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Research Article

Access and Use of the Internet Among Degree Students of Federal College of Education (Special), Oyo (University of Ibadan Affiliated) Oyo State, Nigeria

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Abstract

Globally, the Internet over the past few years has turned out to be a very important tool for teaching, learning and research activities in high institutions. It is a very useful tool for academic and educational mandates, hence, this paper investigated access and use of the Internet among degree students of Federal College of Education (Special), Oyo (University of Ibadan affiliated) Oyo State, Nigeria. A descriptive survey design was adopted. The population comprised all the degree students (1074) with a sample size conveniently calculated based on 20%. Therefore, the sample size is 215. A structured questionnaire was used for gathering of data. The data collected was analysed using descriptive statistics of frequency counts, percentages, mean and standard deviation. It was established that the Internet was available which was accessed via personal phones and from their personal data. However, some indicated accessing the College Internet. It was also established that the frequency of use of the Internet by the respondents was high with a mean score of 3.23%., while majority indicated a daily use of the Internet 129 (63.5%). It was indicated that the Internet was majorly used for assignment. Other purposes include, chatting with friends and family, online banking, online marketing and for downloading and watching movies. The study recommended among others that the library management and college management should intensify their efforts towards making sure that strong Internet facilities are provided in the college premises while empowering the virtual library by installing a very strong Internet connectivity.

Keywords

Access and Use, Internet Resources, Degree Students, Federal College of Education (Special), Oyo, Nigeria

1. Introduction

The Internet is essentially a global network of computing resources which could be regarded as a physical collection of routers and circuits forming a set of shared resources. It is described as a worldwide network of computers communicating through an agreed upon protocol. It provides access to the most diversified sources of information hosted by individuals and various organisations worldwide on a vast network of servers. The Internet is a global network that connects millions of computers and almost all the countries of the world are linked into exchanges of data, news, information and opinions. The Internet links computer networks all over the world so that users can share resources and communicate with one another.

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Society at present is regarded as an information-based economy where information is regarded as a major and potent force of civilization in all facets of life. The evolution of Internet has brought about the emergence of an enhanced society. It is a globally interconnected set of computers through which information could be quickly accessed. As an essential technological tool for individuals, organisations, institutions and society at large, it has significantly impacted every facet of operations. It has transformed the ways individuals communicate, interact, live, work and source for information. Globally, it is a mechanism that enables for a transfer of information to computers and other telecommunication devices hence, has become an invaluable and useful technological tool that supports various educational mandates and activities such as teaching, learning and research. It is very fast and user friendly and could be used via mobile phones, laptops and desk top.

However, the use of the Internet in recent times is at present popular among students of different categories and has revolutionized every facet of educational activities [1]. Students including degree students now use the Internet for their academic mandates giving them the opportunity of working from any location even accessing library information resources quicker and faster. Access and use of the Internet plays a vital role in the teaching, research and learning process in all academic institutions. Similarly, Gada and Sani [2] citing Ifeoma (2010) stated that the use of the Internet plays a major role in helping undergraduate researchers' access large number of information materials from different parts of the world for the fulfilment of their academic and social mandates.

Over the past few decades, the Internet has stood out to become an important technological tool in the production, marketing and use of information worldwide. It has given a new approach to education where students are no longer depending on their lecturers and libraries as the only source of getting the required information to meet their information needs. Internet has a good wide base that allows access to a massive range of research information either as full publications, reports, e- resources or abstracts. The emergence and use of the Internet have made teaching and learning to take place beyond the confines of classrooms. Students and lecturers can work simultaneously without close and physical interaction irrespective of their geographical location making teaching and learning easy. A good number of libraries in high institutions also subscribe to online resources and other academic resources for their students' use to boost the physical collection.

In the same line of thought, Oso and Adesua [3] asserted that the Internet is loaded with data and information which provides students with opportunity to engage in more challenging and life time activities. Students in institutions of higher education widely use the Internet to seek for relevant information and materials to complete their assignments or projects. The importance, value and usefulness of Internet cannot be overemphasised. High institutions in Africa particularly in Nigeria have experienced a shift in terms of educational media. Degree students now use the Internet not only for socials but for writing papers, webinar, projects, assignments, supplement text books, communicating with colleagues on group work and presentations among others.

Hence, the Internet has the capability to provide students quick access to documents, scholarly lists and databases located geographically. However, the access and use of this Internet is greatly dependent on some associated factors such as availability of Internet facilities, services available, purposes, students' experience, and locations among others. Despite the growing number of Internet usage, most students still visit the nearby cafe for browsing and networking, online registrations of a sort, probably due to majority of them have no access to free Internet facilities and services and cannot afford buying Smartphone or data for browsing and downloading academic materials. Fasae and Aladeniyi (2012) as cited by Jubrin, Musa and Shittu [4] therefore, averred that for the developing countries like Nigeria to grow and attain its economic and social status; it must be fully ready to strengthen and empower its educational institutions in all ramifications.

Hence, the students in their respective fields and institutions will need an array of reliable means of accessing and retrieving information without stress. Many studies have been carried out on the Internet access and use by students in different institutions in Nigeria. However, no study has been conducted on Federal College of Education (Special), Oyo, Nigeria degree students. It is based on this premise that this study will examine the Internet access and use among degree students of FCE (Special), Oyo.

1.1. Statement of the Problem

Empirical studies have shown that students of tertiary institutions in Nigeria employ the Internet in educational matters such as writing papers, for course related reading and research needs, communicating with classmates on homework. Previous studies and personal observations have also revealed that the Internet has been a very important instrument for facilitating academic activities in tertiary institutions and various studies have found that Internet use could have positive benefits on educational achievement of degree students.

It is established in the literature that the level of students' access to the Internet was low, and the major reason has been inadequate facilities, low bandwidth and no access to the internet. It was also affirmed that the students who had access to the Internet were not using it effectively and efficiently as expected. It is being used mainly for communications with friends and relatives more than for academic purposes due to lack of skills required for effective use of the internet. Therefore, it is against this backdrop that this study will examine access and use of the Internet among degree students of Federal College of Education (Special), (University of Ibadan Affiliated) Oyo, Oyo State, Nigeria.

1.2. Objectives of the Study

The specific objectives are to:

1) Find out the availability of the Internet in FCE (Sp), Oyo;
2) Find out where the Internet is being accessed by the degree students;
3) Ascertain the frequency of use of the Internet among degree students;
4) Determine the purpose of use of the Internet by the degree students;
5) Ascertain the time spent on the use of Internet by the degree students;
6) Find out the degree students' perception of the use of the Internet;
7) Identify the challenges to the access and use of the Internet by the degree students.

1.3. Research Questions

1) Is Internet facility available for use by the degree students?
2) Is the Internet being accessed by the degree students?
3) What is the frequency of use of the Internet among degree students?
4) What are the purposes of use of the Internet by the degree students?
5) What is the amount of time spent on the use of Internet by the degree students?
6) What is the degree students' perception on the use of the Internet?
7) What are the challenges to the access and use of the Internet by the degree students?

2. Review of Literature

2.1. Brief History of FCE (Special), Oyo

Federal College of Education (Special), Oyo started on 5th October, 1977 as the Federal Advanced Teachers College of Special Education. Later, it became Federal College of Education (Special), Oyo. This was as a culmination of years of planning which was around October 1974 when the then head of state declared the government's intention to establish a national Special Education Teachers' College. Thus, by the decree of 4 of 1996, amended by decree 6 of 1993, the college alongside with other colleges of education in Nigeria became an autonomous institution. Federal College of Education (Special), Oyo is the only established college of education to train teachers and other Para-professionals in special education for the disable, gifted and other persons with different learning disabilities.

The academic programmes of the college are localised among the Eight existing schools which include: Special Education, Education, Art and Social Sciences, Sciences, Languages, Vocational and Technical Education, and Early Childhood, Primary and Adult Education and General Studies. The college produced its first set of Nigeria Certificate in Education (N.C.E) graduates in June 1980 and ever since then; several other sets have graduated including foreign students. The college operates an administration policy that takes the entire nation as the catchment area. Initially, University of Ibadan was the moderating and awarding institution for the college N.C.E certificates. However, from 1993/94 academic session, the college started awarding the National Commission for Colleges of Education (NCCE) certificate.

The college is very unique because it is the only one of its kind in Nigeria and Sub-Saharan African that caters for the training of special education teachers for all the states and country. Some of the visions and missions of the college include: to train and produce a highly professional and technically skilled manpower for special needs education at primary and secondary levels of education; to undertake thorough research into the peculiar needs of the gifted and talented in the Nigerian society and forward the information for the development and improvement of their educational services as well as fostering of their talents; to produce highly professionals, competent and committed teachers for special education at primary, and secondary level to produce a body of young professionals ingrained with attitudes, values and interests compatible with the social and economic circumstances around persons with special needs.

However, consequent upon the approval of the National University Commission, the college started a degree programme in 2012/2013 academic session. The college also runs part-time and sandwich programmes to carter for students who find it difficult to run full-time programme. The college has well equipped library to carter for the information needs of the users.

2.2. History of the Internet

The Internet's inception dates back to the 1960s, when the Department of Defense in the US government was working on a project to establish a decentralized network. ARPANET (Advanced Research Projects Agency Network) was the name of this project. The Advanced Research Projects Agency (ARPA), which is now the Defense Advanced Research Projects Agency (DARPA), created the ARPANET network to enable simple communication and rapid access to information and programs from any location in the world. The Soviet Union's Sputnik satellite launch prompted the U.S. Defense Department to think about how information could be shared even in the event of a nuclear strike. This finally resulted in the creation of the ARPANET, which was first created for military and defense purposes due to the Cold War.

Eventually, the network grew into what is now known as the Internet. Although ARPANET was a huge success, only specific academic and research institutions with contracts with the Defense Department at the time were allowed to join. As a result, by the end of 1969, the University of California at Los Angeles, Stanford Research Institute, University of California at Santa Barbara, and University of Utah had four interconnected nodes. So, by the end of 1971, the number of nodes had

increased to 15 and email was invented. In 1974, a commercial version of ARPANET called Telnet was released and Because Its Time NETwork - BITNET was created in 1981 [5].

In order to make the network more global, a new sophisticated and standard protocol was needed. They developed IP (Internet Protocol) technology which defined how electronic messages were packaged, addressed, and sent over the network. However, the various computer networks did not have a standard way to communicate with each other. A new communications protocol was established in 1974 called Transfer Control Protocol/Internetwork Protocol (TCP/IP). TCP/IP allowed users to link various branches of other complex networks directly to the ARPANET. It also allowed different kinds of computers on different networks to "talk" to each other. ARPANET and the Defense Data Network officially changed to the TCP/IP standard on January 1, 1983. Thus, January 1, 1983 was actually considered the official birth of the Internet, the word that signifies the collection of all networks. All networks could now be connected by a universal language. In same 1983, there were 562 nodes on the ARPANET which was later split into 2 parts because it was so large that security was no longer possible. The 1st part was called MILNET for the government laboratories and ARPANET for the others.

After researchers and academics from various disciplines started using the network, the National Science Foundation (NSF) eventually took over much of the TCP/IP technology from ARPANET and established a distributed network of networks that could handle much higher traffic. NSFNet was a similar and parallel network that the NSF had created. NSF started an initiative to provide Internet access nationwide in 1985. They established a backbone known as the NSFNET and welcomed academic researchers, government agencies, international research organizations, and all educational institutions. By the 1990s, the Internet had grown rapidly. The number of computers with Internet connections is thought to be increasing annually.

Another significant network was added in 1991, financed by the U.S. High Performance Computing Act called the National Research and Education Network (NREN). Thus, at present, all indications are in this 21st Century, an equal number of households, firms, organisations, institutions and individuals are connected to the World Wide Web. The Internet has exceeded all expectations and revolutionized the majority of tasks. Instant messaging, email, Voice-Over-Internet-Protocol (VOIP) two-way interactive video chats, and the World Wide Web with its discussion boards, blogs, social networking, and online shopping sites are just a few examples of how it has greatly influenced society and business. Fiber optic networks that operate at 1Gbps, 10Gbps, or greater are used to send ever-increasing volumes of data at ever-increasing rates. Ever-increasing volumes of online knowledge and information, business, entertainment, and social networking are driving the growth of the Internet.

2.3. The Internet

The phrase "network of networks" is occasionally used to describe the Internet. According to [5], it is defined as the globally accessible network of interconnected computer networks that use the standard Internet Protocol (IP) for packet switching to transfer data. In a similar vein, Oso and Adesua [3] view the Internet as a global communication network that connects thousands of computers via a combination of microwave links and private and public phone lines. In order to facilitate communication and resource sharing, the Internet connects computer networks worldwide. Computer networks come in a variety of forms, including Wide Area Networks (WAN), Metropolitan Area Networks (MAN), and Local Area Networks (LAN).

Network devices, such as a networked office building, school, or house, are connected by LAN over a comparatively small distance. It typically has a single LAN, but occasionally a LAN will cover a collection of adjacent buildings, or a single building may have several small LANs (possibly one per room). MAN, on the other hand, is a huge computer network that typically covers a sizable school or town. A MAN frequently serves as a high-speed network to facilitate the sharing of regional resources, usually spanning an area with a diameter of 5 to 50 km. Although a single organization may own and run it, other people and organizations will typically use it.

WAN, on the other hand, spans a wide geographic area, including a nation, continent, or even the entire world. A WAN is a geographically dispersed group of LANs, and like the Internet, the majority of WANs are owned and managed collectively or dispersedly rather than by a single entity. The Internet significantly improves academic requirements and activities. It is a network of computers that are globally connected and allow for easy access and usage of information. The internet has developed into a vital and indispensable resource for research, education, and learning.

According to Onatola (2004) in Adekunmisi, Ajala, and Iyoro [6], the Internet can be considered a technological advancement that advances the idea of a paperless society. It is an extremely high-wave technology and an information highway that is already advancing humanity to the highest level, especially in this era. It has effectively removed barriers to information access, communication, and utilization. Anyone, anywhere in the globe, may access a large amount of knowledge through the Internet. It has few limitations on content, format, or geolocation and is quick, dependable, accessible, interactive, and global in scope.

Additionally, it offers a plethora of features that help users access the nearly limitless amount of information available on the internet. As a result, it provides access to current research findings and information worldwide and has grown to be a crucial component of electronic services in all sectors, including educational institutions, especially libraries [6]. Additionally, the Internet makes it possible for people, institutions, businesses, or organizations to exchange spreadsheets, documents, and presentations globally. It enables groups of people to collaborate electronically from far-off places for business, education, training, research, and learning. Online learning,

virtual classrooms, virtual meeting spaces, and videoconferencing are a few examples.

The Internet serves as a global broadcasting platform, a way to share knowledge, and a way for people to collaborate and communicate with their computers regardless of where they are in the globe. It is among the best illustrations of the advantages of consistent funding and dedication to information communications research and development. No matter what kind of equipment a person, organization, or company uses to access the Internet, it needs to connect via an Internet Service Provider (ISP). An Internet service provider (ISP) is a business or organization that provides Internet connectivity to subscribers. A corporation, individual, institution, government agency, private customer, or even another ISP can all be considered a subscriber.

Through a Point of Presence (POP), users connect to the ISP utilizing a range of access technologies. An Internet service provider (ISP) can provide a number of different services in addition to an Internet connection, although their primary function is to provide an Internet connection. As a result, the introduction of the Internet has simplified research, teaching, and learning while also introducing a new mode of knowledge production and distribution that has even affected the economy. According to Jibrin, Musa, and Shittu [4], who cited Kumar and Kumar (2006), there are a plethora of information resources available on the Internet right now that are practically limitless and easily accessible to millions of individuals worldwide.

As a result, the Internet has steadily improved as a tool for research, teaching, and learning in the field of education. In order for emerging nations like Nigeria to achieve its economic and social standing, they must make sure that their academic institutions are empowered and reinforced in all areas. The usage of the Internet in tertiary institutions is an exciting prospect. For their academic activities and requirements, students in their fields will require a variety of dependable and interactive ways to acquire and retrieve knowledge without experiencing undue stress. This is due to the fact that higher schools rely heavily on the Internet to facilitate their academic activities.

2.4. Internet Access and Use by Degree Students

Internet use has revolutionised access to information for development in every area of life including education. The Internet and its technology continue to have a significant impact on fostering information sharing, particularly in the academic community, which speeds up corporate transactions and fosters international cooperation between people and companies [3]. Degree students benefit greatly from the Internet because it gives them access to timely, accurate, and pertinent material that is not available on library shelves. It increases their knowledge and improves their academic achievement. By giving students access to scholarly information resources, the Internet can replace pricey physical libraries, according to Bon (2007), as mentioned by Habib *et al.* [7].

At present, survival in academics without the Internet is almost not imaginable. The various applications and tools of the Internet have enhanced students' interactions which have made sharing of knowledge, information, ideas and skills possible. Students use the Internet for variety of reasons particularly for academic purposes and for social purposes. Consequently, previous studies have been carried out to understand how degree students use the Internet and for what purpose. For instance, according to Parameshwar and Patil [8], students utilize the Internet for learning, and this has a beneficial effect on their academic performance and goals.

Furthermore, 74.6% of the students at the University of Maiduguri in Nigeria were utilizing the Internet for academic and research purposes, according to a survey conducted by Mishra [9]. In the study on Internet access and usage by Olabisi Onabanjo University, Nigeria, degree students, Adekunmisi, Ajala, and Iyoro [6] confirmed that the majority of respondents had access to the Internet and utilized it for academic, informational, and email exchange purposes. In a study of Internet usage by degree students at the University of Ibadan in Nigeria, Ajanaku [10] found that students used the Internet for a number of purposes, including software downloads, academic work, and information searching.

However, Oso and Adesua [3] looked at the availability and usage of Internet resources among degree students at the Colleges of Education, Ikere Ekiti, and found that there was a low level of Internet use since the resources were insufficiently available. Bashiru and Nasiru [11] looked into how much time degree students at Shehu Shagari College of Education in Sokoto, Sokoto State, Nigeria, spent on the Internet. The study revealed that academic purposes and social media constitute the major purposes of using the Internet by the degree students. The study also revealed that a great number of respondents made use of the Internet on a daily basis for mostly assignments and social networking purposes.

An empirical study on Internet use by degree students at Adekunle Ajasin University in Akungba-Akoko was conducted by Akintomide and Ademodi [5]. The findings indicated that a significant portion of degree students used the Internet daily, primarily for social networking and assignment purposes. The use of the Internet as a teaching tool in academic programs and activities appears to have expanded quickly. However, it is clear from all signs that the Internet improves academic and scientific information development in addition to social interaction and amusement. In general, it has been noted that degree students approach using the Internet for social and educational purposes with a positive attitude and set of skills.

Degree students from three Nigerian universities use the Internet extensively as reported by Ani [12], who looked into the level and quality of their access to the Internet as well as their

use of electronic resources. However, inadequate infrastructure caused students to rely on cybercafés and private, commercial Internet services for their classwork and assignments. Students pursuing degrees utilize the Internet at varying frequencies.

In a study on the frequency of Internet use, social network, and mobile device use among aspiring teachers from the Faculty of Education Nicosia, North Cyprus, for instance, Tezer and Yildiz [13] found that students often stayed connected to the Internet at home using their computers, that the frequency of using mobile devices and social networks was "always," and that the frequency of using the Internet was daily throughout the week. Furthermore, college students reported using the Internet during their free time.

Okere and Mabawonku [1] carried out a study on Internet and library database use among undergraduates of Fountain University, Osogbo¸Osun State. It was revealed that the students use Internet for scholarly activities. The type of Internet resources used by students are WhatsApp, Instant Messaging, Facebook, online broadcast, You Tube among others, while frequency of use ranges from monthly, weekly, several times a week, daily, and several times a day. At Indonesia Open University, Rahardjo, Sumardjo, Lubis, and Harijati [14] looked into how Internet access and usage could enhance students' self-directed learning. Due to restricted Internet infrastructure, which impact students' knowledge and willingness to access the internet, the results indicated that Internet usage was remained low.

Similar to this, Deniz and Geyik [15] conducted empirical research on the general Internet usage habits of Turkish degree students. The results showed that most students use the Internet for at least eight hours a week, or more than ten hours. Since more than 10 hours of Internet use per week is defined as an addiction behaviour and attitude, this indicates that university students' Internet usage patterns can be regarded as an addictive attitude.

Furthermore, Emeka and Nyeche [16] investigated the impact of Internet usage on degree students' academic performance at the University of Abuja in Nigeria. According to the study's findings, 111 (55%) of the participants use the Internet daily, 31 (15%) use it once a week, 9 (5%), 26 (13%) use it once a month, 20 (10%) use it infrequently, and 3 (2%), do not use it at all. The majority of pupils use the Internet daily, according to the data.

A study by Jubrin, Musa, and Shittu [4] on the impact of the Internet on students' academic performance in tertiary institutions in Niger State, Nigeria, found that students use the Internet for academic purposes. The frequency of Internet use showed that 21% of respondents agreed that they use the Internet daily, 15% use it 0–4 days a week, 11% use it 0–2 days a week, 19% use it for at least 3–6 hours per week, and 13% use it for at least two hours per week. The investigation also shows that 79% of the respondents accepted that their academic performance actually improved by using the Internet and their GPA has improved remarkably as a result of the use of the Internet.

Consequently, a study was conducted by Quadri [17] on the challenges and prospects of using Internet facilities in Federal College of Education (Technical) Library Omoku, Rivers state, Nigeria. The result indicated that 39(30.5%) of the respondents did not make use of Internet facilities at all while 20(10%), 11(5.5%) made use of the Internet a day, 81(40.5) and 74(37%) made use of the Internet for 2 days in both the library and Internet facilities in searching for information respectively. 69(34.5%) and 49(24.5%) on the other hand made use of the Internet for 3 days while 16(8%); 15(7.5%); 9(4.5%); 7(3.5%); 5(2.5%); and 5(2.5%) made use of the Internet for 4 days, 5 days and 6 days respectively to search both the library and Internet facilities for information for academic work.

However, degree students have different means of accessing the Internet. They could access through their smart phones, laptops, library facilities and could even have access to the Internet through cybercafé. Most times, they could make a subscription from a network of their choices and sometimes from the library. In agreement with the above assertion, Jibrin, Musa & Shittu [4] stated that students generally use their own PC, laptop or tablet for accessing Internet by 59% hence, students prefer their own smart phones or androids for Internet use.

Similarly, Apuke and Iyendo [18] examined university students' usage of Internet resources for research and learning: forms of access and perceptions of utility in three selected universities within North East, Nigeria. The study revealed students depended on their smartphone/handsets to access the Internet through subscription from other Internet providers and have become overly reliant on Google, Yahoo, and open access e-Journals. It was established that the use of Internet enabled students to perform research ahead of time, tackle multiple homework, widens the scope of reading and learning, promotes self-learning, encourages and enhances peer learning as well as ameliorates students' examination preparations.

2.5. Challenges to Internet Access and Use by Degree Students

Internet plays an essential role in improving the quality of education generally. It is one of the ways through which individuals communicate, discuss, interact and seek for information of any sort globally despite the geographical location. The Internet has made it easier for education through its diverse search engines by providing access to unlimited information sources. Through the Internet, libraries are creating gateways to a massive library system, identifying, evaluating and ensuring that quality electronic information materials are available for uses. However, despite the benefits of the Internet to students and education, there are certain challenges militating against the effective use of the Internet by the degree students. Though, the Internet is most times misused or applied as a medium to perpetrate series of crimes. For instance,

Internet could be used to steal other peoples' private information and hacking bank accounts hence stealing money. Some students use it for provocations and scorn and often times accessing pornographic sites even in the classrooms. Sometimes they spend too much time chatting with friends, uploading pictures and face booking.

Akintomide and Ademodi [5] investigated on the empirical study of Internet use by degree students in Adekunle Ajasin University, Akungba-Akoko and reported that lack of Internet facilities, low bandwidth, power outage, lack of skills, financial implications, lack of technical assistance among others were the challenges to the use and access to the Internet by degree students. Apuke and Iyendo [18] carried out an investigation on university students' usage of Internet resources for research and learning: Forms of access and perceptions of utility in three selected universities within North-Eastern Nigeria and revealed that lack of digital readiness among the staff and institutions, the absence of electronic library for easy accessibility to journals from the scientific database, and inefficient cybercafé and Internet facility within their university settings were the main issues discouraging students from the utilization of the Internet within their institutions.

Rahardjo, Sumardjo, Lubis and Harijati [14] similarly examined Internet access and usage in improving students' self-directed learning in Surakarta Regional Office of Indonesia Open University. The result showed that Internet usage was still low due to limited Internet facilities that affected the knowledge and willingness of students to access the internet. in addition, they reported that low levels of access equipment availability were also a major factor for the lack of Internet usage among the degree students in the remote area. Otunla [19] investigated Internet access and use among degree students of Bowen University Iwo, Osun State, Nigeria and revealed that non availability of Internet connectivity around the campus; slow connectivity and downloading, constant breaking down of Internet services and irregular electricity supply were the major challenges to the use and access of the Internet by the degree students.

3. Methodology

Descriptive survey research design was adopted for the study. The population of the study was 1074. A simple random sampling technique was used to determine the 20% of the entire population. Therefore, the sample size is 215. The questionnaire was used to elicit information from the respondents which was validated at r = 0.74 after the face validity by senior colleagues. The questionnaire had a return rate of 203 (94.4%), which was deemed suitable for the study. The Statistical Package of Social Sciences (SPSS) was used to perform the statistical procedures of frequency counts, percentages, mean, and standard deviation in the data analysis.

4. Results

4.1. Questionnaire Administration and Response Rate

This represents a response rate of 94.4% as shown in Table 1.

Table 1. *Response rate.*

Level	No of copies administered	No of copies returned	%
100	36	34	94.4
200	71	69	97.2
300	40	37	92.5
400	68	63	92.6
Total	215	203	94.4

The study was carried out on two hundred and fifteen (215) undergraduate degree students of Federal College of Education (Special), Oyo. Out of the 215 copies of the questionnaire administered, 203(94.4%) copies were valid and found usable for analysis. It could be noted from the information provided in Table 1 that majority of the respondents 69 (97.2%) who participated in the study was in 200 level followed by 400 level students 63(92.6%). The least number of participants recorded were in 100 level. The implication of the findings of the respondents points to the fact that the degree students in FCE (Special), Oyo who participated in the study were well informed to be able to respond appropriately to the questions posed in the questionnaire used in the study.

4.2. Answers to the Research Questions

Seven research questions were raised and answered. The results are presented as follows:

4.2.1. Research Question One: Is Internet Facility Available for Use by the Degree Students in FCE (Special), Oyo

Table 2. Availability of Internet to the degree students in F. C. E. (Special), Oyo.

	Yes		No			
Questions	**N**	**%**	**N**	**%**	$\bar{x}$	δ
Do you use the Internet	189	93.1	14	6.9	1.81	0.41
Is the Internet available for you to use	127	62.6	76	37.4	1.43	0.49
Weighted mean					1.62	0.45

Respondents were asked to indicate whether or not they used the internet. The result showed that majority of the respondents (93.1%) responded to the question in the affirmative. This implies that nearly all the degree students of FCE (Special), Oyo used the internet. More so, on the availability of the Internet, the result indicated that a greater number of the respondents (62.6%) affirmed that the Internet was available for them to use while the remaining 37.4% of the respondents did not allude to this. This suggests that most of the degree students believed that there was availability of the Internet for them to use even though it might not be adequate.

4.2.2. Research Question Two: Is the Internet Being Accessed by the Degree Students in FCE (Special), Oyo

The result is presented in Table 4.

Table 3. Internet accessibility by the degree students.

Sources	N	%
Mobile/smart phone	99	48.8
Laptop	27	13.3
Home	17	8.4
College ICT/NRCD	28	13.8
College library	32	15.8

Table 3 presented the result on the mode of access to the Internet by the degree students of Federal College of Education (Special), Oyo. The result revealed that 99(48.8%) of the respondents, constituting the majority, indicated that they accessed the Internet through their phones. This was followed by 32(15.8%) who claimed they accessed the Internet through the college library and 28(13.8%) accessed the Internet through College ICT/NRCD unit of the college. This means that mobile/smart phone is the main source through which most of the degree students accessed the Internet.

4.2.3. Research Question Three: What Is the Frequency of Use of the Internet Among the Degree Students in FCE (Special), Oyo

The result of the frequency of use of the Internet among degree students in Federal College of Education (Special) is presented in Table 4.

Table 4. Frequency of use of the Internet among the degree students in FCE (Special), Oyo.

How often do you use the Internet						
	Daily	**Weekly**	**Monthly**	**Never**	$\bar{x}$	δ
Response	129	61	13	0	3.23	0.76
Percent	63.5	30.0	6.5	0.0		

Result in Table 4 revealed that the frequency of use of the Internet by the degree students of FCE (Special), Oyo was high with a mean of 3.23. For instance, more than half of the respondents claimed that they used the Internet daily (129, 63.5%). Additionally, 61(30.0%) of the respondents used the Internet on weekly basis. It is interesting to note that none of the respondents indicated they never used the Internet. This suggests that most of the degree students of FCE (Special), Oyo used the Internet frequently.

4.2.4. Research Question Four: What Are the Purposes of Use of the Internet by the Degree Students

The purposes of use of the Internet by the degree students in FCE (Special), Oyo were grouped into four namely academic, entertainment, business/marketing and communication. Respondents were asked to indicate their level of agreement with each of the items listed under each of the groups. The result is presented in Table 5.

Table 5. *Purposes of use of the Internet by the degree students in FCES.*

Purposes	Items	Often		Very often		Occasionally		Never			
		N	%	N	%	N	%	N	%	$\bar{x}$	δ
Academic	Assignment	71	35.0	86	42.4	26	12.8	20	9.9	3.38	0.56
	Research work	34	16.7	46	22.7	69	34.0	54	26.6	2.51	0.68
	Searching for e-books	24	11.8	44	21.7	73	36.0	62	30.5	1.62	0.51
	Journal articles	22	10.8	57	28.1	57	28.1	67	33.0	2.26	0.57
	Course materials	32	15.8	65	32.0	75	36.9	31	15.3	2.67	0.75
	Download materials for academic use	43	21.2	50	24.6	62	30.5	48	23.6	2.77	0.67
	Weighted									2.53	0.67
Communication	e-mail	59	29.1	63	31.0	76	37.4	5	2.5	3.32	0.66
	Group discussion forum	36	17.7	49	24.1	49	24.1	69	34.0	2.41	0.85
	Chatting with friends and family	66	32.5	85	41.9	44	21.7	8	3.9	3.49	0.51
	Reading newspapers	30	14.8	49	24.1	48	23.6	76	37.4	2.38	0.53
	Social media networking	60	29.6	73	36.0	48	23.6	22	10.8	3.41	0.82
	Weighted									3.00	0.67
Business/Marketing	Advertisement	22	10.8	52	25.6	63	31.0	66	32.5	2.31	0.84
	Internet banking	57	28.1	62	30.5	48	23.6	36	17.7	2.78	0.52
	Online shopping	61	30.0	67	33.0	38	18.7	37	18.2	3.05	0.50
	Forex trading	29	14.3	27	13.3	75	36.9	72	35.5	2.22	0.68
	Marketing	24	11.8	47	23.2	68	33.5	64	31.5	2.45	0.51
	Weighted									2.56	0.61
Entertainment	watching movies,	42	20.7	63	31.0	71	35.0	27	13.3	2.66	0.65
	listening to music	32	15.8	45	22.2	69	34.0	57	28.1	3.25	0.75
	Playing games	38	18.7	27	13.3	75	36.9	63	31.0	2.77	0.67
	Others	49	24.1	53	26.1	61	30.0	40	19.7	3.42	0.66
	Weighted									3.02	0.68

The result presented in Table 5 revealed that under academic purpose, majority of the respondents used the Internet for assignment (mean = 3.38), research work (mean = 2.67) and to download materials for academic use (mean = 2.77). However, only a few of the respondents used the Internet to search for e-books (mean = 1.52) and journal articles (mean = 2.26). It was apparent from this result that not all the degree students in FCE (Special), Oyo used the Internet for academic purposes but mainly for assignments and to download course materials. As for communication purpose, majority of the respondents agreed at varying extent that they used the Internet for chatting with friends and families (mean = 3.48), social media networking (mean = 3.41) and to access e-mail (mean = 3.32). On the other hand, a greater number of the respondents affirmed that they hardly use the Internet for group discussion forum (mean = 2.41) and to read newspapers (mean = 2.38). This means that most of the respondents used the Internet for communication purposes such as chatting with friends and families, social media networking and to access e-mail but only a few uses the Internet for group discussion forum and reading newspapers.

Another purpose of using the Internet as indicated in Table 5 is for business and marketing. The result showed that majority of the students agreed that they used the Internet for online shopping (mean = 3.05) and Internet banking (mean = 2.78). Additionally, a significant number of the respondents used the Internet for entertainment such as listening to music (mean = 3.25) and watching movies (mean = 2.77). It was deduced from this result that most of the respondents use the Internet for entertainment purposes. On the whole, the purposes of use of the Internet by the respondents could be said to be for communication such as social media networking and chatting with family and friends; entertainment such as listening to music and watching movies; academic such as downloading course materials and for doing assignments; and for business such as online shopping and Internet banking respectively.

4.2.5. Research Question Five: What Is the Amount of Time Spent on the Use of Internet by the Degree Students

Result on the amount of time spent on the Internet by the degree students of F. C. E. (Special), Oyo is presented in Table 6.

Table 6. Amount of time spent on the Internet by the respondents.

How many hours do you spend using the Internet	No of respondents N	Percent %
Less than 1 hour daily	11	5.4
1 hour daily	19	9.4
2-4 hours a week	22	10.8
5-6 hours a week	29	14.3
7-8 hours a week	47	23.2
9-10 hours a week	62	30.5
Unlimited hours	13	6.4

Table 6 revealed that majority of the respondents (62, 30.5%) indicated that they spend 9-10 hours a week on the Internet, 47(23.2%) of the respondents claimed that they spend 7-8 hours a week while only 11(5.4%) spend less than one hour daily. This suggests that a significant number of the respondents spend at least 5 hours per week on the Internet. In other words, a significant amount of time is spent on the Internet by the respondents for various purposes on weekly basis.

4.2.6. Research Question Six: What Is the Respondents' Perception on the Use of the Internet

Result on the perception of the respondents on the use of the Internet is presented in Table 7.

Result in Table 7 revealed that the three most prominent challenges inhibiting access and use of the Internet by the respondents are financial constraints for subscription of data (mean = 3.61), low bandwidth (mean = 3.51) and slow connectivity and very slow in downloading (mean = 3.36). The implication of the result is that most of the respondents agreed that they were confronted with certain challenges affecting their access and use of the Internet. Topmost of these challenges were financial constraints for subscription of data, low bandwidth and slow connectivity and very slow in downloading.

Table 7. Perception of Internet use by degree students of F. C. E. (Special), Oyo.

Items	SA		A		D		SD			
	N	%	N	%	N	%	N	%	$\bar{x}$	δ
Accessing information materials for my assignments is now easy with the internet	72	35.5	83	40.9	31	15.3	17	8.4	3.62	0.60

Items	SA		A		D		SD			
	N	%	N	%	N	%	N	%	$\bar{x}$	δ
I prefer browsing the Internet for information on my assignment than using the library	76	37.4	74	36.5	39	19.2	14	6.9	3.58	0.78
I use the Internet on daily basis for Facebook, WhatsApp, Instagram	65	32.0	80	39.4	35	17.2	23	11.3	3.57	0.70
It is easy to access the required information materials on the Internet than on the library shelves	59	29.1	82	40.4	38	18.7	24	11.8	3.33	0.69
I use Internet mostly for my academic activities more than using it for social networking	41	20.2	67	33.0	57	28.1	38	18.7	2.51	0.88
Accessing the Internet for my academic mandates has improved my academic performance	42	20.7	78	38.4	51	25.1	32	15.8	2.49	0.54
I access the Internet mainly to download movies	32	15.8	63	31.0	71	35.0	37	18.2	2.32	0.56
I watch movies in the class through the Internet while lectures are going on	21	10.3	32	15.8	76	37.4	74	36.5	2.11	0.85
Access and use of the Internet has affected my academic performance negatively	59	29.1	75	36.9	39	19.2	30	14.8	2.44	0.87
Accessing the Internet does not provide the right and required information for my academic activities	39	19.2	46	22.7	81	39.9	37	18.2	2.39	0.55
Weighted mean									2.84	0.70

Results in Table 7 showed that majority of the respondents affirmed that they had positive perceptions towards the use of the Internet as indicated by the weighted mean of 2.84. Specifically, majority of the respondents affirmed that accessing information materials for my assignments is now easy with the Internet (mean = 3.62), prefer browsing the Internet for information on my assignment than using the library (mean = 3.58), I use the Internet on daily basis for Facebook, WhatsApp, Instagram (mean = 3.57) among others. Overall, the weighted mean of 2.84 indicated a positive perception towards the use of internet.

4.2.7. Research Question Seven: What Are the Challenges to the Access and Use of the Internet by the Degree Students

Table 8. *Challenges to the access and use of the Internet by the respondents.*

Items	SA		A		D		SD			
	N	%	N	%	N	%	N	%	$\bar{x}$	δ
Lack of Internet access from the library	54	26.6	59	29.1	52	25.6	38	18.7	2.55	0.71
Lack of Smartphone	53	26.1	46	22.7	71	35.0	33	16.3	2.48	0.7
Financial constraints for subscription of data	81	39.9	67	33.0	39	19.2	16	7.9	3.61	0.62
Low bandwidth	72	35.5	65	32.0	44	21.7	22	10.8	3.51	0.39
Slow connectivity and very slow in downloading	67	33.0	78	38.4	31	15.3	27	13.3	3.36	0.54
Non availability of Internet connectivity around in the college	42	20.7	69	34.0	56	27.6	36	17.7	2.63	0.56
Accessing through cyber cafe is very expensive	65	32.0	68	33.5	34	16.7	36	17.7	3.27	0.85
Lack of skills to use the Internet	34	16.7	47	23.2	73	36.0	49	24.1	2.36	0.87

Items	SA		A		D		SD			
	N	%	N	%	N	%	N	%	$\bar{x}$	δ
Lack of personal laptop	50	24.6	63	31.0	51	25.1	39	19.2	2.57	0.91
Epileptic power supply	55	27.1	64	31.5	44	21.7	40	19.7	2.60	0.89

Result in Table 8 revealed that the three most prominent challenges inhibiting to the access and use of the Internet by the respondents are financial constraints for subscription of data (mean = 3.61), low bandwidth (mean = 3.51) and slow connectivity and very slow in downloading (mean = 3.36). The implication of the result is that most of respondents agreed that they were confronted with certain challenges affecting their access and use of the internet. Topmost of these challenges were financial constraints for subscription of data, low bandwidth and slow connectivity and very slow in downloading.

5. Discussion

The main objective of the study was to identify if there was availability of the Internet and whether students had access to the Internet for their academic activities. The study also sought to find out the frequency of use, and purposes of use including the challenges to the use of the Internet. Questionnaire was employed in gathering data and it was found that the Internet is an essential tool for students' academic activities. This is in line with a review done by Affum [20] on the effect of Internet on students' studies and affirmed that majority of the articles reviewed indicated that the Internet had a vital impact on students' academic outcomes as it helped students to access journal articles which otherwise would not have been made available in the libraries. On the availability of the Internet, the result indicated that a greater number of the respondents (62.6%) affirmed that the Internet was available for them to use while the remaining 37.4% of the respondents disagreed to this.

On the various technologies used in accessing the Internet, the result showed that 99(48.8%) of the respondents which constituted the majority, indicated that they accessed the internet through their phones. This corresponds with the result reported by Affum ([20]; and Okere and Mabaeonku [1] that about 70% uses smartphone to access the internet, 20% uses laptops and I0% uses desktop computers. Similarly, a study carried out by Ellore, Niranjan and Brown [21] on the influence of Internet use on academic performance exposed that most students have had access to Internet on their cellphones. The finding also corroborates with the findings of Ogungbeni, Adekanye, Bamigbose, and Sulaiman [22] who reported that that access to the Internet through mobile devices is the preference among undergraduate students.

More so, in support of the above, Apuke and Iyendo [18] examined university students' usage of Internet resources for research and learning: forms of access and perceptions of utility in three selected universities within North East, Nigeria. The study discovered that students depended on their smartphone/handsets to access the Internet. On the frequency of use of the Internet, the study found that the frequency of use of the Internet by the undergraduate degree students of FCE(S) was high with a mean score of 3.23. This implies that the use of the Internet for a longer period of time aside for academic purposes can lead to poor performance in academic activities and poor learning outcomes. On the contrary, increase in Internet use for academic purposes leads to improvement of the learning outcomes. In the same line of thought, Siraj [23] reported that the availability and access to the Internet help students to be able to broaden their academic information hence, the use of Internet and access to electronic resources are reasonably essential to students.

The finding also corroborates with the result of Jubrin, Musa and Shittu [4] who carried out a study on the impact of Internet usage on the academic performance of undergraduates from University of Abuja. It was found out that that academic purpose constituted the major purpose of using the Internet by the undergraduates particularly mostly for assignments. This finding corroborates with what was reported by prior researchers such as Mishra [9]; Adekunmisi, Ajala and Iyoro [6]; Akintomide and Ademodi [5]; Emeka and Nyeche [16] and Ajanaku [10] that a good number of undergraduates made use of the Internet on a daily basis for academic purposes and mostly assignments. Correspondingly, Ahmed, Vveinhardt and Ahmad [24] carried out an empirical analysis of Internet usage and academic performance of students in Pakistan. The results of the research showed that the Internet is an essential knowledge tool for students, they use the Internet primarily for educational and research purposes and get benefited and also playing a positive role and participation in society.

The result on the perception of students on the use of the Internet for academic activities was positive. They had positive perceptions towards the use of the Internet as indicated by the weighted mean of 2.84. Specifically, majority of the undergraduate degree students affirmed that accessing information materials for their assignments was easy with the Internet (mean = 3.62), that they preferred browsing the internet for information such as for assignment to using the library (mean=3.58). Nevertheless, challenges associated with the use

of the Internet among undergraduate degree students of FCE (Special), Oyo were financial constraints for subscription of data (mean=3.61), low bandwidth (mean=3.51) and slow connectivity and very slow in downloading items (mean = 3.36). This is in line with the studies of Muniandy [25]; Mbabu, Bertram and Varnum [26] who stated that challenges on the use of the Internet among the students include information credibility problems, high cost of Internet bundle, power outages, and inaccessibility of some websites, low bandwidth among others.

5.1. Summary and Conclusion

It was established in this study that the students highly used Internet for academic and other activities. The use of the Internet would continue to develop as long as its users are not deprived of easy access. The Internet use has a great impact on student learning outcomes, which includes; information enhancement, education related information, solving queries and improving learning outcomes. From the findings, the study established that the Internet is very useful in the learning outcomes of students and they have positive perception to the use of the Internet. It is, therefore, concluded that the use blueprint of Internet in Federal College of Education (Special), Oyo was high and the students have access to them from other channels rather than from the library.

5.2. Recommendations

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

1) There is the need for the introduction of basic Internet tools to students in their early stages of education.
2) The students tend to use Internet for entertainment than those platforms that can enhance their learning outcomes, therefore, the institutional management should endeavour to formulate restrictions on the use of Internet outside academic activities;
3) Students should not limit themselves to Internet sources only, rather should try to access information materials from the library which will enhance their creativity and academic performance.
4) The management should endeavour to provide facilities that would encourage the easy access and use of the Internet for academic activities such as alternative power supply, WIFI, high bandwidth among others.
5) The library management and college management should endeavour to empower the virtual library and install a high and strong Internet connectivity that would enhance academic and research productivity and performance.

Abbreviations

ARPA	Advanced Research Projects Agency
ARPANET	Advanced Research Projects Agency Network
DARPA	Defense Advanced Research Projects Agency
F.C.E.	Federal College of Education
ISP	Internet Service Provider
LAN	Local Area Network
MAN	Metropolitan Area Network
N.C.C.E	National Commission for Colleges of Education
N.C.E	Nigeria Certificate in Education
NRCD	National Resource Centre for Disabilities
SP	Special
TCP/IP	Transfer Control Protocol/Internetwork Protocol
VOIP	Voice Over Internet Protocol
WAN	Wide Area Network

Author Contributions

Okere Oluchi Okwudili: Conceptualization, Formal Analysis, Funding acquisition, Investigation, Methodology, Supervision, Writing – original draft, Writing – review & editing

Conflicts of Interest

The author declares no conflicts of interest.

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