

Application of Internet Sources in Communication Research among Communication Students in Universities in Lagos State, Nigeria

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Abstract

In recent times, the approach to research has shifted considerably from analogue to digital. Communication research is not exempted with the introduction of Internet sources to data gathering processes. In view of this, the National University Commission's (NUC) Benchmark Minimum Academic Standard (BMAS) stipulates that communication students in Nigeria should be tutored in this area. However, little is known about how the students apply this knowledge in doing research in communication. Using university students in Lagos as a sample population, this study used the survey method to examine how communication students apply Internet sources in their studies. Drawing from the assumptions of the Technology Acceptance Model (TAM) and the Uses and Gratification Theory, a seven-item questionnaire was administered to 454 students in communication departments of the selected institutions. The findings reveal that majority of the students would use Internet sources in their communication research. A significant percentage also believe it makes their work stress free although a sizeable percentage (44.6%) still believe using the Internet sources does not make a difference. Based on the findings, it was recommended that university authorities should endeavour to provide Internet services at affordable rates for students use.

Keywords: Digital/Virtual library, ICT, Internet, Communication Research, Communication Students, BMAS, NUC.

Introduction

The rapid development of the Internet is one of the most fascinating phenomena characterising the Information Age and influencing the cultural, social and economic dynamics of the society. Since its advent, the internet has progressively enlarged

access to information, created and enhanced new forms of communication (new media) and provided an opportunity for on-line services in the areas of commerce, entertainment and education.

Vliet (as cited in Atakiti *et al*, 2017) defines the internet as “a global network through which millions of users exchange data with series of networks associated with an organisation” (p. 95). Oxford Dictionary (2006) defines the Internet as “an international computer network connecting other networks and computers from companies, universities etc” (p.781). The internet uses the internet protocol as its communication standard to the various computers through the cyberspace. The components of the internet include the websites (world wide web or www), the browsers and the search engines, e-mail, news groups, social network sites (social media) and blogs (Esimokha, 2011; Okunna & Omenugha, 2012; Baran, 2013). This internet protocols have also aided the advent of the new media, which Pavlik (as cited in Maikaba, 2017) refers to as “contents available on demand through the internet, accessible on any digital device and usually containing interactive user feedback and creative participation” (p.81). New media are all that is related to the internet and interplay between technologies, images and sound as stated by the New Media Institute (Maikaba, 2017).

A major aspect of education, which has been influenced by the Internet, is in communication research. In communication studies, the essential of continuous research have been underscored by the dynamics that exist in the process of everyday communication across all the segments of the society. Adeyanju (2011) defines communication research as the “systematic and extensive study of communication process and effects at all levels” (p.68). McQuail (as cited in Adeyanju, 2011) further describes communication research as a process that seeks to understand the production, processing and effect symbols; and signal systems by developing testable theories containing lawful generalization that explains phenomena associated with the production, processing and effects of communication. It is about testing the models and theories that explain the processes and outcomes of communication with a major goal of unifying common communication interest across disciplines.

In recent times, scholars in the field of communication have imbibed the use of the Internet to access information and relevant literature and updates in their researches. Adegoke (as cited in Udende & Azeez, 2010) asserts that the Internet is a virtual library that is seen as virtual space containing an enormous quantity of information and documents including books, pictures, video, graphs and musical sounds that can be accessed. Ifeduba (2009) also agrees that Internet has been found useful in communicating information on statistical analysis, which is an aspect of communication research that is very important in view of the dynamics of daily communication.

In view of these assertions, Okunna *et al* (2012) agree that the Internet has great potential for communication research thus, it is important for mass

communication students to familiarize themselves with the usefulness of the Internet in conducting research. Omenugha (2010) corroborates this view by stating that the Internet allows access for the students and academics to databanks, international research networks and better visibility for researchers and self-learning opportunities. At the universities, new relations between students and professors are beginning to form because of the equal playing field in accessing information that the Internet provides its users. Maikaba (2017) further reiterated that the new media have evidently aided academic endeavours worldwide, including in mass communication and journalism.

In line with these expert submissions, the National University Commission's (NUC) Benchmark Minimum Academic Standards (BMAS) for Nigeria universities recommends courses in communication research for communication students across the country in order for them to be familiar with research procedures, including the use of the Internet. The communication students generally referred to in this paper are those studying in the Department of Mass Communication, Communication and Language Arts, Communication Studies, Information Sciences and Media Studies, Human Communication, Communication Arts, Linguistics and Communication Studies etc. The NUC-BMAS also recommends major courses in Information & Communication Technology (ICT) in which the communication students are taught basic and advance application of the Internet (National University Commission, 2014; Caleb University Senate Handbook, 2016).

In view of the foregoing, it may be assumed that the communication students at the end of their four/five years course, would be grounded in their understanding of ICT as a core component of communication studies and the application of ICT in their communication research which include their class assignments and dissertations. Thus, this study seeks to document how the communication students have been able to adopt the use of Internet in their communication research.

Statement of the Problem

The Internet provides an avalanche of resources for communication research. The Internet, as product of advanced innovation in communication itself, has continuously evolved within the context of information processing, assessment and availability. Maikaba (2017) observes that students use new media to undertake assignments and note taking. Mass communication and journalism education across the globe has benefited from the opportunities provided by new media. It simplifies access to academic journals, books and other e-learning materials of communication or journalism and mass communication.

Nigeria's regulatory body for the universities, National University Commission (NUC) recognised this important dimension in communication studies/education and recommended that communication students in Nigerian universities offer courses in communication research vis-à-vis information

communication technology. It is assumed that these will aid an understanding of the application of Internet in communication processes and research. Today, universities offering communication courses in Nigeria, including those in Lagos state, as earlier stated are offering courses in these areas.

However, despite related studies on the broad use of the internet among university students in Nigeria generally, little is known from existing literature on the application and pattern of use of this tool among communication students who are expected to build major competences in ICT by virtue of their curriculum. The ICT is an extended innovation in communication process hence it is assumed that these students should be readily in tune to adopting and adapting them in their learning endeavours. This level of adoption and application of internet in communication research among communication students is what this study seeks to examine.

Justification/Significance of the Study

In appropriating the Internet and trends in the positive or negative application of the ICT among students, Ihejirika (as cited in Omenugha, 2010) suggested that more studies should be conducted in Nigeria to confirm previous findings on students' use of ICT. The studies will also examine other meanings Nigerian students are constructing through their use of ICT.

In view of this suggestion, this study will contribute to existing literature on the uses of Internet sources in research. Regarding communication research, it will fill the gap in understanding specifically how communication students, who are expected to have a stronghold on the understanding and use of ICT based on their curriculum, apply internet sources in their research activities. The findings will further strengthen the positions, however, in specific terms, of other studies, which have examined the general use of internet use among students. The findings from this study will also provide insights to communication educators on how their students are applying this tool and possibly provide a direction on how to help the students maximize the potentials in the use of Internet for communication research. Education regulatory authorities in Nigeria will also benefit from the findings from this study because it will provide insights on how well the established curriculum is been assimilated and adopted by communication students.

Research Objective

Based on the stated problem and justification for this study, the overall research objective is to examine the application of internet sources in research among communication students in Lagos state. The study will examine frequency, gratification and possible challenges encountered by communication students in the application of Internet sources in their research efforts.

Research Questions

The following research questions have been postulated to address the objectives of his study:

1. What is the level of awareness of Internet sources for research among communication students in universities in Lagos state?
2. To what extent would communication students in universities in Lagos state use internet sources in their research?
3. What are the most important benefits that communication students in universities in Lagos state derive from using internet sources in their research?
4. What is the perception of communication students in universities in Lagos state about how the Internet sources have enhanced their research?
5. What challenges do communication students in universities in Lagos state experience in the use of internet sources in their research?

Theoretical Review

This study is set within the framework of the *Technology Acceptance Model (TAM)* and the Uses and Gratification Theory. Fred Davis proposed the Technology Acceptance Model (TAM) in 1986. TAM provides theoretical basis that explains and predict users' acceptance of information technology. The TAM has its background in the Theory of Reasoned Action (TRA) from which reasons why users accept or reject information technology was reviewed.

In the TAM model, there are two factors, which are the *perceived usefulness* and the *perceived ease of use (EoU)*. Perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will enhance his or her job or performance. The perceived ease of use (EoU) is defined as the degree to which the prospective user expects the target system to be free of effort. It refers to the extent to which minimal efforts will be required to use the system instead of a strained effort.

The TAM model's assumption is that the perceived usefulness and the ease of use are the most important determinants in the actual use of an information system. The two factors are influenced by individual behaviour and attitudes. The attitude deals with the user's evaluation of the desire to apply the information system while the behavioural intentions deals with the measure of the likelihood that the technology will be applied. Invariably, the TAM model postulates that the use of an information system is determined by the behavioural intention, which is determined by the person's attitude towards the use of the system and by his perception of its utility. The attitude toward adoption will eventually decide the adopter's positive or negative behaviour in the future concerning new **technology**. The external factors may be social, political or cultural. Social factors include language, skills and facilitating conditions. Political factors are mainly the impact of using technology in politics and

political crisis (Park, 2009; Chuttur, 2009; Holden & Karsh, 2010; Surendran, 2012).

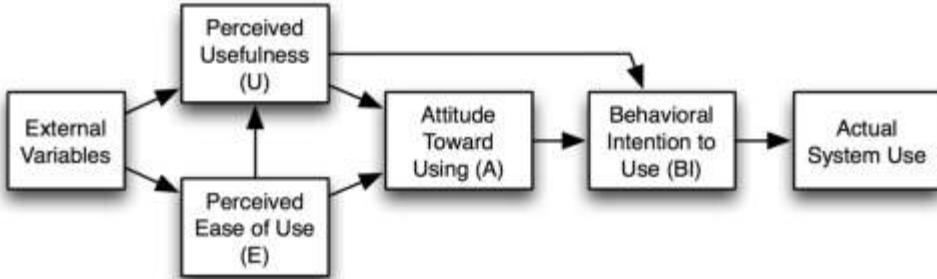


Figure 1: Technology Acceptance Model (Davis, 1989).

Although the TAM model originated from organisational setup in which employees' adoption of new technology such as the computer and internet was tested, the assumptions may be applied to this study. Dillion & Morris (1996) argue that even if an employee does not welcome an information system, the probability that he will use it is high if he perceives that the system will improve his performance at work. Besides, the Technology Acceptance Model hypothesises a direct link between perceived usefulness and perceived ease of use. With two systems offering the same features, a user will find more useful the one that he finds easier to use.

The possibility of applying internet sources by communication students may be defined by their perceived usefulness or perceived ease of use of the internet resources to their research. Factors such as the cost of data, place, speed of data, information technology (IT) skills among other personal and external factors may also influence the acceptance and adoption of the Internet as a research source among the students. Hence, the relevance of this model in examining the objectives of this study.

However, other factors that may influence the perceived usefulness and ease of use of the Internet in communication research may be explained within the framework of the *Uses and Gratification theory*. Earlier research on the uses-and-gratifications theory focused on audience motives for selecting traditional media sources and the gratifications they obtained from them. However, as the new media technologies evolved, attention began to shift to the technologies and how uses and gratifications approach could be applied to them. Hence, the theory's scope continues to expand to embrace other media of mass communication (Uzuegbunam, 2015).

According to Baran (2013), the uses and gratification theory states that the media do not do things to people rather people do things with media. In other words, the influence of media is limited to what people allow it to be. Anaeto, Onabajo & Osifeso (2012) agree with Baran thus:

...the media are conceived as active...the viewers are goal oriented and attempt to achieve their goals through the media sources. This is encompassing the idea that people use the media to their advantage more often than the media use them. The receiver determines what is going to be absorbed and does not allow the media to influence them otherwise...thus it is the individual audience members who make the decision to view the media; therefore, they place the value on it by their individual decision to view it (Anaeto, et al, 2012, p.70).

In view of this, the uses and gratification theory further expanded the framework to emphasise that beneath the adoption and usage lays the gratification individuals get. Hence, as big as technology might be, it may also be a function of individuals' interest to use or not to use. In this case, it refers to the use of Internet for research among communication students in universities in Lagos state.

Review of Related Literature

Internet in Educational Research

Although there are conflicting historical dates about when the Internet actually became part of man (Baran, 2013), a general assumption is that the Internet is a product of ingenuity to fast track, connect and make communication easier amongst many people. However, aided by the computer, the Internet was initially made famous within the realm of military operations (Okunna *et al*, 2012). Studies (Baran, 2013; Kumar & Parma, 2014) have traced the advent of the Internet to the late 1950s and early 1960s' during which the Internet grew out of an experiment conducted by the US Department of Defense. The proponents desired to create a computer network that could continue to function in the event of disaster, such as nuclear war. They eventually came up with the ARPANET (Advanced Research Project Agency Network) that linked up with the United States Scientific Academic Researchers.

In the 1970's, ARPA (Advanced Research Project Agency) developed the Internet protocol known as the TCP/IP (Transmission Control Protocols/Internet Protocols) for transferring data between the networks. In 1972, an engineer named Ray Tomlinson created the first electronic mail (e-mail) programme with the ubiquitous @ used in email addresses. In 1974, Vinton Cerf of Stanford University and Robert Kahn, a military man, coined the term Internet. In 1979, Steve Bellovin of University of North Carolina created the UseNET while the IBM created the BITNET. The two software systems enabled virtually anybody with access to UNIX or IBM computers to connect to others on the growing network. The Internet became fully used in the 1980's when the National Science Foundation (NSF) used ARPANET to link its four regional super centres at major universities so that many users could share their work.

Since 1992 when the Internet Society became chartered and the World Wide Web was released, the Internet has become a critical aspect of human interaction and

existence. Ever since then, the Internet has continued to grow in leaps and bound (Baran, 2013). Today, the Internet plays a vital role in learning and research. It has gone beyond just a means for the exchange of information to a citadel of knowledge sharing and acquisition. According to the *Stanford Encyclopedia of Philosophy* (2016), internet-based research is described as a form of research, which utilizes the Internet to collect information through an online tool such as an online survey; studies about how people use of the Internet; uses of online datasets, databases, or repositories.

Before the Internet, conducting research for school, work or out of curiosity involved a set of encyclopedias and a trip to the library. However, we now live in an age where information is readily accessible from your computer (Fower, n.d.). Maikaba (2017) notes that even though there might be some challenges, the Internet has served and will continue to serve as a veritable tool for the enhancement of teaching, research and learning in educational institutions.

Okunna (2012) agrees that the Internet allows for a vast and engaging exchange of information and ideas between the students and their tutors because of what she termed an “equal playing field” in accessing information that the Internet provides. This has helped to build a good relationship between educators and learners thereby increasing academic excellence. This is consistent with the assertions of Muniandy (2010) that the Internet as an educational tool brought about positive changes to teachers and instructors, who taught students to learn, work, communicate, and play. The Internet has helped to foster relationships as it enables students to find information and experts, to think critically and creatively, and become collaborative, cooperative, and solving research problems.

Within the context of library and information management, Kumar *et al* (2014) state that the ICT has become synonymous with automation and modernization of libraries and information centres. Muniandy (2010) agrees that the Internet offers two main benefits: first, communication and information with immense potential to improve the quality of education because it can increase the understanding of theoretical and critical concepts. Second, the popularity of the Internet as a teaching-learning tool has increased with the introduction of the web browser, which uses a hypertext. With text and graphical images, and later video, audio, and animated objects, materials become easily distributed over the Internet

The main functions of the Internet in education is thus summarized as: (i) storehouse of information, (ii) communication without boundaries, (iii) online interactive learning, (iv) electronic/online research, (v) innovation in the new world, (vi) improve interest in learning, (vii) global education, and (viii) information catalogues. Hence, Fower (n.d) agrees that the Internet should not be disregarded when conducting academic research because it is a major source for scholarly journals, current news, books, credible magazines, general information and other relevant content.

The benefits derived from the use of the Internet in educational research are summarized thus:

1. Access to new and valuable sources of information such as electronic journals (e-journals) and Internet discussion groups.
2. A more efficient route for accessing certain standard information sources such as newspapers, particularly overseas papers and electronic versions of existing print journals.
3. Access to an enormous amount of information. Currently it is estimated that there are about 800 million pages of information on the Web.
4. Access to non-mainstream views. Fringe groups and those without access to the media or a printing press can now make their opinions known on the Internet.
5. Access to obscure and arcane information. Because there are so many people with such diverse interests on the Internet, a search can often turn up the most unusual and hard-to locate nugget of data.
6. Access to digitised versions of primary sources. Some libraries are digitizing (making electronic versions) of primary research sources such as personal letters, official government documents, treaties, photographs, etc. and making these available for viewing over the Internet. The same is true for audio and, in some cases, video.
7. Access to searchable databases and datasets. There are many sites on the Internet where you can search a collection of statistical data, such as demographic or social science data. While some databases on the Internet are fee-based, others are free.
8. Access to government information. For instance, the U.S. federal government is one of the largest publishers in the world and it is utilizing the Internet as its preferred method for disseminating much of its information.
9. Access to international information. Not only can you easily find official data from other countries by connecting to embassies, consulates, and foreign governmental sites, you can also search other countries' newspapers, discuss issues with citizens from around the world on the newsgroups, and locate Web sites established by individuals from other nations (para.2).

Other key benefits that the Internet brings to the researcher include:

10. Speed: Doing a search on the Internet can take just seconds.
11. Timeliness: On the Internet, newly updated information can be accessed in few minutes.
12. Multimedia: The Internet delivers not just text, but graphics, audio, and video.

13. Hyperlinking: The ability to click between Web pages can facilitate an associative type of research, and make it easier to view citations and supporting data from a text (“Benefits and Drawbacks of Internet”, 2016, para. 3).

Issues in Internet-based Research

Despite the usefulness and advantages of using Internet in educational research, there experts have identified some challenges. Fower (n.d) notes that because most of the contents on the Internet are self-submitted and there are very few regulations on what may be published or not depending on local laws, content found on the Web may be inaccurate and opinion based. Salt (2013) asserts that the level of cognitive dissonance encountered on the Internet is staggering because it is quite hard to find solid, unbiased, and fact-based sources. More so, because humans have a tendency toward the psychological phenomenon known as confirmation bias, they tend to seek out sources of information that confirm with their own (often-flawed) belief systems and worldviews. Subsequently, the Internet has become the perfect venue for this, because it allows individuals to completely insulate their own worldview and ignore contrary facts.

In addition, experts have also scrutinised ethical issues in Internet based research as the Internet evolves into a social and communicative tools and avenue. The *Stanford Encyclopaedia* (2016) defines Internet research ethics as “the analysis of ethical issues and application of research ethics principles as they pertain to research conducted on and in the Internet”. The perspectives posited on ethical issues include privacy, confidentiality and anonymity, attributions among others.

The possibility of Internet research contributing to laziness among students with a potential to jettison the use of physical libraries has also been identified as an emerging challenge in Internet research. Omenugha (2010) notes that once students get addicted to digital learning, they do not easily learn from other methods. She also argues that some educators complained that students had become lazy as they hope to get all the formulas and information they wanted from the Internet. Therefore, they reasoned that ICT, on some occasion, has discouraged hard work and innovativeness and makes students less functional in a situation where computers are not available. Salt (2013) agrees that it is easy to become seduced by the convenience of the Internet when he states that,

With ultra-fast connectivity, it sometimes seems like the whole world is at your fingertips. You can bring up one of the major search engines on your web browser and ask it any question you like. Then you can get the answer without having to go to the library or even get out of your chair. That kind of convenience can become a preferred research method in a hurry (para. 4).

Meanwhile, the debate on whether Internet research would replace physical libraries still subsists. Sherman (2013) notes that with today's instant access to Google, Bing and other search engines on the Web, searching for information using the Internet has become a matter of minutes on any internet-connected device. Thus, some people regard physical libraries as quaint relics of a forgotten age. A Pew Research conducted among young Americans, which showed a drop in the use of physical library for online although the respondents still agreed that physical libraries are still very essential, affirmed Sherman's position.

However, Herring (2010) argues that the Internet cannot replace the physical libraries because a sizeable amount of resources required for educational research is not free on the Internet. He also states that the health challenges of having to look through the computer in searching Internet sources may be a major challenge. More so, the cost of digitising all resources may be too expensive for states of universities to accomplish hence, the need for the traditional libraries. In addition, the lack of quality control and the transient nature of some of the materials online also make Internet sources not capable of replacing the traditional libraries. Although Internet is ubiquitous, Herring concluded that books are portable.

Salt (2013) agrees that while the internet is a handy resource for locating quick information for day-to-day usage, it clearly has a long way to go before it can replace the standard research method that is the library. However, Salt notes that "the web is always evolving by leaps and bounds, so it may one day be able to wholly replace traditional research method" (para.16). Nevertheless, Fower (n.d) advises that the internet should not be disregarded when conducting academic research. It is a major source for scholarly journals, current news, books, credible magazines, general information and other relevant content.

Empirical Reviews

Researchers have conducted many researches as an attempt to document approaches in the adoption and uses of the Internet for research by students and scholars. These studies cut across every components of the information communication technology as expressed in new media, social media, blogs, and search engines among others. In Nigeria, some studies have been conducted in this regard. Ifeduba (2009) studied the use and citation of Internet sources in communication research and scholarly papers in selected journals in Nigeria from 1999-2007 and found that only 24.8% of the research papers contained indications of the use of Internet sources while only 4.1% of the 1,878 references were Internet sources. The study concluded that although there is a gradual adoption of the Internet sources in research in Nigeria, however, the adoption is slow when compared to computer ownership density and access.

In their study on Internet access and use among students of the University of

Ilorin, Nigeria, Udende & Azeez (2010) discovered that majority of the students (80.8%) use Internet for academic purposes. It also established that there is relationship between the students' academic performance and the use of Internet because 90.1% of them agreed the use of Internet has positively influenced their academic performance. However, lack of enough money to buy personal laptops, poor electricity power supply on the campus and limited cyber cafes are some of the challenges faced by the students in using the Internet. The study thus recommended that the University should provide adequate Internet facilities and an enabling environment for students to maximise the use of Internet resources in the University.

Omenugha (2010) in a study on the influence of modern ICTs on the academic and social behaviour of students in Nnamdi Azikiwe University Akwa, Anambra state Nigeria found that while ICT empowers the students, there are growing negative trends that are emanating from how the students access and use ICT. Using a mixed qualitative method, which include personal observation, focus group discussion and document review, Omenugha gathered that although the student found the Internet useful in completing their assignments and projects, some only download online materials without any form of editing or care about plagiarism and its implications. This finding by Omenugha confirms some scholars (Salt, 2013) concern that the relaxed access to the Internet sources may encourage students to become academically lazy.

Studying the perception and usage pattern of social media by students of higher institutions of learning in Delta State, Nigeria, Ufuophu-Biri (2013) gathered that students use social media primarily for 14 different reasons. Of the 14 reasons, only 4.27% use the social media for academic purposes. Overall, the study found that the students have a positive perception of the social media, hence, it recommended that institutions should formulate and implement productive ICT policies and enlighten the students on how best to use the social media for positive and productive purposes.

In a related study, Nwabuzor & Ekerikevwe (2015) studied the impact of Facebook on the study habit of mass communication students at the University of Benin. They discovered that while the students found the platform useful, it has become a distraction for an effective study habit among the students because the students appeared to focus more on the socialisation element of the platform, spending longer time with friends rather than studying. Odi (2015) study on uses and gratification of social media among Nigerian youths discovered that only 8% of the 2,000 respondents studied use the social media for educational purposes although 11.4% of them agree that the use social media can enhance their educational activities. The study on the influence of social media on the academic performances of students in Federal Polytechnic Bida Niger state Nigeria also revealed the same trend of a low use of social media for educational purposes. Of the 330 respondents, only 8.5% agreed to use the social media for academic reasons despite the fact that 76.7% stated

that social media if adequately used could enhance their academic performance. Majority use it more for socialization and entertainment.

The low usage of internet sources in educational activities among student in Nigeria as established in the review so far, was reflected in actual thesis and dissertations submitted by postgraduate students at Michael Okpara University of Agriculture, Umudike, Anambra state Nigeria. In an analysis of the citation in 327 thesis and dissertation submitted by the students across 22 departments in the institution between years 2000-2010, Ahiaoma, Uzuegbu & Uzochukwu (2013) discovered that of the 34,150 citations made, only 2% cited Internet sources. The researchers consequently recommended urgent education of postgraduate students on internet use, essentially inculcating in them how to conduct expert search for academic works, adopt them and cite them in their research writings.

The low trend noticed in the studies conducted on the use of Internet for educational purposes in Nigeria appear to be in contrast with experiences from studies in some other parts of the world. In an earlier study by Lenhart, Simon & Graziano (2001) in America, some of the significant findings from a survey of 754 youths shows that 94% of youth ages 12-17 who have Internet access say they use the Internet for school research and 78% say they believe the Internet helps them with schoolwork. 71% of online teens say that they used the Internet as the major source for their most recent major school project or report, while 41% of online teens say they use email and instant messaging to contact teachers or classmates about schoolwork. In addition, 34% of online teens have downloaded an online study aid, 58% of online teens report using Web sites that had been set up specifically for their school or for a particular class and 17% of online teens have created a Web page for a school project. However, this study also established an abuse of the Internet sources as 18% of online teens say they know of someone who has used the Internet to cheat on a paper or test.

In a study conducted on the internet use by teachers and students in engineering colleges of Punjab, Haryana, and Himachal Pradesh States of India, 74.2% respondents used the Internet for an educational purpose while 50.8% specifically use the Internet for research purposes and 30.2% for entertainment (Kumar & Kaur, 2006). Another study conducted in the Faculty of Modern Languages and Communication, Universiti Putra Malaysia among 175 respondents showed that 74.3% of the respondents' main purpose of use internet was getting the information about education while 34.9% of the respondents using internet for research (Qureshi *et al*, 2014). Another study on the patterns in internet use among children and adolescents in Romania by Balea (2016) shows that the most popular activity (88%) is using the Internet for schoolwork, closely followed by playing Internet games on their own or against the computer (83%) and using instant messaging (82%). Entertainment/information and communication uses would appear to dominate.

Generally, the reviews so far have established some variations in studies conducted on the adoption and pattern of use of the various elements of the Internet

among students with particular reference to academic uses. Although a study by Singh, Devi & Raychaudhury (2009) on the use of Internet-based e-resources found that speed, internet access, erratic power supply and lack of required full text journals are some of the problems faced in the use of Internet based e-resource; there still exist a dichotomy in studies conducted in Nigeria and other parts of the world. Studies conducted in Nigeria predominantly reflect a below average use of the Internet for academic activities among students in Nigeria while those conducted in some other parts of the world show an above average use of the Internet for research and educational activities among the students. This gap further affirms the earlier problem stated in this study and the need to further understand the reasons why the projection of Ruzgar's (2005) that the future the profile of education will be changed, mostly because the students will have access to Internet and take their courses via Internet appears not reflected across board. This study will contribute to existing literature and probably proffer new directions in this regard.

Method of Study

A survey research method was adopted for this study. Kotler, Armstrong, Wong & Saunders (2008) explain that survey is the most widely used method for gathering descriptive information about people's knowledge, attitudes and preferences. A purposive sampling was used to select the two public universities owned by the federal and state governments while a simple random sampling, using a ballot system, was used to choose one university from the privately owned universities in the state. The universities selected were University of Lagos, Akoka; Lagos State University, Ojo and Caleb University, Imota.

The 300 and 400 level students in the Department of Mass Communication were purposively selected as the population for this study. This is based on the assumption that at this level, these set of students must have completed courses in communication research process and methodologies as indicated in the NUC-BMAS. At this level, it is also assumed that the students will be planning to present proposals for their final year project while some may actually be in the process of finalising theirs. This process requires a great deal of literature research, which may require that the students use both offline and online library resources.

Table 1: Sample Selection and Questionnaire Distribution

Universities	Levels	Population (Estimated Departmental figures)	Sample Size (Universal Survey Monkey Sample Size Calculator)	No of returned questionnaire
University of Lagos	300	180	123	120
	400	185	126	124
LASU	300	90	74	74
	400	25	24	24
Caleb University	300	90	74	72
	400	35	33	32
Total		605	454	446 (98.2%)

Data Analysis

The data in this study was analysed based on the 446 copies of the questionnaire that were appropriately filled representing a 98.2% return rate. The analysis has been expressed in line with the research questions earlier postulated for this study.

Research Question 1

What is the level of awareness of Internet sources for research among communication students in universities in Lagos state?

Table 2: Level of Awareness

Responses	Frequency	Percentage
Yes	436	97.8
No	10	2.2
Total	446	100

Table 2 above shows a high level of awareness of Internet resources among the students. This may have attributed to the level of tutorship on the availability of Internet sources in research as the students in line with the NUC-BMAS recommendations may have been taught.

Research Question 2

To what extent would communication students in universities in Lagos state use internet sources in their research?

Table 3: Extent to which the students will use Internet sources in their research

Responses	Frequency	Percent
Large Extent	316	70.9
An Extent	128	28.7
Not at all	2	0.4
Total	446	100

Table 4: Frequency at which the students will use Internet sources for research

Responses	Frequency	Percentage
Always	340	76.2
Occasionally	106	23.8
Never	0	0
	446	100

Tables 3 and 4 explain the extent to which the communication students will use Internet sources in their research. Majority of the students will use the Internet largely and they are prone to always use the Internet sources in their research.

Research Question 3

What are the most important benefits that communication students in universities in Lagos state derive from using internet sources in their research?

Table 5: Usefulness of Internet sources in communication research

Responses	Frequency	Percentage
Very Useful	372	83.4
Moderately Useful	72	16.1
Not Useful	2	0.5
Total	446	100

At first, the respondents were asked if they found the Internet sources useful in their research activities. Table 5 indicates that majority of the students found the use of Internet very useful in their research. This high level of usefulness of internet in research may be attributed to the fact that at their levels, particularly the 400 level students, there is a high tendency for robust discussions to enhance the depth of their projects.

Table 6: Benefits of using Internet sources in research

Options	Percentage
Access to new and valuable sources of information	63%
Access to different views on topic of interest	46.9%
Speedy and timely access to current information	35.4%

Access to an enormous amount of information	33.4%
Access to structured research format	21.3%
Access to multimedia including audio-video resources	17.5%
Facilitates a cost-effective research	15.7%
Access to obscure information	13.2%
Access to searchable global databases and datasets	13.2%
Access to digitized versions of primary sources	7.6%
Access to government information	5.4%

Table 6 shows that access to new and valuable sources of information, access to different views on the topic of interest and speedy and timely access to current information are the top three benefits that the communication students derive from using Internet sources in their research. It may be alluded from the responses that the students are more concerned about improving their works with new information that will add value to their outputs from different perspectives. That they also benefit from timely access to information may also be a reflection of their acceptability of this source as relevant in today's academic pursuits.

Research Question 4

What is the perception of communication students in universities in Lagos state about how the Internet sources have enhanced their research?

Table 7: Perception of how the Internet have enhanced the respondents research

Options	Agree %	Undecided %	Disagree %
It made the work stress free	87.2% n=446	9.9% n=446	2.9% n=446
It did not make much difference	12.3% n=446	32.3% n=446	55.4% n=446
It would have been easier using the physical Library to source the materials	13.7% n=446	26.7% n=446	59.6% n=446
The internet search made my research robust and authentic	66.8% n=446	27.6% n=446	5.6% n=446

Overall, Table 7 reflects the general perception of the respondents about how the Internet sources have enhanced their research. Majority of the respondents agreed that it makes their work stress free and robust in terms of authenticity. However, a significant percentage (44.6%) were undecided or agreed that the use of Internet

sources did not make a difference in their work. This cache of respondents may provide insights into further areas of research as their reasons could help illuminate the causes and areas of intervention. More so, cumulatively, a substantial 40.4% of the respondents were undecided or agreed that the physical library would be a better source for their research materials. We can therefore conclude that despite the tutorials in ICT related subjects for the communication students and the fact that the respondents would to a large extent use Internet sources in the research, there may still be some strong attachment among them for the use of physical libraries for their studies.

Research Question 5

What challenges do communication students in universities in Lagos state experience in the use of internet sources in their research?

Table 8: Challenges in the use of Internet sources in research

Options	Percentage
Cost of data for browsing	70.9%
Authenticity of internet sources cannot be verified at all times	56.7%
Temporary nature of information due to change on some sites	44.4%
Narrowing my search to the subject matter	39.5%
Difficulty in searching effectively because of the many web pages	37.2%
Inadequate knowledge of internet protocols	28%
The internet has fewer archival materials	18.2%

Enquiries into the top three major challenges faced by the respondents in the application of Internet sources in their research shows in Table 8 that the cost of data for browsing topped the list. This is followed by the inability to verify the authenticity of some of the Internet sources and the transient nature of some of the Internet sources that makes some of them not permanent on the sourced site. Other challenges such as narrowing the research sites and difficulty in navigating the many sites also have significant impact on the application of the Internet sources among the respondents. The cost of data for browsing remained a major challenge and understandably too because of the poor economic conditions majority of the students face in Nigeria.

Discussions

The study explores the application of Internet sources in communication research by communication students in universities in Lagos. A high level of awareness of the Internet sources in communication research was established in the study. The significant level of awareness may be ascribed to the exposure of the students based on the instructions they might have received from lectures in this regard based on the NUC-BMAS recommendations. More so, the curriculum of the communication students requires that they be thought in ICT education.

The study showed that the communication students would to a very large extent use the Internet sources for in their research. In fact, majority of them revealed that they always use Internet sources in their research. This may attest to the fact of the benefits the respondents found in using the Internet sources. Access to new and valued information, diverse views on area of study and the speed at which they are able to source for Internet resources are the major gratification that the students drive from the use of Internet sources in research. These benefits generally make the research stress free for majority of the students. Hence, we may conclude that the perceived usefulness and ease of use of the Internet technology in communication research as proposed in the model, determined the actual use of the resources by the students.

These findings are consistent with that of Kumar & Kaur (2006) and Qureshi *et al* (2014) conducted in India and Malaysia respectively which that also revealed such high level of the use of Internet sources in educational research. However, a variation to this was established in some studies conducted in Nigeria in this regard. Although Udende & Azeez (2010) studying the students in University of Ilorin also revealed a high use of Internet sources for academic purpose, further studies in Nigeria (Ifeduba, 2009; Ufuophu-Biri, 2013; Ahiaoma *et al*, 2013 and Odii, 2015) revealed otherwise. Omenugha (2010) also established that the Internet in academic research have become a source of distraction for some students who have now become lazy in their academic activities. Further studies may be conducted to investigate this phenomenon.

Another trend established in this study is a significant (44.6%) number of the respondent who were undecided or agreed that the use of Internet sources did not make any difference. Another significant 40.4% were undecided or agreed that physical libraries would have been better. Further studies to examine this phenomenon may be conducted particularly to establish if it has any relationship with the cost of data for browsing which was indicated as the major challenge for the students.

Conclusion and Recommendations

From the data presented and analysed, we could concluded that there is a high level of awareness about the use of Internet sources among the communication students in universities in Lagos state. The communication students would to a large extent use Internet sources in their research and they overtly agreed that the Internet sources make their research stress free. However, there still exists some affinity with the use of conventional libraries among a significant number of the students. In addition, a major challenge faced by the undergraduate using the Internet sources is that of cost of data. In view of these findings and conclusions, the following are recommended:

First, more Internet hubs should be established and maintained within the University campuses and made available at subsidised cost for the students. This will further address the issues of cost of data been a major limitation to the use of internet sources in research among the communication students. By this, the students will be comfortable to take their time in researching in-depth their areas of interest with limited concerns about cost.

Second, universities may enter into bilateral agreement with telecommunication service providers to develop special/customised subscription packages for the students to ease the cost and facilitate the use of Internet sources in their research. With this arrangement, the students to a large extent may be able to manage their budget in line with such packages and further extend their areas of research with limited cost of data.

Third, to address the concern about authentication of Internet sources, lecturers should endeavour to conduct more practical sessions for the students on how to identify authentic Internet sources, which may include providing access to the list of those sources. The lecturers may contact or register with reputable online or institutional libraries to assist their students with accessing authentic Internet sources for their research.

Fourth, to address the transient nature of Internet sources sometimes, the students may print out copies of such materials with dates in case of future referencing.

Further studies should be conducted to examine the assertion among a significant number (44.6%) of the students that using the Internet sources did not make any difference in their research activities despite the fact that majority found Internet sources useful and would use Internet sources largely. The study may expose the factors responsible for this disposition in such a significant number of students and recommendations made for addressing them.

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