Use of Online Information Sources in Federal University Medical Libraries in North West Geo-Political Zone of Nigeria

By

Elameyi Susan Unobe, Abu Yusufu (Ph.D) and Nansoh Shehu

Abstract

This study investigates the use of on-line information sources in Federal Universities' Medical Libraries in North West Geo-Political Zone of Nigeria. Survey research method was adopted for the study and the total populations studied were three thousand five hundred forty-five (3545). Three research questions. A proportionate stratified procedure was used to select 405 respondents out of the total of 3545 population, 405 copiesof questionnaires were administered out of which 374 were duly completed and returned. The instruments used for data collection were close ended questionnaires which was categorised into two (for users and staff).The study revealed that online information sources provisions such as online databases and electronic alert were not adequately provided and therefore are not commonly used. The study therefore recommends that medical libraries should provide facilities that will enhance the use of online information source.

Introduction

Access to On-line information has really revolutionized the processes of classification, storage and retrieval. Resources accessible online are attested to provide the largest reservoir of information in all aspects of disciplines and field of knowledge. It offers variety of services used to browse, search, view, upload, download and communicate information on diverse topics. According to Dhanavandan and Tamizhelvan (2012), online sources are collection of hardware components and computers interconnected by communication channels that allow for sharing of resources and information. Online is the centerpiece that link servers and end users. Online sources have made it possible for computers to be connected locally in an institution or department to form what is referred to as an internal network, otherwise described as Local Area Network (LAN). Online can be conceived as a rich, multi-layered complex, ever-changing textual environment.

Ekwelwm, Okafor and Ukwonia (2009) described online information sources as information sources that are available and can be accessed electronically through such computer networked facilities as online library catalogues, the Internet, the World Wide Web and digital libraries. Online information sources are beneficial to the academia because it provides several opportunities and the mechanism for information dissemination and for collaborative interaction between individuals and the institutions they represent, without geographic limitation and space.

The application of modern information and communications technology adds new services to medical libraries; it enables medical library users to be aware of online journals, online databases and other information services like multimedia application and use of CD-ROM databases, OPAC and Internet Service, creation of in-house database of books, serials, digitization of projects and theses. No wonder Bhardwaj and Walia (2012) stated that the reputation and status of any medical library depends on the quality of information services provided to clients. These days, it is difficult to ignore the advances and resolve to embed ICT, therefore medical libraries are encouraged to adapt the new mode of online information services through the use of CD-ROM database services, bibliographic database services, Internet services, OPAC services, references services, etc.

The main objective of the medical libraries is to provide the information needs of the target users generally and specifically to meet their education, research and patient care missions, through acquisition of resources that can support teaching, learning and research. The library today must be able to provide unhindered access to global biomedical information sources and assists clientele to keep abreast of knowledge and information in their specialties. This necessitate why medical libraries strive to provide a conducive environment where users can study, seek and create information or explore new knowledge sources. According to Oduwole and Idowu, (2011) medical libraries are to provide services to complement the teaching, learning and research activities of their institution. Hence, the study intent to find out if the various libraries under study meets up with the objectives of providing on-line information sources in the libraries.

Statement of the Problem Medical libraries in universities are established primarily to support the

teaching, learning and research activities of the medical schools and faculties of the parent universities and are expected to cater for information needs of students, teaching staff, doctors and other medical personnel as well as for the clinical studies. Medical libraries are required to provide quantitative and qualitative information sources and services to health care professionals in medical institutions.**However,** it has been observed that students and medical professionals do not use medical library as they ought to. This is very disturbing because of the characteristic of the profession which rely on current information for best practice. The medical library is an inevitable media to salvage medical practitioner from obsoleteness of print resources when compared to what is obtained on-line. Upon this background, it becomes pertinent to assess the use of information sources in medical libraries in Federal Universities Medical Libraries in North West Zone of Nigeria.

Research Questions
1. How available are online information sources in Federal Universities Medical Library in North West Zone of Nigeria?
2. **To what** extent are the online information sources used in Federal Universities Medical Libraries in North West Zone of Nigeria?

Literature Survey
The growing popularity of online information sources in most developing countries of the world has influenced and at the same time introduced a new form of information dissemination and use. This has caused governments and corporate bodies to develop interest in the technologies. They are vanguards of their establishments and encouraged numerous network centres within and outside libraries to enable dissemination, access and use of information available with online technologies.

Tsafe (2004)conducted a study on World Wide Web/Online information and services in the new millennium. The study reviewed the infantile state of Internet infrastructure and services in Nigeria, which was noted to be grossly affected and retarded by the dearth of unreliable and exorbitant cost of telecommunication equipment and services. **Several** authors have revealed that scientific, technological and medical information has two unique features namely; their enormous quantity as a result of rapid growth and the great variety of forms in which they are represented make full use of online resources very difficult especially in developing countries. For instance, Omekwu (2010) pointed out that although information technology has theoretically brought about parity in access to scientific information

between the developing countries and their counterparts in the developed ones, in reality, this remains a dream due to difficulties associated with their use. Agbe (2004) opined that it is not an exaggeration to say that information technology availability and its effectiveness may facilitate its use. His reason was that there is a wider portfolio of information sources from which scientists and other researchers can choose on the different aspects and components covering scientific, technological and medical research. Adeoye and Popoola (2011) reported progress and support from donor agencies in uplifting numerous public organizations and libraries through the supply of computers for both Internet connectivity and CD-Rom searches. The gesture has positively influenced medical research in Nigeria, and like any other developing country, it is improving due to access to quality research techniques.

The Internet, which facilitates online access, is the interconnection of computers from different geographical locations. Databases are created by different organization on different subject fields, each of which is installed on a computer. Once such a system is connected to the network, a user from any part of the world can have access to such information applying the necessary procedures.

Ojedokun (2001) conducted a study on online access and usage by students of University of Botswana and found out that there were two related problems, namely inadequacy of facilities and lack of skills. The study revealed that computer with Internet facilities at the time of the study were inadequate hence many of the students did not have access to the required information. It also revealed that though quite a number of students were aware of the immense benefit of its use to academic studies, they lacked the necessary searching skill to use them.

Suleiman and Katsekpor (2007) reported on a survey on convenient access to and use of electronic databases (CD-Rom and online) including full text journals and their effect on information seeking behaviours of health science faculty at the College of Health Science of the University of Ghana Medical School. The study tried to determine preference between print and electronic resources use, and the specific online database and full text journals that faculty found useful. The finding revealed faculty of lack of awareness and recommended the need to reconsider and repackage the marketing and publicity strategies adapted by the library in promoting services and in particular, to promote awareness of the range of online databases and online resources subscribed to and available for use in the library.

Therefore, Universities Medical Libraries in the North West Zone need to identify the importance of making adequate provision for access and usage of information sources and services

Availability of Information Sources in Medical Libraries

Medical research in Nigeria has always been closely associated with the collection, dissemination and use of medical data and information to enhance the efficiency of medical care delivery services. Therefore, the ability of the medical libraries to carry out this function effectively depends on availability and accessibility of information resources in print and non-print (e-resources especially) formats. Adesoye and Amusa (2013) noted that the shift from print to electronic information sources as a result of advances in information and communication technologies (ICTs) affords users with availability of a vast array of information. However, Roy (2006), in discussing information accessibility added what it can be termed as the right time factor. This concern stems from the idea that the Internet can provide access to a vast array of information resources which may result in information overload. According to him information overload, may create problem of access to useful, current, reliable and affordable information and at the right time. **Accessibility** of information sources is an important recurring theme in the literature. Aguolu and Aguolu (2002) stated that resources may be available in the library and even identified bibliographically as relevant to one's subject of interest, but the user may not be able to lay hands on them. The more accessible information sources are, the more likely they are to be used. Readers tend to use information source that require the least effort to access. These observations have been validated by

empirical studies by Slater (1963), Allen (1963) and Rosenberg (1967). The user may encounter five possible types of inaccessibility problems. These are conceptual, linguistic, critical, bibliographic and physical inaccessibility. Aguolu and Aguolu (2002) argued that availability of an information source does not necessarily imply its accessibility, because the source may be available but access to it may be prevented or marred by one reason or the other.

Ajayi and Akiniyi (2004) discovered frustration among information seekers due to the non-availability of sources. In a similar study by Oyediran – Tidings (2004) at Yaba College of Technology, Lagos, low use of the library by students was observed and majorly attributed to expressed accessibility problems. This therefore, indicates that the availability of the sources in a given medical library shall correlate with access by patrons.

Methodology

Survey research method was used for the study in which answers were sought on how to improve access and use of information Sources in Federal Universities' Medical Libraries; the study formulated three research questions. The total populations studied were three thousand five hundred forty-five (3545). A proportionate stratified procedure was used to select 405 respondent out of the total population, 405 Copies of the questionnaire were administered out of which 374 were duly completed and returned. The instruments used for data collection were close ended questionnaires which was categorised into two (for users and staff). A descriptive statistic was used to analyze the data and the data was presented in tabular form using frequencies and percentages.

Analysis of Data

Response Rate

The response rates of the staff and Users of the medical libraries are presented in Table 1 and 2 respectively.

Table 1: Response Rate of Library Staff

Universities	Population	Number Administered	Number Returned	Percentage of Return
Ahmadu Bello University, Medical Library, Zaria.	21	21	19	90.5
Bayero University, Medical Library, Kano	19	19	18	94.7
UsmanuDanfodiyo University Medical Library, Sokoto.	17	17	16	94.1
Total	57	57	53	93.0

A total numbers of copies of the 57 questionnaire were administered to staff of the medical libraries in

the selected institutions. From table 1 it can be seen that 57(100%) copies of the questionnaire were

administered to the respondents whilethe total number of staff who were therefore involved in the study were 53 (93.0%) of the total number of the questionnaires administered to them. Table 2 shows the response rate of the Users from the medical libraries of the selected Federal Universities in the North west Geo-political Zone.

Table 2: Response Rate of Users in the Selected Libraries

Universities	Population	Number administered	Number returned	Percentage returned
Ahmadu Bello University, Medical Library, Zaria.	1422	142	131	92.2
Bayero University, medical Library, Kano	1084	108	101	93.5
UsmanuDanfodiyo University Medical Library, Sokoto.	982	98	89	90.8
Total	3488	348	321	92.2

As in table 2 above total numbers of 142 questionnaires were administered to users of the Ahmadu Bello University, Medical Library in Zaria but 131 (92.3%) were found to be completely filled and was therefore retrieved for the study. The table shows that 108 questionnaires were issued to users of the Bayero University Medical Library in Kano but 101 (93.5%) were retrieved while out of the 98 questionnaires issued to users of the Usmanu Danfodiyo University Medical Library, Sokoto, 89 (90.8%) were retrieved. Overall, 321 (92.2%) of the total number of questionnaires issued to the users were retrieved and used for the study. Thus 53 staff and 321 users of the medical libraries were involved in the study.

Availability of Online Information Sources in Federal University Medical Libraries
The percentage for affirmative ratings of the availability and accessibility online information sources are presented in Table 3.

Table 3: Available Online Information Sources in the Libraries

S/n	Online information resources available in the libraries	Library Staff				Users			
		Available		Not available		Available		Not available	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
1	OPAC	33	62.3	20	37.7	236	73.5	85	26.5
2	Search engines	35	66.0	18	34.0	310	96.6	11	3.4
3	Online institutional repository	46	86.8	7	13.2	249	77.6	72	22.4
4	LAN databases	13	24.5	40	75.5	226	70.4	95	29.6
5	Online data bases	8	15.1	45	84.9	305	95.0	16	5.0
6	Electronic alert	10	18.9	43	81.1	231	72.0	90	28.0
7	E-journal / conference proceedings	41	77.4	12	22.6	185	57.6	136	42.4
8	E-books	45	84.9	8	15.1	253	78.8	68	21.2
9	E-databases	45	84.9	8	15.1	297	92.5	24	7.5
10	E-encyclopedias/Dictionaries	40	75.5	13	24.5	202	62.9	119	37.1
11	Others	34	64.2	19	35.8	271	84.4	50	15.6

Therefore the certainty is that each group tended to respond according to the type of online information sources they had access to. This could explain the differential in opinions on such online information sources like the online databases, Electronic resources consortium and others where such differences tended to have been observed. However, both groups agreed that OPAC 33 (59.9%), Search engines 35 (61.4%), and online institutional repositories 46 (80.7%) were available in the libraries. Other sources of consensus agreement by the two groups were E-journal/ conference proceedings 41 (71.9%), E-books 45 (78.9%), E-databases 45 (78.9%) and E-encyclopedias 40 (70.1%) along with Dictionaries.

The Extent of the use of Online Information Sources in the Libraries
The extent to which the information sources were used are listed in frequencies and percentages Table 4 below
Table 4: Extent of Use of Online Information Sources in the Libraries

S/n	Extent of utilization of online information sources in the libraries	Very often		Often		Not often	
		Freq.	%	Freq.	%	Freq.	%
1	OPAC	259	80.7	19	5.9	43	13.4
2	Search engines	156	48.6	120	37.4	45	14.0
3	Online institutional repository	148	46.1	119	37.1	54	16.8
4	LAN databases	212	66.0	99	30.8	10	3.1
5	Online databases	172	53.6	122	38.0	27	8.4
6	Electronic alert	144	44.9	132	41.1	45	14.0
7	E-journal/ conference proceedings	151	47.0	166	51.7	4	1.2
8	E-books	121	37.7	177	55.1	23	7.2
9	E-databases	84	26.2	155	48.3	82	25.5
10	E-encyclopedias/Dictionaries	173	53.9	125	38.9	23	7.2
11	Others	63	19.6	132	41.1	126	39.3

The table showed that all the online information sources were generally used by the users with more frequencies in such sources like the OPAC 259 (74.4%), LAN Databases 212 (60.9%), search engines 156 (44.8%), and E-encyclopedias along with Dictionaries. Others with such high frequencies of utilization were online institutional repository 148 (42.5%), Electronic resources consortium, E-journal/ conference proceedings and E-books. This would imply that the online information sources were frequently used by the library users.

Findings and Discussions
From research question one on availability and accessibility of online information sources, the findings shows that the response of the two groups on the available online information sources in the table, there were some of the online information sources that might be known to the staff principally because of the fact that they did not use or access such sources. Therefore the certainty is that each group tended to respond according to the type of online information sources they had access to. This could explain the differential in opinions on such online information sources like the online databases; electronic resources consortium and others where such differences tended to have been observed. Other information sources like OPAC, Search engines, and online institutional repositories were available in the libraries. Also, other sources of consensus agreement by the two groups were E-journal/ conference proceedings, E-books, E-databases and E-encyclopedias along with Dictionaries. This finding agrees with Olorunsaye (2008) who argued that online information resources are very informative resources and that libraries today are more than shelves with books. Increasingly, libraries are providing patrons with access to on-line resources such as an e-mail, newsgroup, electronic journals, online databases and e-books. In the medical field, the transportation of multimedia information to various clinical care locations is now possible. The findings are consistent with the position of Abubakar (2007) who described online information sources as information sources that

are available and can be accessed electronically through computer networked facilities as online library catalogues, the Internet, the World Wide Web and digital libraries, and that of Dhanavandan and Tamizhelvan (2012), who reported that the online sources are collection of hardware components and computers interconnected by communication channels that allow for sharing of resources and information.

The findings also, show the extent to which the information sources are use. it is clear that the online information sources were frequently used by the library users. These findings are consistent with Walts and Ibegulam(2006)who stated that the information source is an increasingly popular medium of delivering educational materials. Ugah (2008) also reported that online information resources has attracted considerable attention as a means to improve health and health care delivery, online information resources are becoming increasingly invaluable communications and retrieval tool and means of information provision.

Lastly, the findings show the purposes for utilization of online information sources and services in the libraries and discovered that most of the users utilize the library for assignment. Nevertheless, the observed hierarchy of purposes of the usage here agrees with Adeboye and Amusa (2013) who described online information sources as a mixed blessing. In their words online information sources provide more flexibility in search than their paper based counterparts and remote access at any time is a possibility.

Conclusion

From the findings, it is clear that all the medical libraries have online information sources and services. The online information sources and service has attracted considerable attention as a means to improve health and health care delivery, online information resources are becoming increasingly invaluable communication and retrieval tool and means of information provision. However, it was noted that in the various libraries of studies the provision of online database, electronic resources consortium and Local Area Network database were rated low by the staff which is an indication that though the authority make it available but it does not provide the needed services expected

Therefore the study concluded that there should be adequate provision of online databases connectivity, upgrading of electronic databases consortium to ensure that the provide current online information resource and they should be Local Area Network (LAN) to facilitate local connection that will allow all

the users in medical center have quick access to resources within the library.

Recommendations

Based on the findings from the study, the researcher wishes to recommend as follow:

Medical libraries should ensure that they influence the ease of use of online information source and service and make patron of medical libraries identify the usefulness of online information sources in the library. Also, other facilities that will influence the use of online information source and service should be put in place.

Online information sources such as online institutional repository, online databases and electronic resource consortium should be adequately provided and also services such as E-mail, Electronic alerts and Selective dissemination of information should be adequately made available for interactive section between the library staffs and the users.

More infrastructural facilities for accessing online information sources and services should be made available in the medical libraries.

References

Abubakar. D. (2007) The Availability, Needs and Use of Information Sources by Lecturers and Researchers of the Faculty of Environmental Science, University of Jos, Nigeria. Borno Library, Archival and Information Science Journal, 6(2): 60 – 69.

Adeoye, M.S. & Popoola, S. O. (2011) Teaching Effectiveness, Availability, Accessibility, and Use of Library and information Resources Among Teaching Staff of Schools of Nursing in Osun and Oyo State, Nigeria. Library Philosophy and Practice.Retrieved 11th September, 2015 from http://www.webpapges.nidaho.edu/-mbolin/adeoye-popoola.htm.

Adesoye.A.E. & Amusa, O.I. (2013) Use of Electronic Resources in Health Sciences Institutions in Ogun State, Nigeria. PNLA Quarterly, the Official Publication of the Pacific Northwest Library Association. 77(3), Retrieved 20th September, 2015 from www.pnla.org.

Agbe, D.M., Kigonge – Bukenya, I.M.N. & Nyumba, J.B. (2004) Utilization of Electronic Information Resources by Academic Staff at Makerere University, University of Dare-es-salam Library Journal 6(1):18-28.

Aguolu, C.C. & Aguolu, I.E. (2002) Librarian and Information Management in Nigeria. Maiduguri: Ed-Linform services.**Ajayi,** N.A. & Akiniyi, A.R. (2004) Accessibility of Health Information to Primary Healthcare Workers in Some Selected Local Government Areas in Nigeria.Owena

Journal of Library and Information Science. 1 (2): 31-88.

Bhardwaj, R.K. & Walia, P.K. (2012) Web Base Information Sources and Services: a Case Study of St. Stephen's College, University of Delhi. Library Philosophy and Practice. Retrieved 12th September, 2015 from http://unlib.unl.edu/LPP/

Dhanavandan, S. & Tamizhchelvan, M. (2012) Enhancing Network Architecture in Minority Institutions' Library.Journal of Emerging Trends in Computing and Information Sciences. 3 (2): 67-78

Ekwelem, U.O., Okafor, V.N & Ukwuoma, S.C. (2009) Students' Use of Electronic Information Sources at the University of Nigeria, Nsukka. African Journal of Library, Archival and Information Science 7 (1): 34-45

Ojedokun, A.A. (2001) Internet Access and Usage by Students of the University of Botswana.African Journal of Library and Information Science. 11(2): 97-107.

Olorunsaye, J.O. (2008) Utilization of Web-Based Resources for Medical Research and Education by Health Professions at the College of Medicine, Ibadan, Nigeria. Samaru Journal of Information Studies 8(2): 12-19.

Omekwu, I. (2010) Web Resources for Medical Research**.** Second ProfessionalSummit on Information Science and Technology held on 3rd – 7th May 2010 at NnamdiAzikwe Library, University of Nigeria Nsukka. Pp. 463-469.

Roy, C. (2006) Accessibility in Libraries. Retrieved 15th August 2015.fromhttp://www.com.org/article.php3/id article - 610 on

Suleiman, **S**.B. & Katsetpor, S.A. (2007) Information Seeking Behaviour of Health Sciences, University of Ghana.Information Development. 23 (63) Retrieved from http://idr.sagepub.com/cgi/content/abstract/231 /63.

Tsafe, A.G. (2004) Students' Utilization of Usman Danfodiyo University Medical Library, Sokoto. Gateway Library Journal vol. 7(1): 10-20.

Ugah, A.D (2008) Availability and Accessibility of Information Sources and Use of Library Services at Michael Okpara University of Agriculture.Library Philosophy and Practice. Retrieved 11/9/2015 from www.webpages.uidaho.edu/-/mbolin/ugah4.htm

Uganneya, **S**., Ape, R. & Ugbagir, N. (2012) Information Services Provision and User Satisfaction in Agricultural Research Libraries in Nigeria.International Journal of Library and Information Science. 3(6): 88–93.

Walts, C. & Ibegulam, I. (2006) Access to Electronic Healthcare International Resources in Developing Countries: Experiences from the Medical Library. College of Medicine, University of Nigeria.IFLA Journal 32 (54). Retrieved 24th August, 2015 from http://ifc.sagepub.com/cgi/content/abstract/321/ 34