

Undergraduates' Awareness and Utilization of Information and Communication Technology- Based Library Services in Kenneth Dike Library, University Of Ibadan, Nigeria

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ABSTRACT

Information and communication technology (ICT) is seen as the best way to assist researches solve their information needs for effective and smooth research activities. This study, therefore, investigated the awareness and utilization of information and communication technology based library services in Kenneth dike library, university of Ibadan, Nigeria. Descriptive survey research design was adopted. Purposive sampling technique was used to select 100 undergraduate students. Four instruments were developed and used for data collection. Data were analyzed using percentage. The findings reveals respondent's disagreement to the awareness of e-magazines, digital library, online newspapers, sporting news, databases, web logs, fellowship search, e-encyclopedia, e-dictionaries, online multimedia collections and open access e-journals. Undergraduate students' method of acquaintance with the use of ICT based services are: guidance from fellow students, trial and error, self-taught and external it training. Undergraduates' level of use of ICT based library services was low. Majority of the undergraduates identified poor electric power supply, absence of internet network and high cost of private internet browsing as barriers against the use of ICT based services and resources in Kenneth dike library. The researchers recommend that library personnel should make provision for effective publicity service in order to get library users aware of the latest services available in the library.

Keywords: Awareness, Utilization, ICT, Library Services, Information

Introduction

Information and Communication Technology (ICT) is widely considered as the most important revolution humankind has experienced since the industrial revolution and the development of movable type printing techniques. A country's development depends on the extent of use, speed of access, and skilled application of ICT systems. Computer and communication technologies have drastically changed the entire human activities including library and information field. In this present dispensation, libraries are deeply engaged to modernize operations and activities, which have helped to provide fast,

integrated, interactive and comprehensive services for user's benefit. ICT invention has brought about various types of technologies to aid the services rendered in libraries and information centres.

Information and communication technology is described as enabling technology (both hardware and software) necessary for the delivery of voice/audio, data, fax, internet services from one point to another using wired and wireless media protocol (IP) and non IP network. Information and communication technology is referred to as an electronic based technology generally used to retrieve, store, process and package information as well as providing access to knowledge. It is an item or equipment (hardware) and computer

programme (software) that facilitates access, retrieval, storage, organization, manipulation and presentation of information by electronic means. Lawal-Solarin (2014) defined information and communication technology as a broad-based term that encompasses the gathering (acquisition), organization (packaging), storage and retrieval (dissemination) of information that can be in textual or numerical (books and document), pictorials and vocal forms (audio-visual) or combination of all the above (multi-media), using a combination of computers and telecommunications telephony distance learning.

The library deals with the acquisition, organization, processing, storage and dissemination of information. The advent of information communication technology (ICT) has revolutionized information systems which are now linked to one another and to the larger organization or society. In terms of information management and other relevant issues, the library remains the bedrock (Oduwole, Idowu & Ladipo, 2011).

Various universities and research institution have initiative to set-up digital library is getting fast momentum due to the application of new information and communication technology and the increased information thrust. In like manner, information explosion has helped to revolutionize the expansion of information systems. The advent of the modern information technology has facilitated the electronic storage and transmission of recorded knowledge. Library stood as places where business, legal, historical and religious records of civilization are kept. The use of information communication technologies such as computers, telecommunication, biomedical equipment, have changed the earlier concept of the library and has made it possible to store and retrieve information in many different forms, format and in different places. The adoption of ICT in Libraries can be said to have helped to enhance teaching, learning and research in many institutions. Haruna and Oyelekan (2010) opined that “academic libraries are meant to enhance access to variety of information resources and range of services. The integration of Information and Communication Technology (ICT) in library in

the 1960s did not only add flavor in library activities such as shelving, arrangements, easy assessment. but also globalized the use of library resources.

The advent of e-library, virtual library and library consortium, have made it possible for people to access vast collection of information over the internet, cable television or some other type of remote electronic connection. Library and information centres worldwide are built to provide value added information services to users. As a result of these, Librarian and information managers within an information system are concerned with identification and utilization of certain factors that could facilitate the production of information and information services that will maximally satisfy the needs of the users.

Nwakwo (2006) declared that ICT's application to library works and services could be seen as the best way to assist researchers to adequately solve their literature needs for effective and smooth research activities. The application of information and communication technology to library services and operations has greatly helped in the provision of efficient reference and information services, the utilization of network operations such as cataloguing, authority control, inter library loans and co-operation, participation in international bibliographic project. The use of ICT has impacted library services according to Igbeka (2008) in such areas as Online Public Access Cataloguing (OPAC), Indexing and Abstracting services, Preservation and Conservation, Inter-Library Loan, Access to Electronic Resources and so on. As touching reference services, chat technologies, Ask a Librarian, Electronic-mail, fax, telephone, Compact Disc-Read Only Memory (CD-ROM) are used to answer users queries by the reference librarian. As a result of the above, students and researchers can search, read through a single CD-ROM the 30 volume of encyclopedia Britannica/ Americana in the library and print out the needed pages within a very short time Afolabi and (Abidoeye, 2011)

However, the provision of these services depends on available manpower, infrastructure and level of available resources, which also include machinery and money. Information

and communication technology has transformed library services globally. Most current information is recorded in electronic format. The advent of ICT has immensely contributed to the performance of librarians in the discharge of their duties such as cataloguing, reference services, circulation management, and serial control and so on. ICT has contributed to library in areas such as library management software (LMS), OPAC, office operations, networking, electronic document delivery, online user education or tutorials e-reference services, library cooperation and resource sharing, institutional repositories-library, social media networks, e-mails, library websites, online sharing. Automation or computerization remains an important application of ICT in the libraries. This area of application helps to facilitate speedy library operations, services and access to and delivery of information. Information and communication technology provides users with convenience of accessing information in their own time, saving users the cost of travelling; minimize time spent and affording the new option for answering queries (Ogunjimi, 2015).

The provision of these services is not constrained by the traditional opening hours but can be offered on twenty four hours, seven days in a week basically known as 24/7. ICTs have helped librarian to provide services that would have been almost impossible to offer in the traditional library system. Librarian now provide users with databases that give access to millions of journal articles as well as access to the internet which houses more libraries and limitless variety of formal and informal sources of information. Information and communication technology has also helped to provides library services to remote users as they facilitate the use of certain library resources without visiting the library or consulting the library staff. This has however given the library staff more time to spend on other activities, developing and providing new services. The current study examines the Awareness and Utilization of Information and Communication Technology based Services in Kenneth Dike library (KDL), University of Ibadan, Nigeria.

Statement of problem

The purposes of making provision for information and communication technology-based library services have not been achieved as majority of undergraduates in the present age of technological development are not aware of the incorporation of library services with ICT. This study investigated undergraduates' awareness and utilization of information and communication technology-based services provided in Kenneth dike Library.

Objectives of the study

The specific objectives of the study are to:

1. Find out ICT based library services available to undergraduates in KDL;
2. Find out the method through which undergraduate students become acquainted with ICT based services in KDL;
3. determine the level of use of ICT based library resources by undergraduates;
4. find out factors influencing the use of ICT based services in KDL

Research Questions

The study is guided by the following research questions.

1. What are the ICT based library services available to undergraduates in KDL?
2. What are the methods through which undergraduate students became acquainted with ICT based services in KDL?
3. What is the level of use of ICT based services by undergraduates?
4. What are the factors influencing the use of ICT based services in KDL?

Review of literature

Mairaj and El-Hadi (2012) reported that medical libraries in Lahore are at preliminary stage of automation. Only a small number of the medical libraries were equipped with a reasonable quantity of basic ICT equipment. This was based on the fact that medical literature both online and offline is expensive and has made it impossible for a medical library to purchase all available materials.

Aside the above finding, the authors revealed that the medical libraries were using various kinds of software rather than Integrated Library System (ILS) for possible resource sharing. The result also highlighted challenges such as lack of training opportunities for medical librarians in order to enhance their ICT skills. Mairaj and El-Hadi also reported that libraries in Pakistan were reluctant to introduce automation to their library as a result of fear. It has been a point of upset to the librarians that introduction of automation to library services would either render them redundant or minimize their role.

Swain and Panda (2009), in their study, have made a very close watch into accessibility and usability of e-resources by the faculty members of business schools in the states of India and found high preference on the use of e-articles by the users, while the least preference goes to the use of electronic thesis and dissertations (ETDs). Gowda and Shivaligaiah (2009) conducted a study of the attitude of research scholars towards usage of electronic information resources of university libraries of Karnataka. The study reveals that e-resources have created a positive hope among the research community in searching information. Singh et al (2009) conducted the study of the use of internet based e-resources at Manipur University. The study reveals that low speed internet access, erratic power supply and lack of required full text journals are problems found in the use of internet based resources.

Maharana et al. (2010) conducted a study on the use of internet and e-resources by the students of Business Management of Sambalpur University, India. The investigation shows that majority of the students (1/3 of them) have a long experience of using Internet

for 2 - 4 years and all are more or less aware of the applications of Internet technology. More than half of the students surveyed in the study strongly feel that management study will be severely affected without the use of internet and e-resources.

Madhusudhan (2010) conducted a study on the use of electronic resources by research scholars of Kurukshetra University. The main findings of the study of electronic resources have become an integral part of the information needs of research scholars at Kurukshetra University. Further, it finds that e-resources can be good substitutes for conventional resources, if the access is fast, and more computer terminals are installed to provide fast access to e-resources. Google is the most widely used search engine for locating information electronically.

Siddique (2012) conducted a study on the usage of ICT products and services by faculty members and research scholars. Findings showed that a majority of users (faculty members and research scholars) of Shobhit University used a variety of ICT products and services mainly internet services for their academic purposes and research work, as it is helpful in finding information quickly and also helps the users to access, manage, integrate, evaluate, create and communicate information easily. The low speed internet access and not getting proper training/guidance are general problems related to the internet based e-resources. In addition, limited full text journals are reported.

Dhanavandan, Mohammed and Nagarajan (2012) reporting a study conducted by Nicholas on the use of web for health information and advice. The result of the study showed that 66% of the respondents accessed the internet from their various homes, 28% from their places of works, and 6% combined both that is, place of work and home. Elizabeth Kiondo (2004) studied the application of information technology in provision of information services specifically the provision of electronic information services at the university. Emerging and challenging issues that are related to selection and acquisition of electronic information resources were identified. The emerging issues included the

information technology skills of staff and users, technology infrastructure, financial resources and collection, development and management policy.

Agbolahor (2007) opined that the internet is a system that is made up of thousands of smaller networks that are linked together to form a global network. It is otherwise known as an International Networking of computers and the basis of global connectivity. It is more advanced than telephone, fax and e-mail technology. Internet connectivity otherwise known as World Wide Web (www) is a super high wave invention, which is already advancing in the course of humanity to the greatest height especially in this millennium. According to Agbolahor (2007) the services offered by internet are communication and information. For the purpose of this paper, much interested is in the information service provision of internet. The internet provides an ever increasing quantity and range of information in a number of different formats. It is also possible to make available personal information (research papers, announcements, organizational information and so on) to a worldwide audience by using the internet. It is pertinent to note that as internet tools become more powerful, there is an increasing overlap in these services and the distinction between services that provided access to information and those that allow communication is becoming blurred.

Nwankwo (2006) opines that ICTs application to library works and services could be seen as the best way that could be used to assist researchers to adequately solve their literature need for effective research activities. This, according to the writer, is because the application of ICT to library operations greatly helps in the provision of efficient reference and information services, the utilization of network operations such as cataloguing, authority control, inter library loans and cooperation and in the participation of international bibliographic project. Also Dike (2000) claimed that instant access to information from a multiplicity of sources is one of the major roles of ICT application to library services. Not only can it help in locating the materials where the required information can be found easily but ICT helps in sorting out what information

is relevant from a mass of irrelevant information.

The use of ICT has impacted on library services according to Afolabi and Abidoye (2011) in the following ways: Online Public Access Catalogue (OPAC)

Awareness is defined as the ability to perceive and cognitively react to conditions or events within an environment. It is the ability to perceive, feel or to be conscious of events, objects, thoughts, emotions or sensory patterns. Ogunjimi (2015) explained that at the level of consciousness, sense data can be confirmed by an observer without necessarily implying understanding. Therefore, it is the quality of being aware of something. Encyclopedia Britannica (2012) said that awareness depends on the function of the brain which has been known from ancient times. It says although detailed understanding of neural mechanism of awareness has not been achieved; correlations between states of awareness and functions of the brain are possible. Levels of awareness in terms of levels of alertness or responsiveness are in correlation with the patterns of electrical activities of the brain (brain waves) recorded by an electroencephalograph. The pattern of waves consists of rapid irregular waves of low amplitude or voltage during wide-awake consciousness.

Awareness does not occur in a vacuum. It can be considered in two types of inputs. The environment which encodes all information sources such as a person's memory, possible interactions with other people and nature, books, the internet and everything one might have access to. The other is a context such as the 'Restaurants in Chicago'. Informally we define the unawareness level of an object as the amount of time needed to enumerate that object where the enumerator gets the context as an input and has random access to the environment (Devanur and Fortnow n.d). However, if library is to promote awareness services and activities, there must continual interaction with its users, which can be influenced both by factors directly related to the library such as how effectively and efficiently it is run, the relevance of the information it provides and the communication channels it employs.

As stated by Thanuskodi (2011), awareness and use of library services with information and communication technology is no doubt gaining momentum in university libraries. Students that are aware of this provision patronize these services in sourcing information. Asafeh and Nosrat (2007) carried out a survey to investigate the relationship between awareness and use of digital library services among undergraduates in Isfahan University of medical Sciences. The result of the study showed that 70 percent of the students were said to be aware of digital library services, 69 percent have used them, 62 percent were aware of online databases, and 53 percent have used them. In summary, 87 percent of the students felt that the available online databases met their information needs.

In spite of the perceived availability of electronic information resources in the universities and their benefits to university education, their effective utilization by undergraduate library users in Nigeria appears to be hampered by many factors. The situation leaves doubts about the library's disposition in providing effective access to electronic information resources to the researchers and other users. Undergraduate students, in their various levels of studies and research, have information needs, their field of work notwithstanding. Many of them however do not use e-resources. It is in view of this, that it is necessary to ensure maximum utilization of these sources. Ojo and Akande (2005) conducted a study and drew a conclusion from their findings that the level of usage of the electronic information resources among students is very low. Regarding the use of electronic information resources (EIRs), particularly for the unskilled users, (Fatoki, 2004) asserted that attitude towards a particular phenomenon can enhance or mar human approach to such phenomenon. Satpathy, Maharana and Panda (2012) argued that there is an imbalance between user's skill and ICT based library services trends. Hence libraries regularly should update and provide better library services to users.

Shariful and Nazmul (2006) pointed out most of the challenges being faced with traditional based library service in terms of limited space which could demand for yearly upgrade in

terms of space. This could be quite expensive, time taking to perform library operations due to potential growth of information. Their main aim was to demonstrate how ICT can give new dimension in librarianship. Thus the specific objectives are as follows: to explore various components of ICT used in libraries; to trace the advancement of ICT in libraries; to compare old and new technologies; to identify the reason for introducing ICT in libraries; to explain the functions, impacts and challenges of ICT based library services. Their work incorporated primary and secondary sources. They concluded by noting that a well-equipped library with the facilities of modern information infrastructures and technologies could satisfy the maximum demand of the present technology needed by users.

Ajaegbu, Ehioghae and Oreoluwa (2014) quoting Gulati discussed the status of information and communication technologies usage in Indian libraries with special reference to special libraries and the efforts made by various institutions to propagate e-information products and services. The Author also highlighted consortia efforts in India like JCCC Consortium, INDEST Consortium, CSIR E-Journals Consortia, and UGC infonet. Gulati further discussed digitization efforts in India at NISCAIR, New Delhi, IIITM, Kerala, C-DAC Pune, and the Digital Library of India. In addition the author incorporated the details on major information systems in India and major library networks in India (such as INFLIBNET, DELNET, and CALIBNET). Scholars and some of the Nigerian librarians have not relented in this ICT based services awareness campaign but also have centered much on general awareness within conventional institution without looking at the need to investigate the proper usage and priceless of ICT based services to the undergraduate student of our institutions. Thus a need for an awareness program in order to ascertain the usage and satisfaction rate of ICT based services rendered to the undergraduate students of some of the Nigerian institutions.

METHODOLOGY

Population The population of this study comprised 100 undergraduate students of the University of Ibadan.

Sample and Sampling Techniques Purposive sampling technique was employed to select 100 undergraduate students among the undergraduate students of the University of Ibadan.

Research Instrument The research instrument used for this study was a questionnaire titled Undergraduates Awareness and Utilization of Technology Based Library Service (UAUTBLSQ). The questionnaire has 4 main sections, namely section A- which asked question on the ICT based services available to undergraduates in Kenneth Dike Library; B- which asked question on the method through which undergraduate students become acquainted with the ICT based services in Kenneth Dike Library; C- which asked question on the level of use of ICT based services by undergraduates; and D- which asked question on the factors influencing the use of ICT based service in Kenneth Dike Library.

Method of data analysis Tables, frequency count and simple percentage were used to analyze the data collected.

Presentation of findings

Research Question 1: What are the ICT based library services available to undergraduates in KDL?

Table 1 revealed the awareness of ICT based information resources by undergraduate students. Findings revealed respondent's strong disagreements to their awareness of ICT based information resources such as information service (77%), compilation of reading list (63%), indexing and abstracting services (59%), while on the other way round showed their strong agreement to their awareness of ICT services such as CAI (79%), SDI (68%), compilation of bibliographies (68%), user education service (87%), bibliographic service (62%) and reference service (65%).

Research Question 2: Find out the method through which undergraduate students become acquainted with ICT based services in KDL;

The table 2 considered the method through which undergraduates became acquainted with the use of ICT based library services in KDL. The study showed that most undergraduates got acquainted with ICT based library services majorly through guidance from fellow students (65%), trial and error (53%), self-taught (, external IT training and personal internship program, while few of the undergraduate students indicated that they actually benefit from guidance from technicians (56%), guidance from library staff (53%), lecturers and courses offered by the institution.

Table 1: ICT based services available to undergraduate students in Kenneth Dike Library

| Items | Strongly Agree | | Strongly Disagree | |
|--|----------------|------|-------------------|------|
| | F | % | F | % |
| User Education Services | 87 | 87.0 | 13 | 13.0 |
| Bibliographic Services | 62 | 62.0 | 35 | 35.5 |
| Information Services | 23 | 23.0 | 77 | 77.0 |
| Compilation of Bibliographies | 68 | 68.0 | 32 | 32.0 |
| Compilation of Reading List | 37 | 37.0 | 63 | 63.0 |
| Reference Services | 65 | 65.5 | 35 | 35.5 |
| Referral Services | 64 | 64.0 | 36 | 36.0 |
| Selective Dissemination of Information (SDI) | 76 | 76.0 | 24 | 24.0 |
| Current Awareness Services (CAI) | 79 | 79.0 | 21 | 21.0 |
| Indexing and Abstracting Services | 41 | 41.0 | 59 | 59.0 |

Table 2: Method undergraduate students became acquainted with the use of ICT library services

| Methods of Acquaintance | Strongly agree | | Agree | |
|---|----------------|------|-------|------|
| | F | % | F | % |
| Guidance from technicians | 44 | 44.0 | 56 | 56.0 |
| Guidance from computing staff | 33 | 33.0 | 67 | 67.0 |
| Guidance from library staff | 53 | 53.0 | 47 | 47.0 |
| Guidance from fellow students | 63 | 63.0 | 37 | 37.0 |
| Guidance from lecturers | 14 | 14.0 | 86 | 86.0 |
| Internship course done by me | 54 | 54.0 | 46 | 46.0 |
| Internet course offered by my institution | 44 | 44.0 | 56 | 56.0 |
| Trial and error | 47 | 47.0 | 53 | 53.0 |
| Self-taught | 51 | 51.0 | 39 | 39.0 |
| IT training program done outside the school | 76 | 76.0 | 24 | 24.0 |

Research Question 3: what is the level of use of ICT based library resources**Table 3. Level of use of ICT based library resources in KDL**

| Items | Very high | | Very Low | |
|---|-----------|------|----------|------|
| | F | % | F | % |
| CD ROMs | 15 | 15.0 | 85 | 85.0 |
| Mailing lists | 37 | 37.0 | 63 | 63.0 |
| Web directories | 29 | 29.0 | 71 | 71.0 |
| E-books | 40 | 40.0 | 60 | 60.0 |
| E-magazines | 43 | 43.0 | 57 | 57.0 |
| Digital library | 34 | 34.0 | 66 | 66.0 |
| Online newspapers | 29 | 29.0 | 71 | 71.0 |
| OPAC (Online Public Access Catalogue) | 36 | 36.0 | 64 | 64.0 |
| Fellowship search | 41 | 41.0 | 59 | 59.0 |
| Webliographies (library website services) | 33 | 33.0 | 67 | 67.0 |
| E-encyclopedia | 33 | 33.0 | 67 | 67.0 |
| E-dictionaries | 38 | 38.0 | 62 | 62.0 |
| Online multimedia collections | 4 | 4.0 | 96 | 96.0 |
| Online databases | 32 | 32.0 | 68 | 68.0 |
| weblogs | 5 | 5.0 | 95 | 95.0 |
| Open access e-journals | 13 | 13.0 | 87 | 87.0 |

Research Question 4: what are the factors influencing the use of ICT based services in KDL**Table 4: Factors influencing undergraduate students' use of ICT resources for library services in KDL**

| Barriers | Strongly agree | | Strongly Disagree | |
|---|----------------|------|-------------------|------|
| | F | % | F | % |
| ICT literacy | 42 | 42.0 | 58 | 58.0 |
| Computer system inadequacy | 78 | 78.0 | 22 | 22.0 |
| Inadequacy of online databases | 85 | 85.0 | 15 | 15.0 |
| Low WIFI access | 71 | 71.0 | 29 | 29.0 |
| Unfriendly library staff | 65 | 65.0 | 35 | 35.0 |
| Erratic power supply | 98 | 98.0 | 2 | 2.0 |
| Unsearchable documents | 63 | 63.0 | 37 | 37.0 |
| Incessant change in technology | 62 | 62.0 | 38 | 38.0 |
| Absence of functional network among Nigerian universities | 89 | 89.0 | 11 | 11.0 |
| Negative attitude to ICTs | 28 | 28.0 | 72 | 72.0 |
| High cost of internet browsing | 55 | 55.0 | 45 | 45.0 |
| Inadequate localized software | 77 | 77.0 | 23 | 23.0 |

Table 3 considered the level of undergraduates use of ICT based library services in Kenneth Dike Library. The findings revealed that the respondents' level of use is low on all the listed items

Table 4 above revealed the strong agreement of undergraduates to factors influencing their use of ICT based information services. Findings showed that erratic power supply (98%), computer system inadequacy (78%), inadequate online database (85%), low WIFI access (71%), absence of functional network in Nigerian Universities (89%) among others posed barriers to their use of ICT based information resources in KDL. Findings also revealed that ICT literacy (58%) and negative attitude to ICTs (72%) are not barriers to undergraduates use of ICT based information resources.

Summary of Results

This study concludes that majority of the undergraduates under study are not aware of the ICT based library services available in KDL. Few of the respondents who are aware of the ICT based library services got this awareness principally through trial and error, self-taught and ICT training program done outside the school. However, poor electric power supply, absence of functional networks, and high cost of internet browsing are among the major barriers to the undergraduates' use of ICT based library services.

Conclusion

This study examines undergraduates' awareness and utilization of information and communication technology-based library services and resources in Kenneth Dike Library, University of Ibadan Nigeria. The essence of establishing university libraries is to make provision for information resources and services to the university community at large especially the undergraduate students for the main purpose of achieving the expected academic success in their academic career. However, as a result of development in information and communication technology, the university library has deployed ICT facilities into their library in order to enhance

the provision of services in modern dimension. Nevertheless, undergraduates are supposed to be acquainted with these services because the provided services are directly put in place to meet their information need. It can be concluded that undergraduates' awareness of the ICT based information services and resources provided by the university library can improve their utilization of these services and the resources.

Recommendations

Based on the findings, discussion and conclusion of this study, the following recommendations are made:

1. There should be workable and sustainable policy on ICT use by the federal government of Nigeria.
2. Library personnel should make provision for effective publicity service in order to get library users aware of the latest services available in the library.
3. The federal government of Nigeria should come with workable measures aimed at reducing the high cost of internet browsing. There should be drastic cut down in the import duties on computer hardware and software in order to make them affordable for students.
4. The university management should acquire additional modern power supply to compliment the effort and services of the PHCN in order to promote the effective performance of the library.

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