CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Reference service is a customised service designed to meet the unique information needs of each library user, thereby fostering a sense of inclusion and connection among library patrons. Reference service encompasses a range of library operations that are specifically designed to facilitate easy access to information. Reference services entail providing users with guidance on the available services and resources within the library, as well as assisting them in locating these resources (Aina, 2018). Traditionally, reference services in the library are provided by a reference librarian stationed at a Reference Desk within the library building, as well as through telephone or written communication (Ajani, Buraimo, Adegbaye & Olusanya, 2021). However, there is a growing trend towards digital reference services.

Reference services emerged during the late 19th and early 20th centuries as a result of various factors and trends, including the growing abundance and diversity of information resources both within and beyond libraries (Suthiprapa & Tuamsuk, 2022). The complexity of information resources has increased, as well as the number and diversity of library users, especially in public libraries. This has resulted in a broader range of information demands, inquiries, and a more advanced approach to searching for information (Suthiprapa & Tuamsuk, 2022). The presence of a librarian is crucial in a library due to the abundance of information sources, which has resulted in an overwhelming amount of information. This has led to the need for subject knowledge and search skills among library users (Aina, 2018).

The advent of the internet has further expanded the range of interactive platforms available for communication, including e-mails, social media, and instant messaging. As a result, libraries and reference services are no longer limited to offering face-to-face assistance, but may now engage with users through these digital channels. Before the advent of the internet, reference librarians depended on in-person communication, fax machines, and telephones to address reference inquiries. With the expansion of the internet, librarians gained an additional mode of communication that is more cost-effective and more available to consumers (Suthiprapa & Tuamsuk, 2022). Hence, sitting at a desk may no longer be the optimal approach to deliver reference support. The presence of information across different media has impacted the conventional in-person reference interaction (Ramos, &Abrigo, 2012). This has resulted in a decrease in face-to-face transactions between reference librarians and users, as well as a decline in the number of reference queries (Mkulama, Mwiinga, Chisunka-Mwila, &Daka, 2020). This was confirmed in a study, by Ekwueme, Ilo, Ifijeh, Fagbohun and Dosa (2020) who examined the transformation of reference services in academic libraries. The study discovered that all ten libraries surveyed acknowledged a decrease in face-to-face reference services. Additionally, some libraries reported an increase in email/chat reference services. This has changed the landscape of reference services in most academic libraries

The modern reference librarian is responsible for addressing a wide range of inquiries, including both basic directional questions and more complex research requests. Uzomba (2019) emphasised that, in addition to their traditional duties, reference librarians are also responsible for instructing library patrons on information retrieval techniques, both within and beyond the library premises. Librarians now harness the power of digital databases, online resources, and e-books, which provide a vast reservoir of knowledge at their fingertips. The convenience of digital tools has

ushered in a new era of responsiveness, allowing librarians to provide timely and pertinent information, leaving patrons satisfied and fulfilled. Patrons are no longer constrained by the operating hours of the library; instead, they can access information and seek assistance whenever they need it. Whether it is late at night or during holidays, the digital realm remains open and ready to cater to the curiosity and quests for knowledge from all corners of Nigeria (Ubogu, 2020).

However, academic libraries and librarians in Nigeria have not been able to effectively leverage the opportunities available to render innovative reference services to the user. Certain factors may be responsible for this scenario. Some of them include competence of library personnel, leadership style, economic situation, continuous professional development, institutional support and digital competence of librarians. Institutional support refers to the backing and resources provided by the academic institution to the library and library personnel (Ajayi, Adetayo, Gbotoso, & Salvador, 2021). The concept of institutional support is broad but scholars have identified *key* aspects that are likely to apply to a broad range of institutions and organisations. From these perspectives, institutional support encompasses financial, technical, and administrative support that allows the library to function efficiently (Pedro & Kumar, 2020).

Institutional support can refer to things like funding, staffing, policies, and organisational structure. All of these factors can impact the effectiveness of reference service delivery. In the context of reference service delivery, institutional support affects the quality and effectiveness of the services provided. Some ways in which institutional support may be required for effective reference services delivery include funding, staffing, training and development, infrastructural support. It is logical to argue that libraries with sufficient financial support can invest in relevant resources such as books, databases, and technological infrastructure for delivering reference services effectively. In addition, an institution's commitment to hiring and retaining qualified and trained librarians

affects the quality of reference services provided. Adequate staffing levels ensure librarians have enough time to assist users effectively. In the same vein, institutional support for ongoing staff training and professional development programs ensures librarians have the necessary skills and knowledge to deliver effective reference services.

In a dynamic world in which new knowledge emerges by the minute, personal and professional development should be considered important. Mercy and Wali (2021) noted that, theoretically, training and development are integral aspect of library management in Nigeria. The scholars reported that staff training programmes such as orientation, computer skill acquisition programmes, and in-service workshop among others are often reported by librarians in Nigeria. The staff development programmes available in these libraries also include job rotation, seminar, consultancy, publication and research, institutional education, study leave, mentorship/coaching and professional association. However, librarians do not get opportunities for these professional development opportunities regularly. In term of funding, Nigerian academic libraries also suffer from the global cash crunch. According to Ogunbodede and Wiche (2022), academic libraries in Nigeria are being limited in the scope of services they can provide due to poor funding. Okuonghae and Igbinovia (2019) also added that academic libraries in Nigeria are unable to play their role in the achievement of the sustainable development goals due to inadequate funding.

Going by the assertation of Adeoye, Oladokun and Opalere (2022) that the application of technology in reference services requires some investment, it is logical to assume that financial support would also have some impact on effective modern reference services delivery in academic libraries. The availability of the needed fund will support the acquisition of the necessary infrastructure, training, and personnel required to provide seamless services. According to Ubogu (2019), training and development support is essential in boosting the effectiveness of librarians.

Providing reference services in the modern era, especially with the emergence of digital reference services require specialised knowledge to navigate efficiently. As a result, effective use of digital reference tools often demands specialised training. This training may cover how to conduct searches, evaluate search results, provide accurate responses, troubleshooting and emotional intelligence to deal with deviant online users. Institutions that invest in comprehensive training programs for library personnel empower them with the necessary skills and knowledge to navigate and utilise these tools efficiently.

Continuous professional development opportunities further enhance their expertise and confidence, leading to more effective service delivery (Fasola & Mamudu, 2020). In addition to training and development, another element of institutional support is infrastructural support. Infrastructural support has to do with the provision of all necessary infrastructure to support the provision of virtual reference services. Using virtual reference tools would require a certain level of digital infrastructure such as computer systems, internet connection, alternative power supply and comfortable settings from where the librarians can operate. Implementing and maintaining virtual reference tools require financial and technological resources. Institutions that allocate sufficient funds for acquiring and updating these tools demonstrate their commitment to enhancing library services. Adequate resource allocation enables library personnel to access state-of-the-art virtual reference platforms and receive necessary training, fostering confidence and motivation in using these tools effectively (Kutu & Olajide, 2020). The institutional support that must be continuously available is technical support.

However, even when the needed support is available, the level of digital competence of library personnel may affect the level and quality of services delivered in a particular academic library. Librarians are required to possess and develop proficiency in navigating new technologies and information systems in order to provide efficient service to library patrons (Oyovwe-Tinuoye, Omeluzor & Patrick, 2021). Therefore, librarians must acquire knowledge and actively engage in the cooperative information landscape as it exists now in order to remain significant in the overall context. Librarians must stay abreast of evolving technologies and remain current with new information formats. This require that they develop certain competencies to use the technologies in rendering reference services.

Digital competence refers to the ability of library staff to use technology to provide reference services. This can include things like knowledge of library databases, search engines, and other online resources. In the modern era digital competence goes beyond computer skills. Digital competence needed for librarians to operate in the information age is made up of information and data literacy, digital content creations, communication and collaboration, and cybersecurity skills among others (Evangelinos & Holley, 2015). Digital competence is the most recent concept describing technology-related skills. During the 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. These terms are also often used as synonyms; e.g. digital competence and digital literacy (Ilomäki, Kantosalo & Lakkala, 2011). Sometimes the terms are narrow, e.g., Internet skills, referring only to a limited area of digital technology, and some of them widen the content to media and literacy, e.g., media literacy skills or digital literacy.

The wide variety of terms used to describe digital competence reflects the rapid development of technologies (Arnone & Reynolds, 2009; Jones-Kavalier & Flannigan, 2008). Moreover, changes in society and culture, based on the new technology, have effects on terms. It is expected that the content and the scope will still change, and that is even expected. Alamutka, Punie and Redecker (2008) recommend in their policy-related paper that the approaches should be dynamic and regularly revised because of the evolving new technologies and their use in society. Digital competence encompasses a broad range of skills and abilities that are crucial in today's increasingly digital world. At its core, digital competence refers to individuals' capacity to effectively navigate and utilise digital technologies for various purposes. This includes everything from basic computer literacy to more advanced skills like critical thinking and creativity in digital environments. One of the fundamental components of digital competence is basic digital skills.

According to Baro, Obaro and Aduba (2019), digital competence includes proficiency in using computers, operating systems, software applications, and digital devices such as smartphones and tablets. Without these foundational skills, individuals may struggle to perform even the most basic tasks in a digital context, hindering their ability to fully participate in modern society and the workforce. Another important aspect of digital competence is information literacy. In an era where vast amounts of information are available at our fingertips, being able to find, evaluate, and critically assess information obtained through digital sources is essential. Information literacy enables individuals to discern credible sources from misinformation and make informed decisions in their personal and professional lives. Media literacy is also a key component of digital competence. With the proliferation of digital media platforms, individuals need to understand how to critically analyze and interpret media messages. This includes recognising bias, identifying propaganda, and understanding the impact of media on society.

According to Gopalakrishnan and Kumar (2013), digital competency for librarians has become increasingly vital as libraries adapt to the digital age. Librarians are expected to possess a range of skills and knowledge related to effectively utilizing digital technologies in their professional roles. This encompasses various aspects, including information literacy, digital resource management, technology integration, digital communication, digital preservation, cybersecurity, and continuous learning. Information literacy is a key component, requiring librarians to excel in finding, evaluating, and utilizing digital information. With the proliferation of online resources, understanding search engines, databases, and other digital tools is essential for providing comprehensive services to patrons. Additionally, librarians must be adept at managing digital collections. This involves cataloguing, organizing, and preserving digital materials, ensuring accessibility and longevity (Baro, Obaro, &Aduba, 2019).

Technology integration is another crucial aspect, as librarians need to incorporate digital tools and systems into library services and programs. This may include utilizing library management systems, digital archives, and other technologies that enhance the efficiency and effectiveness of library operations. Furthermore, librarians must excel in digital communication, employing various online platforms, social media, and email to effectively engage with patrons and stakeholders in the digital realm. The digital age brings about the need for librarians to be knowledgeable about digital preservation strategies and technologies. Given the increasing reliance on digital assets, librarians must understand how to preserve and protect these materials for future use. Moreover, awareness of cybersecurity best practices and a commitment to safeguarding patron privacy are crucial in the digital landscape, ensuring that libraries maintain a secure and trustworthy environment for their users (Okeji, Tralagba & Obi, 2020).

In essence, both institutional support which comes from academic library managements and parent bodies as well as digital competence, which is within the control of librarians are factors that can affect the effectiveness of reference service provided in academic libraries. However, while scholars have noticed that library patrons seeking reference services from academic libraries are dwindling due to the impact of technology, there has not been enough attention paid to how institutional support and digital competence can help reposition digital reference services by taking advantage of technologies and patrons' preferences to provide reference services that meet the needs and expectation of modern-day library users

1.2 Statement of the Problem

Reference services is essential in academic libraries as it ensures the library collection and the global information resources are effectively utilised by library patrons. With effective library services, academic library's patrons can easily access the depth of information resources offered by the library. They can also learn useful information and knowledge they might otherwise find difficult to access on their own. With the advent of technology, the traditional reference services are no longer adequate which has led to the reduction in library patrons visiting reference librarians. Without access to professional reference services, information users would be unable to make maximum use of available resources. They would also miss out on the skills thought by reference librarians such as information literacy and information retrieval skills. However, not enough studies have been conducted to explore the role of reference services in improving the relevance of academic libraries in the modern age. In addition, no study has considered the combination of digital competence and institutional support as factors in reference service delivery in Nigerian academic libraries.

Consequently, researchers have shown interest in finding ways to ensure effective reference services in Nigerian academic libraries. However, majority of studies on whether the availability of digital competence and institutional support of librarians can determine the effectiveness of reference services in academic libraries were conducted outside Nigeria. Therefore, this study investigates digital competence and institutional support as determinants of reference service delivery among university librarians in Kwara State, with the aim of proffering relevant solutions and boosting library patronage in the institutions.

1.3 Research Objectives

The main objective of the study is to investigate digital competence and institutional support as determinants of reference service delivery among university librarians in Kwara State. The specific objectives of the study are to:

i. Determine the level of digital competence for reference services delivery among university librarians in Kwara State;
ii. Highlight the institutional supports available for reference services delivery in university libraries in Kwara State; and
iii. Identify the types of reference services delivery rendered by university librarians in Kwara State.

1.4 Research Questions

The following research questions will guide this study:

i. What is the level of digital competence for reference services delivery among university librarians in Kwara State?
ii. What are the institutional supports available for reference services delivery in university libraries in Kwara State? and
iii. What are the types of reference services delivery rendered by university librarians in Kwara State?

1.5 Scope of the Study

The study focuses on digital competence, institutional support as correlates of reference services delivery among university librarians in Kwara State. The variables of interest were limited to digital competence, institutional support and reference services delivery. The study will cover six purposively selected university libraries in Kwara State, Nigeria. The study will adopt a descriptive survey method; questionnaire will be used to collect data from the university librarians which reflected individuals' opinion on the digital competence, institutional support and reference services delivery. IBM SPSS V26.0 will be used to carry out both descriptive statistics such as frequencies and percentages counts.

1.6 Significance of the Study

The results of this study would be of benefit to the management of libraries, librarians, users, society and to expand the existing literature. It would also be of immense benefits to policy makers, practitioners, stakeholders and the society at large. Management of libraries: it will expose the management of libraries to significance of digital competence in enhancing reference services delivery and improving and heightening the relevance of libraries in an ever-changing digital and information overflow era. The digital competence of university librarians will positively revolutionize library reference services delivery. The study's findings will directly benefit librarians working in university libraries in general. By understanding how digital competence and institutional support affect the effectiveness of reference, librarians can gain insights into importance of these factors. The study would highlight the importance of training and support, leading to enhanced proficiency and confidence among library personnel in improving references services to serve patrons better.

The study findings will provide valuable information to library management in universities and other tertiary institutions. By recognising the impact of digital competence and institutional support, administrators can make informed decisions about resource allocation, training programs, and support systems. This can lead to the implementation of strategies that foster a culture of embracing technology and innovation within the library, ultimately enhancing overall effective reference services service delivery. The study's findings will also benefit the Nigerian tertiary institutions as a whole. Institutions can gain insights into the role they play in promoting the overhaul of reference services to align with global best practices. Understanding how institutional support influences motivation can guide the formulation of policies and initiatives that facilitate

the integration of technology within library services, leading to more efficient and user-friendly virtual reference services.

The findings of the study will also be useful to library users in university libraries which include students, lecturers and other members of the university community. The library users will benefit from improved reference services that are likely to occur as a result of the recommendations made in this study. Government bodies and policy makers involved in education and library policy formulation can also be potential beneficiaries. The study's findings would also be valuable for researchers and scholars interested in the field of library and information science. It can add to the existing body of knowledge on factors influencing the effectiveness of reference services in libraries and the role of digital competence and institutional support in this process. The study may inspire further research and discussions on improving library services through technology integration.

The general motivation behind this research is to take activities which are educative in order to contribute more interest towards the improvement in study of digital competence and institutional support in academic level. The result of the study will supplement the rising experimental literature on integration of digital competence and reference services delivery in universities libraries in Nigeria. The findings of this study will be of beneficial to the information institutions such as libraries, archives, media houses and other information institutions. The study will reveal the factors that affects the digital competence, institutional support as correlates of reference services delivery among university librarians in Osun State.

1.7 Operational Definition of Terms

Reference Services: these services involve interactions where the communication does not occur in real-time. Users can submit questions or requests via email, web forms, or message boards, and the librarian or reference specialist responds at a later time.

Digital Competence; refers to the ability of librarians in academic libraries in Osun State Nigeria to confidently and effectively use digital technologies to render reference services and other digitally oriented library services.

Digital reference: these are library services provided through electronic means, enabling users to access reference assistance without being physically present in the library. These services utilize various technologies to offer users access to information and support from reference librarians.

Institutional Support: The assistance, resources, and backing provided by academic libraries in South-West, Nigerian to the library personnel in their use of virtual reference tools.

Infrastructural Support: The provision of necessary infrastructure, facilities, and resources to support the functioning of virtual reference tools used by academic library personnel in Osun State Nigeria. Infrastructural support may include physical resources like equipment, technology, and facilities.

Reference Services Delivery: Reference services delivery refers to the process of providing assistance and guidance by academic library personnel in Osun State Nigeria.to users in locating, accessing, and utilizing information resources to meet their information needs

Reference Services: these are personalized assistance provided by academic library personnel in Osun State Nigeria to users seeking information.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter conducts a critical review of literature on the topic under study. It is an important aspect of a study which the researcher is expected to be objective, critically assessing trends, predicting consequences, pointing out areas of strengths and weaknesses of previous studies, and highlighting different conflicting and similar assertions, views, opinions, arguments, biases, as well as thoughts on the research topic and related areas. Literature will therefore be reviewed under the following subheadings.

2.2 Definition and Types of Digital Competence;

2.3 Nature of Institutional Support and Library Services;

2.4 Concept of Reference Services in Academic Libraries;

2.5 Importance of Institutional Support and Digital Competence in Reference Service Delivery;

2.6 Empirical Studies; and

2.7 Appraisal of Reviewed Literature.

2.2 Definition and Types of Digital Competence

Digital literacy is a concept that have seen global attention since especially at the turn of the century when digital technology became the bedrock of the global economy and society. Globalisation has ensured that no individual alive can totally escape the large of digital technology. It has come to the state that the knowledge of how to manipulate and interact with digital devices has risen from a state of luxury to become something linked to human survival. Digital competence has become essential tool in education, healthcare, governance and research. It has even been recognized as a tool for poverty alleviation and the reduction of the gap between the developed and developing countries of the world (Bejaković & Mrnjavac, 2020). However, as popular as the concept of digital literacy skill is, experts across the world struggled to provide a unified definition for it. This is not unconnected to the fact that technology and its application in various areas of human endeavour has kept evolving over the years.

Indeed, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) admitted that it is difficult to categorically state the components of digital competence as the skills keep expanding regularly (Sánchez-Canut, et al., 2023). Nevertheless, the need to evaluate and design appropriate strategies to develop digital competence has led to various efforts to define the concept. One of the most popular definitions came from an organisation concerned with the development and evaluating digital literacy in adolescents. The organisation defined digital literacy as "the ability of an individual to utilise computer systems for purposes such as; research, information creation and communication in order to participate effectively at home, at school, in the workplace, and in the community (Fraillon et al, 2020). This definition clearly identified, research, information creation and information communication as key digital competence. Other definitions also highlight different skills.

For instance, another definition of digital literacy presents it as the capacity to make use of digital devices to safely and appropriately access, manage, interpret, integrate, communicate, evaluate, and produce information for work, education, and business purposes. It encompasses competencies known variously as computer literacy, ICT literacy, information literacy, and media literacy (Fraillon et al, 2020). In line with this, digital literacy is defined by Reddy, Sharma, and Chaudhary (2020) as the capacity to use digital technology, communication tools, and networks to acquire and assess knowledge, connect with others, and complete practical activities. It is also characterized as the ability to use digital tools securely and effectively for learning, collaboration, and information creation. In addition to the complexity regarding its definition, digital literacy as an embodiment of the knowledge, skills and attitudes required for thriving and succeeding in a digital society is also know by many other terms such ICT literacy, media literacy, new literacy, digital competence and so on.

The definitions that have been given to each of these related concepts have bear close resemblance to each other but each of the definition usually left something out which renders them ineligible as an umbrella term for digital literacy. Despite the fact that different definitions of digital literacy have been propounded by scholars, the central focus of all of them is on the information processing and retrieval utilizing new technologies, as well as communication and content development using ICTs (Fraillon et al., 2020). The importance of information processing and retrieval was further reinforced at the 2013 conference of the International Computer Literacy and Information Study (ICILS). Participants at this conference outlined the constructs of digital literacy into two main categories which are; information collection and management, information creation, and information sharing. Both of these require two main skills; information literacy and media literacy.

The two categories of digital literacy were later expanded to four categories encompassing eight different components (Fraillon et al., 2020). The four categories and their components are basic computer skills comprising computer use foundations and computer use norms; information gathering comprising: information access, assessment, and management, information production comprising information transforming and creation. The fourth is digital communication which is made up of information sharing and ethical use of information (Mikheeva& Meyer, 2020). However, there are others who believe that digital literacy extends beyond information retrieval and information use. In order to reconcile all the various conceptualizations, the European Commission Science Hub introduced a wider concept; digital competence. This 'new' concept encompasses all the skills that have been used to describe literacy. Also, in the absence of a definite scale for digital literacy, the organisation launched the Digital Competence Framework (Digi Comp) to both outline the constructs of digital competence and also to provide a scale to measure digital competence.

Scholar have examined the constructs from both digital competencies and digital literacy to identify their areas of divergence (Mikheeva& Meyer, 2020). It was discovered that digital literacy is a stepping stone to digital competence because it includes the abilities required to become digitally competent. Digital literacy is a set of abilities that enables users to retrieve, assess, store, produce, present, and exchange information, as well as interact and engage in collaborative networks via the World Wide Web. Digital competence, on the other hand, as one of the eight essential competencies required for lifelong learning, extends beyond the digital competence to include a strong emphasis on attitudes and mindset. This means that digital competence has added attitude to the two major skills in digital literacy; information literacy and media literacy (Jin, et al., 2020). However, digital literacy and digital competence refer to the same concepts.

This is shown by the development of the Digital Competence Framework (DigComp) by the European Union and its subsequent enhance by UNESCO to guide its evaluation of digital competence across the world (Ferrari, 2012). The framework, nicknamed DigComp outlines the knowledge, skills and attitudes that constitute digital competence. The framework outlines five comprehensive constructs. These constructs include information and data literacy, communication and collaboration, digital content creation, digital safety, and problem solving (Shmatkov,2021). Each of the five constructs have applicable metrics to measure the exact skills expected of a digital literate person. In addition, each of the metrics is measured in three dimensions representing the level of competence with dimension be the lowest. For instance, information and data literacy dimension include the ability to properly state information needs, locate and retrieve online information resources in various formats, evaluate information sources and contents. It also includes the ability to store, manage, and organise online information resources (Shmatkov,2021).

The second construct is communication and collaboration. It involves using digital technologies for interaction, communication, and cooperation while taking into account generational and cultural differences participation in society through both public and private digital services, as well as active citizenship to control one's online reputation, identity, and presence. The third type of digital competence is digital content creation. The skills here include the ability to produce and edit digital contents; to enhance and incorporate data and content into a body of already existing knowledge while being aware of relevant copyright and licensing laws and the ability to user appropriate keywords and commands when using a computer system. Safety is the fourth construct. It covers the ability of information users to protect their privacy while using digital devices and interacting on networked systems; the ability to create safe passwords and other

data/information protection protocols as well as the presence of mind to avoid cyber bullying but to use digital tools in ways that might promote inclusion and social well-being (Shmatkov, 2021).

Another type of digital competence is problem solving. It involves the ability to trouble shoot computer and information systems. Detecting problems and proffering useful resolution, are all aspects. Problem solving also include the ability to keep up with development in the digital world in order to anticipate and be ready to change. Most importantly, problem solving involves being able to use digital systems to create innovative solutions to personal and societal challenges. It involves the creation of services and products that can meet particular needs (European Union, 2022). All these are in the first dimension with more advanced skills included in the second dimensions. The third dimension also incorporate attitude which is considered in the framework as an important element in sustained, lifelong learning.

Although it is believed by European scholars that the DigComp framework can applied to everyone around the world due to its comprehensiveness, the UNICEF was of the opinion that the competencies listed and the expected skills are more suitable for developed Western countries with appreciable level of technological advancement. Although the EU data in 2016 showed that forty percent of European adults lack digital literacy, the opportunity available to acquire digital competencies cannot be compared what is being by people in the developing world such as Africa and Asian. In line with this, the UNICEF built on the DigComp to create a digital literacy framework that can be applied to all citizen globally (Mikheeva& Meyer, 2020). The Digital Literacy Global Framework (DLGF) took all the constructs itemized in the DigComp, i.e.; information and data literacy, communication and collaboration, digital content creation, digital safety, and problem solving and added a new one; devices and software operations.

2.3 Nature of Institutional Support and Library Services

An institution refers to a formal organisation or establishment that serves a particular purpose within a society. It is a structured system that operates according to established rules, regulations, and norms. Institutions can take various forms, such as governmental bodies, educational establishments, financial organizations, healthcare systems, religious organizations, and more. Institutions typically have a specific mission, objectives, and functions that contribute to the functioning of society. They often have a defined structure, hierarchy, and governing body responsible for decision-making and policy implementation. Institutions may have their own set of rules, procedures, and traditions that govern their operations and interactions with individuals or other institutions (Falola et al., 2020).

In an academic context, “institutional support” refers to the multifaceted assistance and resources provided by an educational institution to foster an environment conducive to learning, research, and overall growth. At its core, institutional support encompasses various dimensions, each crucial for the institution's sustained success (Hora &Smolarek, 2018). Financial resources form a foundational element of institutional support, as adequate funding is essential for the institution's day-to-day operations, research endeavours, and capital projects. The availability of financial backing ensures that the institution can invest in faculty, facilities, and cutting-edge technologies, thereby enriching the overall educational experience. Human resources are equally vital to institutional success, encompassing the skilled and motivated individuals who contribute to the institution's mission. The support here extends beyond recruitment to ongoing professional development opportunities, creating a positive work environment, and fostering a collaborative and innovative culture among faculty and staff.

According to Danbaki (2012) and Gwany (2014), funding enable libraries to purchase information resources, maintain buildings and other types of infrastructure, hire and train people to enhance the attainment of its aims. They reiterated that without money many if not all of the library goals and services cannot be implemented. Similarly, Oniyeike and Eseyin (2014) see finances as a sum of money set aside for the execution of a project in an organization. With inadequate or no money, no project or service can be implemented in an organization. There is essential to have efficient money management to achieve effective implementation of digital reference services. As highlighted by Ololube (2016), management finances involve the act of planning, arranging and controlling monetary operations in one's care. University libraries need cash to recruit staff, educate staff periodically, buy new information technologies and maintain infrastructural facilities. One further aspect that this study regarded relevant and capable of forecasting the deployment of digital reference is the presence of infrastructural facilities.

Infrastructure in this context comprises communications, Internet connectivity, servers, application systems, software applications, power supply, electronic resources, and appropriate buildings or lodgings. Internet as an important component of ICT is also underlined by Afolabi in Eke, Omekwu and Agbo (2014). The connectedness helps reference librarians to answer queries even in areas they do not have prior understanding. This means that without proper infrastructure facilities it will be difficult to establish digital reference services in federal university libraries in the North-East, Nigeria faculty, and researchers (Hora & Smolarek, 2018; Falola et al., 2020). Institutional support is a crucial component in ensuring the effective functioning of academic libraries, providing the necessary resources and structures for these libraries to meet the information needs of their users. Financial support is foundational to library operations, encompassing funding for the acquisition of diverse information resources, including books, journals, and databases.

Adequate financial backing ensures that the library can maintain up-to-date collections and invest in new technologies to enhance user experience (Cox, 2021). In addition to these, infrastructure and facilities play a pivotal role in creating an environment conducive to learning and research. Institutional support involves providing well-designed spaces for reading, research, and collaboration, along with the necessary technological infrastructure such as computer labs and internet connectivity. These physical elements contribute significantly to the overall effectiveness of library services (Harland, Stewart, & Bruce, 2017). Human resources to manage the provided infrastructure are another critical aspect of institutional support for libraries. This involves recruitment, training, and professional development of library personnel. Ongoing support for training ensures that library staff remain proficient in emerging technologies and best practices, enhancing their ability to provide high-quality services (Andrikopoulou, Rowley & Walton, 2022). Technological support is increasingly important as libraries embrace digital transformation.

Institutional support includes investments in library management systems, digital repositories, and other technological tools that streamline information access, retrieval, and user engagement. These technologies contribute to the modernization and efficiency of library services. Collection development is a key focus area for institutional support, encompassing the initial investment and ongoing financial backing for acquiring new materials. This includes a diverse range of resources such as books, journals, electronic databases, and multimedia content. A well-supported collection is essential for meeting the diverse needs of library users (Walsh & Rana, 2020). As an integral part of library services, institutional support is also essential in ensuring effective reference services. Reference services, even when provided at the basic level, requires specific skills. It is important for instance that a reference librarian is skilled in reference interview.

Reference interview skills is a competency that includes referring users to appropriate resources; using open probes to clarify questions; recognising when follow-ups are necessary; offering a personal greeting at the beginning of a chat session to provide clear interest and willingness to help; and confirming the satisfaction of users' information needs. The competency is enhanced by familiarity with electronic resources. Being familiar with a vast array of information resources enhances librarians' skills in selecting and searching databases and internet resources; familiarity with subscribed library databases; a wide-ranging knowledge of Internet resources; and rapid evaluation of the quality of information resources and services (Cassell & Hiremath, 2023). Another important competency for virtual reference is online communication skills This competency includes mastery of online real-time written communication skills and understanding and appreciation of the online culture and chat etiquette. The communication skills are hand especially when the librarians are call upon to play an instructional role.

This competency includes the ability to take the instructional role to educate users to augment their level of information literacy and the ability to provide peer instructions to colleagues in obtaining chat reference skills. The librarians are also expected to possess the ability to recognise different groups of users This competency includes the librarian's ability to understand different users and answer their questions using different techniques. Ability to handle irregularities of user behaviour This competency includes a librarian's ability to deal with any kind of inappropriate use of digital reference services, such as abusive excessive demand from users and rudeness of users (Lateef & Mairaj, 2023). Indeed, professional bodies in librarianships are dedicate to highlighting the skills and competencies that distinguish professional reference librarians from others. The Reference and User Services Association (RUSA), in collaboration with International Federal of Library Association (IFLA) highlighted guidelines, in relation to librarians working with digital reference

services, stipulate that digital reference service responsibilities should be shared among staff to ensure continuity of service (Guo, et al. 2022).

Staff should be provided time and resources for training and continuing education to ensure effective service (Uutoni, 2018). Key skills a digital reference librarian should have include multitasking, clear communication skills, especially in writing, database and online searching skills, interviewing skills to compensate for lack of visual and auditory cues and knowledge of references sources. Update training is necessary and encourages and enables staff members to meet regularly to discuss their experiences and new developments in the field of digital reference services (Mkulama et al., 2020). Specifically, in this study, the measures for institutional support are training and development, technical support and infrastructural support. Librarians need to adapt to new technologies and tools to effectively provide reference services in virtual environments where information and communication technological innovations have obstructed almost all areas of services and routines of the library (Matthews & Flake, 2015). Library as an institution should equip her staff with necessarily need to carry out what is known as needs assessment. Institution should begin by conducting a needs assessment to identify the specific training requirements of librarians. This assessment should take into account the current skill levels, technological proficiency, and knowledge gaps related to virtual reference tools.

Adamu et al. (2021), recommend that managements should fund librarians on seminars, conferences with aim of providing librarians with a comprehensive orientation to the technological tools used for virtual reference services. This can include training on specific software platforms, chat systems, video conferencing tools, and online collaboration platforms. The orientation should cover both the technical aspects of these tools and their practical application in reference services. User experience training should also be done. Librarians should be trained to understand the user

experience and develop skills to provide excellent service in virtual environments. This includes effective communication techniques, empathy, active listening, and problem-solving skills. Training on etiquette for written communication (e.g., email, chat) and video conferencing can also be beneficial.

A scholar put it better by submitting that; “information literacy librarians need to be involved in creating independent thinkers and teaching information literacy in the electronic environment. They need to create courses and formal instruction in the discipline of information literacy with the purpose of encouraging independent learners and critical thinkers to meet the challenges of the new information age” (Udumukwu & Obi, 2019). Leong (2008) asserted that librarians play a crucial role in the digital age, where there is a vast range of information media that needs to be curated and delivered. With the emergence of new online platforms, libraries have struggled to adapt, and librarians need to be trained to help people make sense of abundant information online. Therefore, the trainer must be trained and must subject him/herself to training, reskilling, un-skilling, leaning and relearning what has been learned as well as new things to stay relevant but much more to be effective and efficient in their responsibilities as information scientists (Sahabi, et al., 2022).

This support helps librarians overcome technical obstacles, enhances their digital capabilities, and ultimately improves the user experience for patrons seeking assistance remotely. In this digital age, librarians often rely on virtual referencing tools to provide reference and information services to patrons who may be physically distant or prefer online interactions. These tools can include chat services, email systems, knowledge bases, or video conferencing platforms. While librarians possess expertise in research and information retrieval, they may require technical support to utilise and maintain these tools effectively (Omeluzor, et al., 2022). Technical support for librarians

can encompass a wide range of areas, from acquiring and organizing materials to providing access to resources and databases. Technical training, librarians may receive training sessions or workshops to familiarize themselves with the features, functionalities, and best practices of virtual referencing tools. These sessions can cover topics such as setting up accounts, managing user interactions, utilizing advanced features, and troubleshooting common issues.

Infrastructural support is an essential aspect of institutional support for librarians in the context of virtual reference services (Adetayo, Adeleke & Lateef, 2023). According to Adetayo, Adeleke & Lateef (2023), librarians need access to appropriate technological tools and resources to provide virtual reference services. This includes reliable internet connectivity, computers or laptops, relevant software applications for communication and collaboration, and access to online library resources and databases. Institutions should ensure that librarians have the necessary hardware and software to conduct virtual reference interactions seamlessly. Another area of infrastructural support is technical support. Institutions should have a reliable technical support system in place to address any infrastructure-related issues or challenges faced by librarians while providing virtual reference services. This may include dedicated IT staff or a helpdesk that can troubleshoot technical problems, provide guidance on software or hardware configurations, and ensure smooth functioning of virtual reference systems.

In a study on the effects of library infrastructure on turnover intentions of librarians. A Study of University Libraries in South-South and South-East of Nigeria. It was asserted that Inadequate library infrastructure can render the library useless in the provision of relevant information services to the users and can increase turnover intentions of librarians. Therefore, it is important for libraries to invest in infrastructure to support their librarians and the communities they serve (Omeluzor, et al., 2022). Library infrastructure is comprised of generating set, electrical installations, ICT

facilities, furniture, fittings, information materials and library building. The function of library infrastructure in the management and discharging of essential library services to the patrons has been acknowledged in contemporary literature.

Funds management is the third organisational component that is capable of anticipating the deployment of digital reference. According to Danbaki (2012) and Gwany (2014), funding enable libraries to purchase information resources, maintain buildings and other types of infrastructure, hire and train people to enhance the attainment of its aims. They reiterated that without money many if not all of the library goals and services cannot be implemented. Similarly, Oniyeike and Eseyin (2014) see finances as a sum of money set aside for the execution of a project in an organization. With inadequate or no money, no project or service can be implemented in an organization. There is essential to have efficient money management to achieve effective implementation of digital reference services. As highlighted by Ololube (2016), management finances involve the act of planning, arranging and controlling monetary operations in one's care. University libraries need cash to recruit staff, educate staff periodically, buy new information technologies and maintain infrastructural facilities. One further aspect that this study regarded relevant and capable of forecasting the deployment of digital reference is the presence of infrastructural facilities.

Infrastructure in this context comprises communications, Internet connectivity, servers, application systems, software applications, power supply, electronic resources, and appropriate buildings or lodgings. Internet as an important component of ICT is also underlined by Afolabi in Eke, Omekwu and Agbo (2014). The connectedness helps reference librarians to answer queries even in areas they do not have prior understanding. This means that without proper infrastructure facilities it will be difficult to establish digital reference services in federal university libraries in the North-

East, Nigeria. Institutions should recognize and reward librarians for their efforts in utilizing virtual referencing tools. This recognition can be in the form of performance evaluations, incentives, or professional growth opportunities. Recognising librarians' proficiency and dedication to virtual referencing tools not only motivates them to continue using these tools but also creates a culture of innovation and continuous improvement within the library.

2.4 Concept of Reference Services in Academic Libraries

The various definitions that have been given to reference services shows the evolution of the service that has been an integral part of librarianship and library services for centuries. The conceptualisations reveal the 'humble' origins of reference services and highlight how far this aspect of library services has evolved over the years. Reference services in academic libraries encompass a range of activities aimed at assisting users in finding information, conducting research, and utilizing library resources. According to Avery and Ward (2010), reference services involve personal assistance to library users in finding needed information. This includes direct assistance, such as answering specific questions or providing guidance on the use of library resources, as well as indirect assistance, such as creating guides and tutorials to aid users in their research.

This definition is also reflected in Atanda and Uchendu (2017) who also submitted that reference services are personal assistance eagerly given to library users in pursuit of information by a librarian or information services provider. These definitions capture the essence of reference services but not its true dimensions. Reference services are as old as librarianship itself and it was usually delivered manually. However, Sanches and Melo (2022) suggested that reference services have grown in scope. Reference services in academic libraries now encompass a range of activities

designed to assist patrons in finding, evaluating, and using information resources effectively. These services aim to support the research, learning, and teaching needs of students, faculty, and staff. Modern reference services now encompass in-person assistance in which professional librarians provide guidance at a physical reference desk or through scheduled appointments. It also includes virtual assistance in which academic libraries offer reference services via email, chat, video calls, and screen-sharing platforms. In the digital era, libraries also curate and provide access to online databases, research guides, tutorials, and other digital tools.

Furthermore, giving the increasing complexity of information environment, Librarians in academic libraries now conduct workshops and classes to teach information literacy skills, such as searching for and evaluating information (Elliott, 2020; Nyakweba, et al., 2022). In many academic libraries, particularly in developing countries such as Nigeria, the reference section headed by a reference librarian is an important section that houses and takes care of important information resources that cannot be given to users on loan. The services rendered to users include information services, bibliographic verification and documentation services, inter-library loan and document delivery services, user education, and selective dissemination of information (SDI) among others (Lal, 2022). Information services can also be called referral service. This is the process of identifying resources and agencies with special services or information needed by library users or information seekers, and the ability of the libraries, from time to time, to refer these users to these agencies or organizations for the purpose of satisfying their information need.

Libraries from time to time receive a good number of reference and information enquiries whose range is usually very long i.e. from general to specific. Majority of reference and information queries by users received at the reference desk can be answered through ready reference tools such as dictionaries, directories, encyclopaedias, handbooks and manuals, atlases and gazetteers,

indexes and bibliographies etc. In organizing reference services, bibliography and documentation services should also be made available (Bandyopadhyay& Boyd-Byrnes, 2016). Bibliographic verification is the use of bibliographic tools for purpose of verifying the correctness and completeness of the used information. These verifications provide information about publications, and to achieve this reference librarian consults and searches both manual and electronic versions of standard bibliographic works. Some bibliographic tools may include abstracts and indexes, gazettes, encyclopaedias, almanacs, catalogues, bibliographies etc. while documentation services may include monthly list of additions, reading lists, documentation list, subject bibliographies etc. on the topics of seminars, conferences, research projects etc; and documentation list of contents.

Inter-library loan and document delivery services are important services due to the rising document prices and budgetary constraints on libraries, which makes them unable to purchase more and new documents. This service is closely related to the bibliographic verification and documentation service. A library that does not have certain required documents among its collection may borrow, through the inter-library loan, from other libraries in the neighbourhood and supply or make available to the users at the earliest and required time. In other words, no single library or information centre can boast of having in its collection all the resources that can be demanded of them (Brown, et al., 2021). Another task expected of reference librarian is Current Awareness Services (CAS). This is a service provided for researchers to acquaint them with recent publications that might help them in their research work. The reference librarian's duty is to make its users aware of latest information relating to their work field.

Current Awareness Services (CAS) can be repackaged to suit the information needs of the users/clientele. Its services can be introduced in the routing of periodicals, abstracting or indexing of documents, circulation of accession lists of newly acquired documents, library bulletin containing all types of useful information etc (David-West, 2019). User education is another form of reference services mostly offered by academic libraries. The basic objective of this service is to infuse information seeking habit among the users, especially students, so they can independently search the information sources in the library. User education in the modern day has also expanded to cover information literacy training in view of modern advances in the information environment. The training now encompasses how to search various databases, citation styles, evaluating information, ethical use of information, dissemination of scholarly outputs. In the age of social media and cyber threats, information literacy programmes have also been expanded to include detecting fake news and netiquette among others (Wong & Saunders, 2020).

While user education is mostly focused on students, Selective Dissemination of Information (SDI) services is mainly for lecturers, researchers and professionals within the community served by the library. This is another form of reference service provided in the library. In some cases, it can be referred to as Current Awareness Services (CAS). It is a user packaged reference services that keeps users abreast of latest information. Many libraries use computerize service methods for disseminating the selective information for the users so as to keep them well informed. SDI alerts a user that a document/material of his interest has been received in the library or information centre. The manner in which reference services in academic libraries are rendered has changed as a result of technological advancements. In addition, the format and sources of information libraries employ to provide reference service have also been transformed. The majority of library materials and services are now accessible online.

As a result, library patrons are no longer restricted to using the library itself to access our materials. Many libraries and library cooperatives are introducing virtual reference services to better serve clients who remotely access the library services and collections from their computers (Adeoye, Oladokun, & Opalere, 2022). According to Shoaib et al., (2022), due to advancements in technology, reference services have been transformed from a static service in a corner of the library to a ubiquitous service that can be rendered without time and space restrictions. Virtual reference, as defined by the Reference and Users Services Association (RUSA), is any reference service provided via electronic means (computers, Internet, etc.) such as chat, videoconferencing, co-browsing, IM, VOIP, or email. Synchronous real-time communication is used by the vast majority of VRS. Telephone, fax, and postal reference services are not examples of virtual reference. Reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff, without physically being present (Mehta & Wang, 2020).

Virtual reference services conversations may be synchronous or asynchronous. A user can submit a query at any time, from any location, using an asynchronous service like email or a web form quiz, and the librarian can respond when they have time and have thought through the answer. In contrast, synchronous services facilitate the user's interaction with a reference librarian in real time. Although the term "virtual reference service" (VRS) has been used to describe both asynchronous and synchronous Internet-based communication services, it is more usually used to describe the former. Users don't even need to be in the library itself to have a live chat with a librarian. In addition, co-browsing and "escorting" (when the librarian guides the patron through the web, such as when they are learning to use the online catalogue) are possible with certain Virtual reference services (VRS) (Guo, et al., 2021).

Virtual reference services are a type of library service that allows users to ask reference questions and receive assistance from librarians through online or digital channels, such as email, chat, or video conferencing. Some of the tools used for virtual reference services include chat software, email reference services where users can send their questions and receive answers via email, and video conferencing software like Zoom or Skype to provide face-to-face assistance to users remotely. Virtual reference is a reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff without being physically present. Reference services is rendered by mechanisms otherwise known as tools. However, it is very clear that technology in all its forms and formats to the librarians are just a means to an end, they assist the well-grounded librarian in offering services efficiently and effectively (Ojukwu, 2020). Therefore, to the librarians every means of reaching the library users and satisfying their information needs without a physical contact could be regarded as virtual reference tool. Virtual reference services are divided majorly into duo of synchronous and Asynchronous.

In an asynchronous reference transaction, a client poses a query and receives a response at a later time. It entails asking a question of a trained information specialist but not counting on an instantaneous answer. A researcher observes that there is a lag in this transaction between the question and the response. The listed channels are all viable options for delivering asynchronous virtual reference services (VRS). Users have the option of utilizing the library's provided email address on the website, which will launch the appropriate email client software, or of using their own email client software to submit questions to the library. Due to its widespread adoption and lack of system requirements, e-mail has quickly become the de facto standard for electronic communication. A scholar points out that using email for references service is simple, inexpensive,

and widely available. The reference librarian has the option of using email to transmit data files to the end users.

E-mail reference also has the added benefit of allowing questions and their responses to be saved in a database for later use. argue that improved responses can be obtained by e-mail reference since staff members have more time to think through their responses. There are three main drawbacks to using email as a reference (1) it is more challenging to conduct the reference interview; (2) it takes longer to receive a response; and (3) non-verbal communication is lost. Another form of asynchronous reference service is web form. With web forms, users can fill out a web form on the library's homepage or reference page and submit it for processing. The reference librarian typically responds to user inquiries via electronic mail, telephone, facsimile, or regular mail. Some fields on online forms are required in order for users to submit their responses. These fields can ask for the user's name or email address, for example. Users are also prompted to give supplementary, voluntary data via web forms in order to better understand their information requirements. Information needs can be better identified by reference staff thanks to web forms that allow users to offer more specific information. Users might be helped in the question-asking process by means of online forms due to the fact that they offer a structured format (Radford & Connaway, 2013).

Academic libraries established free phone and fax lines for reference questions in the 1970s and 1980s; in the 1990s, the number of reference questions submitted to American libraries via email exploded. Librarians have been providing online access to reference materials since 1987. Many libraries began using synchronous video chat services in the late 1990s and early 2000s, and by 1999, popular chat software like Library Systems & Services (now Tutor.com), LivePerson, and QuestionPoint had emerged with useful new capabilities including co-browsing and usage tracking. During this time, the use of chat reference grew, and library consortia collaborated to

make virtual reference available for longer periods of time (Vogus, 2020; Abubakar, 2021). Vogus (2020) asserted that the importance of providing library services in a digital setting grew during the Covid-19 epidemic. Virtual reference services have been provided by academic libraries for many years. Live chat, email, and text reference are all common services provided by academic libraries. Virtual reference inquiries can be answered by librarians, employees, or even librarians, and the services can be accessed in a number of different ways. It may be challenging for staff and librarians to adapt to the virtual environment if they have spent their entire careers fielding questions at a physical reference desk (Vogus, 2020).

Virtual reference is reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff, without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing, Voice over IP (VoIP), co-browsing, e-mail, and instant messaging. Reference services requested and provided over the Internet, usually via e-mail, instant messaging ("chat"), or Web-based submission forms, usually answered by librarians in the reference department of a library, sometimes by the participants in a collaborative reference system serving more than one institution. Synonymous with chat reference, e-reference, online reference, real-time reference, and virtual reference. Synchronous reference service is a reference transaction that takes place at exactly the same moment between the information professional and information user. It entails instantaneous interaction between both participants. In this reference transaction, the user and librarian work together in real time to provide a prompt response to the user's inquiry. Live reference, or real-time reference, is another name for this concept.

Types of synchronous services includes webchat, instant messaging, video conferencing, social media tools among others. Web chat is an online chatting tool which facilitates immediate, textual communication between information users and reference librarian. The librarian and the user are both accessible online and able to communicate with one another in real time. A separate window displays on the computer screen for entering and sending written communications. The chat was deemed useful for the reference service since it allowed users to engage with the reference librarian in real time despite their geographical location. It “has potential as an intermediate step between electronic mail reference and real time audio and video conferencing,” they write. In order to contact the reference librarian, the user must follow the instructions provided on the library’s website. Online reference checking is made easier using chat reference.

After the user’s reference has been processed, they can be sent a copy of the entire conversation. A second copy of the text can be kept in an archive database for statistical data pertaining to the reference procedure (e.g., conversation length, discussion subjects, user locations, etc.). However, there are a few drawbacks to using chat references. Some inquiries or users may find the process of typing messages to be cumbersome or unnatural. The chat-referenced transaction likewise lacks any examples of non-verbal communication. Before web chat there was instant messaging in which librarians used simple tools such as SMS to communicate with users. These days, a lot of people use a chat service called instant messaging (IM). IM has been widely adopted by libraries for VRS purposes. Due to its widespread adoption, IM is a valuable resource for DRS. Through the use of specialised text-based software, IM facilitates online communication between the user and the librarian. In order to complete the IM transaction, you'll need to use a split web screen. Reference librarians utilise one screen to search the web or other electronic sources for requested information while users submit inquiries and view the librarian's response on the other.

Instant messaging (IM) allows for the transfer of files, and some IM programs even include VoIP calling options. Using specialised digital reference software like QuestionPoint (QuestionPoint, 2013) or VRLplus, you may combine IM/chat with advanced functionality like co-browsing and page pushing. The librarian can "push" a static web page (essentially a screen capture of the user's browser) from the library's browser to the user's browser. When a librarian and a user co-browse, they both take part in the search at the same time. Librarians and patrons alike can manage their access to the internet and electronic resources. Librarian actions in the co-browse window are visible to the user, and user actions are also visible to the librarian. The co-browsing capability of an IM/chat reference software has excellent potential as a tool for educating librarians about the importance of information literacy. Voice over Internet Protocol Voice over Internet Protocol (VoIP) allows for the transmission of both voice calls and data using the same Internet protocol. For users to be able to hear and be heard by one another, microphones and speakers must be set up on both computers. It is widely used these days as a means of communication. Webcam or video conferencing is an improvement over the VoIP.

It has the advantage of incorporating a visual component which helps in avoiding the misunderstandings common to voice only applications. Referencing transactions can be conducted verbally or in writing via videoconferencing. A video chat window opens on the screen, allowing the librarian and the user to interact in real time. Additionally, it enables the rerouting of web or electronic content to another window. Distance learning, study, and research are all aided by videoconferencing. Aside the asynchronous and synchronous means is the collaborative mode of virtual referencing services. Collaborative Digital Reference Service (CDRS)' which involves collaboration between two or more libraries to offer DRS using any of the above asynchronous and synchronous tools. When combined with in-person assistance, the virtual reference service is

invaluable. Both aim to provide answers to people' questions and address their concerns, but they use different approaches to accomplish these ends. Unlike the traditional reference system, which placed a premium on the librarian's upbeat demeanour and eagerness to help the patron with any question, the virtual service, in which the patron is not physically present but instead communicates with librarians through email or a chat service, will place less weight on these factors.

Reference librarians have an excellent customer relationship with the users, even though they have yet to fortify their presence in an online environment. Sequential to the above facts, recommendations were offered that reference librarians should employ public relation approach in relating to users and other stakeholders of the library. More so, awareness of reference services should be developed through library advertising and marketing of library services among the community of users. The proposal was also given that the reference librarian should be ICT compliance to be able to operate wonderfully in an online setting. Ekwelem et al. (2018) also outlined the challenges associated with the use of digital reference services in academic libraries in Nigeria, and proffer solutions for ameliorating the challenges faced by these academic libraries in Nigeria. The study featured a survey design which was employed to obtain responses from 198 librarians. Data were acquired from the population utilising questionnaire. The conclusion revealed lack of ICT infrastructure to support digital reference services ranked highest as cause for non-application of digital reference services. Other challenges include: lack of sufficient training on use of ICT infrastructure among libraries and lack of finances to support digital reference services.

In the study conducted by Joel and Ibrahim (2021), the finding suggested that information technology competencies, interpersonal competencies and leadership competencies are greatly needed for librarians and information professionals for knowledge management of 21st century libraries in Borno State. Based on the findings, it was recommended amongst others that libraries and information Professionals in Borno State should pool their resources together to create an awareness of the concepts of knowledge management in libraries since library and information professionals have been in the business of discovery knowledge, collaborating and sharing knowledge, gathering, filtering and analysing knowledge. What is also obvious in this study is the need for digital competencies. According to Igbo and Imo (2017), knowledge exchange in the digital age will only be effective if libraries use information technology to project their global presence. Library personnel have accepted that the use of information technology has transformed the globe into a global economy dependent on creative approaches to data organisation and dissemination (Ajie, 2019). Anyone who wishes to operate in this field therefore must acquire the required skills.

Aliyu and Shuaib (2016) warned that failure to acquire the necessary digital literacy competency does not only affect the ability of librarians to provide essential services in the modern digital age, it is also problematic in a number of ways. Librarians without digital literacy competency in libraries with digital ambitions risk being laid off as a result of redundancy. The importance skills development for academic library personnel lies in helping them to adapt to the demands of the digital age. In today's digital age, traditional library services provided by staff members who are not familiar with information and communication technology are no longer in high demand. Many information users had developed skills that allowed them to independently perform tasks that would have previously been performed by library staff. Many libraries are in this predicament,

which helps to explain the dramatic drop in library patronage in academic institutions where studies are routinely undertaken and where it is necessary to regularly seek out information to back up generated data.

The only way the library's user base can be restored and expanded is if staff members actively work to reverse the trend, first by examining their own shortcomings and failings, and then by developing the skills necessary to adapt to the ever-evolving technological landscape. However, the effort of library personnel in Nigerian to acquire digital literacy competency or to apply the acquired skills to improve library service quality is often affected by institutional factors. This is shown in the findings of Abba and Babayi (2019) who examined the internet use of library personnel at the Ibrahim Babangida Library in Yola, Nigeria, and discovered that power outages severely reduced internet access. As a result, in today's digital age, a lack of electricity would limit the library staff's ability to efficiently provide services to patrons.

2.5 Importance of Digital Competence and Institutional Support in Reference Service

The Digital Literacy Global Framework (DLGF) was developed by the United Nation's Education, Scientific and Cultural Organisation (UNESCO) in 2018 as a tool to measure digital literacy worldwide. It built on the Digital Competence Framework for Citizens that was developed by the European Commission (DigComp 2.0) (Pangrazio, Godhe & Ledesma, 2020; Tomczyk & Fedeli, 2021). The Digicomp identified the constructs to include information and data literacy, communication and collaboration, safety, and problem solving. Because the DigiComp was developed for European countries with advanced technology and better opportunities for citizens compared to the rest of the world, it was considered inadequate as a global measurement. The

DLGF was therefore designed to be customization framework for defining digital literacy worldwide (Tomczyk & Fedeli, 2021). The DLGF retained all of the constructs of the DigiComp but in a simplified manner. It also adds "Devices and software operations" which basically focuses on basic ICT skills and "Career-related competences. Therefore, the constructs of digital literacy according to the DLGF are; Devices and software operations, information and data literacy, communication and collaboration, safety, and problem solving, and career related competencies. All of these are meant to be exhaustive and open to adaptation as required by specific situations.

The developers of the DLGF are aware that Digital literacy needed to succeed varies according to region and job demands (Pangrazio, Godhe, & Ledesma, 2020). For the current study, the focus will be on metrics such as device and software operation, information and data literacy and digital content creation. All of these are directly related to the subject of the study which is the use of online information resources. As pointed out by a scholar, reference librarians do not have to become tech experts in order to use online information resources. Having the basic and functional skills that helps them to identify, retrieve and use the needed resources are enough. Device and software operation, according to the DLGF, has to do with the ability to operate the computer and related devices as well as the ability to use relevant software. For reference librarians, the means the ability to use computer desktops, laptops, tablets and other mobile digital devices to access information systems and use other relevant software to retrieve information resources. It also involves being aware of where to get information to assist in the use of computer hardware and software. Dealing with information however, require information and data literacy.

Information and data literacy covers the ability to clearly communicate information requirements and be able to identify and retrieve digital data, information, and content. It also encompasses the ability to assess the relevance and content of information sources and information resources. Information and data literacy also extent to the storage, managing, and organisation of digital data, information, and material that have been identified and retrieved for use. The third construct is digital content creation. This involves the ability to develop and refine computer-based media. It also includes proper grasp of copyright and other relevant laws guiding the use of digital information and the ability to create, synthesize and integrating information and content into an existing body of knowledge. This also applies to librarians. It means their ability to create digital content from online information resources and save them in the appropriate format. Reference librarians are expected to be able to bring information together from diverse online information resources and create a coherent, meaningful and useful resources to expand the frontier of knowledge.

2.6 Empirical Studies

Studies have emphasised the need for institutional support for library activities, particularly in developing countries such as Nigeria. Egunjobi, Ogunniyi, and Ajakaye (2022) examined the challenges facing reference service provision in Federal Academic Libraries in the Southwest of Nigeria. The study adopted a descriptive survey design. The study sample was taken from reference librarians in University of Ibadan, Ibadan, Obafemi Awolowo University, Ile Ife, Osun State and University of Lagos, Akoka, Lagos. The result revealed that face-to-face consultation was the most used medium for reference service delivery while chatbots and web referencing are not used in these libraries; an indication that libraries in Nigeria are far behind in harnessing abounding opportunities for improved reference services. The study recommended that libraries should look

toward adopting innovative technologies to enhance the provision of reference services in their libraries. This clearly shows a need for institutional support.

Ajani and Buraimo (2021) evaluate the current state of library automation in Nigerian academic libraries focusing on Southwest Nigeria. The study encompasses a population of 697 library staff that are employed in 9 university libraries located in Southwest Nigeria. Data collection was conducted using a standardised questionnaire (Appendix A). A total of 335 questionnaires were distributed, however only 309 were considered valid, resulting in a response rate of 92.2%. The findings indicated that library automation in university libraries in South West Nigeria was only partially implemented. Library automation has a beneficial effect on library services. The obstacles encountered included insufficient technical assistance from the vendor, lack of financial support from the institution, poor attitude of library staff, and technophobia.

Bassi et al. (2023) examined the extent to which organisational characteristics predict implementation of digital reference services in federal university libraries in North-East, Nigeria. The study adopted a correlational research design with the study population coming from universities in North-Eastern Nigeria. The population of the study was 201 comprising of the complete professional (102) and paraprofessional (99) staff of the federal university libraries in the North-East, Nigeria. The results showed that leadership style, management of staff, financial and intracerebral support from the management substantially predicted deployment of digital reference services in federal university libraries in North-East, Nigeria. It was proposed that library administrators in the region should come up with policies to ensure that effective deployment of digital references services.

Osiesi et al. (2022) examined the influence of professional training and development for librarians/library workers in the southwest, Nigeria. The descriptive survey research design was employed in carrying out this investigation. The population of study goes over all library staff/attendants in the Federal University Oye-Ekiti. The purposive sampling strategy was employed in selecting the sample for the study. The study found that the level of the job performance of library staff in Federal University Oye-Ekiti (FUOYE) is high; there is a positive and statistically significant relationship between the professional development of library staff and their performance in the job; professional development and training of library staff significantly impact their job performance; orientation, in-house training, seminars, on the-job training and instructor-led training. This further establish the importance of providing institutional support for librarians.

Madukoma (2015) examined users' assessment of electronic reference services at Babcock University Library, Ogun state. The researcher observed that, despite the transformation caused by ICTs in the library, it seems that users are yet to experience the huge advantage offered by ICTs in the area of electronic reference services. The survey research design was employed for the investigation. The population includes 250 registered library customers. Findings demonstrate that Babcock University Library customers have a poor level of awareness of electronic reference services. It is consequently advised that library management should promote awareness at the various school seminars, during the usage of library and study skills workshops, etc. The reference librarian(s) should be taught regularly on the usage of these current technology. If these are done, the knowledge and utilisation of electronic services will improve.

Ademola (2019) examining the professional competence and skills of library personnel in 21st Century reference services. Information and Communication Technology (ICT) facilitates the process of generating, processing storing, and disseminating information. Library personnel is utilizing ICT to keep pace with the problem of information explosion in the 21st century. For library personnel to be competent in handling ICT tools for reference services, certain skills are needed to get the right information from the right source to the right user at the right time. The study employed a survey of the descriptive method. The population of the study comprised library personnel. A questionnaire was designed to elicit responses from the respondents. Descriptive statistics with a simple percentage, mean and standard deviation were used for data analysis.

The results revealed activities of library personnel to include current awareness services, online reference services, answering queries from users, user education, etc. Some of the tools used for these services include blogs, social networking sites, podcasting, instant messaging, etc. For library personnel to strive, some skills are needed. These include IT skills, questioning skills, marketing and repackaging, online searching, web maintenance, social networking, communication, etc. To meet these responsibilities, library personnel is confronted with several challenges including poor funding, lack of training, poor motivation, and technophobia. It was therefore recommended that the government should change its attitude towards the funding of libraries to avail funds for training and acquisition of skills. Also, library personnel should embrace and accept changes in modern technologies in their operations.

Atanda, Owolabi and Ugbala, (2021) investigate the professional competence and attitude of library personnel towards digital services in selected university libraries in Nigeria. The population of the study comprised all the 196 library personnel from the 5 purposively selected university libraries in Nigeria. The total enumeration sampling method was adopted; while the questionnaire

was the main instrument for data collection. The findings of the study revealed that internet service was the most available digital service in libraries. It further revealed that most of the library personnel have requisite proficiency skills in basic computer operations. However, inadequate power supply was the major problem affecting digital services in the university libraries.

Hamad, Al-Fadel & Shehata, (2023) examined the level of smart information service implementation at academic libraries in Jordan. The study also investigated the correlation between the level of smart information services offered by the libraries and the level of digital competencies among the library staff. The survey research is designed using survey design to collect comprehensive information from the study participants. A questionnaire was disseminated to 340 respondents, and 246 questionnaires were returned and were suitable for analysis with a response rate of 72.4%. The results indicated a moderate level of smart information service offered by academic libraries, as well as a moderate level of digital skills associated with the advocacy of smart information services. The study in essence showed that digital competence skills of the librarian is moderate and it affect the level of innovative service rendered. This can also happen in the context of reference services.

Okeji, Tralagba, and Obi (2020) investigated the digital literacy skills possessed by librarians working in university libraries in Nigeria. the study adopted as survey research method with an online questionnaire used to collect data from 111 librarians working in both public and private universities in Nigeria. The study revealed the digital literacy skills that the librarians rated as very high and high, and those that they rated as moderate and low. The study also revealed the knowledge and competencies that they rated to be highly competent and competent, as well as also those that they rated to be neutral and not good. The librarians rated their knowledge of network and system security; ability to apply security software firewalls, filtering routers and ability to

protect access to digital content by providing password or IP base access as neutral and not good. Overall, the study revealed that almost half of the librarians rated their level of digital literacy skills possessed to be moderate. Only few librarians rated their digital literacy skills to be excellent.

Obotu, Chukwuka, and Gambo (2019) analyzed the efficiency with which library staff at two Nigerian agricultural universities used information and communication technologies in their work. It was found that they used the computers for record-keeping (53%), entertainment (30%), and research (16%). However, it was found that the libraries were only partially automated and lacked online cataloguing and e-acquisition. Moreover, administrative activities were performed manually. This suggests that the library staff was woefully unprepared to offer modern services in line with what customers expect in the digital world. The basic digital infrastructure available in this library limits the ability and the motivation of the library personnel to acquire digital literacy competency which also limit the range of services they can offer.

2.7 Appraisal of Related Literature Reviewed

The review of related literature highlights the research findings of other scholarly research that are in line with the objectives/aims of this study. The reviewed related literature revealed certain facts that directed the course of this research and covers the outline set out in the introduction of this chapter. The literature underscores the pivotal role of institutional support in shaping the effectiveness of academic libraries. It highlights the need for proactive measures from university administrations to provide adequate financial resources, infrastructure, and policies that facilitate the integration of digital technologies into library services. The studies emphasize that institutional commitment is essential for the successful implementation of digital initiatives, staff development, and the overall advancement of library services.

In the realm of reference services, the literature reviews shed light on the evolving nature of these services in response to technological advancements. The integration of digital reference tools and online platforms is recognized as a transformative force in enhancing the accessibility and efficiency of reference services. However, challenges such as the digital divide and the need for equitable access to technology are also acknowledged. The literature highlights the critical role of academic librarians as facilitators of reference services. Beyond traditional roles, librarians are expected to evolve into tech-savvy information specialists who can adeptly navigate digital landscapes, assist users in utilizing online resources effectively, and contribute to the development of a technologically proficient academic community.

Finally, it was observed from the related reviewed literature that there is abundance of types of reference services rendered, as well as digital competence of the university librarians. In respect to the related literature reviewed, this study therefore investigates digital competence and institutional support as determinants of reference service delivery among university librarians in Osun State. In order to achieve this, two theories were adopted as to establish if there is relationship between independent and dependent variables.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter outlines the method adopted in carrying out this research under the following subheading; Research Design, Population of the Study, Sample and Sampling Technique, Description of Research Instrument, Validity of Research Instrument, Reliability of Research Instrument, Method of Data Collection and Method of Data Analysis.

3.2 Research Design

This study adopted a descriptive survey research design. This research design is considered appropriate for the current study because it is suitable to describe people's attitudes, opinions and behaviour patterns and their view. Descriptive survey design also makes it possible for the researcher to study the types of relationships that exists between the independent variable and the dependent variable (Siedlecki, 2020).

3.3 Population of the Study

The population of this study consists of all librarians and library officers of university libraries in Kwara State. According to the National University Commission (NUC), Kwara State has Ten universities. This is made up of One federal, Two states, and Seven private universities. The population of the librarians is presented in Table 3.1:

Table 3.1: Population of Librarians and Library Officers

University	Librarian	Library Officer	Total
University of Ilorin, Ilorin	34	28	62
Kwara State University, Malete	11	2	13
Al-Hikmah University, Ilorin	9	4	13
Landmark University, Omu-Aran	8	1	9
Summit University, Offa	2	2	4
Ojaja University, Eiyenkorin	3	3	6
Thomas Adewunmi University, Oko	2	2	4
Ahman Pategi, University, Pategi	2	2	4
Muhammed Kamaldeen University, Ilorin	2	2	4
Kwara State University of Education, Ilorin	2	2	4
Total	**75**	**48**	**123**

3.4 Sample Size and Sampling Technique

The study adopted total enumeration sampling technique. If a study population is small and less in number; it may be preferable to do a study of everyone in the population, rather than a sample (Kumar, 2018). The researcher involved all the librarians and library officers in the Ten (10) university libraries in Kwara State, Nigeria. Therefore, the sample size obtained for this study was amount to One-Hundred and Twenty-Three (123).

3.5 Research Instrument(s)

The instrument for data collection for this was is questionnaire. The survey questionnaire comprises a closed-ended questionnaire. It was an adapted structured questionnaire from various studies including; Adeoye, Oladokun, and Opalere (2022), Aina (2018), Bejaković and Mrnjavac (2020) and, Eisenberger, Rhoades Shanock, and Wen (2020).

3.6 Validity and Reliability of Research Instrument(s)

In order to ensure content and construct validity mechanism, the research instrument was submitted to the researcher's supervisor for scrutiny and expertise judgment with the view of checking the ability of the questionnaire measure what it is supposed to measure before it is administered on the respondents. The supervisor's observations and corrections were duly effect before final draft of the instrument. Reliability refers to the degree of consistency with which an instrument measures what it claims to measure. To ensure reliability, test and retest method was used. The approved questionnaire was administered to 15 respondents outside the study population. The instrument was administered to 10 librarians and 5 library officers from University of Ibadan library. The responses collected from the respondents was analysed to determine whether the Cronbach Alpha value of each construct is reliable. The results showed that the instrument has a Cronbach Alpha value of 7.04 which is regarded as a measure of reliability.

3.7 Method of Data Collection

The researcher administered the questionnaires to the respondents with the help of two research assistants who had been trained for the purpose. To achieve this, an introduction letter was obtained and taken to the selected academic libraries. This letter was presented to the University Librarians of the selected academic libraries and their approval obtained beforehand. After the necessary approval have been granted, the researcher and research assistants visited the library with the questionnaire and administered on the respondents.

3.8 Method of Data Analysis

The data collected for this study was collated and subjected to comprehensive data analysis using the IBM Statistical Product and Service Solution (SPSS) software version 26.0. Pearson Product Moment Correlation (PPMC) was adopted and the correlation coefficient was determined by dividing the co-variance by the product of the two variables standard deviations, which was determined by inferential statistics. Tables was used for results presentation and interpretation by employing frequency counts and simple percentages.

3.9 Ethical Considerations

The study employed the use of anonymity ethical consideration and follow all the ethics guiding scholarly writing by ensuring the work is original. Anonymity refers to keeping secret by not identifying the ethnic or cultural background of respondents, refrain from referring to them by their names or divulging any other sensitive information about a participant (Mugenda & Mugenda, 2003). This is why, during the conduct of the research, the researcher promised to protect the information given in confidence by the respondent. But, if any information has to be revealed, then consent must be sought from the respondent. This enhances honesty towards the research subject by protecting them from physical and psychological harm thereby ensuring that the researcher does not ask embarrassing questions which can disguise or even shock the respondent.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the data analysis, results and discussion of findings of the study. The data collected with the use of questionnaires were presented in tables and analysed using frequency counts and simple percentages.

4.2 Response Rate

Table 4.1: Distribution of Questionnaire and Response Rate

Distributed Questionnaire	Retrieved Questionnaire	Valid	Percentage (%)
123	120	118	95.9

Total of 123 copies of questionnaire were distributed to the librarians in the understudy university libraries in Kwara State, Nigeria. A total of 120 copies were retrieved while 118 copies were valid which resulting to 95.9% as the response rate as shown in table 4.1. During the course of distributing the questionnaires, some librarians were not in their place of work on the day of visitation while some were on the leave of absence.

4.3 Demographic Information of the Respondents

Table 4.2: Demographic Information of the Respondents

SN	Gender	Frequency	Percentage (%)
1.	Male	76	64.4
2.	Female	42	35.5
	Total	**118**	**100.0**
SN	**Age**	**Frequency**	**Percentage (%)**
1.	21 – 30	27	22.8
2.	31 – 40	54	45.7
3.	41 – 50	24	20.3
4.	51 – 60	13	11.0
5.	61 and above	0	0.0
	Total	**118**	**100.0**
SN	**Qualification**	**Frequency**	**Percentage (%)**
1.	BSc	56	47.4
2.	MSc	47	39.8
3.	PhD	15	12.7
	Total	**118**	**100.0**
SN	**Years of work experience**	**Frequency**	**Percentage (%)**
1.	1 – 5	23	19.4
2.	6 – 10	39	33.0
3.	11 – 15	22	18.6
4.	16 – 20	13	11.0
5.	21 – 25	14	11.8
6.	26 and above	7	5.9
	Total	**118**	**100.0**

The results in table 4.2 revealed the demographic information of the respondents. It revealed that 76(64.4%) respondents were male, while the remaining 42(35.5%) were female. This shows that more male respondents participated in the study than their female counterpart. The table also revealed the age range of the respondents, 54 representing 45.7% were within the age range of 31-40 years, 27(22.8%) were within the age range of 21-30 years, 24(20.3%) were within the age range of 41-50 years, and 13(11.0%) were within the age range of 51-60. This shows that the

majority of the respondents were within the age range of 31-40 while the lowest were within the age range of 51 to 60 at the time of conducting the study.

Furthermore, the table also revealed that 56(57.5%) respondents have B.Sc., 47(39.8%) have M.Sc. and 15(12.7%) have Ph.D. This shows that most of the respondents are B.Sc. holders while M.Sc. holders followed as the second and Ph.D. holders were with the lowest responses. Lastly, the table also revealed the respondents' years of work experience, 39(33.0%) have 6-10 years of work experience, 23(19.4%) have 1-5 years of work experience, 22(18.6%) have11-15 years of work experience, 14(11.8%) have 21-25 years of work experience, 13(11.0%) have 16-20 years of work experience and 7(5.9%) have 26 and above years of work experience. This shows that majority of the respondents have 6-10 years of work experience while the lowest years of work experience were 26 and above years.

4.4 Results Presentation and Analysis

RQ1: What is the level of digital competence for reference services delivery among university librarians in Kwara State?

Table 4.3: The level of digital competence for reference services delivery among university librarians.

SN	Statements	HC	MC	LC	NC
1.	I can identify and use computer and other digital devices (laptops, mobile phones, tablets etc).	87(73.7%)	28(23.7%)	2(1.6%)	1(0.8%)
2.	I can identify and use computer software and mobile applications (MS Word, Adobe Acrobat, WPS, etc).	76(64.4%)	30(25.4%)	10(8.4%)	2(1.6%)
3.	I can identify data, information and digital content needed to operate software tools and technologies.	23(19.4%)	32(27.1%)	41(34.7%)	22(18.6%)
4.	I can clearly state my information needs.	47(39.8%)	40(33.8%)	28(23.7%)	3(2.5%)
5.	I can search for data, information and content in digital environments.	58(49.1%)	45(34.7%)	11(9.3%)	4(3.3%)

6.	I can analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content.	51(43.2%)	42(35.5%)	15(12.7%)	10(8.4%)
7.	I can store, manage and organize digital data, information and content.	65(55.0%)	41(34.7%)	10(8.4%)	2(1.6%)
8.	I can create and edit digital contents.	56(47.4%)	51(43.2%)	9(7.6%)	2(1.6%)
9.	I can use existing information to create new useful and meaningful information.	33(27.9%)	32(27.1%)	41(34.7%)	12(10.1%)
10.	I can give understandable instructions to retrieve information from a computer system.	61(51.6%)	42(35.5%)	10(8.4%)	5(4.2%)
11.	I understand how copyright and license apply to data, information and digital content.	55(46.6%)	41(34.7%)	12(10.1%)	10(8.4%)

Keys: HC = Highly Competence; MC = Moderately Competence; LC = Less Competence; NC = Not Competence.

Table 4.3 shows the level of digital competence for reference services delivery among university librarians in Kwara State. The digital competence includes: identification and use computer and other digital devices (laptops, mobile phones, tablets etc) with 87(73.7%); Identification and use computer software and mobile applications (MS Word, Adobe Acrobat, WPS, etc) with 76(64.4%); I can store, manage and organize digital data, information and content with 65(55.0%) and I can give understandable instructions to retrieve information from a computer system with 61(51.6%). However, I can identify data, information and digital content needed to operate software tools and technologies with 23(19.4%) and I can use existing information to create new useful and meaningful information with 33(27.9%) are the least digital competence by the respondents. This implies that respondents have digital competences for library reference services delivery.

RQ2: What are the institutional supports available for reference services delivery in university libraries in Kwara State?

Table 4.4: The institutional support available for reference services delivery among university librarians.

SN	Statements	SS	MS	LS	NS
1.	My institution provides personal desktop and laptop computers to support reference services.	73(61.8%)	25(21.1%)	12(10.1%)	8(6.7%)
2.	My institution provides fast internet connections to support reference services.	67(56.7%)	41(34.7%)	8(6.7%)	2(1.6%)
3.	My institution provides regular electricity supply to support reference services.	81(68.6%)	30(25.4%)	7(5.9%)	0(0.0%)
4.	My institution provides conducive office space to support reference services.	65(55.0%)	50(42.3%)	3(2.5%)	0(0.0%)
5.	Library personnel attend seminars on the provision of effective reference services.	58(49.1%)	45(38.1%)	12(10.1%)	3(2.5%)
6.	There are in-house training programs on the new trends in reference services.	60(50.8%)	46(38.9%)	11(9.3%)	1(0.8%)
7.	Library personnel are given opportunity for self-development on the use of virtual reference serves.	62(52.5%)	45(38.1%)	10(8.4%)	1(0.8%)
8.	Experienced librarians are always available to guide new staff on the use of virtual reference serves.	55(46.6%)	57(48.3%)	6(5.0%)	0(0.0%)
9.	Technical support is easily accessible when I need help with virtual reference tools.	48(40.6%)	59(50.0%)	11(9.3%)	0(0.0%)
10.	Technical staff always respond quickly in addressing my inquiries and resolving technical issues.	66(55.9%)	30(25.4%)	20(16.9%)	2(1.6%)
11.	Technical staff always provide follow-up and feedback after issues have been resolved others.	63(53.3%)	31(26.2%)	23(19.4%)	1(0.8%)

Keys: SS = Strongly Supported; MS = Moderately Supported; LS = Less Supported; NS = Not Supported.

Table 4.4 shows the institutional support available for reference services delivery among university librarians in Osun State. These institutional supports include: regular electricity supply to support reference services with 81(68.6%); provides personal desktop and laptop computers to support reference services with 73(61.8%); provides fast internet connections to support reference services with 67(56.7%) and technical staff always respond quickly in addressing my inquiries and resolving technical issues with 66(55.9%). This indicates that the universities in Osun State provide needed supports to their respective libraries for effective reference services delivery.

RQ3: What are the types of reference services delivery rendered by university librarians in Kwara State?

Table 4.5: The types of reference services delivery rendered by university librarians.

SN	Statements	Available	Not Available
1.	Directional reference services.	79(66.9%)	39(33.0%)
2.	Library orientation.	82(69.4%)	36(30.5%)
3.	Information literacy instruction.	63(53.3%)	55(46.6%)
4.	Web forms.	35(29.6%)	83(70.3%)
5.	Selective dissemination of information.	67(56.7%)	51(43.2%)
6.	Research assistance.	60(50.8%)	58(49.1%)
7.	Current awareness services.	78(66.1%)	40(33.8%)
8.	Referral service.	86(72.8%)	32(27.1%)
9.	Reader advisory service.	68(57.6%)	50(42.3%)
10.	Information technology support services.	64(54.2%)	54(45.7%)

The results in table 4.5 showed the types of reference services delivery rendered by university librarians in Osun State. These services include: Referral service with 86(72.8%); followed by Library orientation with 82(69.4%); Directional reference services with 79(66.9%) and Current awareness services with 78(66.1%). However, Web forms with 35(29.6%) is the least. This implies

that Referral service and Library orientation are the most rendered reference services delivery in the university libraries in Osun State.

4.5 Discussion of Findings

The study has revealed that respondents with MSc and BSc have the lager ratio from the frequency distribution; it also shows that male respondents had the larger ratio more than their female counterpart. Furthermore, the study also revealed the age range of the respondents of which 31-40 years age range of respondents has the highest response rate.

The findings revealed the level of digital competence for reference services delivery among university librarians in Kwara State such as identification and use computer and other digital devices (laptops, mobile phones, tablets etc); identification and use computer software and mobile applications (MS Word, Adobe Acrobat, WPS, etc); store, manage and organize digital data, information and content and give understandable instructions to retrieve information from a computer system. This aligns with the findings of Atanda et al. (2021), they revealed that library personnel are competent in deploying ICT for basic operations. Also, Baro et al. (2019) stated that digital competence includes proficiency in using computers, operating systems, software applications, and digital devices such as Smartphone's and tablets.

The findings of this study also revealed the institutional support available for reference services delivery among university librarians in Kwara State. This institutional support includes provision of regular electricity supply to support reference services; provision of personal desktop and laptop computers to support reference services; provision of fast internet connections to support reference services; and technical staff always respond quickly in addressing my inquiries and resolving technical issues. This is in corroboration with Kutu and Olajide (2020) that adequate resource

allocation enables library personnel to access state-of-the-art virtual reference platforms and receive necessary training, fostering confidence and motivation in using these tools effectively. Also, Cox (2021) stated that adequate financial backing ensures that the library can maintain up to-date collections and invest in new technologies to enhance user experience.

The findings of the study revealed the types of reference services delivery rendered by university librarians in Kwara State. These includes referral service, library orientation, directional reference services and current awareness services. This is supported by the statement of Ajani et al. (2021) that reference services in the library is provided by a reference librarian stationed at a "Reference Desk" within the library building, as well as through telephone or written communication. Also, align with the submission of Aina (2018) that reference services entail providing users with guidance on the available services and resources within the library, as well as assisting them in locating these resources.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter avails the outline of the summary and discussions of findings in line with the objectives of the study. Also, in this chapter are conclusion and recommendations. The chapter further provides possible areas for further studies that were outside the scope of this study. This study investigated digital competence and institutional support as determinants for effective reference services delivery among professional librarians in Osun State.

5.2 Summary

The study investigates the digital competence and institutional support as determinants for reference services delivery among university librarians in Osun State. The major findings of the study are itemized as follows:

i. Most of the librarians of university libraries in Kwara State possessed high level of digital competence. This digital competence includes identify and use computer and other digital devices; identify and use computer software and mobile applications; store, manage and organize digital data, information.

ii. There is institutional support for university libraries in Kwara State from their parent institution. This support includes provision of regular electricity supply to support reference services; provision of personal desktop and laptop computers to support reference services; and provision of fast internet connections to support reference services.

iii. Lastly, the study revealed that the university libraries in Kwara State were using referral service, library orientation, directional reference services and current awareness services majorly as types of reference services.

5.3 Conclusion

The digital competence of university librarians is to ensure a virtual access to the library resources and services couples with institutional support such as digital infrastructure and staff training will significantly promote and sustain their relevancy of reference services delivery in the academic community. It is clearly observed from the study that the librarians possess the required digital competence for effective reference services delivery. Furthermore, it is very convincing to ascertain that the institutional support would play a significance role of providing effective reference services delivery among university librarians in Kwara State.

5.4 Recommendations

Based on the findings of the study, the following recommendations were generated:

i. The librarians should keep up-to-date of their digital competency to attain the benefits of digital technologies to better provide effective reference services delivery to their patrons.
ii. The university libraries should seek financial support from the government, NGO and agencies to continue invest in the necessary technology infrastructure.
iii. The university libraries should endeavour to train and re-train their librarians in the area of advancement information technologies in other to enhance their expertise in their career profession.

5.5 Contribution of the Study to Knowledge

This study on the digital competence and institutional support as determinants for reference services delivery among university librarians in Kwara State provides contribution to the existing literature at the empirical, theoretical as well as practical levels. The study contributes to knowledge by providing evidence of the impact and significance of digital competence and institutional support as determinants for effective reference services delivery among professional librarians in Osun State. Several previous related studies were extensively reviewed and theoretical model of UNESCO's Digital Literacy Global Framework (2018) was adopted.

5.6 Suggestions for Further Studies

The study investigated the digital competence and institutional support as determinants for reference services delivery among university librarians in Osun State. However, due to the limited time and minimum resources, the study only covered librarians in universities located in Osun State. The researcher, therefore, recommends for the future researchers a much wider study, probably covers all librarians in universities in South-west or the country as a whole in order to provide a holistic frame of the digital competence and institutional support as determinants for effective reference services delivery. Future researchers can also look deep into the factors affecting the provision for effective reference services delivery.

Furthermore, future studies can also be conducted on exploring the correlation between the digital competence and institutional support to provide effective reference services delivery. Additionally, potential researchers can assess the effectiveness of training and professional development programmes for librarians, analyzing the correlation between librarians' training opportunities and their professional progress for reference services, while also considering the impact of

technological infrastructure, such as internet connectivity, system availability and supporting information resources.

5.7 Limitation of the Study

The study is limited to the digital competence and institutional support as determinants for reference services delivery among university librarians in Osun State. The study's limitation also includes the restricted sample size and selection, encompassing only all the university libraries located in Osun State, thereby hinders the generalization of the findings to other states in the country and other types of libraries. A more extensive and diverse sample would facilitate a comprehensive understanding of digital competence and institutional support as correlates to effective reference services delivery.

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APPENDIX

QUESTIONNAIRE ON:

DIGITAL COMPETENCE AND INSTITUTIONAL SUPPORT AS DETERMINANTS OF REFERENCE SERVICES DELIVERY AMONG UNIVERSITY LIBRARIANS IN KWARA STATE

Dear respondents,

This questionnaire is designed to collect data on the above subject. Your response to the questions and statements in this questionnaire is high important to the success of the study. I therefore seek your indulgence to fill the questionnaire as accurately as possible. I assure you that your responses will be treated with the utmost confidentiality and used only for research purposes.

Thank you.

ALIYU, Anifat Titilope

Researcher

SECTION A:
Demographic Information

1. **Name of University**: …….
2. **Gender** Male [ ]; Female [ ]
3. **Age:** 25-29 [ ]; 30-34 [ ]; 26-30 [ ]; 31-35 [ ]; 36-40 [ ]; 40-44 [ ]; 45 and above [ ]
4. **Qualification:** Diploma [ ]; HND [ ]; BLIS [ ]; MLIS [ ]; PhD [ ]
5. **Work Experience**: 1- 5 [ ]; 6– 10 [ ]; 11 15 [ ]; 16 – 20 [ ]; 21 -25 [ ]; 25 above [ ]

   Others……

SECTION B:
The level of digital competence for reference services delivery among university librarians in Kwara State

Keys: HC = Highly Competence; MC = Moderately Competence; LC = Less Competence; NC = Not Competence

Statements	HC	MC	LC	NC
I can identify and use computer and other digital devices (laptops, mobile phones, tablets etc).				
I can identify and use computer software and mobile applications (MS Word, Adobe Acrobat, WPS, etc).				
I can identify data, information and digital content needed to operate software tools and technologies.				
I can clearly state my information needs.				
I can search for data, information and content in digital environments.				
I can analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content.				
I can store, manage and organise digital data, information and content.				
I can create and edit digital contents.				
I can use existing information to create new useful and meaningful information.				
I can give understandable instructions to retrieve information from a computer system.				
I understand how copyright and licences apply to data, information and digital content.				

SECTION C:
The institutional support available for reference services delivery among university librarians in Kwara State

Keys: SS = Strongly Supported; MS = Moderately Supported; LS = Less Supported; NS = Not Supported

Statements	SS	MS	LS	NS
My institution provides personal desktop and laptop computers to support reference services.				
My institution provides fast internet connections to support reference services.				
My institution provides regular electricity supply to support reference services.				
My institution provides conducive office space to support reference services.				
Library personnel attend seminars on the provision of effective reference services.				
There are in-house training programs on the new trends in reference services.				
Library personnels are giving opportunity for self-development on the use of virtual reference serves.				
Experienced librarians are always available to guide new staff on the use of virtual reference serves.				
Technical support is easily accessible when I need help with virtual reference tools.				
Technical staff always respond quickly in addressing my inquiries and resolving technical issues.				
Technical staff always provide follow up and feedback after issues have been resolved others.				

SECTION D:

The types of reference services delivery rendered by university librarians in Osun State

Please respond to the following statements as they apply to you

Types of Reference Services	Available	Not Available
Directional reference services		
Library orientation		
Information literacy instruction		
Web forms		
Selective dissemination of information		
Research assistance		
Current awareness services		
Referral service		
Reader advisory service		
Information technology support services		