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6-22-2018

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Bankole, Olubanke Mofoluwaso and Adio, Gboyega, "Pattern of usage of internet among Students of Federal University Oye-Ekiti, Ekiti State, Nigeria" (2018). *Library Philosophy and Practice (e-journal)*. 1887.
<http://digitalcommons.unl.edu/libphilprac/1887>

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Abstract

The internet technology has revolutionized the teaching and learning methods, and appropriate use of the technology is critical for University students. The unprecedented growth of information on internet necessitates the continual evaluation from time to time how students have embraced the technology. Thus, the research explored the pattern of internet usage by students of Federal University Oye-Ekiti, Ekiti State, Nigeria. The research approach adopted for the study was descriptive survey in which a questionnaire was used as the research instrument to collect data from 200 undergraduates selected by stratified random sampling from the four faculties in the university, with a valid response rate of 95%. Findings showed that nearly all respondents used Internet regularly; the main access point being from home/hostels (51.6%), while only 21.1% used the university library, and mobile phones (91.1%) was the main access device. The acquisition of internet use skills was mainly from University training (49%) and by trial and error (45.8%) and the majority of them used the Internet to complete class assignment (78.4%), entertainment(76.3%) and for communication(73.2%). The most used internet services and resources were the social media and search engines, online newspapers and e-books. The respondents that agreed that they filtered their information were 53.2%, while only 28.9% claimed to know how to use the Boolean logic operators. The respondents agreed that internet use has been of immense benefits to their academic pursuit even though, only 36% respondents were satisfied to some extent with the Internet service provided by the university. The major constraints faced in using the internet were slow internet speed, difficulty in finding relevant information and lack of skills of information retrieval methods. To optimize student's internet use, the authorities at FUYOYE should pay more attention to providing enabling environment for the development of appropriate internet infrastructure and strengthen the students' information literacy capacity. The other institutions of learning in Nigeria and elsewhere that have similar situations highlighted in this study could also benefit from the findings to improve their internet provision.

Keywords: internet; user survey; undergraduates; Federal University Oye Ekiti; Nigeria

Introduction

The internet is the electronic communication network that connects computers, its facilities and people across the globe, and is one of the most prominent benefits of the huge investment in the development of information infrastructure. It is an electronic ocean of information, a continuous stream of computers linking together to form a grid, with collections of up to date research reports, providing self assessment tool and a source of interactive learning for students and researchers. Hibert and Lopez (2011) defined the internet as a global system of interconnected networks of computers serving billions of users worldwide, a network of networks consisting of millions of private, public, academic, business, and government networks of local to global scope, linked by a wide array of electronic and optical networking technologies. Ciboh (2007) submitted that over time, communication media, in the sequence: printed word, radio and television and motion pictures, and at present, the internet, have served as the major traditional communication systems for sources of valuable information. Adegoke (2009) described the Internet as a virtual space design that contains endless quantity of information and documents such as books, graphs, pictures, video, and musical sounds. Norris (2000) quoted in Sobowale (2015) submits that the Internet has the capability of been a “leveler” that could make it possible for moderately developed nations to meet up with industrialized nations. Jackson *et al.* (2011) noted that the internet would also level the education playing field due to its availability to everybody, anywhere, and at all times without any barrier of sociodemographic or geographic restriction.

The internet is very important in students’ academic career as it avails them access to quality-oriented education with current and up-to-date information. It has radically changed the methods of sharing information and knowledge, making knowledge dissemination very easy, quick with minimal cost. Students use internet for academic and other non academic engagements such as communication, entertainment and socializing with friends and family members. Otunla (2013) posited that internet is an inseparable part of students’ life as they use it to read and hear news, watch video, chat, and to post and receive mails. Teong (2016) averred that the internet has transformed and enriched the strategies of acquisition, sharing, and use of information by students within and outside the boundaries of classroom. Ozad and Kutoglu (2010) opined that that the internet is a valuable tool to students as it allows information sharing facilitates cooperation and exchange of information locally and internationally and shortens the time between production and utilization of knowledge. Aririguzoh *et al.* (2016) submits that internet provides unlimited human interactivity and combines the attributes of every other communication media to give sound, pictures, text and data. The students of tertiary institutions in Nigeria now do their registration for courses and checking of results online. Indeed, the

registration and checking of results for the entrance examination into Nigerian universities being handled by the Joint Admission and Matriculation Board is done online. Sobowale et al.(2015) posited that the internet is a veritable instrument in the hands of teachers and their students and it has advanced the frontiers of knowledge in unimaginable ways about two decades ago. Most employers of labour in Nigeria now require university graduates to have excellent internet skills.

Though, several researches in Nigeria have dealt with the use of internet by university students, none of such studies focused on students of Federal University Oye-Ekiti, Ekiti State (FUOYE). The proliferation of internet-based resources calls for continuous assessment of internet use by students in order to ascertain the current scenario. Thus, to address this gap, the present study was done with students of FUOYE as the target. The assessment of Internet use pattern by students would provide useful information to institution's management on the development, management and evaluation of their information technology projects. It could also benefit the university authorities and lecturers in developing the knowledge base to guide students' use of internet. Thus, this study evaluated the pattern of use of Internet amongst students of FUOYE.

Research Objectives

The study is guided by the following specific objectives

To find out the pattern of use of internet among students of FUOYE

To determine the purpose for use of internet among students of FUOYE

To ascertain the extent to which students use the various internet services and resource

To find out the perception of the students about the academic benefit of internet

To identify the constraints inhibiting use of internet by students

Research Questions

Specifically, the study examined the following research questions:

What are the patterns of Internet use by the students of Federal University Oye Ekiti?

For what purpose(s) do the students use internet?

To what extent do the students use the information services and resources on the internet?

Do the students perceive the internet to be of benefit to them academically?

What are the constraints that undergraduates of FUOYE face in using the internet?

Profile of Federal University Oye-Ekiti, Ekiti State, Nigeria (FUOYE)

The Federal University Oye-Ekiti (FUOYE) was one of the nine federal universities established in 2011 by the Nigerian government. The University has two campuses at Oye and Ikole. The Oye campus at the time of the study housed two faculties (Science, and Humanities and Social

Sciences) while the Ikole campus has faculties of Engineering and Agriculture. The University had produced one set of graduates at the time of the study. Library operations commenced at the inception of the University. The users of FUYOYE library comprised of undergraduate students (2,500), academic staff (225), and about 1,000 non teaching staff. There is a Virtual library with internet connectivity through a Broadband facility providing access to students in Science, Humanities and Social Sciences. A browsing center at Ikole campus linked to the University network serves the students in Agriculture and Engineering. Students could access the internet with their laptops and mobile phones in all the buildings on the campuses through the campus wireless hotspots and could also pay to use internet at the business centers around the two campuses.

Literature Review

The internet has become an integral part of the daily lives of people in Nigeria. The Nigerian Communications Commission (NCC) put the number internet users in Nigeria at 91.6 million in June, 2017(Vanguard, 2017). In a bid to facilitate the use of Information and Communications Technology (ICT) by educational institutions, the role of the Internet cannot be over emphasized as it has availed scholars' the benefit of gaining access to electronic information materials globally. Studies have shown that Internet use is more prevalent among young people especially university students who exploit it for diverse uses such as education, entertainment and social interactions. This section presents the review of literature on use of internet by university students in Nigeria as well as from other parts of the world.

Udende and Azeez (2010) investigated the use of internet by students of the University of Ilorin, Nigeria and found that the cybercafé, personal computers and friends' laptops were the access points to the internet. The students mainly used the internet for academic activities, posting and receiving mails and socialisation. The students agreed that the internet has assisted them in solving their academic problems, but the challenges faced include frequent power cut, proficiency in the use of computer and unstable internet network.

Bankole and Babalola (2012) studied the internet usage pattern of Olabisi Onabanjo University, Ago Iwoye undergraduates. The results showed that nearly all (97.6%) of respondents had access to internet, the most frequent sources of Internet access were cybercafés within and outside the university campuses, and internet use skills was through trial and error and teaching by colleagues and friends. Fasae and Aladeniyi (2012) studied the use of Internet

facility by science students in two universities in Nigeria. The findings revealed that 89% of respondents accessed the internet at cybercafés, while only 19% used the university library; 89% used Internet for education and 58% for entertainment; only 19% used internet daily, 44% used it 2 – 3 times a week and 34% used it 2 – 3 times a month. The participants agreed that internet has facilitated their access to timely information, ease research process and improved their competence professionally, but slow access speed was identified as the major inhibitor of internet use.

Otunla (2013) carried out a survey of Internet access and usage by students of Bowen University, Iwo, Nigeria and found that all students used the internet mainly for their academic activities. The access points were the mobile phones and laptops, while none had access through the university library cybercafés and the limitation to internet use were lack of internet connectivity around the campus, slow internet speed and downloading, and frequent shut down of internet services on campus. Wilson and Lawan (2015) assessed the extent of internet access and use by female students at the University of Maiduguri, Nigeria and found that the university computer centre was the main access point with information searches and learning ranking on top of purposes of use, while financial constraints was the major barrier to access and use. Abdulrasheed and Musa (2016) examined the educational use of internet by social and management science students in Adamawa State tertiary institutions and found that access was mainly through mobile devices, with education and entertainment ranking high in purpose of use. The study further established that the search engines mainly used by students were Google, followed by Yahoo and Maama, and the barriers faced in using internet were inadequate skills on information retrieval methods and fluctuating internet service. Ugwulebo and Okoro (2016) studied the influence of use of Internet on academic performance of undergraduates of University of Abuja, Nigeria. The findings revealed that most of the undergraduates have adequate computer skills leading to high level of use, home was the preferred location for internet use, and students used internet to get information for their research and assignments. The favourite search engine was Google while the problems faced in usage was lack of computer skills, slow internet server and costs. The students agreed that internet has made positive influence on their academic performance.

Elsewhere in the world, there are several reports on internet use by university students. Tella (2007) studied the internet use pattern of undergraduates of University of Botswana and the influence on academic performance. The findings show that students used internet mainly to obtain information related to their courses and that the internet had a positive significant impact on respondents' academic performance. Malik and Mahmood (2009) examined the University of

Punjab students web search pattern and found that internet was daily used by over two third(67.5%) of the respondents; education topped the list of purpose of internet use (76.5%), followed by research (72.5%), entertainment(68%) and sports(18.5%). Google (97%) and Yahoo (72%) were the search engines most frequently used by respondents. The factors that constrain the use of internet by students were slow speed, information overload, non relevant information, and poor quality of information retrieved. Balakrishnan (2010), in a study of undergraduates in a Malaysian university found that even though the majority of students used the Internet to find books in the library, 32.6% reported that they never used the Internet to search for books. Students used search engines such as Yahoo and Google to support electronic the university library such as Proquest, university E-Learning resources, university web resources and university library. Brafi and Arthur (2013) studied how students of tertiary institutions in a municipality in Ghana have availed themselves of the potentials of the Internet. The findings showed that the students acquired internet skills through training by their teachers, the main access point being the cybercafé, followed by institutions computer laboratories and mobile internet. The most preferred search engine was Google, and purpose of internet use includes searching information for assignment, communications with friends and for sport news. The barriers to internet use were poor speed of internet, fewer computer laboratories and inadequate internet skills.

Manzoor (2014) studied use pattern of internet among Pakistan university students and found that the internet was mainly used for academic and research; personal computers was the main access device, and internet was daily used by 55%. Internet acquisition use skills were by self teaching and from friends, while the major purposes of use were for communication, entertainment and to prepare for examinations. The study of Tuoray (2013) showed that most students from the University of The Gambia daily used the internet for communication, academic and entertainment, the main access points being the internet café with very few students making use of university internet due to poor infrastructures.

Manhas et al. (2015) examined teachers and students use of internet and electronic resources at Colleges of Physiotherapy, Punjab, India and found that majority of the respondents accessed the internet and electronic resources at homes (78.2%); while the college libraries served as access points to only 19.9% of the respondents, and only 1.9% indicated cybercafé as access point. The major hindrance to internet access and usage were that it was time consuming (34.2%); poor/deficit knowledge of ICT (33.7%), detraction from doing other work (17.4%), and information overload (14.7%). Teong (2016) studied use and addiction to internet among undergraduates of Malaysia and found that the most frequent activity on internet was the use of

facebook/social network with online shopping ranking least. Almarabeh et al. (2016) studied use of Internet, challenges, and attitudes of university students in Jordan and found most students had been using the internet before they entered the university; the main reasons for use were the social websites, chatting and to obtain information; while some of the challenges were slow internet speed connection and the non inclusion of ICT in courses curricula.

The review of literature on the subject under study thus shows that several studies have been conducted on the use of Internet among university students both in Nigeria and other parts of the world but no single report has captured the internet usage pattern by undergraduate students of Federal University Oye-Ekiti, Ekiti State, Nigeria.

Methodology

The research was carried out in the 2015/2016 academic session, among the students of the Federal University Oye-Ekiti, Ekiti State, Nigeria (FUOYE). The structured questionnaire was tagged “Pattern of Use of Internet by Undergraduates” and it was developed from review of literature on related subject. The questionnaire was partitioned into two sections. Section 1 requested for demographic information and Section 2 contained questions on internet access and adoption, frequency and purpose of usage, and challenges. It was administered by the researchers and two trained research assistants. The draft questionnaire was reviewed by two librarians for clarity, structure, and ambiguities. The pilot study was done with 20 students of FUOYE, which were excluded from the final study.

The study was carried out among the four faculties of FUOYE viz Sciences, Humanities and Social Sciences, Engineering, and Agriculture at the time of the study. The stratified random sampling technique was used to select 200 students across the four faculties of the University. The students’ participation in the survey was voluntary and consent was implied by completion of the questionnaire. A total 190 questionnaires were found usable giving a 95% response rate. The data obtained was analyzed using descriptive statistics.

Findings and Discussion

Demographic characteristics

The male respondents were 106 (55.8%) and females 84 (44.2%), and the mean age was 21.6 years, and range was 16 to 28 years. The distribution of the respondents’ faculty showed that

28.4% were in Engineering, 23.7% in Agricultural Sciences, 26.2% in Science and the least from Humanities and Social Sciences (21.7%). Forty seven respondents (24.7%) were in 100 Level, 200 level, 24 (12.6%); 54 (28.4%) were in 300 Level, 400L, 35 (18.4%) while those in 500L were 30 (15.8%).

Internet use experience

The results in Table 1 show that majority of the respondents (64.2%) had internet experience of more than 4 years followed by those with 2 to 4 years internet experience (23.7%), while only 5.8% had Internet experience of less than 1yr. This finding is in consonance with the survey of Fasae and Aladeniyi (2012) which showed that 65% of their respondents had over four years internet use experience.

Table 1. Internet use experience

| Years | Frequency | Percentage |
|--------------|------------------|-------------------|
| 0-1 yrs | 11 | 5.8 |
| 1-2yrs | 12 | 6.3 |
| 2-4yrs | 45 | 23.7 |
| >4yrs | 122 | 64.2 |
| TOTAL | 190 | 100 |

Frequency of Use of Internet

Table 2 shows that a very high proportion of the respondents (83.2%) claimed they used the internet daily, 10.5% used it 2-3 times a week, 4.2% used it monthly and only 2.1% used it fortnightly. The findings show nearly all respondents used the internet regularly if we are to add those that used it daily and 2-3 times a week that constituted 93.5%. The result is in consonance with the findings of Otunla (2013) among Bowen undergraduates that internet is widely used by the students daily. It is also in consonance with the findings of Awoleye *et al.* (2008) that

university students in Nigeria have embraced and are consistently using the internet. Similarly, Almarabeh *et al.* (2016) found that 82% of students of University of Jordan used the internet daily. Aririguzoh *et al.* (2016) found that students of private universities in southwest Nigeria regularly used the internet far more than other media.

Table 2. Frequency of Internet Use

| Frequency | Percentage | Frequency |
|------------------|-------------------|------------------|
| Daily | 158 | 83.2 |
| 2-3times a week | 20 | 10.5 |
| Fortnightly | 4 | 2.1 |
| Monthly | 8 | 4.2 |
| TOTAL | 190 | 100 |

Time spent on internet

Table 3 shows that majority of the respondents (41.6%) spent between 3-4hrs daily on the internet, followed by those that spent 1-2hrs (29.5%), and those spending less than one hour (14.7%). The mean internet use time by the respondents was 2.78 hours per day.

Table 3. Time spent daily on internet

| Frequency | Percentage | Frequency |
|----------------|------------|------------|
| Less than 1 hr | 28 | 14.7 |
| 1-2hrs | 56 | 29.5 |
| 3-4hrs | 79 | 41.6 |
| 5-6hrs | 14 | 7.4 |
| More than 6hrs | 11 | 5.8 |
| No Response | 02 | 1.1 |
| TOTAL | 190 | 100 |

Location of access to internet

The students were asked where they accessed the Internet. From the results in Table 4, the majority of the students accessed the Internet from home/hostels (51.6%), followed by 37.9% who gained access through the campus ICT/computer centres, while less than one third of them (21.1%) accessed it from University Library. Those that accessed internet from cybercafé were just 8.4%.

That home/hostels was the main internet access points is in agreement with the findings of Chhachhar *et al.* (2013) that 65% of university students in Pakistan accessed the internet from homes with only 17% of the respondent using the library to gain access to internet. Also Manhas *et al.* (2015) found that 78% of students of Physiotherapy Colleges of Punjab, India accessed internet at homes, with college library used as access points by only 19.9% of respondents. The previous studies on internet use by Nigerian students had identified the cybercafé as the main access points (Udende and Azeez, 2010; Bankole and Babalola, 2012). Also, Tuoray (2013) and Brafi and Arthur (2013) had pointed out that students of the University of The Gambia and tertiary institutions in Ghana mainly accessed internet through the internet café. The low use of cybercafé in this study could be as a result of the increasing access to internet facilities through other means making it not necessary for students not to visit cybercafé again to use internet. Actually, the cybercafé flourished between 2000 and 2012 in Nigeria, but

most of them have closed shops now because people now have other more convenient, efficient and cheaper alternative to getting internet access.

That university ICT/computer centers were the second major source of internet access, though it was only in use by 37.9% of respondents concurs with the report of Wilson and Lawan (2015) that university computer centre was widely used for internet access by female students of the University of Maiduguri, Nigeria. The level of development of internet infrastructure determines whether or not students utilize university library/computer centre to gain access to internet. That only few students used the library to access Internet is not surprising as an earlier study by Otunla (2013) showed none of the students of Bowen University used the University library for internet access. Fasae and Aladeniyi (2012) had pointed out that the limited internet facilities and services by tertiary institutions of learning in Africa compelled students to find alternatives to gain access to internet outside their institutions.

Table 4. Place of Internet access

| Location | Frequency | Percentage |
|-----------------------------|------------------|-------------------|
| Campus ICT/computer centers | 72 | 37.9 |
| University Library | 40 | 21.1 |
| Home/hostels | 98 | 51.9 |
| Cyber café | 16 | 8.4 |
| Other places | 18 | 9.5 |

Devices used for internet access

Table 5 shows that the overwhelming majority of the respondents (91.1%) used their mobile phones to access internet, distantly followed by those that used the desktop computer (22.1%) and laptop (16.3%) for internet access. This result is in agreement with the findings of Otunla (2013) which found mobile phones and laptops as the main devices used for internet access by undergraduates at Bowen University, Iwo, Osun State, Nigeria. Similarly, Aririguzoh et al. (2016) found that students in private universities in Nigeria accessed the internet mainly with their mobile phones. The mobile media or mobile devices have found its way into the mind of the people and has availed Nigerians the benefit of its use as a convergent media with vast usable potentialities and functionalities. The Nigerian Communication Commission stated that in

2016, 149.8 million Nigerians were using one form of mobile devices (Nigerian Communication Commission, 2016 cited in Daily Post, 2016).

Table 5. Devices used by respondents for internet access

| Location | Frequency | Percentage |
|------------------|------------------|-------------------|
| Desktop computer | 42 | 22.1 |
| Lap top | 31 | 16.3 |
| Mobile phone | 173 | 91.1 |
| I phone/ipad | 15 | 7.9 |

Methods of acquisition of internet use skills

Table 6 shows that the respondents acquired internet skills from multiple sources and nearly half of the students (49.0%) claimed that they acquired Internet skills from University training, 45.8% acquired it on their own through trial and error, 42.6% learnt it through the tutelage of colleagues and friends while 21.1% learnt the use through external courses. These findings show that acquisition of internet skills through trial and error and guidance from friends and colleagues is common among university students, though those that gained knowledge through university training were still in the majority. This is supported by the survey of Kumar and Kaur (2006) where 74.5% of the respondents acquired internet skills through trial and error and 68.3% through colleagues and friends. It is however cheering to find that formal training given to undergraduates was the most prevalent internet acquisition skills and this need to be intensified by the university to avoid students being wrongly guided by their colleagues. That almost half of the respondents (48.95%) acquired internet skill through university training as observed in this study contradicts the findings of Kumar and Kaur (2006) where only 6.9% of the respondents acquire internet skill through training from the college. However, the claim is supported by the report of Brafi and Arthur (2013) which found that students of tertiary institutions in a Ghanaian municipality acquired internet use skills mainly through training by teachers.

Table 6. Methods of acquisition of Internet skills

| Method | Frequency | Percentage |
|---------------|------------------|-------------------|
|---------------|------------------|-------------------|

| | | |
|-------------------------|-----------|-------------|
| Trial and Error | 87 | 45.8 |
| Colleagues and friends | 61 | 32.1 |
| University training | 93 | 49.0 |
| <u>External courses</u> | <u>40</u> | <u>21.1</u> |

Purpose of Internet use

The students were asked for what purpose(s) they used the Internet, and the results show that the respondents used the Internet for diverse purposes as shown in Table 7. Three major tasks that stood out were its use to complete class assignment (78.4%), for entertainment (76.3%) and communication (73.2%). About two third of the respondents (66.8%) used the Internet to update their knowledge while 60.5% used it supplement notes given by lecturers. Others use it to read news/newspapers (58.4%) and for research projects(39.5%). The internet usage for health/nutritional information (14.7%), shopping/purchasing (17.4%), and for online banking (22.1%) ranked lowest.

That majority of the respondents used the Internet for academic work corroborates the findings of Fasae and Aladeniyi (2012) and Otunla (2013) which showed that undergraduates in Nigeria used the internet mainly for educational purposes. Similarly, Malik and Mahmood (2009) found that education ranked first among the purpose of internet use by University of Punjab students while Brafi and Arthur (2013) also showed that students of tertiary institutions in a municipality in Ghana have availed themselves of the potentials of the Internet course related activities.

That the internet is highly used for communication supports the findings of Bankole and Babalola (2012) which found that undergraduates of Olabisi Onabanjo University, Ago Iwoye, Nigeria used the internet mainly for communication. It also corroborates the report of Manzoor (2014) that Pakistan university students used the internet mainly for communication. In the study of Aririguzoh (2016), students viewed the Internet as the most readily available communication medium of communication and 60% of the respondents believed that the Internet is the communication medium that is available to them effortlessly.

The findings that internet is highly used for entertainment disagrees with earlier reports of Otunla (2013) and Bankole and Babalola (2012) that found that entertainment was not one of the major reasons why students used the internet. However, a recent study of Abdulrasheed and

Musa (2017) among students in Nigerian tertiary institutions found entertainment ranking next to education as the major reasons for students' use of internet while the study of Aririguzoh et al. (2016) found that students of private universities in southwest Nigeria used the Internet mainly for entertainment and to gather information for their school work. Chhachhar et al. (2013) also found most of the students in Pakistan used internet for entertainments even ahead of its use for gathering information to complete class assignments. Similarly, Tuoray (2013) had shown that most students from the University of The Gambia daily used the internet for communication, academic and entertainment. That entertainment ranks among the top reasons for use of internet points to the fact that students find time to relax and socialize with other people after strenuous academic work or to overcome daily boredom.

Table 7. Purpose of use of Internet

| Purpose | Frequency | Percentage |
|-------------------------------------|------------------|-------------------|
| Complete class assignments | 149 | 78.4 |
| Entertainment | 145 | 76.3 |
| Communication | 139 | 73.2 |
| Updating knowledge | 127 | 66.8 |
| Supplement notes given by lecturers | 115 | 60.5 |
| Reading news/newspapers | 111 | 58.4 |
| Research projects | 75 | 39.5 |
| Seeking scholarships | 46 | 24.2 |
| Seeking employment opportunities | 43 | 22.6 |
| Online Banking | 42 | 22.1 |
| E-shopping/purchasing | 33 | 17.4 |
| Health /nutritional information | 28 | 14.7 |

Regularity of Use of Internet services

The students were asked to rate their frequency of use of the Internet services. Table 8 shows that the social media sites (mean=4.57) was the most frequently used facility, followed by search engines (mean=4.45), World Wide Web (mean=4.34), email (mean=4.31), online chatting (mean=4.29), and instant messaging (mean=3.82). The findings are consistent with that of Almarabeh *et al* (2016) that the use of social media sites has now become an integral part of students' daily lives. It also supports the finding of Teong (2016) that facebook/social network was the main reasons for use of internet by university students. The students desire to get information to meet their need may have accounted for the high usage of internet search engines and www.

Table 8: Regularity of Use of Internet services

| Services | Daily | Weekly | Monthly | Rarely | Never | Mean |
|----------------------------|------------|-----------|-----------|-----------|-----------|-------------|
| Social media sites | 133(70%) | 42(22.1%) | 8(4.2%) | 5(2.6%) | 2(1.1%) | 4.57 |
| Search engine | 126(66.3%) | 39(20.5%) | 13(6.8%) | 9(4.7%) | 3(1.6%) | 4.45 |
| World wide web | 121(63.7%) | 32(16.8%) | 23(12.1%) | 8(4.2%) | 6(3.2%) | 4.34 |
| Email | 101(53.2%) | 52(27.4%) | 31(16.3%) | 6(3.2%) | 0(0%) | 4.31 |
| Online chatting | 96(50.5%) | 72(37.9%) | 8(4.2%) | 9(4.7%) | 5(2.6%) | 4.29 |
| Instant Messaging | 68(35.8%) | 62(32.6%) | 28(14.7%) | 22(11.6%) | 10(5.3%) | 3.82 |
| Listserv/Discussion | 15(7.9%) | 36(18.9%) | 40(21.1%) | 63(33.2%) | 36(18.9%) | 2.64 |
| File Transfer Protocol | 20(10.5%) | 26(13.7%) | 35(18.4) | 57(30%) | 52(27.4) | 2.50 |
| Remote login | 7(3.7%) | 24(12.6%) | 38(20.0%) | 65(34.2%) | 56(25.5%) | 2.27 |
| Frequently Asked Questions | 8(4.2%) | 15(7.9%) | 28(14.7%) | 96(50.5%) | 43(22.6%) | 2.21 |
| Bulleting Board Service | 0(0%) | 28(14.7%) | 31(16.3%) | 71(37.4%) | 60(31.6%) | 2.14 |
| Archie | 0(0%) | 11(5.8%) | 35(18.4%) | 91(47.9%) | 53(27.9%) | 2.02 |

Use of Internet resources

Respondents were asked to indicate the frequency of use of the listed resources. Table 9 shows that online newspapers was the most used (mean=3.86), followed by electronic books (mean=3.64), electronic journals (mean=2.76) and online databases (mean=2.42). The students rely on online newspapers in updating themselves and keeping abreast of happenings in their environment, and this would have accounted for the high rate of use of online newspapers. As such, the University should ensure supply of adequate printed newspapers in library to complement students' access to online newspapers. Thesis and dissertations stand as the second least consulted of all the resources probably because the University has graduated just one set of students and only 400 and 500 level students included in this survey are on projects.

Table 9: Frequency of Use of Internet resources

| Resources | Daily | Weekly | Monthly | Rarely | Never | Mean |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-------------|
| Online newspapers | 70(36.8%) | 64(33.7%) | 28(14.7%) | 16(8.42%) | 12(6.32%) | 3.86 |
| E-books | 48(25.3%) | 73(38.4%) | 28(14.7%) | 35(18.4%) | 6(3.2%) | 3.64 |
| E-journals | 28(14.7%) | 29(15.3%) | 36(19.0%) | 64(33.7%) | 33(17.4%) | 2.76 |
| Online Databases | 14(7.4%) | 35(18.4%) | 23(12.1%) | 62(32.6%) | 56(29.5%) | 2.42 |
| Conference proceedings | 6(3.2%) | 24(12.6%) | 46(24.2%) | 71(37.4%) | 43(22.6%) | 2.36 |
| Theses and Dissertations | 10(5.3%) | 16(8.4%) | 41(21.6%) | 75(39.5%) | 48(25.3%) | 2.29 |
| Technical reports | 3(1.6%) | 23(12.1%) | 36(18.9%) | 90(48.4%) | 38(18.9%) | 2.27 |

Methods used for finding information from the Internet

The students were asked to indicate the strategies for locating information on the internet. Table 10 shows that most of respondents (72.6%) made use of search engines, while 56.8% typed the web address directly, and only 13.2% browsed with subscription databases. Search engines and the use of web addresses have been found to be the most common methods that students use to find information from the internet. This result agrees with Kumar and Kaur (2006) where majority (83.7%) of the respondents finds information using search engines followed by 39.2% that typed the web address directly. Search engines are often preferred due to their familiarity and ease of use.

Table 10: Method of Internet browsing

| Methods | Frequency | Percentage |
|-------------------------------|------------------|-------------------|
| Use of search engines | 138 | 72.6 |
| Through use of web address | 108 | 56.8 |
| Use of subscription databases | 25 | 13.2 |

Use of Internet search engines

The students most used Internet search engine was Google (88.95%), followed Google Scholar (46.8%), Yahoo (38.4%), Hotbot (12.1%), Lycos (6.8%), and Alta Vista (6.3%) (Table 11). This result is in line with the global ratings (Burns, 2007) that Google ranks as the most popular search engine followed by Yahoo. It also supports the findings of Ndinoshiho (2010) in Namibia and Balakrishnan (2010) in Malaysia which reported that students preferred Google in Namibia and that they increasingly use Google as generalist information retrieval tools for their academics. Abdulrasheed and Musa (2016) also found that Google, Yahoo was the most use search engines and that the respondents were of the view that these search engines are greatly dependable.

Table 11: Students use of Internet search engines

| Search Engine | Frequency | Percentage |
|----------------------|------------------|-------------------|
| Google | 169 | 89.0 |
| Google Scholar | 89 | 46.8 |
| Yahoo | 73 | 38.4 |
| Hotbot | 23 | 12.1 |
| Lycos | 13 | 6.8 |
| Alta Vista | 12 | 6.3 |

Information Filtering

Respondents were asked if they filter their information to get accurate information from the Internet and the results indicated that about half of them (53.2%) filtered their information, 37.9% did not, while 8.9% did not indicate whether they filtered the information or not. When those that indicated that they filtered were asked on the strategies employed, their responses were “with the use of key points of the subject of study, by checking reference and citation page, by reframing the sentence/phrase, by using date, time, locations, and by putting the subject of search in double quotes.

Use of Boolean logic

On the use of Boolean logic when searching for information on the Internet, majority of the students (65.8%) reported that they do not know how to use this search terms, 28.9% reported that they know how to make use of Boolean logic search terms while 5.3% did not indicate whether they have the knowledge of its use or not. This finding is in agreement with the work of Nwokedi and Nwokedi (2017) that 65% of lecturers at University of Jos, Nigeria claimed they never heard of Boolean operators, with 22.4% claiming they rarely used the Boolean operators. That majority of the students had never used the Boolean implies that information is sought from the internet by the use simple queries that often return several hits. The use of technical methods in the advanced search options such as Boolean operators makes searching for information more precise. This shows that the students are not aware that this search engine facility could improve the quality of their search display.

Satisfaction level with FUOYE internet services

The findings in Table 12 shows that only 3.2% of respondents felt fully satisfied with the university internet services and 15.3% said they were “satisfied”. A further 17.9% were ‘fairly satisfied’, while those that were ‘dissatisfied’ constituted 59.5%. If we pool together the number of those that were fully satisfied, satisfied and fairly satisfied, then 69 (36.3%) could be said to be satisfied to varying degrees with the internet services provided by FUOYE. The findings thus shows that majority of the respondents were not satisfied with the internet services of their university.

Table 12: Level of satisfaction with University Internet provision

| Satisfaction | Frequency | Percentage |
|---------------------|------------------|-------------------|
| Fully Satisfied | 06 | 3.2 |
| Satisfied | 29 | 15.3 |
| Fairly satisfied | 34 | 17.9 |
| Dissatisfied | 113 | 59.5 |
| No Response | 08 | 4.2 |
| TOTAL | 190 | 100 |

Students perception of the Academic benefits of internet

The students' perceptions of the academic benefits of internet was assessed by asked to indicate their opinions of the role of internet on a list of academic related activities on a four point Likert scale; Strongly Disagree(1), Disagree(2), Agree(3) and Strongly Agree (4) for items 1 to 11. For items 12-15, the reverse coding was used: Strongly agree (1), Agree (2), Disagree (3) and Strongly Disagree (4), since they expressed negative perception.

The result in Table 13 is the summary of the perception of respondents on the importance of internet to their academics. When collapsing the four categories into two i.e. (Strongly agreed and agreed) and (Strongly disagreed and disagreed), the findings indicate that over three quarters of the students had positive perceptions to items 8, 3, 9,7, 1 and 2.

8. "Internet has made easy communication with my colleagues and lecturers" 91.1%
3. "The use of internet is relevant to my academic pursuit" 84.3%
9. "I get my assignments done faster using internet" 78.9%
7. "Internet has availed me access to updated relevant resources globally" 78.4%
1. "It is easier to get academic materials from internet than looking for suitable printed texts" 77.9%
2. "Using internet has enabled me to learn many new things" 77.4%

The results further show that over 75% of the students had positive perception to items 13 and by their disagreement to the following statements:

13. "The use of internet is not as exciting at printed resources" 86.3%
15. "I consider it time wasting and not worth the effort using internet for my study" 86.3%

The perception scores ranged from the minimum of 2.63 ‘‘I am not comfortable using internet for learning’’ to a maximum of 3.37 for ‘‘The use of internet is not as exciting as printed resources’’. The overall mean perception scores on the academic importance of internet was 3.00 out of a total of 4 points.

The inference from the finding is that respondents believed that the internet has a positive influence on their academic pursuit. The findings support that of Oyedun (2007) and Ugwulebo and Okoro (2016) where the students of Federal University of Technology, Minna and University of Abuja, respectively opined that Internet services have enhanced considerably their academic outcome. It also agrees with the report of Tella (2007) that undergraduates of University of Botswana believed that the internet had made a positive significant impact on their academic performance. Udende and Azeez (2010) argued that there exists a significant relationship between students’ usage of the internet and their academic performance. Bodhi and Kaur (2017) in their study of the relationship influence of internet use on academic performance among university students found a significant positive association of use of internet for study purposes and high academic performance

Table 13: Students perception of the academic benefits of internet

| Items | Strongly | | | Strongly | No | Mean |
|---|-----------|-----------|--------------|-----------|----------|------|
| | Agree (%) | Agree (%) | Disagree (%) | Disagree | Response | |
| 1. It is easier to get academic materials from internet than looking for suitable printed texts | 70(36.8) | 768(41.1) | 17(14.2) | 10(5.3) | 5(2.6) | 3.12 |
| 2. Using internet has enabled me to learn many new things | 67(35.3) | 80(42.1) | 24(36.8) | 15(7.9) | 4(2.1) | 3.07 |
| 3. The use of internet is relevant to my academic pursuit | 87(45.8) | 74(38.9) | 21(11.1) | 06(3.2) | 02(1.1) | 3.29 |
| 4. I augment my lecture notes/handouts with materials from the internet | 54(28.4) | 81(42.6) | 39(20.5) | 10(5.3) | 06(3.2) | 2.97 |
| 5. Internet has improved quality of academic work | 72(37.9) | 94(49.5) | 18(9.5) | 03(1.6) | 03(1.6) | 3.26 |
| 6. Internet has availed me access to updated relevant resources globally | 59(31.1) | 69(36.3) | 38(20.0) | 16(8.4) | 08(4.2) | 2.94 |
| 7. It has economised the time spent on looking for academic information | 66(34.7) | 83(43.7) | 23(12.1) | 13(6.8) | 05(2.6) | 3.09 |
| 8. Internet has made easy communication with my colleagues and lecturers | 78(41.1) | 95(50.0) | 10(5.3) | 05(2.6) | 02(1.1) | 3.31 |
| 9. I get my assignments done faster using internet | 86(45.3) | 64(33.7) | 26(13.7) | 12(6.3) | 02(1.1) | 3.19 |
| 10. I am more motivated to learn when internet is used | 48(25.3) | 72(37.9) | 41(21.6) | 25(13.2) | 04(2.1) | 2.77 |
| 11. Internet encourages laziness and fraud in academics | 35(18.4) | 31(16.3) | 67(35.3) | 45(23.7) | 12(6.3) | 2.18 |
| 12. I use internet because I have to not that I like to use it | 24(12.6) | 36(18.9) | 80(42.1) | 47(24.7) | 03(1.6) | 2.80 |
| 13. The use of internet is not as exciting at printed resources | 12(6.3) | 10(5.3) | 62(32.6) | 102(53.7) | 04(2.1) | 3.37 |
| 14. I am not comfortable using internet for learning | 32(16.8) | 41(21.6) | 75(39.5) | 36(18.9) | 06(3.2) | 2.63 |
| 15. I consider it time wasting and not worth the effort using internet for my study | 06(3.2) | 17(8.9) | 123(64.7) | 41(21.6) | 03(1.6) | 3.06 |

Internet Vs library services

The students were asked whether Internet can replace library services and nearly two third of them (65.8%) indicated that library services cannot be replaced with the Internet while only 34.2% of them responded in the affirmative. Those that believed internet could replace library services were asked to state their reasons and the following are some of the reasons given:

Internet access could be anytime without restriction, unlike the library that has restricted opening hours

There are e-books even in PDF that can be downloaded from the internet, it saves time and without stress.

Traditional books in the libraries are being turned to electronic books, and could be accessed online without the need to visit the library.

With subscription to the Internet via the mobile phone, one can easily get needed materials at one's convenience.

The use of the Internet has been embraced by so many people, it is faster and more informative, and it caters for all disciplines

The seating capacity of the University library is grossly inadequate and the Internet has removed the need space barrier.

A student said "we can't get all we need in the library", books that can't be found in the library can be downloaded from the Internet, another one said the Internet is quite robust and unlimited; I get almost everything I need from the internet even materials from international bodies and colleges.

Constraints of Internet use

The constraints of internet use presented in Table 14 shows that the most frequent barrier that inhibited internet use was "slow access speed" (57.9%), followed by difficulty in finding relevant information (38.9%), lack of skills of information retrieval methods (36.3%) and limited institutional internet facilities (31.1%), and only 17.9% of the respondents declared the overload of information on the Internet as a barrier to Internet use. The "slow access speed" identified as a leading problem in this study agrees with other previous studies of Abdurashed

and Musa (2016) and Ugwulebo and Okoro (2016) which found majority of students in Adamawa State tertiary institutions and University of Abuja, respectively identifying slow access speed as one of the major barriers to internet use. That lack of skills is a major barrier is a pointer to the fact that the students have not been taking full advantages of the benefits of internet information due to inadequate knowledge of its use. This implies that there is still room for them to learn more in spite of the skills and the training that they have undergone on usage of internet

Table 14: Constraints of Internet use

| Constraints | Frequency | Percentage |
|---|------------------|-------------------|
| Slow access speed | 110 | 57.9 |
| Difficulty in locating relevant information | 74 | 38.9 |
| Information overload | 34 | 17.9 |
| Lack of skills of information retrieval methods | 69 | 36.3 |
| Privacy concern | 45 | 23.7 |
| Insufficient technical support | 35 | 18.4 |
| Limited institutional internet facilities | 59 | 31.1 |
| Authenticity /quality of information | 45 | 23.7 |
| High cost of Internet usage | 46 | 24.2 |

Strategies for improvement of internet services by FUOYE

The open ended question on ways by which FUOYE could improve upon its internet services provision elicited several responses, with the prominent ones listed in Table 15. Fifty four respondents (28.4%) said the university should upgrade the internet access speed and strength. Secondly, 20.5% respondents said more computer systems with internet connections should be

provided by the university and 15.5% mentioned that there should be continuous lectures on computer programming.

Table 15. Suggestions on strategies that FUYOYE could use to improve on its internet services

| Suggestions | Frequency | Percentage |
|--|------------------|-------------------|
| Continuous training and lectures on computer programming | | |
| Internet use for academics | 36 | 18.9 |
| Upgrading the internet access speed and strength | 54 | 28.4 |
| More computers systems with internet connections | 39 | 20.5 |
| Departments should have internet facilities for students use | 14 | 7.4 |
| ICT studies in GES should include practical | 12 | 6.3 |
| University hostels should have internet facilities | 10 | 5.3 |
| FUYOYE social network sites to publicize | | |
| electronic resources in its digital libraries | 12 | 6.3 |
| IT experts to help students in the libraries and the | | |
| ICT department | 16 | 8.4 |

Conclusion and Recommendations

The Internet avails students a sea of information on every specialty, and its use as viable information and communication channel now surpasses that of any other form of media among the academic community. The study has shed light on the pattern of use of internet by undergraduates of Federal University Oye Ekiti, Nigeria which shows that almost every students regularly used the internet, with many of them having over four years internet use experience. It revealed that internet access was mainly from home/hostels, and only few students accessed

internet through university library; mobile phones were the main access device, and the most used search engine was Google. The students used internet mainly for education, communication and for entertainment. The students derive benefits from the use of internet for academics which include easy communication with colleagues and lecturers, getting assignment done faster, access to updated relevant resources globally and getting academic materials easily. The students faced some constraints in use of internet which include slow internet access speed”, difficulty in finding relevant information, lack of skills of information retrieval methods and limited institutional internet facilities. The respondents suggested strategies to improve the university internet services include upgrading of the internet access speed and strengthen, provision of more computers with internet connections, continuous training and lectures on computer programming. The provision of efficient internet facilities on campus will resolve some of the inhibiting factors to internet use pointed out by the respondents and make it possible for students to have better access and optimise their use of the internet.

Based on the findings, the following recommendations are being put forward:

The University management should do more to upgrade the Internet infrastructure so as to improve on the internet services for the students as the study found that 36.4% of respondents expressed satisfaction to some degrees on the university Internet services, and slow access speed was the major constraints to internet use identified by the students. The university should also put up suitable policy and take necessary steps to increase access points and make it possible for students to have internet access points in faculties and departments.

The university should adopt measures that would make the students more familiar with educational use of internet. The students should be well trained to possess skills needed for optimal use of internet to enhance their learning. The teaching of ICT which is mandatory for all students should not only be theoretical but be backed up by computer-based learning packages with practical examples. A formal information literacy programme should be put in place for the impartation of skills needed to optimize the academic benefits of internet. Part of this could involve the library organizing training on regular basis for students on the educational use of internet to acquaint them with the importance of using the library internet services to get academic materials.

To make the internet more relevant to students, the librarians with their expertise in collection, and information retrieval should assist students in getting needed information. This could be

achived by ensuring that information on their web sites are organized in such a fashion that would make it easy for users to find the right information for their academic activities. The university should make arrangements to train students through lectures, seminars, workshops on effective use of search engines as this study has shown that students predominantly use only Google and Yahoo. The library should also train students on strategies for getting quality academic information from the internet such as the use of Boolean logic operator which more than half of the students claimed ignorance of. A convenient point to train students is in the teaching of General studies to all 100 level students in the university which is being handled by librarians.

The library should from time to time carry out need assessment among students and other members of the university community to guide its collection development with regards to electronic resources as this would lead to students taking more interest if what they find in the digital library is what will satisfy their information needs.

The lecturers should encourage academic use of internet through interactions with students using internet platforms by posting lecture, notes and assignments.

The University should subscribe to more electronic resources and databases in its virtual library and create awareness of the existence of the facilities to attract students' patronage. The library could use the notice boards, university bulletins, newsletters, display media, emails and social media platforms to inform students regularly on the materials particularly the electronic resources in its virtual library.

Librarians and other staff staff in the information and communication technology unit should be made to undergo refresher courses on a regular basis and sponsored to attend national and interntational seminars and workshops to acquaint them with developments in the application of internet in the academic environment.

Acknowledgements

The authors appreciate all the Federal University Oye Ekiti students that participated in this study

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