

Use of Electronic Databases by the Academics of Faculty of Sciences Umaru Musa Yar'adua University, Katsina-Nigeria

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Abstract- *Electronic information resources are becoming more popular than traditional print resources due to the portability, flexibility, and instant availability of up-to-date information. Today, more than ever, libraries are also spending a substantial amount of their budgets on online resources. This study examined the use of electronic information resources by the Academics of Umaru Musa Yar'adua University, Katsina. In order to achieve this objective, four (4) research questions were formulated. A survey method was employed in the conduct of this study and Questionnaire-based survey method for the study was designed to collect data from The Academics of Faculty of Natural & Applied Sciences, of Umaru Musa Yar'adua University, Katsina; The study discovered that African Journals Online (AJOL) and Directory of Open Access Journal (DOAJ) and Bio Med Central were the types of electronic database used by the Academics in UMYUK due to Lack of information literacy skill and Slow Internet connectivity in the institution, The university library should take a leading role to create more awareness among Academics on the available online databases by Conducting training and retraining programs, Organizing workshop, conferences and seminars so as to increase the use of these services*

Key words: *electronic, information, resources, e-books, e-journals, e-zines, e-databases, academics.*

I. Introduction

Roberson (2005) defined a library as an institution that manages the intellectual products of society and processes them in such a manner that the individual can readily gain access to them. Access to information through Internet has changed the role of libraries. Libraries now have both printed document as well as electronic information resources in their collection. The electronic documents can be stored, accessed, and delivered as and when required; therefore the services of libraries are not confined within the four walls but are integrated into local, regional, national, and international networks.

The advent of powerful computers with fast internet connections is driving the development of complex e-learning modalities in research and learning. Electronic information resources, popularly known as e-resources have become a major element of today's libraries collections nationwide.

Technology has penetrated all areas of human endeavor and the use of electronic information resources has a great significance in the research and learning process. Libraries use e-resources for better services and satisfying numerous needs of its users. Libraries of today, are transforming into digital and virtual libraries where books, journals and magazines have changed into e-books, e-journals, and e-zines. This has increased the global dissemination of information. Electronic resources are easily accessible in the remote areas. Electronic resources have almost solved the storage problems and control the flood of information in the Libraries. Print sources are being digitized, especially the expensive resources, Fragile, Thesis and Dissertations, etc. Meaning that, there is a great need to study the use of electronic information resources in order to find out the factors that are a hindrance to their use by the undergraduate students.

E-resource is information that is stored electronically and which are accessible through electronic systems and networks. According to Saye (2001), "electronic resources are the resources that are generated through some electronic medium and made available to a wide range of viewers both on-site and off-site via some electronic transferring machine or internet." E-resources are generally in the form of e-books, e-journals, e-zines, and online public access catalog (OPAC), CD-ROMs, Online databases, print-on-demand (POD), e-mail publishing, wireless publishing, electronic link and web publishing etc. These are available either through Open Access or commercially.

E-resources provide many advantages over traditional print resources including 24 hours in 7 days access to these available information resources electronically; remote / universal access; saving in physical space; ability to be linked from and to indexing and abstracting

databases; accessibility from the user's home, office, or dormitory irrespective of whether or not the physical library is open; the ability of the library to get usage statistics that are not available for print collections; and their relative ease of maintenance. Today, more than ever, libraries are spending a substantial amount of their budget towards commercial e-resources apart from providing and facilitating Open Access resources to the student community.

Umaru Musa Yar'adua University and Electronic Resources

The University Library of the Umaru Musa Yar'adua University Katsina (UMYUK); is the central library of the University, which serves students, faculty, and researchers. Even though, all the faculties have libraries called faculty library. University Library is responsible for the acquisition and technical processing of all information resources irrespective of their nature.

The library has e-library for the academics, non academics and students in general to access their desired resources that will help them meet their academic pursuits. All necessary facilities and equipment for accessing electronic resources are available through the University Library in particular and the University management in general. This e-library was introduced right from the inception date of the University (Library Complex Student Handbook, 2008), in order to provide access to international scholarly literature in electronic form, including high-quality, peer-reviewed journals, articles, databases, and e-books.

Objectives of the Study

The objectives of this paper are:

1. To determine the ability of academics to use electronic information resources
2. To discover the types of e-resources being use most often among academics
3. To discover the purpose for using electronic resources
4. To determine the constraints encountered by academics on the use of electronic information resources.

Scope of the study

This study covers uses of electronic information resources among academics of Umaru Musa Yar'adua University Katsina. Specifically this study is limited to the Academics of the Faculty of Natural & Applied Sciences, of Umaru Musa Yar'adua University, Katsina. The university has five faculties, and the Faculty of Natural & Applied Sciences is among of the five faculties of the University, consisting of seven departments.

Literature Review

Electronic resources have become an integral and substantial component of academic library collections worldwide and these resources are regarded highly as essential for learning, teaching and research activities (Blecic et.al, 2007; Kumar and Kumar, 2007 and Zhang, Ye & Liu, 2011) has reported that in United State "between 1994/1995 and 2001/2002, expenditures on electronic resources for the typical university research library have grown almost 400 per cent to almost \$1.4M, while the overall library materials expenditures have grown only 61 per cent. Electronic journals account for the greatest proportion of the electronic expenditure claiming 92 per cent of these dollars in 2001/2002". The study by Bar-Ilan et al. (2003) on the awareness of electronic resources by faculty and administrators at Israeli universities indicated that the use of electronic resources was already widespread among the respondents and more than 50 per cent found the electronic services indispensable. Yet, disparities were found between the usage patterns in different disciplines. In an another study on students' usage of electronic resources at Carnegie Mellon University in the US, George et al. (2006) reported that while browsing information on the internet, students usually depend on the help of the library staff, especially academic staff, to implement their search activities.

However, several studies on use of electronic information resources (EIS) have been carried out by students, researchers, and teachers of various institutions all over the world. Maunissamy and Swaroop (2005) in their study "Evaluation of usage and usability of electronic journals" identified the usage and usability of e-journals by the users of the NIT, Tiruchirapall. Appleton (2006) in his study, perceptions on electronic library resources in further education, expressed personal experiences on the use of e-resources and their impact on teaching and learning activity.

Also, Bayugo and Agbeko (2007) reported on a survey of convenient access to, and use of, electronic databases (CD-ROM and online resources) with full-text journals and their effect on information seeking behavior of health sciences academics at the College of Health Sciences of the University of Ghana. The survey documented academics preferences of prints and electronic resources, and the specific databases and full-text journals. The results showed that Academics were unaware of the two full-text journal databases (HINARI and PERI) available at the Library; hence they resorted to PUBMED as their source of access to full-text articles. They concluded that, most academics now prefer using electronic access to information (CD-ROM/online resources) to traditional print indexes and abstracts.

Meanwhile, Kanaujia and Satyanarayana (2003) study revealed that in addition to browsing the web consistently, users consulted e-journals regularly on the internet, to find online databases and for telnet services. Also, Ali's (2005) study among the users of the Indian Institute of Technology (IIT) in Delhi found that majority of users face difficulty while browsing for e-resources. Lack of printing facilities, terminals and trained staff are the major reasons that discourage users from accessing electronic information services. Haridasan and Khan's (2009) research also indicated that students use e-resources (such as e-books, e-journals, e-encyclopaedias, e-theses, CD-ROM databases, e-mail, internet and the OPAC). In a similar study, Kumar and Kumar (2010) found that both faculties and students are quite aware of e-resources and the internet. In addition, a majority of the academic community prefers print to electronic information sources and they have learned about the electronic information sources either by trial and error or through the advice of friends. Likewise, Swain (2010) found that students express keen interest in the use of e-journals, followed by e-books, e-newspapers, e-reports, and e-articles.

II. Research Methodology

Questionnaire-based survey method for the study was designed to collect data from The Academics of Umaru Musa Yar'adua University, Katsina; a structured questionnaire was developed for data collection. It consists of fourteen questions. The first part of the questionnaire included personal background information, while the second part asked questions about the use of electronic information resources.

The researchers, being the staffs of Ahmadu Bello University, Zaria have distributed and retrieved the Questionnaire through their colleagues among the staff members of UMYUK. According to Nwana (1981) if a population is in many hundreds, one needs a sample size of 20%. But if a population is in few thousands, one needs a sample size of 10%.

Population Of The Study

Adamu and Johnson (1997) defined population as a collection of individual items whether of people or things that are to be observed in a given problem situation. Similarly, Osuala (2002.39) reported that "population as any group of individuals that have one or more characteristics in common that is of interest to the researcher. Population according to Mugo (2010) is a group of individuals, persons, objects or items from which samples are taken for measurement. The target population of the study will be those Academics of the Faculty of Natural & Applied Sciences, of Umaru Musa Yar'adua University, Katsina. The table below showed the population of the study for the Academics that is to be used.

S/no	List of departments in UMYU	Males	Females
1	Maths and computer science	14	04
2	Biology	11	03
3	Geography	13	04
4	Pure and industrial chemistry	12	05
5	Physics	09	03
6	Microbiology	08	01
7	Biochemistry	10	01
Total		77	21

Sample of the study: Since the population is not large and it is manageable, the researcher will use the whole population for the study. Bernard (2012) also supported this by asserting that if a population of a study is less than two hundred (200) the entire population should be used for the study

Table type of electronic databases used by the Academics in UMYU

Types of information resources	f	%
African Journals Online (AJOL)	33	33.7
Directory of Open Access Journal (DOAJ)	35	35.9
Health Internet-work Access to Research Initiative (HINARI)	0	0.0
Scencedirect	0	0.0
Sage OARE	0	0.0
Agora	0	0.0
BioOne	0	0.0
Bio Med Central	3	3.1

The respondents were allowed to tick as many that applied. The analysis revealed that African Journals Online (AJOL) and Directory of Open Access Journal (DOAJ) were the types of electronic database used by the respondents with highest frequency of over 33.7% scores responses. Whereas Bio Med Central are the type of electronic databases used by the respondent with leas frequency of less than 3.1% response scores, it was

observed that HINARI, Science direct, Directory of Open Access Journal (DOAJ), BioOne, Journal of interdisciplinary History, Sage OARE were completely not used by the Academics

Table: Level of usefulness of the electronic database by the Academics in UMYUK

Also the researcher further asked the respondents to indicate the level of usefulness of the electronic databases in their institution. This was done through the provision of a list of type of electronic databases to indicate their level of usefulness using Likers Scale of measurement. However, for convenience, the options were merged into three options in order to facilitate analysis. These are Very Useful (VU): Rarely (R): Not Useful (NU). Below is table 4.6 showing their responses:

Types of online database available	Level of use				
	Very often	often	Rarely	Not often	Undecided
African Journals Online (AJOL)	0.0	33.7	0.0	0.0	66.3
Directory of Open Access Journal (DOAJ)	35.9	0.0	0.0	0.0	64.1
Journal Storage (JSTOR)	0.0	0.0	0.0	0.0	100
Health Internet-work Access to Research Initiative (HINARI)	0.0	0.0	0.0	0.0	100
Scienedirect	0.0	0.0	0.0	0.0	100
Scientific Electronic Library Online (SciELO)	0.0	0.0	0.0	0.0	100
Sage OARE	0.0	0.0	0.0	0.0	100
Agora	0.0	0.0	0.0	0.0	100
Journal of interdisciplinary History	0.0	0.0	0.0	0.0	100
BioOne	0.0	0.0	0.0	0.0	100
Bio MedCentral	3.1	0.0	0.0	0.0	0.0

The table showed the responses of the respondents of the usefulness of online Arabic information resources by the Academics in UMYUK. It was discovered that majority of the Academics in UNYUK indicated that electronic databases outline to them were not useful with the highest frequency of over 66.3 and 100% response scores respectively. It was only African Journals Online (AJOL) and Directory of Open Access Journal (DOAJ) indicates very useful to them.

Purpose of using the electronic databases by the Academics in UMYUK

The researcher further sought to find out the purposes of using electronic databases by the Academics in UMYUK. In order to obtain the answers, the respondents were asked to indicate their purposes of using electronic databases in their respective institution as outline in the table below.

Purpose for the use of online	F	%
Research activities	44	44.9
Paper writing for publication	44	44.9
Teaching	34	34.1
Seminar/workshop presentation	23	23.5
Preparing note	34	34.9
Self development	24	24.9
Consultancy service	24	24.9
Community development	14	14.3
Lecture Note	46	46.9
Thesis/ Dissertation writing	46	46.9
Others specify	0	0.0

The table shows the response of the respondents on the reasons/purpose for using electronic databases by the Academics it was discovered that research activities a, thesis writing, lecture note, teaching, preparing writing for publication with were the major reasons for the used of electronic databases with highest frequency over 46.9% responses score by the Academics in whereas Self development, preparing note and community development were the least frequency of less than 15% responses score respectively. However, this finding showed that majority of the respondent were using electronic databases purposely for research activities and thesis writing.

Section F: Extent Of Satisfaction On The Used Of Electronic Databases By The Academics In Umyuk

This is to find out the frequency at which Academics satisfied with the electronic databases in UMYUK. In doing this, a list of options to the respondents to determine their level of satisfaction of the resources and the responses were captured and presented in table

Types of Information resources	Highly satisfied	Satisfied	Not Satisfied
African Journals Online (AJOL)	0.0	33.7	66.3
Directory of Open Access Journal (DOAJ)	0.0	35.9	64.1
Journal Storage (JSTOR)	0.0	0.0	100
Health Internet-work Access to Research Initiative (HINARI)	0.0	0.0	100
Sciedirect	0.0	0.0	100
Scientific Electronic Library Online (SciELO)	0.0	0.0	100
Sage OARE	0.0	0.0	100
Agora	0.0	0.0	100
Journal of interdisciplinary History	0.0	0.0	100
BioOne	0.0	0.0	100
Bio MedCentral	3.1	0.0	96.9

African Journals Online (AJOL) and Directory of Open Access Journal (DOAJ) were the types of electronic databases indicated highly satisfied with highest frequency of over 35.9% response score by the Academics of UMYUK. Whereas, Bio MedCentral indicated highly satisfied with least frequency of less than 3.1% response score by the Academics in UMYUK. On the other hand, it was observed that majority of the respondents in UMYUK found were not satisfied with highest frequency of over 100% response score respectively. However, this finding may be as result of poor ICT facilities, lack of awareness the resource, slow internet connectivity and lack of computer literacy skills. This corroborate the earlier finding of Hafeez (2010) that Slow internet connectivity, Poor ICTs facilities, lack of access to low cost printers in the library, using advanced search strategy of most databases, and lack of awareness of most of the e resources are significant contributors for the low level of satisfaction and patronage of customers.

How do you access Electronic databases	Freq	%
Through library website	0	0.0
Through search engine	85	86
others	0	0.0

Through library website 20 (28.5%) and through search engine 30 (42.8%), and 3 (4.2%) it was observed that majority of the respondent access ODB through search engine 30 (42.8%),

Challenges On The Used Of Electronic Databases By The Academics In Umyuk

Is one of the objectives of this research to identify the major challenges on the used of electronic databases by the Academics In order to obtain the answers, the respondents were asked to indicate their challenges on the use of electronic databases as outline in the table 4.11 below

Challenges	F	%
Slow Internet connectivity in the institution	46	47.0
Erratic power supply	52	53.0
Poor ICTs facilities	65	66.0
Lack of access of Internet connectivity in the office	25	26.0
Insufficient access to needed journals	52	53.0
Lack of information literacy skill	89	89.5

The table showed that Slow Internet connectivity in the institution, Erratic power supply, insufficient computer skill, Poor ICTs facilities and Lack of information literacy skill were the major challenges when using electronic databases with highest frequency of over 89.5% responses scores by the Academics in UMYUK. Whereas, Lack of access of Internet connectivity in the office were the major challenges when using electronic databases with the least frequency of less than 25% responses scores respectively. The prevalence of these challenges has also reported in similar studies such as Abdullahi and Haruna (2008) found that lack of basic knowledge of ICT is the second major constraint after the problem of erratic power supply to the use of electronic resources in the university libraries in Nigeria.

Summary of the major finding

1. African Journals Online (AJOL) and Directory of Open Access Journal (DOAJ) and Bio Med Central were the types of electronic database used by the Academics in UMYUK
2. It was discovered that majority of the Academics in UNYUK indicated that electronic databases outline to them were not useful It was only African Journals Online (AJOL) and Directory of Open Access Journal (DOAJ) indicates very useful to them
3. It was discovered that research activities a, thesis writing, lecture note, teaching, preparing writing for publication with were the major reasons for the used of electronic databases by the Academics in UMYUK

4. that Slow Internet connectivity in the institution, Erratic power supply, insufficient computer skill, and Lack of information literacy skill were the major challenges when using electronic databases by the Academics in UMYUK

III. Recommendations

Arising from the findings of this study, the following recommendations were made:

1. The university library should take a leading role to create more awareness among Academics on the available online databases by:
 - a. Conducting training and retraining programs
 - b. Organizing workshop, conferences and seminars so as to increase the use of these services
2. Since the result of usage is not encouraging, in order to increase the use of online Databases by the Academics, the Faculty and Departments should give more assignments related to current issues, so that the Academics and other researchers may be forced to learn how to use online information resources and services more effectively.
3. The university management should improve on the internet connectivity in the campus and particular

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