

Library User Satisfaction with the Use of Digital Information Services in University of Ilorin, Nigeria

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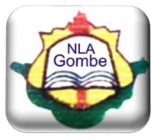
Abstract

This study assessed library user satisfaction with the use of digital reference services at the University of Ilorin, Nigeria. This study employed a survey design. Survey research is applied mainly to examine the current practice of digital reference service without manipulating or controlling the factors influencing these practices. The study population comprised of undergraduates and postgraduate students at the University of Ilorin. This study adopted simple random sampling technique in selecting 406 library users' across thirteen faculties of the university including College of health science, faculty of agriculture; faculty of arts; faculty of communication and information sciences; faculty of education; faculty of engineering and technology; faculty of environmental science; faculty of law; faculty of management science; faculty of pharmaceutical sciences; faculty of physical science; faculty of social science; and faculty of veterinary medicine, for this research, in ensuring equal representation of the sample been selected and avoid been bias. The instrument for data collection was a structured questionnaire. The data collected was analyzed using descriptive statistics such as frequency counts and percentage distribution. Findings revealed that; the construct with the highest percentage of frequently consulted on the university DRS was Face-to-face consultation with the ICT librarians (31.5%), followed by a consultation of Webform (21.1%). The findings revealed that convenience (14.4%), time-saving (13.3%), and fast access to materials (13.2%) were among the benefits of digital reference services. Furthermore, the respondents were more satisfied with current information provision (97.3%); accuracy (94.6%); and courtesy of librarians (92.8%). It was concluded in this study that the majority of library users are aware of the existence of digital reference services at the University of Ilorin library. It was recommended that the library should use the latest formats of digital reference services, such as online chat reference, video conferencing, and collaborative DRS to encourage regular use of the library's digital information resources and services.

Keywords: Library User, Satisfaction, Digital Reference Services, University.

Introduction

Academic libraries such as a university have many units such as the acquisition, processing, circulation, reference, periodicals/journals, computer and internet, and reprography units. Reference units among others is the most popular because most of the library patrons have one thing or the other to do with services offered at the reference unit. In the past era, the



reference function was largely based on the traditional print materials. However, the advancement of technology and the advent of ICT have impacted on the library reference function. Hence, the reference section now uses print as well as electronic, digital resources to provide reference service to the library users. We now have what is called digital reference service. Digital Reference Service (DRS) is an extension of the digital information system. Ndakalu (2014) suggests that the skills required in accessing the maximum potential of digital information services are much greater than those required for searching printed sources. Most modern-day academic libraries accommodate digital information resources.

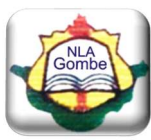
Trivedi (2010) in Isaac (2017) defines digital library as ‘a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and accessible through computers in which the content may be stored locally, or accessed remotely’. Examples of such include the United States Library of Congress American Memory collection. Digital Library Services accommodate digital reference services. In an online survey study conducted by Dhamdhare (2012) on digital library services and practices, it was found out that digital libraries are needed for present libraries to support the teaching and learning process. Conversely, Digital Reference Service (DRS) is an advancement in reference services emerging as a natural explanation for meeting user's information needs. It allows individuals to submit questions to library staff using synchronous (real-time) or asynchronous technology. Digital reference services encompass any reference services provided over information technology (IT) and can involve the use of print as well as digital resources.

According to Arms (2000), a digital library is a "managed collection of information with associated services, where the information is stored in digital formats and accessible over a network (Mohd & Mohd, 2016). Digital reference services seek to enhance the ability of users to locate needed information through reference librarians by providing both direct and indirect services. The digital library is an electronic or virtual library that allows information selection, acquisition, processing, organizing, storage, and information retrieved in digital form. One aspect of digital reference services involves assisting users accessing digital library resources such as the exchange of emails, e-books, e-journals to mention a few. Choughule (2007) also in Isaac (2017) reasoned that digital information services offer a variety of services to support members of the library by making the collection more widely available to its patrons.

Statement of the Problem

In the past decades, the application of well-known information communication technology (ICT) was widespread in many libraries. However, in the current era, many academic libraries are making use of the robotic technology, artificial intelligence, cloud computing, and social media, all of which are digital resources deployed for effective information service delivery in academic libraries. McClure, Lankes, Gross, and Choltco-Devlin (2002) alluded to the fact that people have become increasingly comfortable with the use of digital services as part of their way of life. However, with the deployment of digital resources in the University of Ilorin Library, there is a dearth of literature on the extent to which library users are satisfied with the use of these digital resources in the course of their visit to the library for reading, studying and research within the university community. This gap in knowledge motivated the researchers into this research with a view to contributing to the general body of knowledge, theory, and practice.

The objective of the study



The main objective of this study is to examine library user satisfaction with the use of digital resources at the University of Ilorin, Nigeria. The specific objectives of the study are set to:

1. Find out the item frequently consulted among the digital information resources in the university
2. determine users' perception of the benefits of digital information resources in the university
3. ascertain the level of user satisfaction with the use of digital information resources in the university

Research Questions

The following research questions were raised at the onset of this study.

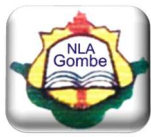
1. which item is frequently consulted among the digital information resources in the university?
2. How do the users perceive the benefits of digital information resources in the university?
3. What is the level of user satisfaction with the use of digital information resources in the university?

Literature review

Overview of Digital Reference Service

The word "reference" refers to the task of assisting library users in finding information, answering questions, and otherwise fulfilling users' information needs. Digital reference (or virtual reference) is a service by which a library reference service is conducted online, and the reference transaction is a computer-mediated communication (Han & Goulding, 2003; Isaac, 2017). It is the remote, computer-mediated delivery of reference information provided by library professionals to users who cannot access or do not want face-to-face communication. Oluwabiya (2017) described digital reference service as an improvement on the traditional reference service to meet the information needs of users in a changing technological environment. Oluwabiya maintains that 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 provide valuable user feedback to collection builders so that they may better tailor their resources and maximize their investment in content creation.

The virtual reference refers to transactions in real-time, using chat and video-conferencing, for example. Online, digital, electronic reference includes email and web form transactions. However, these distinctions are quite often blurred and overlap. The terminology surrounding digital reference services may involve multiple terms used for the same definition (Pace, 2003; Chandra & Dominic, 2015). Such terms include a virtual library, an electronic library, and a library without walls. Sridhar (2007) argued that both digital and electronic libraries can be "virtual libraries" if they exist only virtually - that is, the library does not exist "in real life." The preferred term for remotely delivered, computer-mediated reference services is "virtual reference", with the secondary non-preferred term "digital reference" having gone out of use in recent years. "Chat reference" is often used interchangeably with virtual reference, although it represents only one aspect of digital reference. Digital reference includes the use of both synchronous (IM, videoconferencing) and asynchronous communication (texting and email). Here, "synchronous virtual reference" refers to any real-time computer-mediated communication between patron and information professional. Asynchronous virtual reference is all computer-mediated communication that is sent and received at different times (Kern, 2009).

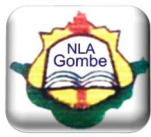


In the context of this research, 'digital reference' is used to include two broad components: 'it is IT-based and designed to connect users with experts'. More importantly, the digital reference refers to a network of expertise, intermediation, and resources placed at the disposal of someone seeking answers in an online environment. 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. Neeraj (2012); Mohd and Mohd (2016) reasoned along and indicated that a digital reference transaction will usually include 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; and the information professional.

The digital reference service allows individuals to submit questions to library staff using synchronous (real-time) or asynchronous technology. Library web pages and "webliographies" are new forms of delivery for the products of indirect reference service. Collaborative digital reference service involves multiple institutions and requires additional software support in order to route questions to the most appropriate participant. Digital reference service provides many benefits for libraries and their users. A librarian can provide digital reference services regardless of location or person using global information. Digital reference service also adds overall value to library services by extending reference service to physically challenged users who cannot visit or avail the library facilities due to varied reasons.

E-learning and teaching system in education needs library services of different nature and digital reference services are getting more preferences in the academic sector while completing assignments and seminars. Thus Digital Reference Services (DRS) is the need of the present era as the information resources are being made available in digital form. Faculty of students are using electronic media extensively (like mobile technology, WhatsApp, Wechat, etc) and have good digital literacy and also put more demand to a librarian for subscription to e-resources. Along with IT, social media is also playing a massive role to communicate and share information among library users. Gilbert, Liu, Matoush & Whitlatch (2006) assessed digital reference and online instructional services in an integrated public/university library; they found in their study that one of the great advantages of digital reference services is that records of reference transactions remain and may be archived, after identifying data has been stripped from the transactions to protect the privacy of both user and librarian. Nwabueze (2015) examined the availability and use of digital information resources by undergraduates of universities in Delta and Edo States, Nigeria, and found that digital information resources were available in the university libraries of the institutions studied. Their findings also revealed that students make use of DIRs to a low extent.

From the foregoing, one could infer that the availability of digital information resources in the library has become a major motivation to increase library use in the 21st-century knowledge institutions. It is now top agendum in the information resources management research.



Methodology

This study employed a survey design. Survey research is applied mainly to examine the current practice of digital reference service without manipulating or controlling the factors influencing these practices. The study population comprised of undergraduates and postgraduate students at the University of Ilorin. This study adopted stratified and simple random sampling method in selecting 406 library users' across thirteen faculties of the university including College of health science, faculty of agriculture; faculty of arts; faculty of communication and information sciences; faculty of education; faculty of engineering and technology; faculty of environmental science; faculty of law; faculty of management science; faculty of pharmaceutical sciences; faculty of physical science; faculty of social science; and faculty of veterinary medicine, for this research, in ensuring equal representation of the sample been selected and avoid been bias. The instrument for data collection was a structured questionnaire. The data collected was analyzed using descriptive statistics such as frequency counts and percentage distribution.

Results

The results of data analysis was presented based on the research questions raised at the onset of the study.

Research question 1: which item is frequently consulted among the digital information resources in the university?

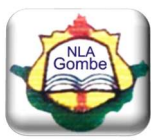
Table 1: Items frequently consulted on the university digital information resources

Items (Multiple response)*	Percentage	Percentage
Face-to-face consultation with the ICT librarians	31.5	31.5
Web form	21.1	21.1
Ask-A Librarian	19.5	19.5
E-Mail Reference	14.3	14.3
Telephone consultation	6.5	6.5
Correspondence	3.3	3.3
Online Chat Reference	2.9	2.9
Others	1.0	1.0
Total	100.0	100.0

*multiple response analysis

From Table 1, the construct with the highest percentage of frequently consulted on the university DRS was Face-to-face consultation with the ICT librarians (31.5%). The construct with the second-highest frequency was the consultation of Webform (21.1%). The construct with the third-highest frequency was ask-a librarian (19.5%). Others constructs include: e-mail reference (14.3%), telephone consultation (6.5%), correspondence (3.3%), online chat reference (2.9%), and Others (1.0%). The table shows that of all items frequently consulted, the use of digital reference services in the university is still largely dependent on Face-to-face consultation with the ICT librarians. This implies that there is a low level of independent use of the DRS among the users.

From the study, it was found that the University of Ilorin academic libraries have implemented digital reference services (DRS) which allow for the interface between users and electronic services. Part of the services included Web Form, via a 'Contact Us' or 'Ask Us' link in the main menu. They have also implemented at least e-mail references and



Webforms. The results show A high percentage of students have been using DRS. However, they used more of E-Mail reference, Web Forms, and Ask-A-Librarian Services than others.

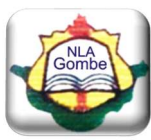
Research question 2: How does the users' perceived the benefits of digital information resources in the university?

Table 2: Users perceived benefits of DRS

Benefit (multiple answers possible)	Frequency	Percentage
Convenience	327	14.4
Time saver	303	13.3
Fast Access	300	13.2
Cheaper than using telephone	215	9.4
Can be submitted at any location/time(24/7)	196	8.6
Promotion of Active Learning	157	6.9
Ease of access	147	6.5
More Personalized Services	145	6.4
New Options for answering reference	143	6.3
Providing More Complete Answers	144	6.3
More Time for Thought and Reflection	105	4.6
Increase Motivation	91	4.0
Others	3	0.1
Total	2276	100.0
Rating of quality of services compared to the traditional reference services		
Somewhat High Quality	215	53.0
High Quality	152	37.4
Very High Quality	22	5.4
Poor quality	15	3.7
Very poor	2	0.5
Total	406	100.0

As shown in Table 2, the construct with the highest reported benefit of digital reference service was convenience (14.4%), the second-highest was time-saving (13.3%), and the third-highest frequency was fast access (13.2%). Other perceived benefits include cheaper than using a telephone (9.4%), can be submitted at any location/time (8.6%), promotion of active learning (6.9%), ease of access (6.5%), more personalized services (6.4%), new options for answering reference (6.3%), providing more complete answers 6.3%), more time for thought and reflection (4.6%), increase motivation (4.0%) among others.

With regards to the rating of the quality of services compared to the traditional reference services, the construct with the highest score was somewhat high quality (53%) while (37.4%) rated it high quality, the value for very high quality was (5.4%). Only (4.2%) of the respondents rated DRS Low and very low quality. In all, it is evidence that the driving force for using DRS is mainly quality and ease of access to electronic information (Chowdhury, 2016). These findings are in tandem with Isaac (2017) who postulated that the introduction of digital information has added a new dimension to the provision of digital information services within academic libraries. From his findings, it is reported that the respondents were aware of the existence of digital information resources and services as the case in this current study.



Research question 3: What is the level of user satisfaction with the use of digital information resources in the university?

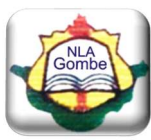
Table 3: User Satisfaction with the use of DRS

Survey Items	Very Satisfied	Satisfied	Somewhat Satisfied	Dissatisfied	Very Dissatisfied	Overall satisfaction		Rank
						Satisfied N (%)	Not satisfied N (%)	
Current Information Accuracy	44 (10.8%)	191 (47.0%)	160 (39.5%)	11 (2.7%)	0(0%)	395 (97.3)	11(2.7)	1st
Courtesy of library staff/librarian	33 (8.1%)	169 (41.6%)	182 (44.9%)	22 (5.4%)	6 (1.5%)	384 (94.6)	22(5.4)	2nd
Access to Information Resources	33 (8.1%)	168 (41.3%)	176 (43.4%)	23 (5.7%)	8 (2.0%)	377 (92.8)	29(7.20)	3rd
Cooperation of library staff/librarian	37 (9.1%)	178 (43.8%)	157 (38.7%)	26 (6.4%)	8 (2.0%)	372 (91.6)	34(8.4)	4th
Answer Given	22 (5.4%)	194 (47.8%)	156 (38.4%)	26 (6.4%)	8 (2.0%)	372 (91.6)	34(8.4)	5th
Knowledge of library staff/librarian	28 (6.9%)	157 (38.7%)	186 (45.8%)	32 (7.9%)	3 (0.7%)	371 (91.4)	35(8.6)	6th
Availability of Resources	35 (8.6%)	189 (46.6%)	147 (36.2%)	24 (5.9%)	11 (2.7%)	371 (91.4)	35(8.6)	7th
Response Time	30 (7.3%)	184 (45.3%)	155 (38.2%)	27 (6.7%)	10 (2.5%)	369 (90.8)	37(9.2)	8th
Efficiency of library staff/librarian	27 (6.7%)	162 (39.9%)	174 (42.9%)	42 (10.3%)	1 (0.2%)	363 (89.5)	43(10.5)	9th
	24 (5.9%)	164 (40.4%)	129 (31.8%)	16 (3.9%)	4 (1.0%)	317 (78.1)	20(4.9)	10th

Table 3 indicates that the 1st most important construct of user satisfaction was current information (97.3%); the 2nd most important construct satisfaction was accuracy (94.6%); while the 3rd important construct satisfaction was Courtesy of library staff/librarian (92.8%). Other important satisfaction constructs include the 4th - Access to Information Resources (91.6%); the 5th - Cooperation of library staff/librarian; the 6th - Answer Given (91.4%); the 7th - Knowledge of library staff (91.4%); the 8th - Availability of Resources (90.8%); the 9th - Response Time (89.5%) while Efficiency of library staff/librarian was the 10th and the least construct with the lowest percentage (78.1%). One could be inferred from table 3 that none of the constructs in terms of satisfaction was rated below 78% implying a high level of user satisfaction with the use of digital reference services in the university library.

Discussion of findings

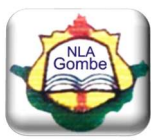
With regards to items frequently consulted among the digital information resources in the university. The outcome of this study indicates that the respondents preferred face-to-face consultation with the ICT librarians, consultation with a webform, and ask-a librarian being the frequently consulted digital information resources and services offered in the university library. It has been documented that according to Shukla and Sialai (2016) in a conference presentation, the development of ICT and their application in library and information centers have changed the nature of collections; the needs of users; the library environment, and the roles of LIS professionals. They reasoned further that in the web environment, options of sources and format of information and flow of information have a great impact on the role of libraries and library professionals. The current study also identified the importance of asking



a Librarian as one of the frequently consulted services. Ask a Librarian is a live virtual reference service that offers online reference assistance to library users. Scholars (Ward & Barbier, 2010); (Bishop, Sachs-Silveira & Avet, 2011) have argued that participating libraries in Ask a Librarian often provide users with virtual reference services via a live chat software, text messaging, and e-mail forms which users can access through embedded links and widgets on their library's official website. Besides, it implies that the users are conversant with the importance of digital information services in knowledge acquisition in this 21st century.

As regards users' perception of the benefits of digital information resources, the findings revealed that top reported benefits included convenience, time-saving, and cheaper in terms of cost than using a telephone call. Studies (Mohd & Mohd, 2016); (Isaac, 2017) have revealed the superiority of digital information resources over the traditional manual services. Essentially, it cannot be overemphasized that digital information services are easier and more convenient to use. Besides, the database of digital material is open to all users over the organization-wide LAN. Scholars such as Uzoigwe and Eze (2018) in a survey 'The Perceived Benefits of Electronic/digital Reference Services in Nigerian University Libraries' found that librarians and library users made use of ICT facilities for different reference purposes especially to obtain the information they need using the internet. Other reference needs for which patrons used the ICT facilities included: - access to current e-books and e-journals, user education, and access to global information in other libraries. Provision of current awareness services (CAS) and selective dissemination of information services (SDI), on-line searching using workstations in the library, provision of on-line public access catalogue (OPAC) services, keeping statistics of users of the reference section and compilation of bibliographies. Further findings showed that the librarians and library users derive a lot of benefits from their use of ICT facilities in reference services. The results showed that easy retrieval and dissemination of information to patrons were ranked highest by the librarians amongst others.

The findings on the level of user satisfaction with the use of digital information resources in the university indicate that the respondents alluded a high level of satisfaction to the university digital information services. The library users were particularly satisfied with the currency of information, accuracy of digital information, courtesy of library staff among others. This findings tally with the extant literature that has reported significant benefits of digital information services. Such studies include Kadir, Ghani, Bakar, Bunawan, and Seman (2016) who examined user satisfaction with electronic resources and found a significant positive relationship between User Satisfaction and the use of Electronic Resources. Also, Egharevba (2018) surveyed Users' Satisfaction with ICT-Based Resources and Services in University Libraries at the Igbinedion University Library, Okada, Edo State, Nigeria. He found that students at Igbinedion University were satisfied with the use of ICT-based resources and services, especially the use of online database resources, in meeting their information needs in the university library. Similarly, Sritharan (2018) Evaluation of Usage and User Satisfaction on Electronic Information Resources and Services: A Study at Postgraduate Institute of Medicine Library, University of Colombo. His findings indicate that 60.2% of the respondents were very satisfied with the provision of Internet access in the library, they were also satisfied with the level of subscribed e-journals. However, the author identified lack of time to access e-journals at the library, lack of training, non-availability of remote access for subscribed resources as significant issues associated with electronic information resources and services in the university library.



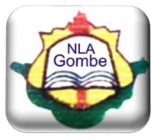
Tiemo and Ateboh (2016) investigated Users' Satisfaction with Library Information Resources and Services: A Case Study College of Health Sciences Library Niger Delta University, Amassoma, Nigeria and found that library users were satisfied with the lending services of the library, renewal of library materials and longer hours of internet services in the library. On the other hand, his study revealed that users were dissatisfied with the limited reference materials in their various subject areas, national and international journals because they were not up to date.

Conclusion

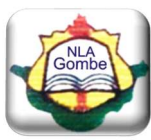
It was concluded in this study that the majority of library users are aware of the existence of digital reference services at the University of Ilorin library. A large portion of them utilized these services for knowledge acquisition. The level of satisfaction with digital information services particularly with the adequacy, quality, convenience, and efficiency of the DRS was high. As shown in this study, the benefits of digital reference services included fast access, convenience, time-saving, cheaper than using the telephone and can be submitted at any location/time (24/7). The study concluded that digital reference services are seen as indispensable in enhancing the effectiveness of the library in the university as technology makes more information accessible, people will need less human help in doing research. It was recommended that the library should use the latest formats of digital reference services, such as online chat reference, video conferencing, and collaborative DRS to encourage regular use of the library digital information resources and services.

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