their internet-based skills to aggregate data and information (Collier, Burkholder & Branum, 2015).

Digital teaching offer exciting opportunities to expand the learning environment for diverse student populations. Digital teaching share much with face-to-face teaching, but it also has a unique set of skills and requirements. Both approaches are similar in content, except in pace and delivery. For online teaching to be successful, it should be designed to encourage student participation, encourage student cooperation, encourage active learning, give prompt feedback, emphasize time on task, communicate high expectations and respect diverse talents and ways of learning (Mathew, Sadiku, Adebo & Musa, 2018).

Supporters of digital learning suggest that technology can help prepare students for the workforce, improve student learning and educator effectiveness, and bring high-quality education to those who cannot otherwise access it. To achieve this aim, digital teaching should be tailored towards addressing individual differences, motivating the student, avoiding information overload, creating a real-life context, encouraging social interaction, providing hands-on activities and encouraging student reflection (Mathew, Sadiku, Adebo & Musa, 2018).

2.4 Digital Literacy Skills Influencing Teaching

Digital competence means the skills associated with using technology to enable users to find, evaluate, organize, create, and communicate information; and developing digital citizenship and the responsible use of technology (Vanek, 2017). Digital competence is much more than proficiency with discrete computer skills. Certainly, digital competence is critical; however, the crux of what is meant by digital competence is the recognition of the skills relevance in specific contexts and one's ability to creatively apply digital resources (Jacobs & Castek, 2018).

Spires and Bartlett (2012) have divided the various intellectual processes associated with digital competence into three categories: (a) locating and consuming digital content, (b) creating digital content, and (c) communicating digital content. Digital competence is often referred to as one monolithic construct; but it is really one that encompasses several groups of competencies. In their foundational work on the topic, Lankshear and Knobel (as cited in Vanek, 2017) suggested that successful functioning in digital spaces and with digital media requires a plurality of

proficiencies, starting with text literacy and technical skills and extending to include the cognitive and sociocultural strengths.

Digital skills involve any number of digital reading and writing techniques across multiple media forms, including: words, texts, visual displays, motion graphics, audio, video, and multimodal forms. Gbaje (2013) posited that digital skill has become an inevitable quality for teachers and learners in the 21st century. The author further stressed that teaching in this digital era are increasingly technologically driven, thereby changing the way teaching take place. To effectively work in the digital work environment, teachers and learners require re-training with the skills, knowledge, and experience that will enable them to teach and learn through digital tools.

The need for digital skills among teachers and learners is becoming extremely essential to face this ever-changing technology. The training of teachers and learners to be digitally competent can be required at three levels: baseline, desired and target levels. The baseline information includes general competence such as turning on the computer, familiarity with the basic operations of computers, turning on printers and adding paper, knowing how to open browsers and use menu bars, sending and receiving emails, and search engines. The desired level includes competence that are a little more advanced than the basic level, but are not as developed as those in the target level, which include knowledge of downloading files, cookies and general security issues. These skills include knowledge of metadata, database development, digital archiving and preservation and content management system (Hamada & Stavridi, 2014).

Gbaje (2013) submitted that digital competence includes knowledge and skills that are relevant for teachers and learners to effectively work in the digital environment. The competence must include a certain degree of knowledge and skills in information technology. In order to disseminate knowledge and information available in all current formats: print and electronic, the new era teachers and learners are required to understand the need to learn more about new technologies and be comfortable using them in order to perform their utmost role (Bin Hashim & Mokhtar, 2014).

Bin Hashim and Mokhtar (2014) and Gbaje (2013) highlighted e-mail management skills, word processing skills, database management skills, spreadsheet skills, competence to use presentation software, use of portable document format (PDF) software, web searching skills, searching

library databases, using Learning Management System (LMS), installing printer, scanner and computer systems, use of digital camera for digitization and web navigation skills.

Others are, teaching others to use technology, file management/operating system navigation skills, CD-ROM/DVD search, using scanners and similar devices, troubleshoot printing problems, creating online instructional materials/products, how to cite and evaluate Internet resources, installing software, web design, security of digital resources, connecting patrons laptop to the library wireless, graphic design, creating and updating Institutional OPAC, and network management.

2.5 Digital Tools Used for Teaching

The introduction of new technology-assisted learning tools such as mobile devices, smartboards, MOOCs, tablets, laptops, simulations, dynamic visualisations, and virtual laboratories have altered education in schools and institutions. The Internet of Things (IoT) is proven to be one of the most cost-effective methods of educating young brains. It is also a robust mechanism for integrating a world-class learning experience for everybody (Haleem, Javaid, Qadri & Suman, 2022).

Digital technologies make it easy to use classroom tactics like gamification or approaches like flipped classrooms that optimise learning. Learning landscapes have evolved as a didactic tool that mixes several techniques and enables distinct itineraries to be presented to each student (Haleem et al., 2022).

Social media: This is a learning tool that has come a long way. Large numbers of teachers and students use social media as an essential element of the overall e-learning experience. It is a critical venue for exchanging information about crucial topics these days. Aside from the ability to communicate information anywhere, at any time, social media sites are also a fantastic source of producing networking possibilities to establish social activities and possibly new jobs (Haleem et al., 2022).

Easy Class: This is a free and simple online learning management system. It is made especially for the educators and the students. On the Easy Class platform, teachers can create online courses for students which they can access at any time, and at any pace.

Teacher can make important announcements and share materials and files in a well-organized and systematic manner. It includes assignments, class discussions, quizzes, and even exams and results. The grade points of the students are also being updated including the feedback to the students that is provided at the end of the exam. This tool provides opportunities to the teachers for engaging the students in different activities through which a dimension for interaction and the learning increases and becomes efficient (Kouser and Majid, 2021).

Microsoft Teams: This is a hub for teamwork in office 365 which brings everything together where people can work in teams by cooperating and collaborating. It includes various options like chatting knowing the opinions and each other's personality along with the use of emojis, gifs and stickers. A team of people like 10 or 10,000 groups of people can meet in one place and it does not matter from where they belong. There is also a calling option in Microsoft teams where the calling is done in teams and even they all can collaborate in one place no matter whether the participants are. In the Team platform, participants can share, access and even edit word documents, PowerPoint and Excel files in real-time. This type of technology has united many minds together and due to which they have achieved their aims and objectives to be accomplished. Microsoft Teams is a place where online documents, announcements, favourite websites, discussions, grade books, and the videos can be found by the students easily (Kouser & Majid, 2021).

Multimedia Contents: These are educational contents containing two or more media including texts, images, audios, videos, graphics and animations. The multimedia animations consist of images, words, sounds, pictures, and moving images. Multimedia animations can improve a learner's capability to remember information. With images, sounds and actions, animations can interpret complicated abstract ideas for students. Multimedia resources are an educational tool that can help students to comprehend complicated ideas, recognize misapprehensions, and positively influences students' contentment, motivation, and studying accomplishment (Ain et al., 2019).

Zoom: This is another digital tool for teaching. It is a web-based video conferencing and digital classroom system allowing face to face communication, two-way video and audio

where up to 100 people can join. They can be in small groups or large groups. On the Zoom platform, teachers, instructors or educators need a device with the microphone and a camera. It increases student's participation retention with the combination of virtual and hybrid classrooms and also the micro-learning. Zoom has many innovative features that help a teacher in delivering online lessons. It can be delivered by engaging students with a chat feature, using videos, sharing and recording lessons. To connect to Zoom, all a user needs is to make a schedule of meetings or lessons to get a link (Personal Meeting ID) which can be shared by the educator with the students and the students can use that link for their identification. The feature of Zoom helps teachers for exploring and accessing the skills while interacting with students. It makes lessons more interactive and the students can also record the lessons and they can use the recording at any time for learning. Participants can join this online platform by using the basic (free) package and then if they need more, they can buy by using paid monthly packages/add-on packages (Kouser & Majid, 2021).

Mobile technology: This has rapidly grown as a teaching resource. Mobile-based technological advancement has led to most people to carry their own individual small computer systems that contain notable processing capability such as notebooks, PDAs (Personal Digital Assistance) personal computers, tablets, mobile phones, and e-book readers. Mobile technologies have excellent prospects for assisting advanced academic techniques. Most learners used their laptops mobile phones, PDAs to write, make demonstrations, browse the Internet, do preparation, or take tests. Mobile technology provides easy usage, helps students to learn independently, motivates students to interact and make social connections, and helps them quench their inquisitive thirst (Ain et al., 2019).

Mentimeter: This was designed by a Swedish company to create presentations with real-time feedback. It is an interactive learning platform where users can make their audience feel involved in teaching by enabling them to contribute to the presentations with smartphones and showing the live results. Mentimeter has a lot of other options like presentations, polls or brainstorming sessions in classes, meetings, gatherings, conferences and other group activities. A teacher after uploading the desired PowerPoint

presentation creates a unique six-digit code. The students who want to access that content are directed to enter the unique code to start viewing the PowerPoint on the web. The (Kouser & Majid, 2021).

Computer-based Teaching: This is any prospectus in which learners interact with a personal computer as a key factor of the studying process. This basically refers to any kind of computer use in educational settings which includes simulations, tutorials, programming, databases, drill, practice, supplementary exercises, writing using word processor, or other applications and these terms may refer to either computer activities which are taught by teachers in the classroom through reinforcement or to stand-alone computer learning activities (Ain et al., 2019).

Google Form: This is a free online teaching platform which everyone can easily use. It is used mostly by the educators which allow them to create forms, quizzes, result declaration grading, item analysis, surveys and collaborative editing. Google Forms are also used for assessing the students and for checking the child's previous knowledge. These forms can be applied for giving and receiving feedback from the students and parents also. Similarly, the students can make use of Google Forms for assessing their learning and they can fix the learning goals for collecting data for research projects. Google Form provides templates for users like feedback and course evaluation. Many types of questions can be asked on Google Form which includes short answer, multiple-choice, responses through paragraph, checkboxes, linear scales etc. Images and videos can also be included directly in the Form. This helps in assessing the students thinking after they have viewed the image or video. The data collected from Google Form are collected by using Google spreadsheet, which provides further analysis (Kouser & Majid, 2021).

Near Pod: This is a platform where the interactive lessons were being practised by the teachers. Near pod offers teachers an easy-to-use tool for creating interactive lesson plans, presentations, assessments, and digital content. Near pod allows teachers to create digital lesson plans, share it with students during class, and track individual progress. Lessons comprised teacher-created slides that can include text, video, images, websites,

questions, quizzes, polls, and assignments. Students can follow the lesson on their own devices at their own pace or teachers can lead a synchronized session where students can follow the lesson in real-time (Kouser & Majid, 2021).

Google Classroom: This is an online teaching-learning platform and a free web service developed by Google. In the Google Classroom, teachers can create online classrooms where they can upload the teaching material and can conduct online quizzes. The main purpose of Google Classroom is to update and share the files between teachers and learners. It is a combination of Google Drive, Google Docs, Slides and Sheets for writing. Gmail is used for communication and the Google calendar for scheduling. The students are invited to join a Google Classroom through a code and later on the calendar was integrated (Kouser & Majid, 2021).

Google Hangouts Meet: This is a video communication service that was developed by Google. It is a combination of two apps. One is the new version of Google Hangouts, and another is the Google hangouts chat. The new meet experience provides the outline for connecting with people on campus or outside the campus. You can have 5 peoples joining your conference at a time Through the use of Video Conferencing the students and teachers are connected for the purpose of teaching.

2.6 Benefits of Digital Literacy Skills on Teaching

The utilisation of projectors, computers, and other cutting-edge digital tools in the classroom may make studying fascinating and entertaining for students. Student learning can become more dynamic and engaging by establishing tasks in class that incorporate technology resources, oral presentations, and group participation (Haleem et al., 2022). Digital competence combines series of abilities that empower and equip library staff. Roy (2015), Singh (2016) noted that digital skill is beneficial to teaching in the following ways:

Understand the protocols surrounding creating and handling of digital teaching contents: Digital competence is essential to understanding the efficient creation and handling of digital teaching contents by enabling teachers and learners know the procedure guiding the use and conditions to be followed when handling digital teaching resources.

Equips teachers and learners with the skills required to create and share digital contents: Digital competence helps teachers and learners by enabling them to know the right digital tools they can use to create and share digital teaching contents. This will minimise stressing digital tools to perform tasks they are not designed for.

Allow teachers and learners to collaborate globally and instantaneously: Digital competence equips teachers and learners with the skills of collaborating globally in order to be exposed to the trends and practices associated with digital tools and resources used for teaching.

Helps to streamline teaching: This means that less time is spent on repetitive tasks and teachers and learners are freed up to focus their efforts on higher value work that helps them in their teaching course.

Improve teachers' and learners' confidence to use technology for work, learning and daily life: Digital competence is beneficial to teaching by enabling teachers and learners cultivate the habit of continuous learning. This will help in updating their knowledge on the digital tools that can be adopted and deployed for teaching.

Help teachers and learners work efficiently in a digitally via smart devices: Digital competence empowers teachers and learners work efficiently. This is associated with reducing the workloads on the teaching digital tools. This, in the end, will prolong the lifespan of digital tools and resources available on those tools.

Plays a critical role in teachers' and learners' ability to digitally transform: Digital competence enables teachers and learners to learn swift actions needed to advance their use of digital tools without abusing the previous ones.

Enhanced productivity of teachers and learners with digital tools*:* Digital competence empowers productivity of teachers and learners with digital tools by equipping them with the abilities to manage and handle digital tools appropriately.

Enhanced maximum protection of digital information: Digital competence equips teachers and learners with the skills needed to secure and protect digital resource in order to reduce abuses and mismanagement of digital teaching resources and tools.

2.7 Problems Associated with Digital Literacy Skills for Teaching

Many teachers and learners in Africa need more basic digital literacy skills and face challenges in integrating technology effectively into their teaching processes. Research indicates that, until recently, training opportunities have remained limited in availability and inconsistent in quality. There is an emphasis on providing professional development opportunities for teachers. Training and support are necessary to enhance teachers' digital literacy skills and pedagogical knowledge (Chama & Subaveerapandiyan, 2023). Despite the potential benefits of digital learning, many students still lack access to the technologies that could benefit them, creating a digital divide that is evident both within and among countries (Best & Dunlap, 2018).

The major problem associated with the low transition of digital literacy to teaching is people's motivation to teach and learn with digital tools. Best and Dunlap (2018) noted this by asserting that students who have access to digital teaching technologies do not always benefit from that access. Some studies demonstrate improvements in student achievement associated with digital learning technologies, while others have found no correlation between access to technology and student achievement.

Digital divide also poses a problem to digital teaching. The concept of the Digital Divide, in the mid-1990s, defines the gap in access. It has gained recognition in technology and digital education. It refers to the gap between those with access to digital technologies and those without and the unequal distribution of skills and knowledge related to using these technologies. It is about access to technology and the ability to use it effectively. The presence of a digital divide implies that specific individuals or communities have limited or no access to digital resources and technology (Chama & Subaveerapandiyan, 2023).

Overreliance on traditional approaches has been another bane of adopting digital teaching. Chama and Subaveerapandiyan (2023) noted that numerous studies have taken a step to highlight the existing gaps in teacher digital competencies in Africa. Many African countries still rely on traditional pedagogical approaches characterised by teacher-centered instruction and rote learning. However, blended learning initiatives have gained traction recently. A recognised combination of face-to-face teaching with digital resources and the widespread adoption of mobile technology has facilitated innovative pedagogical approaches.

Teachers'/learners' low digital efficacy also affects digital teaching. Ghavifekr and Rosdy (2015) observed that teachers'/learners' digital efficacy in schools changes as the years of experience of working and age of teachers. It shows that the teachers' efficacy is decreasing as the years of experience and age increases but somehow the decrease and the efficacy belief depend on the school management. School management here means the opportunities for collegial interaction, and the use of the instructional resources. Schools that could provide opportunities for teachers to reflect on teaching with their colleagues and for administrators and teachers to collaborate and communicate, as well as support the use of instructional resources. If the school has always implant the culture to change and teachers are always sent for training for upgrading themselves, and then the integration of ICT in classroom will be easier to be enhanced in the classroom.

2.8 Summary of the Chapter

Digital literacy, as a set of skills on how to identify and utilise digital tools optimally has become an important ability for teaching in the 21st century. This chapter has clearly discussed the concept of digital literacy and its major components. It further reviewed the concept of digital teaching before expatiating the digital literacy skills required for teaching. More so, this chapter pointed out some major digital tools used for teaching and justified the benefits of digital literacy on teaching. The problems associated with digital literacy for teaching was finally reviewed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter will explain the approaches that will guide the researchers in conducting the study. This chapter will also espouse the justifications for any approaches used in conducting this study.

Hence, this chapter will be organised under the following sub-headings:

3.2 Research design

3.3 Population of the study

3.4 Sample size and sampling technique

3.5 Instrument for data collection

3.6 Validity and reliability of the instrument

3.7 Procedure for administration of the instrument

3.8 Method of data Analysis

3.9 Ethical considerations

3.2 Research Design

Research design indicates the patterns of how this study will be conducted. Kolawole and Ijiebor (2018) clearly asserted that research design is the conceptual outlook with which research is

conducted, which constitutes the yardstick for the collection, measurement and analysis of data. Thus, descriptive-survey design will be adopted for this study. Descriptive-survey design is relevant for this study because it gives the researchers the opportunities of investigating the opinions, beliefs and perceptions of lecturers on influence of digital literacy skills on digital teaching in Al-Hikmah University, Kwara State, Nigeria.

3.3 Population of the Study

Population is the total area, environment, location or group of people a study intends to cover. Issa (2012) explained population as all the members or elements of a particular group of people, animals, or things in a defined area. The population of a study is expected to show what constitute the study's participants, whether actual or targeted and also indicate their number.

Therefore, the population of this study is 531 lecturers in Al-Hikmah University, Ilorin. The number of the lecturers in the institution this study will cover is generated from the Office of the Registrar of Al-Hikmah University, Ilorin.

3.4 Sample Size and Sampling Technique

Sample is the unit, portion or element of the population, which will provide data that are relevant to the study. In this study, sample size was determined with Research Advisor Table. Two-hundred and thirty-four (234) respondents were picked based on the Table's advice of sampling 234 people for 501 – 600 population, if 95% confidence level is used.

On the other hand, sampling technique is the process of choosing the respondents. Simple random sampling will be used to select the respondents because it allows the researcher to give equal chance to every lecturer in the study area, since the researcher had little or no advance knowledge about the members of the population.

3.5 Instrument for Data Collection

This study will adopt questionnaire to collect data from respondents. Issa (2012) explains questionnaire as a data collection instrument containing series of questions and other prompt responses for the purpose of gathering information from library users. The questionnaire will be titled ***"Questionnaire on influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria"***

The questionnaire will be arranged in the six major sections below:

Section A: Demographic characteristics of respondents

Section B: Digital tools used for teaching in Al-Hikmah University, Ilorin;

Section C: Frequency of use of digital tools for teaching in Al-Hikmah University, Ilorin;

Section D: Digital literacy skills influencing teaching in Al-Hikmah University, Ilorin;

Section E: Benefits of digital literacy skills on teaching with digital tools in Al-Hikmah University, Ilorin; and,

Section F: Problems associated with digital literacy skills for teaching in Al-Hikmah University, Ilorin.

3.6 Validity and Reliability of the Instrument

Validity refers to the extent at which an instrument accurately measures what it intends to measure (Li, 2016). The questionnaire will be given to two subject experts for assessment of the quality of presentation of the contents of the variables the researchers wish to measure. Their expert opinions will be corrected before the questionnaire is presented to the supervisor for

assessment and corrections, which thereafter, the questionnaire will be distributed to the respondents.

However, reliability refers to the extent at which an instrument yields consistent results. Internal consistency will be used to assess the extent of differences within the test items by exploring the same construct that produce similar results (Thomas, 2022).

3.7 Method of Distribution of the Instrument

The questionnaire will be distributed to the respondents by the student researchers. The student researchers will use five days to visit each Faculty in the University. During the student researchers' visit, 25 questionnaires will be taken to each Faculty. After exhausting the Faculties and the student researchers still have more questionnaire to administer to have an acceptable response rate, the student researchers will reschedule a day to revisit the Faculties to find lecturers who have not participated in the study and appeal to them to fill the questionnaire.

3.8 Method of Data Analysis

Data collected will be presented in simple percentage, frequency tables, mean and analysed by using the IBM SPSS Statistics. The reason for the choice of simple percentage, frequency tables and mean is because it allows presentation, analysis and comparison of multiple attitude, opinion and ideas which can enhance easy understanding of tables and the data they contained.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter is concerned with the analysis of data collected, presentation of results and discussion of findings. The chapter is presented under the following sub-headings:

4.2 Questionnaire distribution and response rate

4.3 Demographic information of respondents

4.4 Presentation, analysis, discussion and interpretations of results

4.2 Questionnaire Distribution and Response Rate

Out of the234 copies of the questionnaires administered, only 182 were filled and returned. Out of the filled questionnaires, only 167 were adequately filled and suitable for analysis. The filled questionnaire represents 71.81% return rate. The return is adequate for analysis and discussion going by the assertion of Rubin and Barbie (2011) that response rate for physically administered questionnaire is found to be appropriate for analysis, if it is up to 70% or more.

4.3 Demographic Information of the Respondents

Table 1: Characteristics of the Respondents

Statements		F	%
Faculty	Pure and Applied	14	8.4
	Basic Medical Sciences	8	4.8
	Arts	20	12.0
	Management and Social Sciences	25	15.0
	Education	17	10.2
	Agriculture	18	10.8
	ICT	24	14.4
	Engineering	26	15.6
	Law	15	9.0
	Total	**167**	**100**
Gender	Male	98	58.7
	Female	69	41.3
	Total	**167**	**100**
Age range	21 - 25 years	4	2.4
	26 - 30 years	11	6.6
	31 - 35 years	23	13.8
	36 - 40 years	55	32.9
	41 years and above	74	44.3
	Total	**167**	**100**
Highest academic qualification	B.Sc/BEd/BLIS	24	14.4
	MSc/MEd/MLIS	50	29.9
	PhD	93	55.7
	Total	**167**	**100**
Work experience	1 - 5 years	15	9.0
	6 - 10 years	21	12.6
	11 - 15 years	59	35.3
	16 - 20 years	39	23.4
	21 years and above	33	19.8
	Total	**167**	**100**
Marital status	Single	16	9.6
	Married	139	83.2
	Divorced	5	3.0
	Widow	7	4.2
	Total	**167**	**100**

Table 1 reveals that majority (15.6%) of the respondents are from Faculty of Engineering, followed by 15% from Faculty of Management and Social Sciences, 14.4% from Faculty of ICT, 12% from Faculty of Arts, 10.8% from Faculty of Agriculture, 10.2% from Faculty of Education,

9% from Faculty of Law, 8.4% from Faculty of Pure and Applied Sciences and 4.8% from Faculty of Basic Medical Sciences. The table also shows that 58.7% of the respondents are males, while 41.3% are females.

More so, 41 years and above are the highest (44.3%), followed by 36 - 40 years (32.9%) and 31 - 35 years (13.8%). Furthermore, 55.7% are PhD holders, MSc/MEd/MLIS are 29.9%, while B.Sc/BEd/BLIS are 14.4%. Respondents with 11 - 15 years are higher (35.3%), followed by 16 - 20 years (23.4%) and 21 years and above (19.8). Finally, 83.2% of respondents are married, single (9.6%), widow (4.2%) and divorced (3.0%).

4.4 Presentation, Analysis, Discussion and Interpretations of Results

4.4.1: What are the digital tools used for teaching in Al-Hikmah University, Ilorin?

Table 2: Digital tools used for teaching

	SA		A		D		SD			
Statements	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	$\bar{X}$	**R**
Mobile devices/tablets/telephones	94	56.3	38	22.8	20	12.0	15	9.0	3.26	SA
Smartboards	74	44.3	38	22.8	40	24.0	15	9.0	3.02	A
Laptops	80	47.9	44	26.3	24	14.4	19	11.4	3.11	A
Virtual laboratories	65	38.9	46	27.5	26	15.6	30	18.0	2.87	A
MOOCs	70	41.9	43	25.7	32	19.2	22	13.2	2.96	A
Easy class platforms	63	37.7	46	27.5	33	19.8	25	15.0	2.88	A
Microsoft team	61	36.5	48	28.7	36	21.6	22	13.2	2.89	A
Multimedia contents	85	50.9	31	18.6	25	15.0	26	15.6	3.05	A
Zoom	74	44.3	47	28.1	25	15.0	21	12.6	3.04	A
Computer-based teaching	94	56.3	38	22.8	20	12.0	15	9.0	3.26	SA
Google form	76	45.5	43	25.7	26	15.6	22	13.2	3.04	A
Google meet	71	42.5	38	22.8	30	18.0	28	16.8	2.91	A
Google classroom	72	43.1	46	27.5	27	16.2	22	13.2	3.01	A

Source: Researchers' Field Survey, 2024

Decision Rule: If mean 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 2 points out that the respondents strongly agreed that mobile devices/tablets/telephones ($\bar{X}$ = 3.26) and computer-based teaching ($\bar{X}$ = 3.26) are digital tools used for teaching. They also agreed that laptops ($\bar{X}$ = 3.11), multimedia contents ($\bar{X}$ = 3.05), Zoom and Google forms ($\bar{X}$ =

3.04) respectively, smartboards ($\bar{X}$ = 3.02) and Google classrooms ($\bar{X}$ = 3.01) are used for teaching.

The analysis of the variables in the table indicates that the respondents strongly agreed and agreed to the use of the itemized digital tools for teaching. This implies that the digital literacy of the respondents has exposed them to different digital tools they can leverage for teaching. It also shows that the respondents, because of their digital literacy skills, have been equipped with the basic and intermediary skills needed to use digital tools for teaching as the emerging education demands.

The adoption of mobile devices/tablets/telephones and computer-based teaching among the respondents affirmed that lecturers in the study area are moving with the pace of modern education. It also affirms the notion of Marin and Castan˜eda (2023) where they explained that the use of digital resources such as mobile devices, tablets and telephones for teaching is soaring, making them a force to be reckoned with in the teaching environments. This is corroborated by Kouser and Majid (2021) where they noted that digital tools have the potential for making a substantial contribution to enriching education for all areas of curriculum that strives for excellence; their effective use for teaching will result in enhancing the teaching.

More so, the respondents' agreements to the use of laptops, multimedia contents, Zoom, Google Forms, Google classrooms and smartboards showed that the respondents prioritised making teaching engaging to the students by integrating different contents to captivate the attentions of the students. Computers, tablets and laptops are useful tools for creating multimedia contents suitable for teaching. Ain et al. (2019) asserted that multimedia contents are educational contents containing two or more media including texts, images, audios, videos, graphics and animations. The multimedia animations consist of images, words, sounds, pictures, and moving images. Multimedia animations can improve a learner's capability to remember information. With images, sounds and actions, animations can interpret complicated abstract ideas for students.

4.4.2: What is the frequency of use of digital tools for teaching in Al-Hikmah University, Ilorin?

Table 3: Frequency of use of digital tools for teaching

	D		W		M		RU		NU			
Statements	**F**	**%**	**F**	**%**	**F**	**%**	**F**		**F**	**%**	$\bar{X}$	**R**
Mobile devices/tablets/telephones	47	28.1	64	38.3	40	24.0	10	6.0	6	3.6	3.81	W
Smartboards	34	20.4	32	19.2	39	23.4	34	20.4	28	16.8	3.06	M
Laptops	28	16.8	69	41.3	45	26.9	17	10.2	8	4.8	3.55	W
Virtual laboratories	0	0.0	10	6.0	70	41.9	79	47.3	8	4.8	2.49	RU
MOOCs	7	4.2	23	13.8	35	21.0	32	19.2	70	41.9	2.19	RU
Easy class platforms	14	8.4	29	17.4	44	26.3	32	19.2	48	28.7	2.57	M
Microsoft team	20	12.0	40	24.0	35	21.0	32	19.2	40	24.0	2.81	M
Multimedia contents	24	14.4	71	42.5	45	26.9	15	9.0	12	7.2	3.48	W
Zoom	21	12.6	57	34.1	38	22.8	21	12.6	30	18.0	3.11	M
Computer-based teaching	40	24.0	71	42.5	40	24.0	10	6.0	6	3.6	3.77	W
Google form	26	15.6	38	22.8	52	31.1	20	12.0	31	18.6	3.05	M
Google meet	14	8.4	37	22.2	46	27.5	36	21.6	34	20.4	2.77	M
Google classroom	17	10.2	42	25.1	45	26.9	30	18.0	33	19.8	2.88	M

Source: Researchers' Field Survey, 2024

Decision Rule: If mean ($\bar{X}$) is 1.0 – 1.74 = Never used (NU); 1.75 – 2.49 = Rarely used (RU); 2.50 – 3.24 = Monthly (M); 3.25 – 3.99 = Weekly (W); 4.0+ = Daily (D)

Table 3 reveals that mobile devices/tablets/telephones ($\bar{X}$ = 3.81), computer-based teaching ($\bar{X}$ = 3.55) and multimedia contents ($\bar{X}$ = 3.48) are digital tools used for teaching on weekly basis. They also agreed that laptops ($\bar{X}$ = 3.11), are used weekly for teaching by the respondents. The digital tools used monthly by the respondents included Zoom ($\bar{X}$ = 3.11), smartboards ($\bar{X}$ = 3.06) and Google form ($\bar{X}$ = 3.05). However, virtual laboratories ($\bar{X}$ = 2.49) and MOOCs ($\bar{X}$ = 2.19) are rarely used by the respondents.

The weekly use of mobile devices/tablets/telephones, computer-based teaching and multimedia contents by the respondents is consistent with the point of Phuapan, Viriyavejakul and Pimdee's (2015) position that the university education format in the present time has changed so much from that of the past. In the current university education, lecturers have been surrounded with abundant digital tools they can use to teach students. These tools can be used for teaching daily or weekly. In some instances, lecturers can choose to use the digital tools occasionally.

The use of the aforementioned tools in weekly by the respondents is simple to comprehend. This is because digital-savvy lecturers, in one way or another, usually used their mobile devices,

tablets, telephones and laptops to hold lectures at least once a week. Thus, it is not surprising to discover that majority of the respondents settled for weekly usage of digital tools for teaching. The results of this table aligned with the views of Phuapan, Viriyavejakul and Pimdee (2016) where they posited that teaching in the 21st century have been made comfortable through different digital tools teachers and learners can use daily, weekly or at their comfort to access, assess, use, manage and enrich the vastness of their knowledge.

It is interesting to discover the monthly use of smartboards among the respondents. Based on our experience, smartboards are usually used during presentations and other special academic activities. It is, therefore, not surprising to note that the respondents chose to be using smartboards monthly. The use of smartboards monthly by the respondents is similar to that some other developing countries, which Haleem et al. (2022) reported that smartboards are being used in periodic interval – weekly or monthly – for specific purposes.

The rarely usage of virtual laboratories and MOOCs by the respondents is an interesting point and worthy to be explored by future research. The Massive Open Online Course is an online platform or model for learning online by anyone interested in taking courses. This model has no limit for attendance (Arango-Morales, Tamayo-Salcedo & Delgado-Cruz, 2021). The rarely usage of MOOCs by the respondents raises the question if the respondents only used digital tools to teach.

4.4.3: What are the digital literacy skills influencing teaching in Al-Hikmah University, Ilorin?

Table 4: Digital literacy skills influencing teaching

	SA		A		D		SD			
Statements	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	$\bar{X}$	**R**
Ability to creatively apply digital resources for teaching	51	30.5	86	51.5	17	10.2	13	7.8	3.05	A
Ability to locate and consume digital content for teaching	32	19.2	100	59.9	22	13.2	13	7.8	2.90	A
Ability to create digital content for teaching	34	20.4	86	51.5	28	16.8	19	11.4	2.81	A
Ability to communicate digital content for teaching	32	19.2	95	56.9	22	13.2	18	10.8	2.84	A
Basic operations of digital tools for teaching	43	25.7	91	54.5	18	10.8	15	9.0	2.97	A
Familiarity with the digital tools used for teaching	40	24.0	89	53.3	21	12.6	17	10.2	2.91	A
Ability to download files and content needed for teaching	55	32.9	78	46.7	19	11.4	15	9.0	3.04	A
Ability to use e-mails for teaching	20	12.0	92	55.1	32	19.2	23	13.8	2.65	A
Ability to navigate websites/digital learning and teaching platforms	17	10.2	99	59.3	31	18.6	20	12.0	2.68	A

Source: Researchers' Field Survey, 2024
Decision Rule: If mean 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 reveals that the respondents agreed that digital literacy influences their ability to creatively apply digital resources for teaching ($\bar{X}$ = 3.05), ability to download files and content needed for teaching ($\bar{X}$ = 3.04), basic operations of digital tools for teaching ($\bar{X}$ = 2.97) and familiarity with the digital tools used for teaching ($\bar{X}$ = 2.91).

Digital literacy has become an important skill in the contemporary society. In the education sector, digital literacy has become imperative for both the teachers and learners to develop because the skills will enable them to make an optimal use of digital tools and contents (Marin & Castan˜eda, 2023). It includes technological, attitudinal, and cognitive components, linked to the need of teachers and learners to express, explore, question, communicate and understand ideas in digital formats. This also includes engaging with the use of technologies to do teaching tasks, solve problems and communicate educational contents (Arango-Morales, Tamayo-Salcedo & Delgado-Cruz, 2021).

The findings of this study on the influence of digital literacy on teaching are consistent with the views of Vinek (2017) who noted that digital literacy includes the intellectual processes associated with locating and consuming digital content, creating digital content and communicating digital content. The familiarity with and basic ability to operate digital tools for teaching by the respondents are similar to the position of Hamada and Stavridi (2014) where they outlined familiarity with the basic operations of computers as one of the digital literacy skills that influenced teaching.

Going by the respondents' options in the previous tables 2 and 3, where the respondents claimed to be using telephones, tablets, mobile devices and laptops weekly to create multimedia contents for teaching, it is safe to conclude that the respondents have the ability to identify the right digital tools they can get information resources from and creatively use the digital tools they used mostly to create captivating contents for learners.

4.4.4: What are the benefits of digital literacy skills on teaching with digital tools in Al-Hikmah University, Ilorin?

Table 5: Benefits of digital literacy skills on teaching

	SA		A		D		SD			
Statements	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	$\bar{X}$	**R**
Enables me understand the protocols surrounding creating and handling of digital teaching contents	26	15.6	94	56.3	24	14.4	23	13.8	2.74	A
Equips me with the skills required to create and share digital contents	52	31.1	95	56.9	7	4.2	13	7.8	3.11	A
Equips me with the skills to collaborate	21	12.6	94	56.3	28	16.8	24	14.4	2.67	A
Helps me to streamline teaching	27	16.2	90	53.9	26	15.6	24	14.4	2.72	A
Improves my confidence to use technology for work, learning and daily life	41	24.6	91	54.5	20	12.0	15	9.0	2.95	A
Helps me to work efficiently in a digital environment	48	28.7	87	52.1	18	10.8	14	8.4	3.01	A
Plays a critical role in transforming my ability to teach and learn digitally	31	18.6	99	59.3	20	12.0	17	10.2	2.86	A
Enhances my productivity of teaching with digital tools	45	26.9	88	52.7	19	11.4	15	9.0	2.98	A
Enhances my ability to protect my digital teaching information	51	30.5	86	51.5	17	10.2	13	7.8	3.05	A

Source: Researchers' Field Survey, 2024

Decision Rule: If mean 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 5 reveals that the benefits of digital literacy to teaching as majorly agreed by the respondents are equips me with the skills required to create and share digital contents ($\bar{X}$ = 3.11), enhances my ability to protect my digital teaching information ($\bar{X}$ = 3.05), helps me to work efficiently in a digital environment ($\bar{X}$ = 3.01) and enhances my productivity of teaching with digital tools ($\bar{X}$ = 2.98).

The decision rule adopted revealed that the respondents agreed with the benefits of all options provided to them on their benefits to teaching. But the major ones worthy to be mentioned and discussed are equipping respondents with the skills required to create and share digital contents, enhancing respondents' ability to protect their digital teaching information, helping respondents to work efficiently in a digital environment and enhancing respondents' productivity of teaching with digital tools.

Singh (2016) asserted that digital literacy encompasses series of abilities that empower and equip individuals with requisite skills to use digital tools for their advantages. It is unsurprising to discover that digital literacy benefits the respondents' creation and sharing of digital contents needed for teaching. This point is similar to the assertion of Haleem et al. (2022) where they pointed that digital literacy by enable teachers and learners to know the right digital tools they can use to create and share digital teaching contents, which will minimise stressing digital tools to perform tasks they are not designed for.

Another significant benefit of digital literacy to teaching among the respondents which is worthy discussing is enhancing their ability to protect digital teaching information. This implies that digital literacy has made the respondents known how to secure digital contents they have created for teaching. The respondents can be protecting their contents in variety of ways, maybe through watermarking, encryption, digital marking and others. This is an important ability to possess in the contemporary society being riddled with intellectual theft and piracy.

Discovering that digital literacy makes the respondents productive in the digital teaching environments is important to be stressed because it validates the points of scholars and researchers. Roy (2015) and Singh (2016) asserted that digital literacy empowers productivity of teachers and learners with digital tools by equipping them with the abilities to manage and handle digital tools appropriately. This means that digital literacy has equipped the respondents with the skills to use the right digital tools for appropriate teaching activities.

4.4.5: What are the problems associated with digital literacy skills for teaching in Al-Hikmah University, Ilorin?

Table 6: Problems associated with digital literacy skills for teaching

	SA		A		D		SD			
Statements	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	$\bar{X}$	**R**
Integrating technology into my teaching difficult	5	3.0	61	36.5	57	34.1	44	26.3	2.16	D
Inadequate training on digital teaching is not provided by my institution	51	30.5	86	51.5	17	10.2	13	7.8	3.05	A
The quality of the training organised by my institution on digital teaching is inadequate	34	20.4	95	56.9	21	12.6	17	10.2	2.87	A
Lack of access to the technologies I can use for teaching	1	0.6	76	45.5	55	32.9	35	21.0	2.26	D
I do not have the motivation to use digital tools for teaching	0	0.0	53	31.7	53	31.7	61	36.5	1.95	D
I lack the ability to use digital tools for effective teaching	0	0.0	50	29.9	48	28.7	69	41.3	1.89	D
Digital divide hinders me from using digital tools to teach students	48	28.7	89	53.3	17	10.2	13	7.8	3.03	A
I highly relied on the traditional teaching approaches	50	29.9	93	55.7	18	10.8	6	3.6	3.12	A
I have observed that students do not like to be taught with digital tools	51	30.5	86	51.5	17	10.2	13	7.8	3.05	A

Source: Researchers' Field Survey, 2024

Decision Rule: If mean 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 6 reveals that the problems associated with digital literacy for teaching as majorly agreed by the respondents are highly relied on the traditional teaching approaches ($\bar{X}$ = 3.12), observed that students do not like to be taught with digital tools and inadequate training on digital teaching is not provided by my institution ($\bar{X}$ = 3.05), digital divide hinders me from using digital tools to teach students ($\bar{X}$ = 3.03) and inadequate quality of the training on digital teaching organised by my institution ($\bar{X}$ = 2.87).

However, the respondents disagreed that lack of access to the technologies I can use for teaching ($\bar{X}$ = 2.26), makes integrating technology into teaching difficult ($\bar{X}$ = 2.16), I do not have the motivation to use digital tools for teaching ($\bar{X}$ = 1.95) and I lack the ability to use digital tools for effective teaching ($\bar{X}$ = 1.89) are not problems associated with digital literacy for teaching.

The points agreed with by the respondents affirmed the points of Best and Dunlap (2018), Chama and Subaveerapandiyan (2023) that digital literacy has not been exploited for teaching because teachers and learners highly relied on the traditional teaching approaches, students do not like to be taught with digital tools, lack of training on digital teaching in institutions, digital divides and inadequate quality of training on digital teaching.

On the other hand, it is important to note that some problems such as lack of access to the technologies teachers and learners can use for teaching, difficulty in integrating technology into teaching difficult, lack of motivation to use digital tools for teaching and lack of ability to use digital tools for effective teaching as reported in previous studies of David-West (2022), Ghavifekr and Rosdy (2015) are not applicable to the respondents of this study. This means that the respondents' digital literacy skills motivate them to use digital tools for teaching. This makes them not perceived digital divides as a limitation to using digital tools for teaching.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarises the findings of this study, draws conclusion from those findings and makes appropriate recommendations. This chapter is arranged in the following order:

5.2 Summary of findings

5.3 Conclusion

5.4 Recommendations

5.2 Summary of findings

Results of this study revealed that:

1. The digital tools used for teaching in Al-Hikmah University, Ilorin, include mobile devices/tablets/telephones, computer-based teaching, laptops, multimedia contents, Zoom, smartboards, Google form and classrooms.
2. The digital tools used on weekly basis for teaching in Al-Hikmah University, Ilorin, include mobile devices/tablets/telephones, computer-based teaching and multimedia contents.
3. Digital literacy influences the ability of lecturers of Al-Hikmah University, Ilorin, to creatively apply digital resources for teaching, download files and content needed for teaching, basically operate digital tools for teaching and familiar with the digital tools used for teaching.

4. Digital literacy benefits teaching among lecturers of Al-Hikmah University, Ilorin, by equipping them with the skills required to create and share digital contents, enhancing their ability to protect their digital teaching information, helping them to work efficiently in a digital environment and enhancing their productivity of teaching with digital tools.
5. The problems associated with digital literacy skills for teaching in Al-Hikmah University, Ilorin, include over reliance on the traditional teaching approaches, students' poor interest in being taught with digital tools, inadequate training on digital teaching, digital divide and inadequate quality of the training on digital teaching.

5.3 Conclusion

Digital literacy is one of the most important abilities possessed by everyone thriving in this digital era. The importance of digital literacy is highly limitless. In education, digital literacy has redefined the paradigms by determining what teaching resources teachers and learners can access and maximally utilised. The need to determine the status of effect of digital literacy necessitated why this study explores digital literacy as prerequisites for teaching in Al-Hikmah University, Ilorin.

This study revealed that lecturers in Al-Hikmah University, Ilorin, have adequate digital literacy skills. These skills equipped them with the abilities to use computers, tablets, mobile devices, multimedia contents, Zoom and Google form for teaching on weekly basis to create and share digital contents, protect their digital teaching information, helping them to work efficiently in a digital environment and enhancing their productivity of teaching with digital tools.

Nonetheless, digital literacy as prerequisites for teaching is being hampered by the lecturers' over reliance on the traditional teaching approaches, supported by students' poor interest in being

taught with digital tools; inadequate training on digital teaching, digital divide and inadequate quality of the training on digital teaching.

5.4 Recommendations

Based on the findings of this study, the following recommendations are hereby made:

1. Management of Al-Hikmah University, Ilorin, should be organising adequate training for their lecturers on the use of digital tools for teaching. This will expose the lecturers to different digital tools they can use for teaching and also equip them with the skills to use the digital tools.
2. Management of Al-Hikmah University, Ilorin, and other stakeholders should train the lecturers on the modern teaching methods aided by digital tools. This will minimise the lecturers' over reliance on traditional teaching approaches.
3. Management of Al-Hikmah University, Ilorin, the library, lecturers' association and students' bodies should organise orientation programmes for the students. This will increase the students' understanding of digital teaching and can result to them developing interest in it.
4. Management of Al-Hikmah University, Ilorin, should collaborate with institutions, bodies and agencies to strategise on making digital tools available virtually to all lecturers and students of the University. This will help in reducing digital divides affecting digital teaching.
5. Management of Kwara State University Malete, should encourage the lecturers to be using MOOCs for their teaching activities. This will contribute to increasing the numbers of digital contents that can be used for teaching by the lecturers.

REFERENCES

Issa, A. O. (2012). Practical guides to project writing for students in Polytechnics, Colleges and Universities. Offa: Wunmi Commercial Press.

Kolawole, A. A. & Ijiebor, J. A. (2018). A guide for researchers and writers of term papers. Offa: Correctman Press Limited.

Thomas, L. (2022). Simple random sampling | definition, steps & examples. https://www.scribbr.com/methodology/simple-random-sampling/

Ain, Q., Shahid, F., Aleem, M., Islam, M.A., Iqbal, M.A. & Yousaf, M.M. (2019). A review of technological tools in teaching Computer Science. *EURASIA Journal of Mathematics, Science and Technology Education*, 15(11), 1-18. Doi: https://doi.org/10.29333/ejmste/109611

Best, J. & Dunlap, A. (2012). Beyond Access: Effective Digital Learning for a Globalized World. Denver: Mid-content Research for Education (McREL).

Bin Hashim, L. & Mokhtar, W. (2012). Preparing new era librarians and information professionals: trends and issues. *International Journal of Humanities and Social Science,* 2(7): 151–155.

Chama, A. & Subaveerapandiyan, A. (2023). Digital Literacy Skills of Teachers: A Study on ICT Use and Purposes. *Qeios*, Article, June 27.

Collier, D., Burkholder, K. & Branum, T. (2015). Digital learning: Meeting the challenges and embracing the opportunities for teachers. Texas: Texas Association of School Administrators (TASA) and Fort Worth (TX) Chamber of Commerce.

Gbaje, E.S. (2013). Re-training of librarians for the digital work environment by the Nigerian Library Association. *IFLA Journal of Library and Information Science*, 39(1), 30–36. DOI: 10.1177/0340035212472957.

Ghavifekr, S. & Rosdy, W.A.W. (2015). Teaching with technology: Effectiveness of ICT integration in schools. International Journal of Research in Education and Science (IJRES), 1(2), 175-191.

Haleem, A., Javaid, M., Qadri, M.A. & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, Vol.3, 275-285. https://doi.org/10.1016/j.susoc.2022.05.004.

Hamada, D. & Stavridi, S. (2014). Required skills for children's and youth librarians in the digital age. *IFLA Journal of Library and Information Science*, 40(2) 102–109. DOI: 10.1177/0340035214529733.

Harris, K. (2015). Integrating digital literacy into English language instruction: Issue brief. Retrieved from https://lincs.ed.gov/sites/default/files/ELL_Digital_Literacy_508.pdf

Jacobs, G., & Castek, J. (2018). Digital problem solving: The literacies of navigating life in the digital age. *Journal of Adolescent and Adult Literacy*, 61(6), 681-685.

Kolawole, A. A. & Ijiebor, J. A. (2018). A guide for researchers and writers of term papers. Offa: Correctman Press Limited.

Kouser, S. & Majid, I. (2021). Technological tools for enhancing teaching process. *Towards Excellence, an indexed refereed & peer-reviewed journal of higher education*, 13(1), 366-373.

Lai, K. (2011). Digital technology and the culture of teaching in higher education. *Australasian Journal of Educational Technology*, 27 (8), 1263-1275.

Mathew, N.O., Sadiku, P. Adebo, O. & Musa, S.M. (2018). Online teaching. *International Journals of Advanced Research in Computer Science and Software Engineering*, 8(2), 73-75.

Museum and Library Services Act of 2010, Pub. L. 111-340, 22 Dec. 2010.

Oparaji, I.C., Nwosu, O. & Oguejiofor, C.N. (2022). Online teaching in Imo State public secondary schools during the covid-19 pandemic era. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, 6, 146-150.

Ouahidi, L.M. (2019). Constraints on Developing Digital Literacy Skills in Higher Education. *International Journal of Linguistics, Literature and Translation (IJLLT)*. https://ssrn.com/abstract=3546856

Partnership for 21st Century Learning. (2019). Framework for 21st century learning: Definitions. Columbus, OH: Battelle for Kids. Retrieved from https://www.battelleforkids.org/learning-hub/learning-hubitem/framework-for-21st-century-learning-definitions

Roy, L. (2015). Indigenous cultural heritage preservation: A review essay with ideas for the future. *IFLA Journal of Library and Information Science*, 41(3) 192–203. DOI: 10.1177/0340035215597236.

Singh, A. (2016). Digital preservation of cultural heritage resources and manuscripts: An Indian government initiative. *IFLA Journal of Library and Information Science*, 38(4), 289–296. DOI: 10.1177/0340035212463139

Spires, H., & Bartlett, M. (2012). Digital literacies: Designing a path forward. Friday Institute White Paper Series. NC State University.

Vanek, J. (2017). Using the PIAAC framework for problem solving in technology-rich environments to guide instruction: An introduction for adult educators. https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/589a3d3c1e5b6cd7b42cddcb/14 86503229769/PSTRE_Guide_Vanek_2017.pdf

Arango-Morales, A. J., Tamayo-Salcedo, A. L., & Delgado-Cruz, A. (2021). Digital competence and professional training in tourism. A literature review. *Cpu-E Revista De Investigación Educativa,* 32, 62–87. https://doi.org/10.25009/cpue.v0i32.2734.

Ayhan, B. (2016). Digital literacy. DOI: 10.3726/978-3-653-07022-4/10. https://www.researchgate.net/publication/323018313

David-West, B.T. (2022). Digital literacy skills and utilization of online platforms for teaching by LIS educators in universities in rivers state, Nigeria. *International Journal of Knowledge Content Development & Technology*, 12 (4), 105 - 117.

Lankshear, C. & Knobel, M. (2016). Digital literacy and digital literacies: Policy, pedagogy and research considerations for education. *Nordic Journal of Digital Literacy*, 10(2), 8–2.

Marin, V.I. & Castan˜eda, L. (2023). Developing digital literacy for teaching. Zawacki-Richter, O. & Jung, I. (eds.), Handbook of open, distance and digital education. United States: IGI Global Publishing. https://doi.org/10.1007/978-981-19-2080-6_64

Phuapan, P., Viriyavejakul, C. & Pimdee, P. (2015). Digital literacy skill of students in public higher education institutes. *Journal of Educational Management*, 2(3), 17-32

Phuapan, P., Viriyavejakul, C., & Pimdee, P. (2016). Elements of digital literacy skill: A conceptual analysis. *Asian International Journal of Social Sciences*, 15(4), 88 – 99. http://aijss.org/index.php/aijss20150406/

KWARA STATE POLYTECHNIC, ILORIN
INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY
DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

Questionnaire on "***Influence of digital literacy skills on digital teaching among lecturers in Al-Hikmah University, Kwara State, Nigeria***"

Dear Respondent,

Request for Response to Questionnaire

We are undergraduates of the above-named institution, carrying out research on the above-mentioned topic. Our research is in partial fulfillment of the requirements for the award of National Diploma in Library and Information Science (ND).

Your assistance is hereby requested for timely completion of this questionnaire.

We are assuring you that all data provided will be treated with utmost confidentiality and used for academic purpose only.

Thank you for your anticipated cooperation.

Researchers

Part A: Demographic Characteristics of Respondents

Kindly select the option of your choice by ticking (✔) from the answers below

1. Faculty of respondents: ……
2. Gender: Male ( ) Female ( )
3. Age range: 24 – 33 years ( ) 34 – 43 years ( ) 44 – 53 years ( )
   54 and above years ( )
4. Academic qualification: ND ( ) HND ( ) BLIS ( ) MLIS ( )
   Ph.D. ( )
5. Work experience: 0 – 4 years ( ) 5 – 9 years ( ) 10 – 14 years ( )
   15 – 19 years ( ) 20 and above years ( )
1. Marital Status: Single ( ) Married ( ) Divorced ( ) Widow ( )

Section B: Digital tools used for teaching in Al-Hikmah University, Ilorin

What are the digital tools used for teaching in Al-Hikmah University, Ilorin?

Kindly tick (✔) "Yes" for the digital tools used and "No" if not used. You can tick as many statements as applicable

S/No	Options	Yes	No
1.	Mobile devices/tablets/telephones		
2.	Smartboards		
3.	Laptops		
4.	Virtual laboratories		
5.	MOOOCs		
6.	Easy Class Platforms		
7.	Microsoft Team		
8.	Multimedia contents		
9.	Zoom		
10.	Computer-based teaching		
11.	Mentimeter		
12.	Google form		
13.	Google meet		
14.	Google classroom		
Others, please specify……			

Section C: Frequency of use of digital tools for teaching in Al-Hikmah University, Ilorin

What is the frequency of use of digital tools for teaching in Al-Hikmah University, Ilorin?

Kindly tick (✔) R for "**Rarely**," D for "**Daily**," W for "**Weekly**" and M for "**Monthly**"

S/No	Options	R	D	W	M
1.	Mobile devices/tablets/telephones				
2.	Smartboards				
3.	Laptops				
4.	Virtual laboratories				
5.	MOOOCs				
6.	Easy Class Platforms				
7.	Microsoft Team				
8.	Multimedia contents				
9.	Zoom				
10.	Computer-based teaching				
11.	Mentimeter				
12.	Google form				
13.	Google meet				
14.	Google classroom				
Others, please specify……					

Section D: Digital literacy skills influencing teaching in Al-Hikmah University, Ilorin

What are the digital literacy skills influencing teaching in Al-Hikmah University, Ilorin?

Kindly tick (✔) "Yes" for the digital tools used and "No" if not used. You can tick as many statements as applicable

S/No	Options	Yes	No
1.	Ability to creatively apply digital resources for teaching		
2.	Ability to locate and consume digital content for teaching		
3.	Ability to create digital content for teaching		
4.	Ability to communicate digital content for teaching		
5.	Basic operations of digital tools for teaching		
6.	Familiarity with the digital tools used for teaching		
7.	Ability to download files and content needed for teaching		
8.	Ability to use e-mails for teaching		
9.	Ability to navigate websites/digital learning and teaching platforms		
Others, please specify……			

Section E: Benefits of digital literacy skills on teaching with digital tools in Al-Hikmah University, Ilorin

What are the benefits of digital literacy skills on teaching with digital tools in Al-Hikmah University, Ilorin?

Kindly tick (✔) "Yes" for the digital tools used and "No" if not used. You can tick as many statements as applicable

S/No	Options	Yes	No
1.	Enables me understand the protocols surrounding creating and handling of digital teaching contents		
2.	Equips me with the skills required to create and share digital contents		
3.	Equips me with the skills to collaborate globally and instantaneously through digital tools		
4.	Helps me to streamline teaching		
5.	Improves my confidence to use technology for work, learning and daily life		
6.	Helps me to work efficiently in a digitally via smart devices		

7.	Plays a critical role in transforming my ability to teach and learn digitally		
8.	Enhances my productivity of teaching with digital tools		
9.	Enhances my ability to protect my digital teaching information		
Others, please specify……			

Section F: Problems associated with digital literacy skills for teaching in Al-Hikmah University, Ilorin

What strategies do you employ to refine your search queries when using electronic information resources?

Kindly tick (✔) "Yes" for the digital tools used and "No" if not used. You can tick as many statements as applicable

S/No	Options	Yes	No
1.	Making integrating technology into my teaching difficult		
2.	Inadequate training on digital teaching is not provided by my institution		
3.	The quality of the training organised by my institution on digital teaching is inadequate		
4.	Lack access to the technologies I can use for teaching		
5.	I do not have the motivation to use digital tools for teaching		
6.	I lack the ability to use digital tools for effective teaching		
7.	Digital divide hinders me from using digital tools to teach students		
8.	I highly relied on the traditional teaching approaches		
9.	I have observed that students do not like to be taught with digital tools		
Others, please specify……			