



Digital literacy skills of Librarians in Providing Digital Reference Services in Selected Universities in Kano Metropolis: A survey

Bala AHMED ¹ (✉) & Abdulrahman Kabir IBRAHIM²

¹Abubakar Tafawa Balewa University Library (ATBU) Bauchi,

²College of Health Sciences and Technology, Nguru, Yobe State

Abstract

The study is aimed at assessing the digital literacy skills of librarians in providing digital reference services in selected university libraries in Kano metropolis. Descriptive survey design was adopted for the study. The area of the study was Kano State located in the North West Geopolitical Region of Nigeria. The population of the study comprised all the 30 practicing academic librarians in the three selected university libraries in Kano Metropolis (one private and two public universities). The entire population was used as the number of academic librarians was manageable. Questionnaire was the research instruments used for data collection. The instrument was validated by two experts from the department of library and information science Bayero University, Kano. Data collected was analyzed using mean scores. 2.50 was used as the benchmark. The major findings of the study revealed that academic librarians in selected university libraries in Kano Metropolis possess digital literacy skills. Although, the librarians sponsor themselves to training on digital literacy, but the libraries organizes computer training for staff over time. Also, epileptic power supply and internet failure are the challenges librarians in the three selected university libraries in Kano Metropolis mostly faced. Based on the findings, the study recommends among others that academic librarians working in in the three selected university libraries in Kano Metropolis should endeavor to acquire all the digital literacy skills required for perfect digital reference services delivery. Apart from organizing computer training for staff over time, the management of the three selected university libraries in Kano Metropolis should provide financial sponsorship to the academic librarians to attend digital literacy skills training in order to provide effective digital reference services; standby power generating source supplemented by solar and inverter as well as strong internet bandwidth should be provided for the libraries.

Keywords

Digital literacy, skills, librarians, library, digital reference services

Corresponding Author (✉)

ahmedbala72@gmail.com,
Abubakar Tafawa Balewa University
Library (ATBU) Bauchi,
+2347038372196

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State Chapter

Introduction

the development and availability of information and communication technologies (ICTS) in libraries have today not only increased and broadened the impact of information resources and brought them to their doorsteps, but also placed more emphasis on effective and efficient services.

to this note, a good way to think about ICT is to consider all the uses of digital technologies that already exist that is been used in helping individuals and organizations to manage information. ICT also covers any product that is capable of storing, retrieving, manipulating, transmitting or receiving information electronically in a digital form.

digital reference services is one of the important library services that allow referral services to be performed in real-time efficiently and conveniently by using library website, e-mail service, Facebook, Instagram, twitter and etc. Traditionally, university libraries operate only within the working hours, but with the digital reference services, libraries can work 24/7 attending to their clients. Hence, in this our modern day society, university libraries cannot continue operating without using ICT in their service delivery.

Notably, the advent of internet, World Wide Web and even social media has led to a new challenge for librarians to meet. However, the rapidly changing information needs and expectations of the 21st century users have also thrown a challenge to librarians by making library services more relevant in the digital environment especially digital reference services. To this note, librarians, in the digital age are responsible for a wide variety of services that expand far beyond the typical eight-hour work day. Meanwhile, the roles of librarians in the global information environment were unique. Also, the roles were critical and necessary for the control of information services in digital domain which requires digital literacy skills (Akporkhonor & Olise, 2015).

Digital literacy skills are the capacity to locate, analyze, use, and generate information using digital technology, communication tools, or networks. However, when provided via computers, it is the capacity to absorb and utilize information in a variety of formats from a variety of sources. Also, it refers to a person's capacity to complete things efficiently in a digital setting. It also regarded as the ability to read and analyze information, recreate data and images through digital modification and apply new knowledge received to provide digital reference services in digital settings. These include, communication skills, information retrieval skills, design skills,

database administration abilities, and multitasking skills are among the talents and competencies required. These abilities therefore, are important requirements for librarians to provide good information services in a digital world for digital reference services. It is against this background that, the researcher has undertaken this research work to assess the digital literacy skills of librarians in providing digital reference services in selected university libraries in Kano metropolis.

Statement of the problem

Literature (Abdulsalami & Dika, 2019; Abubakar, 2021) on library services reveal that web-based library services (using the internet as a medium and library website as a gateway) are spreading rapidly in university libraries in Nigeria. As the borderless libraries were nothing but the advanced application of information technology on the library, librarians should have to possess digital literacy skills to handle it and its application in the library to provide digital reference services. study by Angeline, (2019) have revealed that a large number of librarians in university libraries perceive Google as a solution to every problem despite the dilemma of irrelevant and unauthentic retrieval due to insufficient searching skills possessed to worked with digitized tool to provide digital reference services.

Although, university libraries own authentic and credible reference tools, many librarians lack necessary digital literacy skills in the use of computer and internet connectivity to provide digital reference services (Adetomiwa 2020). Introduction of new services such as digital reference services required competent librarian. this means that, for digital reference services to be delivered successfully, it must be delivered by knowledgeable and well trained librarian but literature (Adetomiwa 2020) have explored many challenges associated with inadequate funds for the training and

retraining of staff in the university libraries which necessitated librarians to sponsor themselves for digital literacy training and attend trainings to possessed digital competencies. Therefore this study aims at filling that gap.

Research Objective

The main objective of the study is to assess the digital literacy skills of librarians in providing digital reference services in selected university libraries in Kano metropolis. While the specific objectives are:

1. To identify the digital reference services provided in selected university libraries in Kano metropolis.
2. To identify the digital literacy skills possessed by librarians to provide digital reference services in the libraries under study.
3. To ascertain the digital tools used by librarians to provide digital reference services in the libraries under study.
4. To identify the method of acquiring skills and competencies by librarians to provide digital reference services in the libraries under study.
5. To identify the challenges associated with the provision of digital reference services in the libraries under study.

Review of related literature

In today digital environment, university libraries need librarians with wide range of digital competencies in addition to their routine competencies for digital reference services. Daniels, Wiche and Nsirim (2023) studied librarians ICT skills and effective library service delivery in university libraries in Rivers State. The findings revealed that there is a significant relationship between web application skills and effective library services delivery. It revealed that the librarians could understand the strategies of evaluating web resources, use various search engines to retrieve information, use web applications, knowledgeable of web browsers

use and able to download and install web applications. This is perhaps due to the types of web application skills presented in the study which probably are common to librarians in university libraries in Rivers State. In the same vein, Ayoku and Okafor (2015) studied information communication technology skills acquisition and competencies of librarians and found that although many of the respondents did have knowledge and skills of webmail, web search engines and directories, Google and Yahoo but were not skilled in Web design and were equally not familiar with web design applications. The study further revealed that there is a significant relationship between library networking skills and effective library services delivery which implies that with library networking skills, librarians can render effective services. This could be because librarians are already familiar with library consortium which is part of library networking as presented in the study. Also, Akporhonor (2019) examined librarians' network literacy skills and use of ICTs in university library operations in the Niger Delta region and discovered that librarians in the universities under study possessed network literacy skills to a limited extent and that there is a significant relationship between network literacy skills of libraries and use of ICT for library services delivery.

Ilevbare, Enang, and Ukpanah (2023) studied information scoping skills and the research output of academic librarians in universities in south-south geopolitical zone of Nigeria. The findings revealed that relationship exists between information scoping skills and the research output of academic librarians in universities in south-south Nigeria because the level of information scoping skills enables the academic librarians to understand the characteristics of different types of information sources, know the current information available in the publication process, understand issues surrounding information accessibility, are aware of what services are available to help get access to

information resources, easily discover the extent of any information gaps, recognize formats in which information may be provided, demonstrate the ability to use new tools as they become available, source for search tools be it general or subject specific at different levels, differentiate data collection methods and determine the range of effectiveness of identifying the need on a research area.

Chukwueke and Idris (2023) conducted a study on 'librarian's digital literacy skills and services delivery in academic libraries in Taraba state, Nigeria: A correlation. The findings of the study showed a non-significant positive very low association between such digital literacy skills of library staff and delivery of services in academic libraries in Taraba State, Nigeria. This flows from a correlation coefficient of 0.17 obtained, which represents a positive and very low relationship between digital literacy and delivery of services in academic libraries in Taraba State, Nigeria. Furthermore, the test of HO1 with a p-value 0.08 indicates that the correlation coefficient is insignificant. This proves that a significant relationship does not exist between digital literacy of librarians and delivery of services in academic libraries in Taraba State, Nigeria.

Okeji et al. (2020) conducted a study on the assessment of 21st-century librarians' digital literacy skills in private university libraries in Anambra State. The findings revealed that librarians in private universities in Anambra State have digital literacy skills, in which the librarians sponsor themselves for digital literacy training twice a year. This was corroborated by Oyovwe-Tinuoye et al. (2021) who examined the impact of ICT skills on librarians' job performance in university libraries in Nigeria's South-South region. The findings revealed that majority of

respondents in the university library acquired ICT skills through self-sponsorship. From the foregoing discussion, it is obvious that digital competencies and knowledge overlapped each other. This means that, possession of digital competency by librarians is a stepping stone to development of real competencies to provide digital reference services in Selected University libraries in Kano Metropolis.

Methodology

Survey design was adopted for this study. The population of the study comprised of 30 academic librarians in the in selected university libraries in Kano Metropolis. This include university library, Skyline University Kano; Sule Hama Library, Yusuf Maitama Sule University, Kano and Musa Babayo Undergraduate Library, Sa'adatu Rimi University of Education, Kano were university libraries studied. The population of the academic librarians in the three university libraries was 10, 6, and 14 respectively. Total enumerative sampling was adopted. Therefore, the entire population was used because it was small and manageable. The questionnaire was the research instruments used for data collection.

The instrument was validated by two experts from the department of library and information science Bayero University, Kano. Their criticisms were noted while their suggestions were included in the final draft of the questionnaire. The instrument was administered to the respondents with the help of research assistants. Out of the 30 instrument administered, 29 were returned and used for the analysis. Data collected were analysed using mean. Mean scores from 2.50 and above for any item, was considered to be acceptable while scores below 2.50 were regarded as non-acceptable.

Findings

Table 1: Types of digital reference services provided in libraries

Items	Responses	Frequency	Percentage (100%)
E-mail Reference Services	Yes	28	96.6
	No	1	3.4
	Total	29	100
Instant Messaging	Yes	18	62.1
	No	11	37.9
	Total	29	100
Ask a Librarian	Yes	22	75.9
	No	7	24.1
	Total	29	100
Online chat reference	Yes	14	48.3
	No	15	51.7
	Total	29	100
Web Forms	Yes	10	34.5
	No	19	65.5
	Total	29	100
Voice-over-IP (VOIP)	Yes	5	17.2
	No	24	82.8
	Total	29	100
Real-time reference	Yes	11	37.9
	No	18	62.1
	Total	29	100
Online User education	Yes	20	69.0
	No	9	31.0
	Total	29	100
Video Conferencing(zoom)	Yes	19	65.5
	No	10	34.5
	Total	29	100
Collaborative reference (Library consortium)	Yes	17	58.6
	No	12	41.4
	Total	29	100

Source: Survey Data, 2023.

Five items in table 1 (e-mail reference services, ask a librarian, online user education, instant messaging, video conferencing(zoom), collaborative reference (library consortium) were responded by “yes” from majority of the respondents, with frequency and percentage of **28 (96.6)**, **22(75.9)**, **20(69.0)**,**19(65.5)** and **17(58.6)** respectively. while four items (voice over the

internet protocol (VOIP), web forms, online chart reference, real time reference services) were responded to no by majority of the respondents with frequency and percentages of **24(82.8)**, **19(65.5)**, **18 (62.2)** and **15(51.7)** respectively. Based on this, it signifies that majority of the items received positive responses **5:4**.

Table: 2 Digital literacy skills possessed

Statement	SA/A	Undecided	SDA/DA	Mean	Decision
I can use digital devices such as laptops, smart phones, iPod, desktops etc.	29	0	0	4.9310	Accepted
I have the ability to engage in online communications	28	1	0	4.7586	Accepted
I network with other colleagues via computers	25	2	2	3.1994	Accepted
I can find and evaluate online information	26	1	2	3.3448	Accepted
I can navigate databases properly	26	2	1	3.2069	Accepted
I can analyze facts objectively	21	6	2	3.1655	Accepted
I participate in Professional online Webinar meetings	28	1	0	4.5172	Accepted
I know how to share resource with other colleagues online	29	0	0	4.7241	Accepted
Average Mean				3.9809	Significant

Source: Survey Data, 2023.

All the eight items presented in Table 2 were accepted by the respondents. Item 1(I can use digital devices such as laptops, smart phones, iPad, desktops etc.) has the highest acceptance with the mean score of 4.93. It was closely followed by items 2(I have the ability to engage in online communications), 8(I know how to share resource with other colleagues online), and 7(I participate in Professional online Webinar meetings) with mean scores of **4.75**, **4.72**, **4.52** respectively.

Items 4(I can find and evaluate online information), 5(I can navigate databases properly) and Item 3(I network with other colleagues via computers) have the acceptance with the mean scores of **3.44**, **3.21** and **3.19** respectively. While item 6(I can analyze facts objectively) has the lowest acceptance with the mean scores of **3.17**. Based on the average mean **3.98** it could be deduce that all the responses are significant.

Table 3: Tool used to provide digital reference services

Items	Responses	Frequency	Percentage
E-mail	Yes	29	100
	No	0	0
	Total	29	100
Whatsapp group	Yes	27	93.1
	No	2	6.9
	Total	29	100
Facebook (Library Fan Page)	Yes	22	75.9
	No	7	24.1
	Total	29	100
Online Public Access Catalogue (OPAC)	Yes	26	89.7
	No	3	10.3
	Total	29	100
Compact Disc Read Only Memory (CD-ROMs)	Yes	13	44.8
	No	16	55.2
	Total	29	100
Instagram	Yes	10	34.5
	No	19	65.5
	Total	29	100
You Tube	Yes	11	37.9
	No	18	62.1
	Total	29	100
Blog	Yes	8	27.6
	No	21	72.4
	Total	29	100

Items	Responses	Frequency	Percentage
Google+	Yes	10	34.5
	No	19	65.5
	Total	29	100
Wikis	Yes	10	34.5
	No	19	65.5
	Total	29	100
Telegram	Yes	15	51.7
	No	14	48.3
	Total	29	100

Source: Survey Data, 2023

Five items in Table 3 (email, whatsapp, OPAC, Facebook and telegram) were responded to "YES" by majority of the respondents with frequency and percentage of **29(100.0)**, **27(93.1)**, **26(87.7)**, **22(75.9)** and **15(51.7)** respectively. While five items (Blog, Google+, wikis, instagram and YouTube) were responded to "NO" by majority of the

respondents with frequency and percentage of **21(72.4)**, **19(65.5)**, **19(65.5)**, **19(65.5)** and **18(62.2)** respectively. Base on this findings it could deduce that email received highest positive response of **29(100.0)** while blog received highest negative response of **22(75.9)**.

Table 4: Method of acquiring skills

Statement	SA/A	Undecided	SDA/DA	Mean	Decision
My library provides adequate funds for staff training sponsorship	24	3	2	3.1379	Accepted
My library organizes computer training for staff over time	24	4	1	4.2759	Accepted
I sponsor myself to digital literacy training workshops	25	2	2	4.3448	Accepted
I enrolled in private computer and internet training.	23	4	2	4.1379	Accepted
It is not easy for me to learn and practice via ICT gadgets	15	2	12	3.2135	Accepted
I have improved over time by virtue of my training and work	21	4	4	3.9572	Accepted
Average mean				3.8445	Significant

All the six items presented in Table 4 were accepted by the respondents. Item 3(I sponsor myself to digital literacy training workshops) have the highest acceptance with the mean score of **4.34**. It was closely followed by items 2(My library organizes computer training for staff over time), 4(I enrolled in private computer and internet training.), 6(I have improved over time by

virtue of my training and work) and 5(It is not easy for me to learn and practice via ICT gadgets) with mean scores of **4.27**, **4.13**, **3.94**, **3.21** respectively. While item 1(My library provides adequate funds for staff training sponsorship) has the lowest acceptance with the mean scores of 3.13. Based on the average mean **3.84** it could be deduce that all the responses are significant.

Table 5: challenges associated with provision of DRS

Statement	SA/A	Undecided	SDA/DA	Mean	Decision
The cost of acquiring and maintaining digital reference services is high	25	2	2	4.3103	Accepted
Digital reference services provision require high digital competencies	23	4	3	4.1379	Accepted
Epileptic power supply affects the provision of digital reference services	26	3	0	4.3793	Accepted
There is occasional network failure with digital reference services	26	1	2	4.3793	Accepted
Inadequate staff training opportunities is a challenge	24	2	3	4.1724	Accepted
Poor ICT infrastructural facilities is a challenge to the provision of digital reference services	21	7	1	3.9310	Accepted
Average mean				4.2186	Significant

All the six items presented in Table five, were accepted by the respondents. Item 3(Epileptic power supply affects the provision of digital reference services) and 2(There is occasional network failure with digital reference services), has the highest acceptance with the mean score of **4.37 each**. It was closely followed by items 1(The cost of acquiring and maintaining digital reference services is high.), 5(Inadequate staff training opportunities is a challenge) and 2(Digital reference services provision require high digital competencies) with mean scores of **4.31, 4.17, 4.13**, respectively. While item 6(Poor ICT infrastructural facilities is a challenge to the provision of digital reference services) has the lowest acceptance with the mean scores of **3.93**. Based on the average mean **4.22** it could be deduce that all the responses are significant.

Discussion of findings

Based on the result, there is a clear indication that the librarians are found with digital literacy skills. The digital literacy skills possessed by these librarians enable them to provide digital reference services such as email reference services, instant messaging, online chat reference, online user education, video conferencing (zoom), as well as the collaborative networks as respondent by majority of the respondents. While the digital literacy skills to provide real time reference services, voice over the internet protocol, as well as web forms was found to be moderate.

The present study is fully ally with that of, Okeji, et. al. (2020) assessed the digital literacy skills of 21st-century librarians in private university libraries in Anambra State and found that academic librarians in private universities in Anambra State possess digital literacy skills, which they apply in delivering of their services. Therefore, to this end, a partial reflection of the finding of the present study is essential. Consequently, the study further disagrees with that of Anyaoku, et. al. (2015) who investigated information literacy skills and perceptions of librarians in colleges of education in Nigeria and reported the lowest ability of the librarians to carry out a search using Boolean operators and ability to use appropriate presentation software to present information. Hence librarians in this present study have the digital skills to provide different forms of digital reference services

What are the Digital literacy skills possessed by librarians to provide digital reference services in the libraries under study?

Many number of the items (Digital literacy skills) mentioned above were accepted by the academic librarians examined. The five most accepted Digital literacy skills) are; I can use digital devises such as laptops, smart phones, ipads, desktops etc, I have the ability to engage in online communications, I know how to share resource with other colleagues online, and I participate in Professional online Webinar meetings; I can navigate database properly. Followed by I can analyze fact

objectively and I network with colleagues via computer. The present study agrees with Basahuwa et al. (2020) who looked into librarians' digital literacy skills for information services delivery in public universities in Nigeria's north-central region. The findings revealed that digital literacy skills had direct bearing on librarians' information services delivery. Because the level of professional ICT digital skills of librarians for information services delivery were very high. Therefore, the study concluded that the level of information services delivery provided by librarians' was influenced by their digital literacy skills. This is true reflection of the current study.

What are the digital tools used by librarians to provide digital reference services in the libraries under study?

Further on the result, there is a clear indication that the librarians are found with digital literacy skills. The digital literacy skills possessed by these librarians enable them to use digital tools such as email, whatsapp, Facebook (library fan page), as well as the online public access catalog to provide digital reference services as respondent by the majority of the respondents. While the digital literacy skills in the use of instagram, YouTube, blog, Google+, wikis and telegram to provide digital reference services was found to be moderate. The present study is fully in ally with that of Okeji, et. al. (2020) assessed the digital literacy skills of 21st-century librarians in private university libraries in Anambra State and found that academic librarians in private universities in Anambra State possess digital literacy skills, which they apply in delivering of their services. Also, the present study is fully ally with that of Anyaoku, et. al. (2015), which investigated the information literacy practices of librarians in universities in South East Nigeria and found that the librarians are highly skilled in Internet information search and retrieval. But the study of Emiri (2015) which investigated the digital literacy skills

among librarians in university libraries in the 21st century in Edo and Delta States, Nigeria indicates that such skills were low among librarians in the area studied.

What are the method of acquiring skills and competencies by librarians to provide digital reference services in the libraries under study?

The librarians studied accepted all the method of acquiring the digital literacy skills listed. The two most accepted items remain; I sponsor myself to digital literacy training workshops and my library organizes computer training for staff over time. The finding reveals that academic librarians in the selected university libraries in Kano Metropolis, acquire digital literacy skills out of their own personal efforts. This signifies that, the intervention of university library management to sponsor them was minimal. This finding tallies with the findings of Babu et al. (2019) that investigated the digital literacy skills of librarians at the University of Delhi's college libraries. Workshops/seminars/conferences were favoured by the majority of respondents as a method of obtaining ICT digital skills, followed by colleagues/friends, self-study, and trial and error. It also reflect the findings of Oyovwe-Tinuoye et al. (2021) examined the impact of digital literacy skills on librarians' information services delivery in university libraries in Nigeria's South-South region. The findings revealed that majority of respondents in the university library acquired digital literacy skills through self-sponsorship, according to the findings.

What are the Challenges associated with the provision of digital reference services in the libraries under study?

Among the challenge faced by librarians in applying digital literacy skills to provide digital reference services is poor internet network followed by power failure. This shows that in most of the working hours, the services were hindered by network failure

and power is sometimes getting off. It also implies that the libraries studied either lacks standby generator or the generator is not in good other. This finding corroborates the finding of Odu, & Omosigho, (2017) concluded that power failure and poor funding is a major problem faced by Nigerian librarians in carrying out their official duties.

Conclusion and Recommendation

Successful career progression and competent service delivery are facilitated by the acquisition of digital literacy skills among academic librarians working in both private and public university libraries in this 21st century to provide digital reference services. However, the paradigm shift from manual to digital reference services have charged librarians to provide borderless services as their primary duty of meeting the information need of library patrons in university libraries. To effectively accomplish this mission, the librarian must possess the necessary digital literacy skills for effective and efficient digital reference services. Also, universities being the parent organizations to university libraries, should do everything possible to equip academic librarians with the necessary skills to accomplish the universities' mission which normally revolves around teaching, learning and research. Due to the fact that, academic librarians are backbone to academic libraries; therefore development in terms of digital literacy skills have become crucial for academic librarians in order to enhance productivity in the provision of digital reference services.

Moreover, the level of competencies of the academic librarians will determine to a large extent how effectively they should be able to perform their duties and carry out routine jobs in the library in terms of digital reference services. Based on the research findings, this study made recommendations as follows;

1. Academic librarians and other supporting library staff working in selected university libraries in Kano

Metropolis should make serious efforts towards acquiring all the digital literacy skills required for using different types of digital reference services to provide effective services delivery.

2. University library management in Kano metropolis should always provide financial sponsorship for the academic librarians and supporting library staff to possessed digital literacy skills for efficient digital reference services.
3. Efforts should be made by the library management to intensify the job motivation to the librarians' for the application of digital literacy skills to different technological channels, medium or tools to ensure effective and efficient digital reference services.
4. Librarians should attend trainings on digital literacy skills more often with little opportunity they have even if it is self-sponsorship.
5. Strong internet bandwidth and Standby power generating source supplemented by solar and inverter should be provided by the management for the libraries studied.

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