

USE OF DATABASES BY STUDENTS IN UNIVERSITY LIBRARIES: ISSUES AND PROSPECTS**By****KABIR IBRAHIM****and****HAKEEMAT SALAHUDEEN BELLO****Abstract**

This paper examines the utilization of databases by students in university libraries. The introduction of Internet and Databases to library and information services has greatly enhanced the efficiency and effectiveness of information services. The paper also enumerates the types of databases available and used by students in the universities libraries which include: Health Internet work Access to Research Initiative (HINARI), Access to Global Online Research in Agriculture (AGORA), Research Paper in Economics (REPEE) and Library Index (LIBDEX) Online Public Access Catalogue (OPAC) among others. Issues associated with the use of databases by students are: slow internet connectivity, incessant power outage, Lack of access to full text of citation/abstracts, inadequate infrastructure for accessing electronic resources among others. The paper also discussed the prospects in the use of these databases which includes among others training of students on online searching, functional ICT Policy, funding of the university library, regular power supply etc. Hence the study concluded, students just like any other category of library users need online databases to satisfy their information needs regarding their academic pursuit and access to a plethora of databases to address such academic needs.

Keywords: Use, Databases, Students, University Libraries**Introduction**

University libraries are libraries attached to Universities and patronized by students, teachers, researchers and administrative staff of the universities. According to Abubakar (2011), University libraries are at the forefront of providing information services to their respective communities, which comprise students, lecturers and researchers in order to support their teaching, learning and research needs. University libraries provide an absolutely fundamental service, which affects the whole university community and without which it will cease to function as a center of teaching and research. These libraries also provide all the necessary support in order to enhance the cardinal educational objectives of their parent bodies, that is,

teaching, learning and research. Furthermore, it also serves as an intellectual arena and places for the generation and dissemination of knowledge, as well as centre for the provision of world class resources and services to their users.

Studies have shown that the introduction of Information and Communication Technology (ICT) facilities in the university libraries has tremendously enhanced information generation, access, storage and dissemination (Mohammed & Philip 2017). Dissemination of timely and up-to-date information is made easier with the advent of these technologies which aid the transmission of information through electronic resources. Ternenge & Kashimana (2019) opined that “the rapid advancement of Information and Communication Technology (ICT) has brought revolutionary changes in the university library giving rise to a number of options to the user community to handle varieties of information sources conveniently and effortlessly”. As a result electronic resources have become the lively substance to the modern libraries reserve in satisfying needs of students, teachers and researchers with minimum risk and time (Dare 2017).

Database is an integrated collection of files of data stored in a structured form in a large memory, which can be accessed by one or more users at different terminals. This information could include hypertext references to information held within a computer database, or spreadsheet formulae.

According to Bruce (2009), database refers to any collection of data organized for storage in a computer memory and designed for easy access by authorized users. The data may be in the form of text, numbers, or encoded graphics. Government, military, and industrial databases are often highly restricted, and professional databases are usually of limited interest. Effective use of data based advances in computer-readable information provided much excitement in libraries and threw open extraordinary service and opportunities. The networking increasing numbers of

full-text and full-image databases, coupled with developments in CD-ROM and telecommunications technology, made an 'electronic information revolution' increasingly feasible. Nzewi (2015) argued that wide range of commercial, governmental, and nonprofit databases are available to the general public. Databases, according to Dike (2002) are available to anyone who could link up to them via computer.

Students are increasingly expected to use electronic resources whilst at the university; to make use of the growing range of electronic resources, students must acquire and practice the skills necessary to exploit them (Okello-Obura & Magara 2008). Lawson (2005) posited that skills learning is essential in a technology-driven environment but can be enhanced tremendously through the use of innovative learning strategies.

Databases as essential tools and contemporary research for students

Databases are systematically organized collections of information covering different subject matters or specializing in one given subject or topic they may be arranged in a table of contents, alphabetically, in numerical order, in an index or in subject categories. According to Nura (2015), databases refer to a large collection of electronically organized data for one or more purpose which can access electronically. Databases play significant roles as information sources in today's libraries. Uzuegbu, Chukwu & Ibegwam (2012) defined databases as specialized records of related published information documents which are not available on Google or other common search engines, especially in a full text. Furthermore, Ani & Ahiauzu (2008) stated that databases are collection of electronic information sources (e-journals or e-books) by publishers from various fields or disciplines and that some of these databases are provided free of charge to libraries in developing countries by their publishers or vendors, while others require some fees for subscription.

Databases are a collection of electronic resources by publishers in various fields and disciplines which can be accessed online or off-line. Some of these databases are provided free of charge to libraries in developing countries by their publishers or vendors. Databases have now become important part of the library collection and serve as a complement for print materials in recent times (Swain 2010). They provide access to current information and can be accessed from anywhere and by many users at the same time.

Kinds of databases Needed by Library Users

These e-databases are categorized into Textual, Numerical, Bibliographical, Non Bibliographical, Online and Offline etc (Alhassan & Afolabi, 2007). Below are some of the databases needed by library user:

CD-ROM Databases: A compact disc (CD) is a laser - read (also termed optically read) data storage device on which audio, video or textual material can be stored. One application for the CD that is important to information dissemination is the CDROM (Compact Disc Read-Only Memory), used for the storage of computer text programs. Typically, a CD-ROM can store up to 250,000 A4 typewritten pages in digital form (550-600 megabytes) on a disc of a size of only 4.7 inches (11.98cm). This storage capacity corresponds to the whole of the Encyclopedia Britannica. The record is a sort of sandwich of Plexiglas and aluminum. The data are permanently retained when the disc is produced. Magnetic field or electromagnetic waves do not influence the record. The user cannot alter the information once it has been burnt in. No information is lost if there is power cut. It is possible to record on CD-ROM text, figures, graphs and digital pictures.

On- line Databases: Online Database is ‘a collection of bibliographic information stored in a computer or a central computer and retrospective search is made possible remotely from a

distance computer through the use of software's'. By means of timesharing, many users can search the record simultaneously. Distance is no barrier. The procedure according to him was to type on the terminal keyboard a request for a search on a particular topic. The machine replies immediately by displaying a list of citations. If these were not exactly what are required, the search request can be modified and a new list obtained. Online search techniques can be carried out by either author, title of publication, subject area or keyword. Any of these methods will display the relevant information a user can choose from.

Access to Global Online Research in Agriculture (AGORA): AGORA is an Internet portal with links to major scientific journals, bibliographic databases and other Internet resources related to agriculture. According to Mudunsur (2013) AGORA is set up by the Food and Agriculture Organization of the United Nations (FAO) together with major publishers, to enable developing countries to gain access to an outstanding digital library collection in the fields of food, agriculture, animals, health, crop production, forestry environmental science and related social sciences. It provides a collection of more than 3500 key journals and 3300 books to 2500 institutions in 116 countries.

The Essential Electronic Agricultural Library (TEEAL): TEEAL or "Library-in-a-Box" database is a recent arrival on the scene. It is a full-text database covering 160 selected journals in agriculture and related sciences, with content beginning from 1993. The update is yearly and currently span the period 1993 – 2008 and contains over 2 million page images stored on external hard drive. It is an initiative of Albert Mann Library, Cornell University in association with Rockefeller Foundation. The databases mentioned above are available both on CD-ROM, hard drive and on-line. Most International organizations like CTA, Rockefeller Foundation; FAO

and some donor agencies sponsored their acquisition by information centers and organizations from developing countries including Nigeria.

Health Inter Network Access to Research Initiatives (HINARI): HINARI is a Programme set up by World Health Organization (WHO) together with major publishers to enable low- and middle- income countries to gain access to one of the world's largest collections of biomedical and health literature. Up to 12,700 journals (in 30 different languages), up to 24,900 e-books, up to 70 other information resources are now available to health institutions in more than 100 countries, areas and territories benefiting many thousands of health workers and researchers, and in turn, contributing to improved world health. HINARI Access to Research in Health Programme provides free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries (Marry, 2008).

Directory of Open Access Journals (DOAJ): DOAJ is aimed at increasing the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increasing usage and impact. DOAJ defines Open access as the right of user to read, download, copy, distribute, print, search or link to the full text pdf articles.

BIOLINE International: According to Charp (2011), BIOLINE is a pioneer in the provision of open access to peer reviewed bioscience journals published in developing countries. These journals contain timely research on public health, international development, tropical medicine, food and nutritional security, and biodiversity. BIOLINE is not a publisher, but an aggregator that provides a free platform for journals who wish to participate in the global open access movement. An aggregation of over 78,000 peer-reviewed, full-text articles on current research in Biodiversity Conservation, Biology, Ecology, Plant Sciences, Entomology, Ornithology, and Zoology.

LIBDEX: LIBDEX according to Uwaito (2011), is an index of libraries from around the world created by Bisca Investments. The site contains basic information about the libraries, such as their size, operating hours, and catalog software vendors. Links to a library's public web catalog are also included for some entries.

Other databases include: HINDAWI publishing cooperation, Online Access to Research in Environment (OARE), Public Library of Science (PLOS), Research Papers in Economics (REPEC), e-Granary Digital Library (Emuvanta & Nwalo 2013, Dadzie, 2014 & Das 2016).

Purpose of Use of databases by students

The purposes for students' use of databases are mostly for academic activities. They include: research and completion of assignments (Thanuskodi, 2012). According to Ukachi, Onuoha, and Nwachukwu (2012), Databases are utilized by students in the universities for several academic purposes. These purposes include: doing class assignments, writing term papers, augmenting class works, retrieving current literature for studies, following blog discussions on the subject area of interest, searching for scholarship opportunities, searching for internship placement and for research purposes. Similarly, the study of Osaheni, Oshiotse and Momoh (2016) revealed the reasons for using databases to include: research, study, assignment. Others reasons mentioned were examination and lastly for pleasure. The study to a large extent conforms to Ansari and Zuberi (2017) that opined from their study that databases are mostly used for research, to prepare lectures note and for gaining subject knowledge.

Issues associated with the Use of Databases by Students

In spite of the enormous potential in the use of electronic information sources, users still have some difficulties to contend with. The following are some of the findings identified by Ochs (2005): language barrier, inadequate infrastructure (computers, electricity, paper, toner

cartridge etc), high cost of printing of articles, limited access (Library hours). In the case where Internet facilities are made available, some users find the Internet slow and expensive. The major constraint identified by Oduwosle and Akpati (2003) is insufficient terminals to cope with the high demand for access, closely followed by power outages. New information and communication technologies, aimed at providing rapid and convenient access to information, are themselves responsible for a high proportion of the overload effect, Allen and Shoard (2005).

Specifically the issues are:

1. Slow internet connectivity
2. Incessant power outage
3. No access to full text of citation/abstracts
4. Inadequate infrastructure for accessing electronic resources
5. Lack of knowledge of search techniques
6. Download delay
7. Lack of skills

Prospects of use of databases by students

These are highlighted below:

Training of students on online searching: Students should be given orientation or more education on how to identify, use and evaluation online information resources. Hardy (2010) argued that as the availability of information has expanded exponentially, well trained academic librarians ought to be positioned to help readers navigate and evaluate library – based information resources. This education should target specific skills set such as browsing skills, basic online searching skills and advanced search strategy. This can be achieved by integrating online information searching into the university curricular. Authors like Heseltine (2000) and

Muteshwa (2004) have agreed that information literacy can be successful when it is integrated into curriculum.

Functional ICT Policy: The university library management and the university administration as well as the relevant organs of the university such as the ICT Unit should work together toward developing a functional ICT policy for the university library. This policy should create a budget for ICT infrastructural development in the university library and help also to design websites for faculties and departments in the University. These websites are obviously non-existent. It is hoped that when these websites are designed, information will be disseminated to the library user community and the sites will also allow lecturers to have access to library information resources in their offices. It is hoped that the ICT policy will address the issue of low bandwidth, and this will facilitate expanded access to internet resources and help to organize online training for the students.

Funding of the University Library: The ten (10) percent of the university's recurrent expenditure, as directed by the National Universities Commission (NUC), should always be allocated to the university library. This will help the university library to maintain its subscription cost and to ensure also that there is a balance between print resources and online information resources in the library. Adequate funding will also help the university library to develop new services or to provide value added services to lecturers and students. Poor funding has negative impact on library resources and services. The effects of inadequate funding as highlighted by Komolafe – Opadeji and Haliso (2012) include lack of current books, journals and other information resources as well as lack of user attraction and little professional activism.

Regular power supply: Incessant power failure affects library services. The situation often forces the library to shut down its services before the closing time. Uzoigwe (2002) also added

that without regular power supply, the aim of installing and providing online services would be defeated. Extending library hours may not be possible in a situation of uncertainty. The library provides space for students especially during peak periods. Regular power supply will not only enhance the library's image but also attract more users to the library. In addition, the students can have more access hours in the library.

Students' support for information accessibility: The university administration should provide support to students to enable them have uninterrupted access to online resources. This support may take two forms. The first form is by scaling up the number of ICT facilities in the library which may include providing more computers for students' use. The second form is by providing laptops to students at subsidized rate to enable them browse at their easiest convenience. Whichever form the students' support takes; it has the potential of increasing the use of online resources by the students. Equipping the university library with more computers, according to Gakibayo, Ikoja-Odongo and Okello- Obura (2013) will improve on full text delivery of resources, electronic document delivery and the use of search engines. The library itself can provide further support through sensitization and awareness creation. According to Gakibayo ,Ikoja-Odongo and Okello-Obura (2013), the university library should update faculties on the available online information resources through email, alert messages and text messages.

Electronic Resources Librarian needed: The new library information environment is increasingly becoming competitive. Besides, library users now hold the view that information is no longer the property of the library. An electronic resources librarian's position needs to be created for electronic resources development in the library and to ensure that e-resources are downloaded on stand-alone computer systems in the library for use by all students. This implies that the acquisition policy of the library has to be modified to emphasize e-resources more.

Another obvious reason for this new position in the library is that the traditional academic library systems have come to embrace the digital library model (Riju, 2014) and academic librarians must adopt this model for innovative and interactive library services.

Consortium building: Since no library is self-sufficient, consortium building may help in this regard. Consortium building has the advantage of helping libraries to expand their resource-base and provide resources to meet user needs. Many full-text online databases like Science Direct and EBSCO Host are quite expensive, but through consortium building access can be provided to them. The University library is not adequately providing access to online information resources which can be improved through library partnership arrangements or library consortia to help students have uninterrupted access to online information. Library consortium building will help deal with the high cost of subscriptions as reported by the students. These students observed that some of the materials they wanted to use for research have restricted access and often with condition of payment for access called subscription fee. Such fees are always in foreign currency and usually too high for students. These students now rely on the library for access to those restricted materials or subscribed materials. To this end, libraries the world over are forming alliances for the purpose of meeting the needs of users, and identifying and addressing common needs arising from developments in information technology (Dai and Zhang, 2000; Gakibayo, Ikoja – Odongo and Okello –Obura, 2013).

Recommendations

1. Adequate fund should be provided by the university management for subscription of more scholarly databases in order to build a strong collection of e-resources in the library.
2. Librarians in universities libraries should identify non users of the databases and effective steps should be taken to encourage them to use the databases.

3. University libraries should organize ICT literacy skills programme for library users; this will encourage frequent usage of the databases.
4. Access to the databases should not be limited only to the library; users should be able to have access to databases anywhere any time for their academic purposes.
5. Databases evaluation usage should be conducted among library users; this will help librarians to know the challenges of users and how to strengthen the databases and services.

Conclusion

The paper concluded that databases are vital information resources that need to be made available in university libraries for use by students. Hence students just like any other category of library users need online databases to meet their information needs regarding their academic pursuit and access a plethora of databases to address such academic needs. There are however, a plethora of challenges that affect their utilization of online databases which needs to be surmounted.

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