

# Use of Information Communication Technology (ICT) for Academic Purposes among Undergraduate of Madonna University-Nigeria, Anambra State

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**Purpose:** This study was carried out to investigate the use of Information Communication Technology (ICT) for Academic purposes among undergraduates of Madonna University-Nigeria, Anambra State.

**Design/Methodology/Approach:** The study adopted the descriptive survey research design. Five objectives and five research questions were formulated to guide the study. A desired sample size of 200 respondents which represents approximately 13% of the target population selected through Proportionate stratified random sampling technique were used. The main research instrument used for the study was a well-structured questionnaire. Two hundred copies of questionnaire were distributed to social science faculty students of Madonna University Nigeria Okija campus with a 100% return rate. The study used simple descriptive statistics as statistical measure for data analysis.

**Findings:** The research findings revealed that there are inadequate facilities in their various departmental computer laboratories; Undergraduate students used the internet once in a while; most undergraduate student preferred utilizing the internet for research purpose, seminar purpose amongst others; The constraints includes not being taught on the use and access to internet, lack of computer, poor internet network amongst others. It also identified the provision of computers in various computer laboratories, availability of internet connectivity, free internet browsing amongst others as better ways to ensure potential use of internet amongst the students.

**Implication:** Suggested solutions to challenges in the use of Information Communication Technology (ICT) for academic purposes among undergraduates in the University, includes lack of adequate internet connectivity and ICT facilities in the departmental laboratories, amongst others.

**Originality/Value:** It was recommended that a pool of computer systems and laptops should be provided in the various departmental computer laboratories by the university authorities with a defined schedule on when students can access the internet to browse, as obtained at the universities in the developed world and sufficient ICT training programmes be given to all first year students as a course of study, amongst others.

**Keywords:** Internet, ICT, Librarians, Undergraduate Students, Academics.

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## Introduction

The onset of Information Communication Technology (ICT) has improved all the inclusive open arms to information service delivery worldwide. The growth on internet usage has been tremendous, since its inception. The internet is used for various reasons which include social entertainment and educational purposes. Its

continuous growth has imposed a question on the extent to which it is used for academic purposes. (Miniwattsmarketinggroup, 2012) world statistics shows that internet users in Africa have increased by 94% between 2010 and 2012, which is an immense growth. Such a high increase shows a massive interest usage rate. Information Communication tools such as the internet, electronic mails, online professional blogs and list

serves as well as other emerging social networking platforms which are being increasingly utilized by students and staff in Nigeria because it enables them to have access to timely, accurate and relevant materials. Amichai-Hamburger and Hayat (2010), posit that internet is the creation of a continuous stream of computers linked to form one grid, which enables interactions among hundreds of millions of people browsing the net. Internet services are major information communication technology tool which seems to be the life wire of any organizations or institutions. Park, (2009) stated that the internet has functions especially in education and these can be listed as them easily and on time. The internet is the latest tool for learning recent news all around the world as well as getting any kind of information that serves different purposes such as learning more information about a hobby, or health etc. through a unique help of the Librarians, whom already acquired, processed, organized, even evaluated and made these information readily available and accessible to its library users.

Globally, there are notable changes in the information science. These changes are impacting on the ability of libraries to remain veritable sources of information. Development in information communication technologies have changed the way information is generated, stored and disseminated. Use of computers and other technologies requires significant funding which are beyond the budget of most libraries and some departments. Information being the foundation of Social, Economic and National development in this information age has changed the pace with which it is needed to be acquired and this gave rise to the need for effective and efficient use of information technological gadgets for an all-round and updated activities of librarians and students in the acquisition and use of its resources. This technologies are impacting on library services, on information delivery by Librarians as well as in teaching and learning as they can create opportunities for greater user satisfaction. In Nigeria, most universities and their Academic Libraries are yet to fully harness these technologies for better Information service delivery as well as in teaching and learning. Lack of funds is at the root of these problems. The importance of information and use of ICT is seen in the classification given to nations where

storehouse of information, without boundaries, online interactive learning, electronic/online research, innovation in the new world, improves interest in learning global education and information catalogues. As the internet has many different functions, it is important to consider its extent of use by undergraduate students in the universities for academic purposes. According to Aquil and Ahmad (2011), the internet places information on our finger tips and it is everywhere, knocking at our door, making our life easy and smooth. This widens the world of libraries or any kind of real life resources, hence it can access these places online and benefit from developed nations are referred to as 'Information rich' and developing Nations as 'Information poor'. Since ICT is now seen as foundation for development, Nations, Universities, Libraries and Individuals needs to invest in acquiring this developmental resource.

### **Objectives of the Study**

The objectives of this study was to:

1. Find out the availability of internet facilities in the various departmental computer laboratories.
2. Ascertain how often students access the internet for educational materials.
3. Find out the extent of utilization of internet materials through the information technology resources.
4. Examine the constraints in establishing use of internet resources for educational purposes.
5. Find out ways of ensuring better use of internet in the university system.

### **Literature Review**

#### **Internet**

According to the Middle-belt Journal of Library and Information Science, (2016), the internet, sometimes called "the Net", is a worldwide system of computer networks, a network of networks in which users at any one computer can get information from any other computer if given the permission (and sometimes talk directly to users at other computers). In view of this, to connect to the internet via a range of device, desktop and laptop computers, mobile phones and tablets are the most commonly used devices. However, in order for any device to actually get connected online, requires signing up for a specialized service for

accessing the internet. The internet access services are generally of two types: The internet fixed to a specific location and provided by internet service providers and Mobile phone networks.

People use one or the other (or both) types of internet access depending on the device they are using, their immediate environment and budgets. Majid, Amineh, Mostafa and Zoreh (2011) conducted a study on the impact of internet usage on increasing students' skills and its effects on their scientific success and on improving their social relations, using Survey Method on Sample and Sampling Random Size (SSRS) questionnaire. The results showed there are strong correlations between two aspects of social skills and abilities among students to bring success in the social and educational relationships, the Internet emerges as the educational tool by being a good source of getting right information and solution to problems in an academic environment. In support to that, Awoleye, Siyanbo and Oladipo (2008), core research findings have been traced to the universities and application of these innovations has resulted in tremendous gains to country's economy. No wonder, a number a universities in Nigeria are now making emphatic moves to improve on their information and communication policies.

The concept of utilizing the internet services and access, according to Wikipedia (2007), is that the process enables individuals and organizations to connect using computer terminals, computer networks. Once connected to the internet, users can access internet service such as E-mail and World Wide Web (www). Internet Service Providers (ISPs) offer internet access through various technologies that offer a wide range of data signaling rates (speeds). Jones (2003), stated that the services derived from the internet are many and may not be exhausted. These include: File sharing and topic searching, Education or E-learning, Virtual Libraries (V.Libs), Technology and Communications, Archival Information Storage, Chatting, Electronic Mail (e-mail), Surfing the Internet, Entertainment, Electronic Commerce, Blog amongst others.

Common search engines for sourcing Information among undergraduate students in the University includes: Google.com, Wikipedia.com, Yahoo.com, Ask.com, You-tube.com etc.

## **Information and Communication Technology (ICT)**

In the drive of higher educational institutions to promote the use of information and communication technology (ICT), the role of the internet cannot be over-emphasized as it makes possible for lecturers, researchers, students etc., to have access to information resources from any part of the globe. According to Ezekwe and Muokebe (2012), Information Technology is sometimes interchangeable with Information Communication Technology. It is "the study, design, development, implementation, support or management of computer based information systems, particularly software applications and computer hardware. "It explains that the information technology also deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and securely retrieve information.

According to Ezeji (2006) Information Technology is defined as one of the most important breakthrough in the history of information and communication. It is the result of years of relentless efforts to researchers and scientists to reduce the problems encountered by business organizations, governments, educational institutions and many more as they try to communicate with others. Information Technology is a computer based system which provides data processing capability and information which are used by organization for decision making and by Librarians in Information Service Delivery. The library and information science professionals are utilizing ICT to keep pace with the problem of information explosion because ICT, facilitates the process of identification, collection, storing, processing and disseminating of information (Rahman A., Uddin H. & Akhter R. 2004).

## **Internet Access and Services by the Undergraduate Students for Educational purposes**

Salako and Tiamiyu (2007), stated that the internet is acknowledged globally as a technology dominated by young people and particularly students who are more inclined to exploit internet resources for education, social interaction and entertainment. Librarians and information professionals contribute to the Internet community by making library catalogs and local databases available on the network; creating Gopher sites

that offer logical, well organized, menu-driven access to services and resources on the Internet; and establishing World Wide Web servers that provide graphical user interfaces for browsing the resources of the Internet (Abdoulaye, 2000). Students in higher educations of learning should take advantage of information available on the internet which has been processed and made available by the library, in their course work. The internet is playing an important role in transforming the library system and the way in which we view the library resources and the library services, it provides links to various library sites, specializing in almost every topic and they can be accessed directly from any parts of the world. The internet in its uniqueness has impacted positively in library services, processes and products by enabling librarians and information professionals in designing and maintaining libraries' web page/website leading to increase in library efficiency (Singh, 2001). The integration of the Internet has affected all functions of the library, particularly reference services, this integration has led to the utilization of new tools and methods for providing information to students and other library users. Hence, it is desirable, for students to strike a balance in the time spent online for academic and non-academic purposes. Ikoro (2002) in Anuobi (2006), pointed out that staff and students in academic community enjoy internet as a result of the facilities it offers such as e-mail, audio broadcasting, telex/video conference, World Wide Web browsing, telephone, news and discussion/chat group facilities, e-books storing etc. Internet as affirmed by Awoleye, Siyanbola and Oladapo (2008) is used for information development, enhances easy communication, improves academic performance, used as a researched tool, provides solution to assignment, gives information on entertainment and education, and a source of scholarship.

#### **Use of Internet materials through the Information Communication Technology Resources:**

Bashir (2008), posits that the internet use has become a way of life in higher education, institutes and department students use internet around the world. Most universities have brought the development and implementations of new and innovative teaching strategies in higher education institutions. Adomi (2008), pointed out that, the

internet has profound implications for African countries such as Nigeria as it has potential to positively impact on the social, political, educational, technological and other spheres of lives of its people. The speedy development of internet in recent years became so dominant in human life, internet also increasingly boast the use of technology in education and it brings a new advent of technology, and such information can be obtained easily with just one click of a mouse. Undeniably, the use of internet has grown rapidly, country's educational system especially up to the tertiary level. Mishra (2009), studied the use of internet at the University of Maiduguri, Nigeria, the findings showed that internet was very important for 60.8% of the respondents, with 71.5% using the internet for research; 71.5% mentioned Google as their preferred search engine and concluded that necessary facilities should be put in place for faculty and students to make optimal use of information resources available on the internet..

Muniandy, (2010), informed that the growth of the use of internet and increase in the variety of information disseminated via the World Wide Web (www) has implications for how it is used in education. In this context, development of internet would be meaningless if it is not used appropriately in education. It is already known that students are among the avid users of information from the internet. However, it is also important to investigate to what extent students especially undergraduate students use the internet for academic purposes. There are so many students can do with the internet. Not only can they communicate with international students, they can gain from other's knowledge and experience, participate in chat-rooms, share ideas and solutions and learn about many diverse cultures out there.

#### **Constraints in Establishing Use of Internet Resources for Educational Purposes in the University**

The challenges of internet resources are those things that affect the resources of the internet or those things that makes information on the internet inaccessible. Researches have been carried out by different scholars on internet, its accessories, its challenges etc. at different points of view. Ezeani and Igwesi (2012), stated that the issue of

insufficient bandwidth is one of the challenges facing the undergraduate students in using internet resources for academic purpose. According to the authors, it was frustrating and most university only go for higher bandwidth during accreditation time. Ezeji (2008), also pointed out that the major challenge that affects undergraduate students in the use of internet resources is inadequate power supply. For instance, one may be in the middle of an important work and suddenly there is power outage which results in wasted efforts, time and frustration may set in. Lack of information technology to effectively utilize the services is another challenges facing the undergraduate students in accessing the internet for academic purpose.

Lack of training of staff in the use of computer and associated technologies was identified by (Opeke & Onuorah, 2013). In their study stated the challenge hinders effective delivery through the use of internet resources in libraries. Most library staff lacks skills that are required to adopt social networking tools for effective services. It is important to train libraries to manipulate the technologies that those tools are housed in the library.

**Ways of Ensuring Better Use of Internet Resource in the University System.**

There are many things to be done in order to ensure better use of internet resources in the university system. The challenges in the use of internet resources by the undergraduate students in the university can be resolved through the provision of quality and adequate internet resources equipped with the necessary ICT facilities by its institution.

Olatokunbo and Asine (2011), finds versatility in the use of electronic information sources has a greater influence in the students’ use of internet

resources for academic purpose. The students are also of the opinion that the university should provide access to computer terminal and by this way; the cost of access to services can be made affordable. Ibinaiye (2012), posits that the library management should provide effective solution to the problems faced in the internet resources which he mentioned that more equipment such as computers, soft wares, CD-ROMs, modem, UPS (to sustain the power failure), etc. should be purchased and also training of software management, maintenance of server and the D-space data management. Concurring to this statement, Lippincott (2018) further stated the need for libraries to find ways to make their information access systems more approachable by students, integrate guides to quality resources into course pages, and find ways to increase their presence in general Web search engines. Newly emerging services such as Google Scholar are providing access to more library resources in the general Internet environment. This will help the students to retrieve relevant information more easily also, the students should be given more education on the use of internet resources.

**Methodology**

The study adopted the survey research design. The population of the study comprises of social science faculty students of Madonna University Nigeria Okija campus, and One Thousand Five Hundred and Thirty Seven (1,537) students made up the entire population while a desired sample size of 200 respondents which represents approximately 13% of the target population were used as the sample size. The main research instrument used for the study was a structured questionnaire and data were analyzed using simple descriptive statistics.

**Results and Discussion**

**TABLE 1:** Sample Distribution of Respondents by departments

S/N	Items	Frequency	Percentage
1.	Mass Communication	58	29
2.	Library and Information Science	19	9.5
3.	Sociology	10	5
4.	Public Administration	25	12.5
5.	Psychology	13	6.5
6.	Political Science	22	11
7.	Economics	26	13
8.	Philosophy	7	3.5
9.	International Relation Studies	20	10

<b>TOTAL</b>	<b>200</b>	<b>100</b>
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Source: Field survey, 2017

From the table 1, 58(29%) respondents are students in Mass Communication department, 19(9.5%) respondents are in Library and Information Science department, 10(5%) respondents are in Sociology department, 25(12.5%) respondents are in Public Administration department, 13(6.5%) respondents are students in Psychology department, 22(11%) respondents are students in Political Science department, 26(13%) respondents are in Economics department, 7(3.5%) respondents are students in Philosophy department, 20(10%) respondents are in International Relation Studies department.

with (35%) of the respondents admitting to availability of computers against (65%) respondents, laptops (22.5%) against (77.5%) respondents, computer servers (10%) against (90%) respondents, web browsers (15%) against (85%) respondents, modems (7%) against (93%) respondents and printers (10.5%) against (89.5%) respondents. The result obtained, reflected the statement of Kamba (2008) that researchers and students in Nigeria higher education institutions are battling with the problem of inadequate facilities and out of data material. The only way to pursue knowledge is through research and the internet have a profound benefit on quick access to information.

From the table 2, it shows that most departments are not adequately equipped with internet facilities

**Table 2:** What are the available internet facilities in your departmental computer laboratory?

S/N	Items	Frequency	Available %	Not Available %
10.	Computers internet enabled	200	35	65
11.	Laptops internet enabled	200	22.5	77.5
12.	Computer servers	200	10	90
13.	Web browsers	200	15	85
14.	Modems	200	7	93
15.	Printers	200	10.5	89.5

Survey: Field Survey, 2017

**Table 3:** How often do the undergraduate students access the internet for educational materials?

S/N	Items	Frequency	Percentage
16.	Daily	49	24.5
17.	Weekly	37	18.5
18.	Once in a while	74	37
19.	Don't know	40	20
	<b>TOTAL</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2017

From the table 3, responses shows that the students makes use of this facilities for educational materials for at least once in a while with the higher responses of 74 (37%) and some daily with high responses of 49(24.5%) respondents accessing the internet Daily, 37(18.5%) respondents access the internet weekly, whereas 40(20%) respondents do not know how often they access the internet for educational materials. The above result reveals that there is not up to 90% use of this facilities by the students for educational material, although most affirms to be making use

of the facility, there is need for a 99% use by the students. As in line with Momani, (2006), which revealed in his study on “the nature, extent and level of satisfaction with the use of internet by faculty of applied science and technology, that “lack of access” is one of the main challenges confronting internet use in the university. In view of this, much of the use of internet for educational materials should consider a routine exercise and make provision for frequently access to the facilities.

**Table 4:** In what activities is your utilization of internet resource preferred through information communication technology?

S/N	Items	Frequency	Preferred %	Not preferred %
20.	Research purpose	200	87.5	12.5
21.	Seminar purpose	200	75	25
22.	Article publishing	200	85	15
23.	Assignment purpose	200	87.5	12.5
24.	Examination purpose	200	95	5
25.	Online chat	200	15	85
26.	Leisure chat	200	12	88

Source: Field Survey, 2017

From the table 4, the result shows that information communication technological facilities is most preferred and utilized for research purpose (87.5%), seminar purpose (75%), article publishing (85%), assignment purpose (87.5%) and examination purpose (95%) and this is shown by large proportion of respondents that endorsed these activities as preferable. Only online chat (15%) and leisure chat (12%) were among the list preference by the undergraduate students of the

social science faculty. This finding could be connected with Salako and Tihamiyu (2007), which stated that the internet is acknowledged globally as a technology dominated by young people and particularly students who are more inclined to exploit internet resources for education, social interaction and entertainment. This conveys the fact that there exists a significant relationship between student’s usage to internet and their academic purpose.

**Table 5:** What are the major constraints in establishing use of internet for educational purposes?

S/N	Items	Frequency	Yes %	No%
27.	I have not been taught on how to use the computer to access information in the internet	200	91	9
28.	Lack of computer internet enablement in the departmental computer laboratory	200	83	17
29.	Poor internet network	200	85.5	14.5
30.	Limited access to computer in the departmental computer laboratory	200	85	15
31.	Inadequate power supply	200	90	10
32.	Lecturers don’t engage you	200	95	5
33.	I am not computer literate	200	83.5	16.5

Source: Field survey, 2017

From the responses in the table 5, the result shows that lack of training on the use of internet (91%), lack of internet connection in the departmental computer laboratories (83%), poor internet connection (85.5%), inadequate power supply (90%), lecturers don’t engage them (95%) and lack of computer literacy (83.5) in this order are

the major constraints in establishing use of the internet for educational purpose among the undergraduate students. Adegboro (2010) & Raknuzzaman (2006) concurred that these factors constitute major constraints in establishing use of internet for academic purpose by the undergraduate students.

**Table 6:** What are the ways to ensure better use of internet for academic purpose?

S/N	Items	Frequency	Yes %	No %
34.	Provisions of computers in various departmental computer laboratory	200	95	5
35.	Availability of internet connectivity in the departmental computer laboratory	200	83.5	16.5
36.	Free internet browsing	200	82.5	17.5
37.	Students should be given more education on the use	200	90.5	9.5

	of internet for academic purpose			
38.	Provision of constant power supply	200	85	15
39.	Lecturers can help by given students assignments which they will source answers from the internet	200	87	13
40.	Parents should provide laptops for their wards in the higher institution	200	69	31

Source: Field Survey, 2017

From the table 6, the result shows that the respondents rated provisions of computers in various departmental computer laboratories (95%), availability of internet connectivity in the departmental computer laboratory (83.5%), free internet browsing (82.5%), student's training on the use of internet (90.5%), provision of constant power supply (85%), lecturers assistance by giving assignments, answers can only to be sourced from the internet (89%) and parents provision of laptops for their wards in the higher institution (69%) as ways to ensure better use of internet for academic purpose while a few respondents (5%, 16.5%, 17.5%, 9.5%, 15%, 13% and 31%) respectively admitted that the above are not the ways to ensure use to internet for academic purpose. This is in accordance with the findings of Nnadi & Victoria (2014) that provision of computers, availability of internet, free internet browsing among others. Hence when applied, it could go a long way in ensuring better use of internet among undergraduate students, thereby, boost the level of teaching and learning among the lecturers and students in the university.

### Conclusion

Based on the analysis, it is appropriate to conclude that, in order to keep pace with development in the present era, computer literacy is a necessity. Acquiring the skills is one thing and access to computer with internet connectivity is another. However, the undergraduate students face a lot of challenges in using the internet for academic purpose such as inadequate power supply, limited access to internet enabled computers in their various departmental computer laboratories, lack of computers amongst others, there is need to ameliorate this situation by tackling the findings judiciously until a complete positive change is attained as well as enhanced learning and research among the students is promoted. ICT literate students are the pride of the nation tomorrow, with the fast changing pace to information technology, Librarians as well as other information

professional needs to work hard in equipping this young minds with competent information literacy skills.

### Recommendations

As a way of effecting Use of Information Communication Technology (ICT) for academic purposes among undergraduates of Madonna university-Nigeria, Anambra state.

1. A pool of computer systems and laptops should be provided in various departmental computer laboratories by the university authorities with a defined schedule on when students can access the internet to browse and trained information personnel (Librarians) to guide the student when met with any difficulties while surfing the net for information as obtained at the universities in the developed world. This will also facilitate online discussion between students and lecturers.
2. Information and Communication training programme should be given to all the first year students as a course of study to educate the students in the use of internet for academic purpose.
3. Libraries should intensify their awareness campaigns concerning the availability of internet resource in the libraries and motivate the students to greater use of internet for their academic purpose.
4. The University management should ensure that adequate resource personnel, funding and training facilities be put in place to enhance skills acquisitions in order to improve the use of internet among the undergraduate students.
5. Government and other stakeholders in the power sector have a crucial role play by pumping money into protecting the nation's pipeline grid and invest heavily in natural gas power plants, to ensure availability of electricity. This will enhance a favorable ground for internet

operators to effectively deliver and satisfactorily too.

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