



DIGITAL REFERENCE SERVICES IN ACADEMIC LIBRARIES IN NIGERIA: EFFECTIVENESS AND ROLES IN THE NEW NORMAL

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Abstract

Purpose: *The purpose of this study is to explore the concept of digital reference services and its models which constitute synchronous and asynchronous model, the role played by academic libraries in the provision of digital reference services in the Covid-19 era, and the effectiveness in ensuring that the information needs of their clientele are met. It also explores holistically the Covid-19 era, how well academic libraries fared in the provision of digital reference services in the Covid -19 era and recommending the way forward.*

Methodology: *This study employed an exploratory approach in investigating the effectiveness of digital reference services in academic libraries during the Covid-19 era, and through a conceptual review, the study drew conclusions from varieties of literature. Diverse studies were utilized in ensuring that an unbiased review is given.*

Findings: *The result revealed that the traditional reference services do not suffice in today's Information and Communication Technology era. For librarians to effectively provide the information needs of their clientele; especially during the inevitable period of global shutdown affiliated to Covid-19, digitalization of their resources and rendering of digital reference services is a paramount necessity, and the librarians needs review their information and reference services process.*

Originality/Value: *The paper is not solely focused on Digital reference services; it calls to action academic reference librarians, academic libraries need to prove their indispensability by providing of timely and accurate digital reference services.*

Keywords: *Academic libraries, ICT, Digital Reference Service, Digitalization, Covid-19.*

Paper type: *Exploratory and Conceptual.*

Introduction

Libraries are the heartbeat of any academic institutions; it enables the academic community access to up-to-date, relevant and needed information. Within an academic library, there are several departments handling different functions that help oversee the realization of the goals of the academic institutions in which they are situated. Such departments include, but are not limited to; acquisition department, cataloguing department, circulation department, reference department, bindery/reprographic department, etc. The focus here is on reference services. The reference department is the major spot for assisting library users to discover the true potential of the library. In this section, users are helped to get to the resources of the library. It is one of the core functions of all the libraries

generally and academic libraries specifically. It is an important part of the library. It ensures the provision of current sources of information, such as encyclopedias, yearbooks, dictionaries, reports etc. these resources are meant to support teaching and learning in academia, they are designed to answer ready reference queries.

With the advent of Information and Communication Technology (ICT), an umbrella name for computers, Internet, CD's, flash/hard drive etc. library services have become digitized and reference service is not left out of this. In the course of the past decade, the introduction and development of the Internet and its associated Web technologies have significantly influenced both the way libraries provide information services to their patrons and the way patrons choose to access information. For example, a large number of Web-based

reference services have appeared over the past few years (Chowdury and Margariti, 2004). Thorpe (2017) in elucidating on the advance of technology in libraries stated that Libraries throughout the world are continually remodeling themselves as they respond to changing community needs and the benefits and challenges posed by new and emerging technologies. They are appraising their staffing, service offers, spaces, and equipment as they seek to listen and respond to their community's needs. It is important that libraries continually seek to identify their users' changing expectations and aspirations in this age of ongoing digital disruption.

The conventional process of locating desired information have become complicated by the developments in ICTs and growth in the available online information resources, accordingly, the reference environment is being transformed as major elements of its services is moving from traditional to automated, to hybrid and eventually to digital, this have helped seen to the establishment of web-based digital reference services (Khan and Ashraf 2012). The web-based digital reference services have eased the hassles faced by librarians and clientele. The librarian can now access current resources for his patrons on the web with ease and in a short period of time. Using these technologies, reference librarians can be in a better position to assist medical researchers with literature that can possibly unravel the cure for COVID-19 and advice the citizens on precautionary measures to adhere to and also meet their clientele other diverse information needs in the period when social distancing is enforced and visitation to the library is restricted. Rudner (2000) suggests that library users have become more self-supporting in their information seeking approaches, but the outcome of their findings is inadequate due to their inability to select the best information sources". To enable the users make the best possible selection from the wide range of explosive information resources available on the internet, there is a need for the academic reference librarians to girdle up their loins in the provision of digital reference services.

The Concept of Digital Reference Services and its Models

The volume of information on the Internet can oftentimes be perplexing, and usually present too much alternative. Web portals or gateways alone do not help in the search for sources. Users looking for quick clear paths through what are available and obtainable on the internet need more person-to-person guidance from the information professionals. Digital reference imitates in the digital library environment what is most valued in the physical; personalized guidance in the gathering and selection of the best resources. Although this new type of service poses a challenge to more traditional library service delivery, successful integration of the new and old models will provide users with the consistent support necessary in navigating the digital environment (Berube, 2003). Digital reference services is best described as the provision of an orthodox reference library services to library clientele in a computer based environment, whilst exploiting the various technological mediums.

Janes, Carter and Memmott (1999) developed their own definition of digital reference as a process by which people can submit their questions and have them answered by a library staff member through some electronic means (e-mail, chat, Web forms, etc.) not in person or over the phone. Sharma, Kurma and Singh (2003), described it as "a network of expertise, human intermediation and resources placed at the disposal of users in an online environment, which employs automated tools wherever possible, allowing human experts to concentrate on 'hard questions'". Digital reference services are fast becoming part of today's core library services, especially the academic libraries. These services were necessitated mainly by two factors:

1. The increase number of library users using the Internet for their information needs and, as a result, few come to the libraries for help; and
2. The growing sense among librarians that they need to reach out to their users and bring them back to the library (Francoeur,

2001; Coffman & Mcglamery as cited in Kasowitz, 2001).

These factors resulted in the introduction of 'remote communication' between librarians and library users, and a good number of libraries and other organizations around the world developed digital reference services, which mainly used electronic mail (e-mail) as a mode of communication (Kasowitz, 2001).

The terms electronic reference and virtual reference are often used synonymously with digital reference, although virtual reference is limitless by distance and physical space. Digital Reference, Internet Information Services, E-reference, Virtual Reference, Real Time Reference, Live Reference, and Chat Reference are used to describe reference services that utilize computer technology in some way, they all share the central objective, use of software and internet to facilitate human intermediation at distance (Arya & Mishra 2012) in Jan (2018). Berube (2003) agrees that the distinctions used in characterizing digital reference service are quite often blurred and overlap. She however affirmed that 'digital reference' is used to include two broad components: 'it is Internet-based and designed to connect users with experts'. More importantly, Digital reference can provide support for users who find online tools and resources unfamiliar, difficult to learn, or insufficient to answer their information needs. It can also provide valuable user feedback to collection builders so that they may better tailor their resources and maximize their investment in content creation.

A digital reference transaction will usually include the following elements:

- The user
- The interface (web form; e-mail; chat; video etc.)
- Electronic resources (including electronic or CD-based resources; web resources; local digitized material etc.), as well as print resources
- The information professional

Digital Reference Service involves the provision of reference services involving collaboration between library user and librarian, in a computer

based medium. These services can utilize various media in both synchronous models and asynchronous models.

Asynchronous Digital Reference Services

Asynchronous digital reference services refer to a type of digital reference service that is not coordinated in time. Messages sent in an asynchronous model often happen at irregular intervals, the information sent is stored, to be accessed at the recipient's convenience. Communication between the sender and recipient is not dependent on each other. Jan (2018) defined it as a type of virtual reference service in which the user/patron/clients submits a question and the librarian responds after some time. This means that there is a time delay between the question being posed by the user and the answer being given by the librarian.

According to Dollah and Singh (2006), Asynchronous digital reference is characterized by communication in one direction at a time, typically by e-mail or Web forms. It involves the use of FAQs (Frequently Asked Questions), e-resources, which comprise of subject guides, lists, journals, and other content, and e-mail, which may be forms-based or address-based. The asynchronous transaction involves a time delay between the question and answer, such as with e-mail based services and web form services (Berube, 2003).

The asynchronous form is considered the most popular form of communication from users' perspectives for the following reasons:

- It is a relatively non-threatening, non-intrusive transaction,
- The question can be plainly stated without the need to respond to what users would consider to be extraneous questions.

From the librarian's perspective, the asynchronous form of digital reference service is easy to implement, requiring no extra training of the software. (Berube, 2003).

Synchronous Digital Reference Services

Synchronous digital reference service is an in-person conversation and video conferencing. Exchange of information occurs instantly, there is no delay, and the events are dependent on

each other and build on top of one another in a linear fashion. Jan (2018) refers to it as a “real-time digital reference service”. Synchronous digital reference services take the following forms:

- **Chat Using Instant Messaging;** This one of the most common forms of web communication. In Chat using Instant Messaging librarians and users can 'speak' to each other in real time on the Internet using special text-based software. There is a live communication between the user and librarian just as it is in the traditional reference service setting, just that in this case, it takes place in a web environment.
- **Video based Reference Services:** This form of digital reference includes the visual element, which may be an antidote to the communications problems inherent in the more text-based services. Librarians and users are able to use both text and speech for reference transactions. Instead of a window for the textual exchange, there is a window in which librarians and users can see each other while conducting a face-to-face interview. Web or other electronic sources can 'be pushed' to users via another window. This technology provides distance learning, as well as research and reference applications (Berube, 2003).
- **Digital Reference Robots:** this involves the use of artificial intelligence in rendering digital reference service. Jan (2018) notes that it is most often used to respond to reference questions during the unavailability of the reference librarian. It involves the use of software to search the databases.

Academic Libraries in Nigeria and Digital Reference Services

Academic libraries are libraries of higher education. Institutions of higher education include universities, polytechnics, colleges of education, colleges of agriculture and colleges of technology. The primary obligation of the academic library is to the staff and students of such an institution. Generally, the main function of an academic library is to provide materials for teaching, learning and research (Ugwuanyi 2012, Edeka 2002).

Edeka (2002) explained that academic libraries provides information materials required for academic programs of the parent institutions, provides research information resources in consonance with the need of the faculties and students, provides study accommodation in useful variety of location, provide information resources for recreational and personal development of users, provides specialized information services to appropriate segment of the wider community and also provides protection and security for those materials. Aina (2004) described academic libraries as libraries attached to post-secondary institutions. He stated that academic libraries are varied and distinctive as the institutions which they serve.

According to the American Library Association (ALA), Today's libraries are involved in a variety of challenging activities, which includes;

- Consulting with individuals in analyzing, identifying and fulfilling their information needs
- Creating campus-wide information literacy programs and delivering classroom instructions to strengthen information literacy skills.
- Select, organize and facilitate access to information in a variety of formats
- Keep abreast of technological advancements and develop strategies to take advantage of them
- Plan, implement, and administer computer-based systems, electronic databases design and manage web sites
- Collaborate with classroom faculty, computer specialists, and instructional developers
- Contribute to effective teamwork among colleagues
- Participate in and lead public relations efforts to promote and raise funds for academic libraries.

The activity of the academic libraries also includes the provision of digital reference services to the students and faculty members in order to enhance teaching, learning and research activities. In the years past, the quality of services

provided by academic libraries is usually measured by the physical building and the collections of its holdings. This criterion doesn't totally suffice in today's computer era, because big structures and huge collection doesn't necessarily translate to quality service. Gone are the days when libraries were mere store houses of information, today's academic library is much focused on dissemination of quality information/information resources to the end users.

Academic libraries are increasingly becoming digital conscious and should not hesitate to key into the ICT revolution and exploit all necessary web technologies within her reach in ensuring that her objectives are effectively achieved. For academic libraries to remain relevant in today's Information and Communication Technology era, they have to never stop evolving with the present realities. The number of library users that visits the library keeps dwindling every day. It is a global world now and it takes only but a click for a person to access all needed information from the comfort of their home. There is a need for a general overhaul in the way things are done in the academic libraries and the onus to review lies very much on academic librarians. We acknowledge that almost all needed information can be accessed on the web but people's approach and methods of seeking this thousands to millions information on the internet reaffirms our belief that the academic librarian is still very much necessary even in an ICT era. In the period of the global lockdown, academic libraries needed to be up and doing, sieving the myriad of information that abound on the internet and removing the chaff, making certain that her clientele are protected from fake information consumption.

Digital Reference Service and Covid-19 Era

The year 2020 ushered in a novel disease known as Covid-19, which is caused by the Virus referred to as Coronavirus. According to WHO "Coronaviruses are a large family of viruses which may cause illness in animals or humans, In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The

most recently discovered coronavirus causes coronavirus disease COVID-19. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally.

The most common symptoms of COVID-19 are fever, dry cough, and tiredness. Other symptoms that are less common and may affect some patients include aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhea, loss of taste or smell or a rash on skin or discoloration of fingers or toes. These symptoms are usually mild and begin gradually. Some people become infected but only have very mild symptoms. Most people (about 80%) recover from the disease without needing hospital treatment. Around 1 out of every 5 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, or cancer, are at higher risk of developing serious illness. However, anyone can contract COVID-19 and become seriously ill. (WHO, 2020)

The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. As at 26th of August 2020, there was a global report of 23,752,965 confirmed cases with 815,038 deaths and a nationwide report of 53,021 confirmed cases with 1,010 deaths as respectively reported by the World Health Organization (WHO) and National Center for Disease and Control (NCDC). With no cure in sight, this novel disease led to a global shutdown and libraries are not exempted from the shutdown. Although there are some countries' libraries that are on minimal restrictions, however, Nigeria academic libraries are among those on a total lockdown, since schools are also not in session. This critical period has availed the academic libraries the opportunity to reevaluate and reassess the service delivery in general and reference service in particular and also, our relevance to the students and faculty members in promotion of teaching, learning and research. This is the period where academic libraries have to promote digital library (reference) services

In assessing the importance of academic libraries to the academic society in the COVID-19 era, there's a need to ask the following pertinent questions,

- How useful have the academic libraries been since the lockdown?
- Has the lockdown rendered us redundant?
- Can we survive without the physical library?
- In the absence of the physical library, can the academic library boast of any impact or contribution that has been made towards the continuation of teaching, learning and research?
- Are the academic libraries adequately equipped to effectively render virtual reference services to our supposed end users?
- How many of the academic libraries' information/educational resources are digitized?
- How functional is our institution's digital reference services?
- Did the library play any part in ensuring that the medical personnel do not lack information resources in their researches for a Covid-19 cure?
- Did the academic library in Nigeria play any significant role in curbing misinformation in regards to the novel virus?

These questions and more unwritten ones do not beg for a response because it is obvious that the Nigeria academic libraries are not in any way ready nor prepared, neither did they play any significant role through the period of the pandemic. For developed countries, the many years of curating digital contents, providing multiple opportunities for research interaction, developing robust search interfaces, creating an active web presence, delivering digital reference services has prepared them better during the inevitable global shutdown.

An effective and functional digital reference and information services remains a mirage in the Nigeria academic libraries. A personal experience reveals that such service (digital reference services) is almost non-existent. The only thing that could pass for a Digital reference

service is a non-functional email address that we often find under the websites of some academic libraries; it is not enough to have an email address in a website, the functionality matters. Can clientele in the quest for information services reach reference librarians through it?

Recommendation

The inevitable COVID-19 era has revealed and reinstated the needs of digitization of our library services. It can be unequivocally stated without mincing words that digital reference service is a powerful method of delivering a reference service in particular and library services in general. Obviously, many Nigeria academic libraries are still laidback and lackadaisical in their actions towards the full adoption and implementation of digital reference services. Libraries that have been making efforts in adopting the asynchronous models of digital reference services and those still stuck in the pre-internet era, should awaken and move beyond that, they need to incorporate synchronous and asynchronous model of reference service, although the synchronous model of digital reference service is often impossible for single academic libraries to solely implement, this is where collaboration with multiple academic libraries comes into play. The 24/7 service model is more easily delivered through collaborative services. Creating values that can be relevant in a period of a global pandemic/shutdown can only be achieved through engaging and liaising with others because libraries do not exist in isolation. There should be collaboration, and partnership that would help harness collective intelligence which is crucial for an impactful reform.

Training programmes bordering on E-reference skills, both in breadth of knowledge of electronic and web resources, and the ability to respond in real-time to questions in a timely and accurate manner should be organized for the academic Reference Librarians, also, reference libraries should re-orient themselves on service delivery, they should never fail to take cognizance of the fact that the library can only be said to be succeeding when the information needs of the majority of their clientele are met and that they are satisfied with the services rendered.

A digitized library gives academic libraries the opportunity to still be up and about, making useful impacts, contributing to finding solutions, and delivering information services to clientele in an era akin to the COVID-19 pandemic period.

References

- Aina, L.O. (2004), *Library and Information Science Text for Africa*. Ibadan, Nigeria: Third world information services limited.
- Berube, L. (2003). 'Digital reference overview: an issue paper from the Networked Services Policy Task Group.' Available at <http://www.ukoln.ac.uk/public/nsptq/virtual/>
- Chowdhury, G. and Margariti, S. (2004). 'Digital reference services: a snapshot of the current practices in Scottish libraries.' *Library Review*, 53(1): 50-60. Available at <https://strathprints.strath.ac.uk/2612/1/strathprints002612.pdf> Accessed August 15, 2020
- Jan, Sabah (2018), Digital Reference in the Information Communication Technology (ICT) Based Environment; A Study. *Library Philosophy and Practice (e-journal)*
- Janes, J., Carter, D. & Memmott P. (1999). Digital Reference Services in Academic Libraries. *Reference & User Services Quarterly*, 39, 145-50
- Khan, N.A. & Ashraf, K.M. (2012), Digital Reference Service: Concept, Development and Models. Available at file:///C:/Users/PC/Downloads/fulltext_stamped.pdf accessed on 15th August, 2020
- Kasowitz, A.S. (2001), 'Trends and issues in digital reference services'. (ERIC Document Reproduction Service No. EDO-IR-2001-07).
- National Center for Disease and Control (NCDC) <https://covid19.ncdc.gov.ng/> accessed on the 26th of August, 2020.
- Rudner, L. (2000), "Who is going to mine digital library resources? And how?", D-Lib Magazine, Vol. 6 No. 5, available at <http://www.dlib.org/dlib/may00/rudner/05rudner.html> Accessed on the 13th of August, 2020
- Sharma, S., Kumar, A., Singh, M. (2004), Digital Reference Service; *Bulletin of Information Technology*, Vol. 24, No. 6, November 2004, pp. 11-18. Available at <https://publications.drdo.gov.in/ojs/index.php/djlit/article/view/3641/2053>. Accessed on 7th August, 2020.
- Thorpe, Clare (2017) Engaging with Our Communities: Future Trends and Opportunities for Reference Services, *Journal of the Australian Library and Information Association*, 66:4, 406-415, DOI: 10.1080/24750158.2017.1359993
- Ugwuanyi, A.A. (2012), *Technical Services in Libraries: An Introduction*. Umunze, Anambra: Annyco publishers,
- Wan-Dollah, W.K, & Singh Diljit, (2006), Digital Reference Services in Academic Libraries. Available at <https://pdfs.semanticscholar.org/5521/d76eead4c030aa75b9ae815244d1e8de6340.pdf> Accessed on 15th of August
- World Health Organization (WHO), <https://covid19.who.int/>. Accessed on the 26th of August, 2020.