

Availability, Accessibility and Utilization of Electronic Reference Services by Undergraduate Students in Bells University, Ogun State, Nigeria

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Abstract

Undergraduates who are among the users of the university library, during the course of their program may require reference services that will assist them in accessing information resources to boost their learning and research. Advancement in information technology has led to the development of electronic reference services. These services ensure that library users get assistance from the reference librarian without physically coming to the library. However, despite the benefits of electronic reference services, studies have revealed that some university libraries still face the challenge of making these services available and accessible due to slow technology adoption and infrastructural deficiencies. In addition, the apathetic attitude displayed by users towards the use of the library raises question as to whether undergraduates even utilize electronic reference services for academic activities where it is available and accessible, hence the need for this study. Descriptive survey method was adopted for the study and the population comprised of undergraduates in the six colleges of Bells University, Ogun State, Nigeria. The multistage sampling technique was used to select the sample size of 213 and the questionnaire was the data collection instrument. Results revealed that the most available electronic reference service was email as indicated by 205 (96.2%) of the respondents, while 186 (87.3%) noted that erratic supply of electricity was the greatest challenge. The study recommended that alternative sources of electricity like inverters, solar and power generating sets should also be provided to address the issue of erratic power supply.

Keywords: electronic reference services, undergraduate students, university libraries, Nigeria

1. Introduction

Universities are the birth place of life changing ideas and philosophies that drive development in societies. Merriam Webster Online Dictionaries defines a university as an institution of higher learning which provides facilities for teaching and research and authorized to grant academic degrees; such as bachelor, master and doctorates. Individuals that are awarded these degrees after satisfying the academic requirements have the required knowledge and skills to contribute their quota to the development of the society socially and economically. Boulton and Lucas (2009) expressed that universities are seen as crucial national assets that provide new knowledge, innovative thinkers and skilled manpower.

Shuaib (2011) opined that the university is a place where qualified people acquire the needed social, mental and intellectual skills that enable individuals to become self reliant and resourceful member of the society. Universities play major roles in the development of nations, as they provide the high as well as middle level manpower needed for the social economic and political advancement. Universities achieve this through their programmes of teaching, learning, research and community service. The various disciplines offered in the universities impact on the society as modern societies are built on the knowledge base of their citizens. Universities provide the opportunity for individuals acquire knowledge, competence and skills that can lead to philosophical revolution and socio-economic re-engineering of the society. This could lead to growth and development.

Universities are made up of different components that ensure that they render their services and also function effectively and efficiently. These components include students, staff, essential service units like administration, health center, fire unit, faculties, departments, sports and recreational facilities and the university library. The university library as an essential component of the university system contributes immensely to the goals and objectives of the university. This is because, without the information resources that are available and accessible in the university library, the teaching role of the faculty will not be effective and the research function of faculty and students will be shallow.

Edem *et al.* (2008) averred that university libraries function as partners in supporting the university in teaching, learning and research, thus making them the intellectual centerpiece of the universities. Information resources and services are very essential for university libraries to fulfill this function. University libraries acquire and provide access to print and electronic information resources in the various disciplines offered in the universities. Ifijeh (2011) asserted that the role of the university library is subsumed in developing highly visible collections that are well organized and serve as academic support for teaching, learning and research of faculty members and students. In like manner, library services also ensure that the library resources are well utilized by

the users of the library. Reference service is one of the most important services in the university library.

Undergraduates constitute a substantial part of the users of the university library. During the course of their study, undergraduates may have questions that might arise as a result of their academic activities that might necessitate their use of the reference section. The reference section renders reference service which is sometimes referred to as reference and information service that symbolizes a form of personal assistance provided to the users and potential users of information (Bunge 1999 as cited in Bhatia and Vohra 2007). Kumar (2009) quoted Ranganathan who described reference service as the process of establishing the right contact. This right contact means contact between the right reader and the right book at the right time and in the right personal way. In order to effectively assist the users with the right information, the reference librarian must display some qualities when rendering this service. These qualities include; resourcefulness, confidence, respect, empathy, attentiveness and love of service.

Reference service is characterized by a high degree of interaction between staff members and individual users or specifically identified groups of user or potential users. Bunge and Bopp (2001) as cited in Bhatia and Vohra (2007) categorized reference service into three broad groups; information services that involve either finding the required information on behalf of the users or assisting users in finding information, instruction in the use of the library resources and services and user guidance in which users are guided in selecting the most appropriate information sources and services.

Nwalo (2003) expressed that the answering of user query is perhaps the primary service rendered in the reference department. These queries refer to the information need of users expressed as questions to the reference librarian, with a view that the librarian will provide the relevant information resources that will address them. Reference queries can be categorized as quick or research. A quick reference query is such that the user expects an instant reply from the reference librarian, the clientele does not intend to wait for too long before results are supplied. Even though the reference librarian may consult reference sources like dictionaries, encyclopedias, handbooks, indexes, abstracts, almanacs, yearbooks etc, in addressing quick queries, it does not require extensive search. While the research query, by virtue of its nature requires extensive search of reference sources and other information resources in the library. The user in this case may be told to wait for a little time or asked to return after a few days to get the results of the search conducted by the reference librarian.

Bhatia and Vohra (2007) also listed reference activities to include search service, user guidance, selective dissemination of information, bibliographic service/referral service and current awareness services. They explained the search service as the process of providing the users with search help ranging from providing search tips and assistance. Users' guidance and orientation involve training programmes that are conducted to help the users make good use of the library resources and services. Selective Dissemination of Information (SDI) involves the process of maintaining the profiles of users and whenever there is something in a user's area of interest, email is sent to him or her. Bibliographic service/referral service involves the provision of quick and easy access to bibliography and other resources while current awareness service involves informing users about recently published literature in their field of specialization.

Due to the influence of Information and Communication Technology, electronic reference services are gradually replacing the traditional reference services. Horn (2001) expressed that advances in technology have been the major impetus for electronic reference service that provides the users with access to a knowledgeable librarian of the user's convenience rather than just during hours when the reference desk is open. Geronimo (2009) stated that electronic reference service refers to a library service that uses a librarian's knowledge to provide onsite and or remote clients with relevant information based on a request that was initiated electronically. The sources of information may be print or non print resources. The most common types of electronic reference service used in most libraries are email, chat/instant messaging, Yahoo, MSN, short messaging service, blogs/wikis/online social networking sites (Facebook, Twitter etc) and websites. These services ensure that real time reference services (Chat, IMs) are provided round the hour. Ask services are also available, web casts, pod casts, video conferencing, call center information service and the likes can also be used to provide electronic reference services.

Bhati and Vohra (2007) stated that electronic reference services are sometimes grouped as Asynchronous Digital Reference and Synchronous Digital Reference. Asynchronous allows a user to submit a question and the reference librarian provides response which may not be immediate. For example in the case of email and web forms, library users can post their queries to the email address of the reference department or the web form space on the website and the reference librarian can provide complete answers via the same medium after careful thought and consultations. On the other hand, synchronous digital reference creates an opportunity whereby the user and the librarian communicate in real time through instant messaging, short message service, video conferencing, online chat and the likes. Electronic reference service presents some advantages to library patrons. For example, it provides simplicity of information access to users who cannot physically contact the library due to geographical or physical constraints. In addition, it alleviates constraints like non communication, accountability on the part of patrons and anonymity not possible with in-person reference service for the patrons

who are too shy or too proud to ask for help in person. (Bristow and Buechley 1995 as cited in Ossai-Ugah 2012).

However, despite the perceived benefits of electronic reference services, it is as if some university libraries especially in developing countries are not offering these services. While in libraries where electronic reference services are provided, users have identified the challenges facing the accessibility and use of electronic reference service to include; limited explanation, absence of face to face interaction, computer error, failure of technology and slow browser. In view of these, the researchers investigated the availability, accessibility and use of electronic reference services by undergraduates in Bells University, Ogun State, Nigeria.

1.2 Research Questions

The following are the research questions for the study:

1. What are the electronic reference services that are available to the undergraduate students of Bells University, Ogun State, Nigeria?
2. How accessible are the electronic reference services to the undergraduate students of Bells University, Ogun State, Nigeria?
3. What is the purpose of use of electronic reference services by the undergraduate students of Bells University, Ogun State, Nigeria?
4. What are the challenges faced by the undergraduate students in the use of electronic reference services in Bells University, Ogun State, Nigeria?

2. Literature Review

Studies have been conducted on the availability of electronic reference services and most especially on the utilization by undergraduate students. The study by Okeke *et al.* (2013) on the students' attitude towards the use of reference information services (RIS) in academic libraries, especially on the availability of digital reference services revealed that telephone (GSM) services was the most available with 25.64%, followed by the social media services with 8.20% and online live chat with reference librarian with an appalling percentage of 0.01%. Surprisingly, chat services and email alert services were not available at all as none of the respondents chose them.

Dollah (2006) studied digital library services in selected public academic libraries in Malaysia and found out that online chat reference was the most used digital reference service with a percentage of 43.8%, followed by email with 43.8%. The least used digital reference service was telephone with 13.8%. Similarly, Hill, Hill and Sherman (2007) also reviewed digital reference activity for two semesters at Southern Louisiana University. The study examined the 1,447 requests for information via digital reference and findings showed that most of the respondents 954 (66%) indicated that the most used service was chat, 410 (28%) chose email and 83 (6%) utilized text messaging. The study noted that the most used electronic reference service was chat messaging.

Chow and Croxton (2012) also examined information seeking behavior and reference medium preferences. They studied 936 university library users and their virtual reference preferences (email, telephone, online chat, text messaging and video conferencing) and found out that the most used virtual reference service was email, followed by online chat and telephone reference services. More than half of the respondents (56.6%) preferred email because of convenience, familiarity, ease of use and a written record that was both precise and in depth.

Chow and Croxton (2014) further evaluated academic virtual reference services. They focused on the usability of five virtual reference services (instant messaging, chat, email, telephone, text messaging and Skype video conferencing) by 31 undergraduates and graduate students. Findings showed that online chat was rated highest across all the measures including satisfaction and seven different usability factors. These factors are task completion, quality of output, deviation, errors, time on task and mental efforts. Telephone was rated second; email third, text messaging fourth and Skype video conferencing fifth.

The use of electronic reference services by undergraduates has not been entirely free from challenges. For instance, Dollah (2006) in Malaysia itemized five challenges that the respondents faced in their use of the digital reference services. Most of the respondents (53.9%) viewed limited explanation via the electronic medium as a challenge, as close to average (46.3%) identified information overload as a challenge and (44.8%) indicated that no face to face interaction was indeed a constraint. Others (44.3%) and (37.7%) considered absence of the human element and infrastructural and system instability as challenges respectively.

Heckman (n.d) on virtual reference service also revealed that the problems that undergraduates face in their use of electronic reference services included lack of simple keyboarding skills and the time needed to type out a message explaining anything but the simplest of messages. Similarly, Duncan and Gerrard (2011) gave the opportunity to respondents to bare their minds as regards the challenges encountered in their use of the electronic reference services. Most of the respondents indicated that the information they received through the electronic reference service was useful, except that they had to stop at times due to computer error, failure of the technology to work, unresponsiveness of the browser, and the effect of slow browser and lack of knowledge as

to the receipt of queries. Crow and Croxton (2014) also noted that the challenges that undergraduates faced in the use of electronic reference service included time to wait for responses from email and chat. Most of the undergraduates did not appreciate the fact that they had to wait with no response to their queries.

3. Methodology

The descriptive survey was used to carry out this study and the population consisted of 513 undergraduate students of Bells University, Ota, Ogun State, Nigeia from 100 level to final year in all the six colleges. The multistage random sampling technique was adopted. In the first stage, four colleges were randomly selected with the use of the balloting method. The second stage involved the purposive selection of three departments with the highest number of undergraduates from the four faculties; the number of undergraduate students selected was 355. The last stage of sampling involved the selection of the sample size from the departments with the use of 60% sampling fraction. With the use of this percentage, the sample size was 213. The questionnaire was the instrument used for data collection and descriptive statistics of frequencies, tables and percentage counts were used for data analysis.

4 Results

A total of 213 copies of the questionnaire were administered to the undergraduate students of Bells University and all copies were duly completed and returned. This represents a 100% response rate.

4.1 Demographic Characteristics of Respondents

Majority of the undergraduate students 137 (64.3%) were from the College of Engineering Studies, while the college with the least number of respondents was the College of Natural and Applied Science with 6 (2.8%). The age distribution of the respondents showed that most of them 101 (47.4%) were between 26-30 years of age, while the least 3 (1.5%) were between 31-35 years of age. Most of the respondents 124 (58.2%) were males, while less than average 89 (41.8%) were females (Table 1).

Table 1: Demographic characteristics of respondents

Variables	Frequency	Percentage
Colleges		
Engineering	137	64.3
Management Studies	48	22.5
Environmental Studies	22	10.4
Natural and Applied Science	6	2.8
Total	213	100
Age		
16-20	12	5.6
21-25	97	45.5
26-30	101	47.4
31-35	3	1.5
Total	213	100
Gender		
Male	124	58.2
Female	89	41.8
Total	213	100

4.2. What are the electronic reference services that are available to the undergraduate students of Bells University, Ogun State, Nigeria?

Table 2 revealed that even though all the electronic reference services were available, the most available as indicated by the highest number of respondents 205 (96.2%) was email of questions to the librarian. This was followed by online chatting with the librarian and discussion over the phone with the librarian as expressed by 201 (94.4%) of the undergraduate students.

Table 2: Availability of electronic reference services

Electronic reference services	Available		Not Available	
	Freq.	%	Freq.	%
Online Chatting with the librarian	201	94.4	12	5.6
E-mail of questions to the librarian	205	96.2	8	3.8
Discussion over the phone with the librarian	201	94.4	12	5.6
SMS conversation	168	79	45	21.1
Social media interaction	157	73.7	56	26.3
Web form where questions can be submitted	166	77.9	47	22.1

4.3 How accessible are the electronic reference services to the undergraduate students of Bells University, Ogun State, Nigeria?

The undergraduate students indicated that all the electronic reference services were accessible with online chatting with the librarian as the most accessible as noted by 203 (95.3%).

Table 3: Accessibility of electronic reference services

Electronic reference services	Accessible		Not Accessible	
	Freq.	%	Freq.	%
Online Chatting with the librarian	203	95.3	10	4.7
E-mail of questions to the librarian	188	88.2	25	11.7
Discussion over the phone with the librarian	172	80.7	41	19.3
SMS conversation	158	74.2	55	25.9
Social media interaction	154	72.3	59	27.7
Web form where questions can be submitted	163	76.5	50	23.5

The second most accessible electronic reference service was email of questions to the librarian as indicated by 188 (88.2%) of the respondents. The third most accessible was discussion over the phone with the librarian, 172 (80.7%) of the undergraduate students stated this (Table 3)

4.4 What is the purpose of use of electronic reference services by the undergraduate students of Bells University, Ogun State, Nigeria?

Table 4 showed that most of the undergraduate students 194 (91.1%) noted that it was true that they used electronic reference services for the purpose of assignment completion, while 163 (76.5%) also indicated that they used these services to prepare for their continuous assessment. On the other hand, majority of the respondents 108 (50.7) indicated that preparation for lectures was not among the reasons why they made use of electronic reference services by ticking “not true of me”.

Table 4: Purpose of use of electronic reference services

Electronic reference services	True of me		Not true of me	
	Freq.	%	Freq.	%
I use Electronic Reference Services for the purpose of assignment.	194	91.1	19	8.9
I use Electronic Reference Services when I am engaging in research.	159	74.7	54	25.3
I use Electronic Reference Services while preparing for examination.	155	72.8	58	27.2
I use Electronic Reference Services when I am preparing for debates.	148	69.4	65	30
I use Electronic Reference Services in preparation for continuous assessment.	163	76.5	50	23.7
I use Electronic Reference Services in preparation for lectures.	105	49.3	108	50.7

4.5 What are the challenges faced by the undergraduate students in the use of electronic reference services in Bells University, Ogun State, Nigeria?

The undergraduate students faced several challenges in their use of electronic reference services. Majority of them 186 (87.3%) agreed that erratic supply of electricity was a challenge, while 162 (76%) acknowledged that they lacked Information and Communication Technology (ICT) skills. Other constraints that hindered the use of electronic reference services as indicated by 146 (68.6%) and 150 (70.4%) were slow internet connectivity and inadequate finance (Table 5)

Table 5: Challenges faced in the use of electronic reference services

Statement	Agree		Disagree	
	Freq.	%	Freq.	%
Erratic supply of electricity	186	87.3	27	12.7
Lack of Information Communication Technology skills	162	76	51	23.9
Computer phobia	66	31	147	69
Bias treatment by the librarian	74	34.7	139	65.2
Unresponsive attitude of librarian	55	25.8	158	77.2
Slow internet connectivity	146	68.6	67	31.5
Inadequate finance	150	70.4	63	29.6

4.6 Discussion of Findings

Majority of the undergraduate students indicated that the electronic reference services available to them included online chatting, email, telephone discussion, SMS conversation, social media interaction and web form. However, the most available electronic reference service was email. This finding is in agreement with that of Chow and Croxton (2012) where majority of the 936 respondents indicated that their most used electronic reference service was email. This implies that the respondents used email because it was available to them, and they noted that they preferred email because of convenience, familiarity, ease of use and a written record that was both precise and in-depth. On the contrary, studies by Nolen *et al.* (2012) on the use of virtual reference data in an academic library and Chow and Croxton (2014) who evaluated academic virtual reference services presented a different result as most of the respondents indicated that the most available and used electronic reference service was chat services.

The study also found out that most of the respondents utilized the electronic reference services for the purposes of assignment completion, research and examination preparation. This is similar to the finding of Duncan and Gerrard (2011) where the result presented revealed that most of the undergraduates agreed that they utilized the virtual reference service because of research.

Some of the challenges faced in the use of electronic reference service as indicated by most of the respondents were erratic nature of electricity, lack of ICT skills and slow internet connectivity. This corroborates the findings of Dollah (2006) who studied digital reference services in selected public academic libraries in Malaysia and found out that infrastructural and system instability were identified as challenges by the respondents. Also, Duncan and Gerrard (2011) revealed that computer network, failure of the technology and slow browser were challenges faced by the respondents in their use of electronic reference services.

5 Conclusion and Recommendations

University libraries can assert their relevance in this age of search engines by providing electronic information services, especially electronic reference services. The provision of these services presents an opportunity for undergraduates and indeed all library users to count on the library in its capacity to provide relevant information in electronic format. This is because electronic reference services break the barriers of time and space, and as such the reference librarian can render reference services anytime and at anywhere in answering different reference queries. In order to ensure that electronic reference services are available, accessible and utilized without hindrances, the study recommended that university libraries that are yet to render electronic reference services should do so without delay and those who already offer these services should ensure that they do not become moribund. Additionally, the reference librarian should be quick to identify new trends in electronic reference services, so as to incorporate them in service delivery for the benefits of users. Alternative sources of electricity like inverters, solar and power generating sets should also be provided to address the issue of erratic power supply.

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