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# The Use of ICT in Nigerian Universities: A Case Study of Obafemi Awolowo University, Ile-Ife

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## Introduction

The information and communication technology revolution is sweeping through the world and the gale has even caught up with developing countries like Nigeria and Ghana. Information and communication technologies have introduced new methods of teaching and conducting research and have been brought into education facilities for online learning, teaching and research collaboration. While some university communities in some countries enjoy free or inexpensive Internet access, students and faculty/staff in Nigeria must pay for time spent accessing the Internet, whether at a cyber café or in the library (although the library offers a discount). To improve ICT services in the library, therefore, researchers need to show how students and faculty/staff are using the Internet in the academic environment. University administration at many Nigerian universities see information and communication technologies as necessary in the process of learning and teaching. Information and communication technologies have given rise to new modes of organizing the educational environment in schools and new concepts in the teaching process as well as the remodeling of the roles played by the participants in the educational process.

According to Ojedokun and Owolabi (2003) teachers in the developing world will have to change their teaching styles and acquire Internet skills as new technologies transform classrooms over the next 20 years. Teachers will need to learn new skills to teach students how to search for and use information from the Internet safely. Internet's seemingly infinite information offers access to up-to-date research reports and global knowledge (Nwokedi, 2007) so it has become an important component of electronic services in academic institutions. Therefore, the Internet has become an invaluable tool for learning, teaching and research (including collaborative research) in Nigeria.

## Role and Relevance of Universities in National Development

Universities have facilitated and contributed to societal development. They have aided the removal of the major sources of poverty, tyranny, etc. Development is essentially about proper knowledge use and application in developing countries such as Nigeria and Ghana. Universities as institutions for knowledge generation and its transfer to society have been central to development, contributing ideas, skills, technology and expertise in many spheres of human endeavour (Jega 2007a). They are centres of creative undertakings, innovation and inventions and they impart skills pertinent to these to all those who qualify for enrollment (Jega, 2007b).

As at now, universities play a significant role in building up a country's capacity for a mutually beneficial engagement in an increasingly knowledge based global economic environment. Since universities are relevant in national development, information is very important for national development as well. So to help move the nation forward, the use of information and communication technologies should be encouraged and practiced in Nigerian universities.

### ICT Services In Nigerian University Libraries

The information and communication technology facilities in Nigerian libraries are those that assist in providing efficient and current information services for their use. In Nigeria, some of the resources that are harnessed for scholarly work include the use of various computer operating systems such as Microsoft Windows, software packages specially designed for library operations such as library management software, software for indexing journals and newspapers, graphical library automation systems and data management applications. Internet technologies software used include file protocol software, use net news groups, discussion groups, web directories, search engines, and e-mail services. These can be harnessed by academics for good scholarly work. These technology oriented services have shifted most university libraries from traditional library

services to technology oriented services. Libraries these days provide reading resources as well as online information. MOST universities world wide have added technology-oriented services such as these to traditional library services. Libraries these days not only provide reading resources but also online information that is always available on the World Wide Web (WWW). Current information is very important for the development of mankind.

### ICT Resources And Use in Nigerian Universities

Oduwole, et al. (2003), sought to know the electronic resources provided by Nigerian libraries. When asked what electronic resources they provide, Nigerian university libraries identified Online Public Access Catalog, CD-Rom databases, electronic mail (e-mail) and Internet browsing. The study found that students constitute the major category of users of electronic services in the university libraries surveyed. In a survey of cyber cafes which are facilities established in the university environment to aid learning and research in Delta state Adomi et. al. (2003) reported that 77.8% of the customers/users cafes were students. Ojedokun and Owolabi (2003) reported that e-mail is the most used Internet resource by staff and students.

### Technical Support for Electronic Sources in Hezekiah Oluwasanmi Library

Obafemi Awolowo University has institutional computer support services. Hezekiah Oluwasanmi Library, which is the main library at Obafemi Awolowo University, Ile-Ife, has an ICT unit. The unit has a system librarian and a system technologist. These staff have computer -related qualifications at diploma levels. The other support staff are three in number. Each has at least

certificate in computer studies.

The ICT section in the library is able to undertake day- to-day technical and managerial and minor maintenance thus provide technical trouble-shooting . The section also play important liaison function with the institutional computing centre. The library has its own server and battery converters. Thus the library's collection can still be accessed even when there is no electricity .

The university library has an e-library for students which has been completed. The e-library for the university staff is yet to be completed. The e-library is a form of cyber café within the library where students can access the Internet and search for library materials for a fee. The fee charged in the e-library is just a token and is not as high as the fee charged by other cyber cafes within the university environment.

## Availability of Computers

Access to and availability of computers in the university community potentially has influence on the use of electronic resources. The research has revealed high levels of access to computers connected to the Internet among both academic staff and students. It is worth observing that although the availability of computers within the institution is fairly good, the number of computers available for users in Hezekiah Oluwasanmi Library on the whole is not satisfactory.

## Literature Review

Kumar and Kaur (2005) state that the current information revolution and increasing impact of information and communication technologies has modernized the process, learning and research in most universities. Several studies provide details about ICT adoption. Ramzan (2004) observes that expert systems, wireless networks, virtual collections, interactive web interfaces, virtual reference services, and personal web portals have brought changes since the start of the new millennium .Ramzan (2004) in his study observed that librarians in Pakistan were not prepared to embrace the changes brought by information and communication technologies. Most of them were not even sure about ICT applications in their libraries. They were also uncertain about the benefits of these new technologies for their organizations since they have little knowledge of ICT. Islam (2007) stated that the application of web-based information retrieval trends of researchers is ever increasing and the electronic material will eventually replace the traditional library and users need not go there to find and collect information they need.AI-Ansari(2006)focused on the Internet use by the faculty including purpose of use, impact on teaching and research, Internet resources that they use and the problem faced while using the Internet. It was discovered that majority of them have been using the computer and Internet for more than five years.The Internet has helped them save time, find up-to-date information and compare with their colleagues. Almost all of them want to improve their Internet use skill through formal training.

Shahriza et. al.(2007)found that website is seen as an increasingly important reading source. Genoni et al.(2006)in their study indicated that the research users are positive regarding the usefulness of the Internet for research purposes and for expanding their scholarly community. Kinengyere (2007) stated that availability of information does not necessarily mean actually use. This showed that users are not aware of the availability of such resources or they do not know how to access them or they do not know what they offer. The study suggested that these call for continued information literacy programme. Over the years, the Internet has become an all important technological tool in the production, marketing, and use of information world wide. Bemah (2002) stated that the exponential growth in information and knowledge and the

corresponding increase in user needs have stipulated a greater degree of technological inventions and

strategies towards the management, transmission/dissemination, organization and the use of information. In the study of Internet usage and satisfaction of students at the Federal University of Technology, Minna, Oyedum (2006) reported that only 30.8% of the respondents indicated that they were satisfied with the provision of the general Internet services while 62.2% answered negatively. Adeogun (2003) emphasized that ICTs have broken the barriers of time, distance and location which use to impede the growth of formal education. Information and communication technologies have also had profound impact on the tasks and skills of teachers in both the pattern and quality of lecture delivery (Mogbo 2002). Rapid development of ICTs have led to many changes in the responsibilities of the academics in tertiary institutions. The traditional methods of doing academic work are fast becoming inappropriate.

Finally, Ehikhamenor (2002) stated that ICTs are changing the ways in which academics seek information, communicate with each other, conduct research and distribute research results.

All these point to the fact that information and communication technologies are very important for effective teaching, learning, and research activities in an academic environment.

## Objectives of the Study

This study aimed to achieve the following objectives:

- (i) Are the staff and students aware of the Internet resources?
- (ii) How often do they use these resources?
- (iii) For what purpose do they use Internet resources?
- (iv) What is the perceived usefulness of the Internet to staff and students?
- (v) What are the reasons for non-use of the Internet?

## Methodology

This study gathered information through a questionnaire and case studies. It was conducted in 2007. First, a detailed questionnaire based on the objectives of the study was administered to staff and students. A random sample of 100 academic staff and 300 students participated in the study. A total of 99 and 279 usable questionnaires were returned by staff and students respectively for a response rate of 99%. The data was analyzed using simple descriptive statistics. The results are presented below.

## Analysis of Data

### Awareness of the Internet and Its Resources

The results showed that awareness of the Internet among respondents is universal. All the students who responded to the questionnaire indicated that they are aware of the Internet. The number of students as well as staff who responded to the questionnaire indicated that they are aware of the existence of Internet services available in the University Library. One hundred and fifty (50.5%) of the students are aware, 100 (33.6%) of the students responded were not aware, while 47 (15.8%) were undecided.

Table 1: Response of Students on Internet Services in the Library.  
N=297

Response	No. of Respondents	Percentage
Aware	150	50.5%
Not aware	100	33.6%
Undecided	47	15.8%
Total	297	100%

A large proportion of the staff were aware of Internet services in the library as shown on Table 2. Seventy one percent of the respondents indicated that they are aware of the existence of Internet Services in the university library, twenty percent of the respondents indicated that they are not aware of the services offered by the university library while nine percent of the respondents indicated that they are undecided.

Table 2: Awareness of Internet Services In the Library by The Staff.  
N=99

Response	No. of Respondents	Percentage
Aware	70	70.7%
Not aware	20	20.2%
Undecided	9	9.0%
Total	99	100%

One hundred percent of students as well as staff indicated that they often make use of the Internet. Some of the respondents indicated that they use the cyber cafes on the university campus. Two Hundred and Sixty Seven (90%) of the students that responded to the questionnaire indicated that they make use of cyber cafes. This is because the cyber café/e-library in the library is open between 8am-4pm which is the time most of the students have their lectures. Only students that have no lectures during this period can visit the e-library. The cyber cafes outside the library is open for 24 hours in a day . 6.7% of the students indicated that they use other libraries, 1.3% of the students that responded to the questionnaire stated that they use the university library while 2.0% indicated that the use other sources.

Table 3: Students Access to Internet Services and Location. N=297

Internet Access Location	No. of Respondents	Percentage
Cyber cafe	267	90%
Hezekiah Oluwasanmi Library	4	1.3%
Other Libraries	20	6.7%
Others	6	2.0%
Total	297	100%

As for the academic staff who responded to the questionnaire, Seventy –one percent of them responded that they have PCs that are connected to the Internet in their offices therefore they access the Internet from their offices. Four percent of the staff indicated that they use the university library, Fifteen percent of them indicated that they use the cyber cafes, seven percent of the staff indicated that they use other of libraries while 3 percent indicated that they use other sources.

Table 4: Staff Access to Internet Services and Location

Internet Access Location	No. of Respondents	Percentage
Cyber cafe		
Hezekiah Oluwasanmi Library		
Other Libraries		
Others		
Total		

Internet Access Location	No. of Respondents	Percentage
Staff Offices	70	70.7%
Cyber cafes	15	15.2%
Hezekiah Oluwasanmi Library	4	4.0%
Other Libraries	7	7.07%
Others	3	3.03%
Total	99	100%

## Use of Internet and Its Resources

The survey also asked about the use of specific types of Internet resources most commonly used resource among both staff and students, followed by World Wide Web (WWW), discussion groups, use net news, and File Transfer Protocol (FTP) in descending order. Two hundred and fifty (84%) of students and Sixty-Six (65%) of staff indicated that they use e-mail. Both staff (35%) and students (30%) use search interfaces daily. About 3% of staff use discussion groups and news on FTP daily. Twenty percent of the students use search interfaces.

Table 5: Use of Internet Resources by Students Responses. N=297

Use of Internet Resources by Students	No. of Respondents	Percentage
E-mail	250	84%
World Wide Web (WWW)	172	58%
Search Interfaces	89	30%
File Transfer Protocol (FTP)	25	9.0%
Discussion Groups	20	7.0%

Table 6: Use of Internet Resources by Staff Responses. N=99

Use of Internet Resources by Students	No. of Respondents	Percentage
E-mail	66	65%
World Wide Web (WWW)	55	55%
Search Interfaces	35	35%
File Transfer Protocol (FTP)	11	11%
Discussion Groups	9	9%

As shown on Tables 5 and 6 above, it was discovered that 55 percent (55) of staff and 172 (58 percent) of students who responded to the questionnaire made use of the World Wide Web respectively. The results also indicate that twenty (7%) of students and nine (9%) of staff respectively made use of discussion groups, while eleven (11%) of staff and twenty-five (9%) of students made use of file transfer protocol.

Table 7: Frequency of Use of Internet Responses by Students. N=297

Frequency of Use of Internet by Students	Percentage/Numbers of Respondents				
	Once a week N=297	Twice a week N=297	Daily N=297	Occasional N=297	No Response
E-mail	13%(39)	11%(33)	21%(62)	16%(48)	39%(115)
Search Interfaces	5%(15)	8%(24)	14%(42)	27%(80)	46%(132)
Discussion Groups	6%(18)	4%(12)	1%(3)	11%(33)	77%(229)

File Transfer Protocol	3%(9)	3%(9)	3%(9)	8%(24)	83%(246)
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Table 8: Frequency of the use of internet Responses by Staff. N=99

Frequency of Use of Internet by Students	Percentage/Numbers of Respondents				
	Once a week N=99	Twice a week N=99	Daily N=99	Occasional N=99	No Response
E-mail	8%(8)	15%(15)	38%(38)	17%(17)	22%(22)
Search Interfaces	5%(5)	9%(9)	12%(12)	9%(9)	65%(65)
Discussion Groups	3%(3)	3%(3)	2%(2)	28%(28)	63%(63)
file Transfer Protocol	2%(2)	4%(4)	1%(1)	12%(12)	71%(71)

Respondents were asked to indicate the frequency with which they use the various Internet resources which were grouped into:

- (a) E-mail
- (b) Search interfaces - World Wide Web, google, google scholar and other search engines
- (c) Discussion Groups
- (d) File Transfer Protocol

The results show in tables 7 and 8 that the most widely used of the Internet resources is the e-mail followed by search Interfaces which is the World Wide Web, google and other search engines. Eight percent of staff and 13% of students made use of the e-mail once a week, 38% of staff and 21% of students made use of e-mail daily. Five percent of staff and 13% of students that responded to the questionnaire use the search interfaces once a week. While 12% of staff and 14% of students who responded to the questionnaire made use of the search interfaces daily. On the whole, the result show low frequency of use of all kinds of Internet resources by staff and students respondents.

Table 9: Sources of Information for Staff Research. N=99

Sources of Information for Research	No. of Respondents	Percentage
Library	77	78%
Internet	50	50%
Others	25	25%
Inter Library Loan	2	2.0%

Table 10: Sources of Information for Research, Students' Responses

Sources of Information for Research	No. of Respondents	Percentage
Library	237	85%
Internet	156	56%
Others	89	32%
Inter Library Loan	3	1.0%

Table 9 and 10 show both staff and student respondents reported extensive use of the library. Seventy eight (77%) of staff and (85%) of students reported using the library for their research. The made use of library books or library catalog, journals, theses, newspapers, articles, dictionaries,



encyclopedias. respectively for their research. It was discovered that they made use of library books/Library Catalogue, journals, theses, newspaper articles, dictionaries and encyclopedia. The internet is ranked second after the library. Interlibrary loan is the least used of the resources.

## Discussion

According to the survey, e-mail was the most used Internet technology by both staff and students used in the survey while file transfer protocol was the list used. The respondents made use of search interfaces and discussion groups. The library/institution should therefore organize workshops for both staff and students so that they acquire knowledge to effectively use the Internet resources that are less used. When this is achieved, it will go a long way to improve the academic achievements of both the staff and students.

The results of the survey also show that both the staff and students used search interfaces to look for information while they use the resources of the library involved in research. The few staff and students who made use of discussion groups did so mainly to be updated on research issues as well as for social reasons.

## Conclusion

The use of information and communication technologies no doubt is gaining momentum in Nigerian universities. The Internet is used by faculty, staff and students in sourcing information. Information and communication technologies assist libraries in providing efficient and current information services. Once the staff and students are able to use these technologies effectively, the teaching, learning and research activities in the university will be made easier for the university community. ICT usage will facilitate development since there will be free flow of information.

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