

# Impact of Internet Use on Student's Learning Outcomes In Biology

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**Abstract:-** This paper attempts to review various impacts the usage of the internet would have on student's learning outcomes in Biology, the paper includes research objectives such as finding out the attitude of students in accessing biology information from the internet, the perception of students' uses of internet for learning purpose, discovering how relevant is the obtained information students, got from the internet is to their academics. The paper reviewed several previous works from scholars on different concepts revolving around the research study including; the internet, impact of internet service on academic activities, frequency of internet use by students, internet usage and learning outcomes, and challenges encountered in the use of internet facilities. The sample for this study is made up of 100 students that would be given questionnaires to answer to find out the impact of internet use on students learning outcomes. The 100 students would be partitioned and gender-biased this is to cater to the gender-based research questions. The study has to do with inferential statistics. Inferential statistics is aimed at summarizing the properties of a population from the known properties of the sample of the population. Simple frequency, mean scores, and the percentage would be used for analyzing the data because they will explain the phenomena under study.

**Keywords:-** Biology, Learning Outcomes, ICT, Perception, Science.

## I. INTRODUCTION

The internet, which is the online world, may be seen as a rich, multi-layered, sophisticated, and dynamically developing text for connectivity and a means for geographically unrestricted participatory interaction involving people and machines. The internet as it exists now is a worldwide phenomenon whose nature is difficult to pin down. A general consensus is that the web is a highly interconnected network that links lots of computing elements located at various locations across the globe and used by thousands of corporations, ministries, government, educational, and other

organizations. Web users view the web as an international society with a thriving social scene. According to the June 22 issue of the Awake magazine, the internet originated as "a 1960s effort by the US Department of Defense to let scientists and researchers from geographically scattered regions work together by sharing scarce and expensive computers and files." The project, needed the development of a network of interconnected networks which would function as a coordinated whole." According to Ibegwam, the internet "is a massive computer network made up of many individual computers called servers," it actually began in 1969 under the purview of the Advanced Research Project Agency (ARPA). According to Awake magazine (1997), the internet arose from a need for a "bombproof" network during the Cold War era, such that even if a portion of the connectivity was destroyed, data would be able to reach its destination with the help of the other sections. According to Ibegwam, "the internet was created in parts to provide a communication network that would work even if some sites were destroyed by a nuclear strike." The internet seems to be a new medium for academic materials, containing large amounts of information that vary greatly in terms of content, aim, target, group, and dependability. As a result, it is critical that the basic consumers are informed of the various information sources existing on the web and educated on the criteria for accessing information material. The World Wide Web is a very valuable tool in today's IT world for businesses, also for scholarly purposes, since it improves students' skills and talents, assisting them in their studies and professional lives. Students use the web as a research tool for a variety of subjects of study. This may be observed in how students use the web for schoolwork, presentations, research projects, and exams.

Biology is all about information that has been discovered via research, study, experience, and awareness. Such understanding is organized and methodical. The dynamism of biology is built on theory and experiment, as shown by a detailed examination of the development of biology studies across time. But as society has evolved, so also the learning of biology, especially with the influence of the internet.

The internet is currently one of the most effective instances of the benefits of long-term investment in research and the development of information systems. People use the internet as a vital source of knowledge. There are more than 50 million websites on the internet, it is likely that knowledge on any topic, no matter how obscure, may be accessed using adequate search engines. The internet has provided enormous possibilities in education various levels because it allows for the shared development of teaching strategies and the more affordable distribution and updating of educational content, giving students more opportunities to interact with both their teachers and their educational materials. Another important aspect of the World Wide Web is that it gives students accessibility to a vast amount of information, particularly in developing nations. This might reduce the disparity brought on by the limitations of instructional experiences. The University library plays a role in providing a wide variety of information sources through the facilitation of internet access. The library's resources must be linked to one another and even inside the library environs, and academic libraries must complement their users' learning and research practices. The internet can enable access to virtually limitless amounts of information that are not normally available through traditional channels. The internet has eliminated geographical obstacles to communication access. It is quick and dependable, with no limits on material or format. It also contains an endless number of features that allow consumers accessibility to nearly infinite amounts of information on the internet. Furthermore, it provides global access to the most recent research findings and expertise. As a result, it is becoming a crucial part of online services for academic establishments. As an outcome, the world wide web has evolved into a magnificent resource for education and research.

Before the use of the world wide web for information collection, redefinition, and distribution, academic teaching, learning, and research were limited to resources available through inter-leading or the student's dominant institution's library. According to Akintunde, as mentioned in Anunobi, any attempt at meaningful academic communication can only be accomplished with the use of ICT, which provides information in real-time and location. It's no surprise that young people, particularly students and researchers, spend the majority of their time online. Where the latter is not provided in the university environment, people must go a greater distance to do one or more transactions on the internet; however, things have become easier with the growth of mobile phones.

## II. STATEMENT OF THE PROBLEM

Biology is a very comprehensive course, extremely detailed and wide, even in secondary schools, its syllabus is quite voluminous and most of the time are uncompleted by the teachers in school, also in the higher institutions, biology as a subject metamorphosed into various branches such as botany, zoology, genetics, fisheries, microbiology, biochemistry and so much more, although biology seems to have a voluminous nature, no biological content can be put to waste as every information about life is important, therefore due to its voluminous nature, biology contents cannot be fully covered or comprehensively taught in the allotted time, thereby, reducing

the students learning outcome, hence this research addresses the impact to which the use of internet services affects students learning outcome in biology.

## III. PURPOSE OF THE STUDY

The purpose of this study is to find out the impact of the use of internet services and how it affects students' learning outcomes in biology, and how it can address the problem of voluminous biological information students have to acquire. Specifically, the aims of the study are gender-biased hence, it's

- To find out the attitude of students in accessing biology information from the internet.
- To understand the perception of students to the use of the internet for learning purposes.
- To discover how relevant, the obtained information students, got from the internet is to their academics.

## IV. REVIEW OF RELATED LITERATURE

Biology is a broad topic with many sections and concepts; its value to society is generally understood and cannot be overstated. However, due to recent changes in the world today, particularly the internet, (Jagboro, 2003) which stated that the internet is a rich, multi-layered, complex, and ever-changing environment of the text., many aspects of the world have been made easier. Currently, curriculum experts around the world, including Nigeria, have been attempting to integrate the use of the internet into the transmission and assimilation of subject contents in schools. The review of literature will be done under the following sub-headings;

- The internet
- Impact of internet service on academic activities
- Students' internet usage frequency
- Internet usage and learning outcomes
- Problems faced when using internet services
- Summary

### A. *The Internet*

The internet is a critical innovation in the advancement of information technology. Now, In today's knowledge-based culture, the Internet has emerged a crucial tool for data systems, retrieval of information, networking, investigation, and instruction. The Internet has made a borderless world a reality. Any use of internet technology would make it simpler for individuals to receive a variety of information, including the most up-to-date information, in a timely and effective manner. The Internet is beneficial to the globe, particularly to students. A wide range of modern technologies developed and employed throughout the globalization period. Similarly, the global adoption of Internet technologies is increasing. The Internet, also known as a worldwide system of computer networks and information transportation infrastructure, has become an extremely significant instrument and is now required by the knowledge-based society for information management, information gathering, communication, research, and learning. It is based on (Jagboro, 2003), who stated that the internet is a rich, multi-layered, complicated, and ever-changing text environment. The Internet was first hailed for its capabilities

and complexity when it first appeared in the 1990s. The Internet, which began as a means for communication, has now evolved into a tool for social engagement, education, commerce, and a variety of other roles and functions. Previously, the Internet was only utilized by experts in the field of information technology and Internet-based technologies. According to the author (Ceyhan, 2011), the internet gives a broad variety of handy opportunities to expand and grow one's life. This is because the internet has allowed for the unrestricted sharing of knowledge and allows individuals to collaborate and connect with computers all around the world, regardless of time or location. According to Wells, the internet is a computer-mediated communication tool that provides individuals with access to a wide range of information and unique communication methods. The internet is a global system of interconnected computer networks that service billions of people worldwide by utilizing the standard internet protocol suite. It is a collection of networks composed of millions of personal, public, institutional, commercial, and government networks ranging in size from local to global in scale and linked by a diverse set of electrical, wireless, and optical communication systems. The internet transports a large array of resources and services, such as the World Wide Web's (WWW) inter-linked hypertext pages and the architecture to enable electronic mail. Madu and Adeniran pointed out that the internet grew out of a US Department of Defense effort during the cold war years. To be more specific, the internet began in 1969 with a contract from the Advanced Research Project Agency (ARPA) whose main goal was to connect significant computers at colleges in the South Western United States. The internet's origins may be traced back to 1960s research commissioned by the US government in partnership with private business interests to construct resilient, fault-tolerant, and dispersed networks. The National Science Foundation's (NSF) discovery of a new US backbone in the 1980s, as well as private support for other commercial backbones, resulted in international involvement in the management of network infrastructure technologies and the integration of several networks. The marketing of what had become a worldwide network by the 1960s culminated in its rising popularity and absorption into almost every area of modern human existence. The internet has no centrally controlled governance in terms of technological execution or regulations for access and usage; each component network establishes its standards; only the broad definitions of the internet's two primary namespaces, the internet protocol address space, and the hostname, are directed by a maintainer organization, i.e. the internet co-operation for assigned names and numbers (ICAN). The Internet Engineering Task Force (IETF) is a non-profit institution with loosely associated international membership in which anybody can participate by giving technical skills. Thus according to Ani, the internet is a global network of connected computers placed at various places throughout the world that allows for simple communication between people and organizations regardless of their location. The internet is largely used to get information. Researchers may produce and access numerous

articles around the country over the internet, sometimes from their home computers, once linked to the internet. The internet's main functional value arises from its desire to share knowledge with others so everyone benefits.

#### *B. Impact Of Internet Services On Academic Activities*

At the moment, the Internet is a highly significant instrument utilized by students for education as well as other reasons such as leisure. Many research and academic organizations offer internet access to students, lecturers, and researchers. Learners are progressively turning to the internet to help them with their studies. As a logical consequence, the web has become increasingly popular among learners. The internet also helps kids enhance their capabilities, which can aid them in their schooling and professions. As a logical consequence, there is a significant need to study a great deal about the internet in order to examine the linkages with other aspects in learning settings that are crucial to students. To improve inquiry, instruction, and interaction, both learners and tutors should have accessibility to the web. Learners rely significantly on the web to support their scholastic tasks as well. Although, little research has been undertaken to assess internet use by college children from various areas, the purpose and effects of online access, and overall views about the internet. The availability of the world wide web in schooling provides accessibility to a vast array of global resources. Materials on the internet may be appropriately organized, enabling for more efficient information access and exchange. Students and instructors alike utilize the internet because someone else has done the legwork of locating the material for them. There are four primary categories of internet activity for students, according to Ebersole. These include:

- A website that delivers papers or groups of materials for informative reasons. Other sorts of information collecting services, such as commercial information services concerning research businesses, are available on the internet. Thousands of libraries are also connected to the internet, allowing even casual users to browse catalogs and request loans via inter-library lending services. Aside from such digital resources, the amount of internet journals, newspapers, and trade periodicals grows month after month. Although much of the content in these magazines are free, some are exclusively available to paying subscribers.
- E-mail is simply the act of sending and receiving messages through the computer. It blends the telephone's immediacy with the computer's global processing capacity. Learners use e-mail to communicate with friends and family and to collaborate on a task with someone thousands of miles away. E-mail is a low-cost mode of communication, with no volume or long-distance surcharges, unlike telephone or conventional postal services.
- Chat rooms are online services that allow students to chat with one another while on the computer, typing messages to one another.

- An electronic message board is a newsgroup. The media outlet is an example of how the internet may help students acquire a worldwide perspective. He goes on to say that this promotes teamwork, good communication, and socioeconomic and cultural action ethics.

There is a long history of using ict in classrooms, notably the usage of mass media (Cuban, 1986). Learners all across the globe have been able to improve the value of their learning by utilizing texts, photographs, audio, and media as key technological instruments. The use of the internet, is a largely modern development in the chronology of education programs. Nevertheless, given the rapid rise of telecommunications and information technology across all corporations and companies, the influence of employing this medium is rather significant.

Everyone benefits from being exposed to new technology. It also discusses the advantages that students may obtain from the advancement of the internet as a learning medium. Students may acquaint themselves with the internet by using it, which can be appropriate for those who wish to take a chance. The majority of students used digital media as a source of knowledge, a primary source of current events, and a platform for exchanging information with others, often through social media platforms. As a result, using the internet allows students to swiftly and conveniently access the knowledge they want. This facility will encourage pupils to seek information more frequently. As a result, students' presence on the internet will have an impact on their academic achievement. However, if Internet use is not adequately regulated, it might have a detrimental influence on kids' academic performance. However, if a student can better regulate his or her Internet usage, it will have a good impact on his or her academic achievement. The internet's role in enhancing student academic attainment will be considered since it allows students to access e-books, search for information quickly, and aid them in completing tasks. Academic performance or accomplishments are the outcomes of a study to assess how far a student, instructor, or institution has accomplished their educational goals (Ward et al., 1996). This illustrates how Internet tools and services assisted students in improving their learning, searching for information to fulfill their work, and other activities.

Use of the Internet as Educational Materials; quantitative studies have indicated that instructors and research researchers use the internet to help their research and teaching (Sampath Kumar & Manjunath, 2013). The internet has had a good influence on their academic achievement, particularly in terms of writing research papers, which helps them conduct better research and provides better educational experiences. Furthermore, according to (Sushma et al., 2014), the more time spent on the internet, the more hooked a pupil becomes.

Students' widespread usage of social media technology can have a beneficial influence on them and be a crucial element in them getting a summative grade and leaving the course early (Garcia et al., 2015). Additionally, according to (Ahsan Ul Haq & Sohail Chand, 2012), students' usage of

Facebook harms their academic achievement. Male pupils are more affected by these negative impacts. This is supported by the fact that male students are much more engaged and spend more time on Facebook, making it difficult for them to concentrate on their studies. Furthermore, according to (Rouis, Limayem, & Sangari, 2011), many students who have an outgoing nature use Facebook, which might contribute to low academic accomplishment. It appears that a person's personality influences whether or not academic success may be attained while utilizing Facebook. According to (Rouis, Limayem, & Sangari, 2011), the study's goal was to look at the impact of students' usage of Facebook on their academic performance via personality, self-control, and confidence. According to the conclusions of this study, students who use Facebook frequently would have worse academic accomplishments. Researchers contend that the authors' objective, findings, and model are all relevant to the current study and may be applied to it in a new context.

Teaching with online media is a means to improve or increase the quality of the knowledge facilitation and learning process. Furthermore, web media has the benefit of being able to incorporate a range of material, including text, photos, animations, video, and audio. Watching feeds online and seeing videos relevant to subjects are features of media online for education, whereas content online for non-education is amusement, such as playing a video game online. If viewed, online content is interactivity in which the consumer does not get or communicate in a single method, but instead can converse bilaterally to obtain information and do tasks. There are various reviews of prior research to learn more about internet media that are utilized for educational and non-educational purposes.

According to research (Anand, 2007), internet media has a detrimental impact on kids. This is based on the studies carried out by the researcher on online video games, which are a sort of non-educational internet media that has a detrimental impact on academic attainment. Furthermore, a research by (Kubey et al., 2001) attributes the decline in college learners' scholastic success to the use of real - time networking, such as discussion forums, which can cause individuals to remain awake and impair their scholastic achievement. As a result, online content consumption has an impact on academic achievement. The student's academic performance is negatively affected by social media (Asemah, Okpanachi & Edegoh, 2013). While (Shakir Ullah et al., 2013) reveals the facts about electronic media as a reliable agent of socialization and recognize that it can educate the public and assist learners in their courses better than any other.

### C. Students' Internet Usage Frequency

According to the Ebersole study, respondents provided the following grounds for using the internet: 5.2 percent for research and learning, 7% for communicating with others, 5% for access to information otherwise unavailable, 8% for finding something exciting/fun, 5% for finding something to do when bored, and 1% for sports and game information.

Students are the most regular internet users, according to another research based on a review of literature by Kumar and Kaur. They mostly used the internet for instructional rather than recreational purposes. At Kuvempu University, Bavakutty and Biradar et al. did a study on online activity by students and faculty. According to the findings, 42.1 percent of students use the internet twice a week, while 31.25 percent of faculty members use it every day. The majority of the students and professors utilize the internet for study and teaching. Commercial establishments are the most popular venues to use the internet. The vast majority of people are happy with online sources and services. Laite polled 406 Shippensburg University graduate and undergraduate students. According to the report, 57.6% of students enrolled to use the internet 1-2 times per week, and 37.1 percent use it 1-2 times each day. 54.7 percent of undergraduate students used the internet once or twice a week, and 37.7% used it once or twice every day. E-mail was shown to be the most popular online service. Graduates and undergraduates in equal numbers 100% of the graduates and undergraduates used e-mail services. A study conducted by library science students on the effect of gender on online activity found that while there is no significant difference between male and female internet usage percentages, their online abilities can affect whether or not they find the internet beneficial (Roman, 2003). The research examined the state of internet connectivity in Bangladesh, as well as the issues with it and the possibilities for internet commerce. Undergraduate Internet usage has also been studied abroad (Rahman, 2004). Shippensburg University in the United States conducted an internet usage study with 406 graduate and undergraduate students. The majority of graduate and undergraduate students utilized the internet 1-2 times each week, according to the research. The email was the most popular online service since all undergraduate and graduate students utilized it (Laite, 2000). According to research conducted at Obafemi Awolowo University in Ile-Ife, Nigeria, a large percentage of undergraduate students utilize the internet. Students use cyber cafés as their access point, and the university library has yet to provide an interlibrary loan. As a result of the investigation, the institution should provide more entry points for students (Omotayo, 2006). Seton Hall University in the United States conducted an internet usage study. According to the study's findings, 40.2 percent of respondents accessed the Internet daily, 38.3 percent weekly, and 10.7 percent monthly. Approximately 10% of responders said they used the internet only seldom or never (Bao, 1998). At the University of Malaysia, Sarawak, researchers investigated students' attitudes regarding using the internet for educational purposes. According to the findings, pupils had favorable attitudes toward studying via the internet. The pupils had very elementary online abilities and saw the internet as a beneficial tool for learning (Hong et al., 2003). The research looked at the percentage of undergraduate students who had access to the internet and used electronic resources at three Nigerian universities. According to the findings, undergraduate students utilize the internet extensively. However, due to infrastructural issues, internet access at university libraries, departments, and computer labs was limited. The majority of respondents used cybercafés and private internet services. The survey also discovered that responders should be taught how to use the internet and networks (Ani, 2010). Kuvempu University

performed internet usage research with students and faculty members. According to the report, 42.1 percent of students and 31.25 percent of faculty use the internet twice a week. The majority of faculties and students utilize the internet for studying and teaching. The library has been selected as a preferred location for utilizing the internet. The majority of students and professors are pleased with existing online services and resources (Biradar, Rajashekhar, & Sampath, 2006). In the United Arab Emirates, a study was conducted on web usage among university students. The study's goals were to investigate online socializing and attitudes regarding the internet. The study's findings revealed that the internet might play an important role in minimizing social exclusion and gender disparity (Ozad, 2010). Another research was undertaken at the University of Punjab in Lahore on internet activity among university students. The study's goal was to learn more about students' internet usage habits. The results revealed that the majority of students use the internet for research and academic objectives. They were labeled as first-time internet users. The university library, departments, and households were recognized as typical internet usage locations. Without any official instruction, the majority of students have learned to use the internet on their own or with the assistance of friends (Sakina et al., 2011)

The University of Dares Salam conducted a study on internet usage among students. The findings of the survey revealed that the majority of students did not utilize the internet due to a shortage of computers, poor online skills, and sluggish computer speeds. The majority of pupils did not utilize the internet for academic purposes, according to the research. As a result, the study suggests that more computers be connected to the internet and that pupils be provided sufficient online training (Luambano & Nawe, 2004). Another study looked into the purpose of internet usage and online learning. The study's findings revealed that the internet has become an integral component of college life, with 100 percent usage among students. The research also discovered that 36% of students spend 1-10 hours each week using the internet. Students mostly use the internet to send and receive an email, read newspapers, conduct research, chat, and download photographs. Because of their large share of online activities, pupils used to watch fewer television shows. Saving time and ease of work were the reasons for internet usage among university students (Ruzgar, 2005).

#### *D. Internet Usage And Learning Outcomes*

As a result, several researchers have begun to explore the link between Web use and scholastic performance. Landers and Lounsbury (2006), for instance, examined 117 American university students and discovered that greater Online activity was negatively related to work ethic, culminating in terrible scores. Likewise, Kirschner and Karpinski (2010) discovered a link between Facebook use and lower academic performances in a cohort of 219 American university pupils. In a survey of 572 American university pupils, Kubey, Lavin, and Barrows (2001) discovered that Web use was related with worse scholastic achievement. Utilizing a sample of 2,100 American college students, Stollak, Vandenberg, Burklund, and Weiss (2011) revealed that a student's Academic achievement did not

represent their use of social media sites such as Facebook, Twitter, or YouTube.

The advantages of internet use to the academic community are described by Chiwepa and Jagboro as "quick, global, and convenient access and exchange of information with experienced and expert in any field; easy dissemination of research findings, enhanced collaborative research and other activities, ability to use some software and expand one's competences." According to Kuh and Hu, utilizing the internet has a substantial correlation with total student participation. In a survey of "best-wired campuses" (institutions that have made data-driven decisions), students reported somewhat more frequent interaction with instructors and participated in more active learning activities than their counterparts at less connected campuses. The findings revealed a favorable relationship between information technology and participation in successful educational methods. Laird and Kuh discovered a significantly positive correlation between using the internet for instructional methods such as active collaborative student learning and academic faculty interaction in the study of data from the National Survey of Students' Engagement (NSSE) at Indiana University Bloomington. Students' options for different sorts of involvement expanded as they accessed the internet.

In their study on the influence of the internet on research, Adegboji and Toyo found that obtaining resources from the internet made research easier. Researchers and students at institutions of higher learning are frequently regarded to be dealing with a lack of suitable and up-to-date materials. Research is one approach to exploring knowledge, and the internet is showing a significant influence on the research process and information transmission. Because all institutions were adequately equipped with internet access, Asani demonstrated that all respondents used the internet often. It was discovered that the university's researchers were using the internet to obtain high-quality material. Even though the university library provides all students and employees with access to numerous databases and online publications, 55% of respondents used the internet to find scientific material. Anasi looked at how undergraduates at the University of Lagos' major campus in Akoka, Lagos, used the internet. Even though internet use was minimal among undergraduates from both the law and education faculties, she observed that internet users had a significant influence on students' academic and career-related actions. Researchers exploited the Internet's presence in higher education to communicate and exchange project data. When used effectively, the internet may assist undergraduate researchers in accessing a great number of materials from all over the world. With its introduction, professors and students can collaborate without physically interacting with one another to achieve the same goal as traditional higher education learning. Since the internet has made teaching, learning, and research easier, lecturers communicate ideas and communicate efficiently. According to Awoloye, Siyanbola, and Oladapo, the internet is utilized for information development, easier communication, better learning outcomes, used as a research instrument, offers assignment solutions, provides entertainment and education material, and is a source of scholarship.

#### *E. Problems Faced When Using Internet Services*

Bac (1998) observed that students receive so little instruction in the use of ICT facilities, that where the internet is available in an institution, very little time is scheduled for students to use it, whereas Chifwepa (2003) identified a lack of supervision, inability to use, and inadequate internet facilities as difficulties related with the use of Internet facilities.

Ibrahim attempted to assess the usage and perspective of electronic resources by UAEU faculty members in his study titled "use and user perception of electronic resources in the United Arab Emirates University (UAEU)." He discovered that regular use of electronic information resources was limited owing to a lack of time to devote to teaching, a lack of understanding of the library's electronic resources, inadequate communication channels, and language difficulties. Faculty members were handed a stratified random sample questionnaire. Self-administered questionnaires were used. There were also e-mails and phone calls. A 25% sample was taken from each department. Mashra, Yadav, and Bisht undertook a study to determine the internet usage patterns of GB Pant University of Science and Technology, Pantnagar undergraduate students. The majority of respondents, 83.1 percent of men and 61.3 percent of women, stated that their internet connection was sluggish. The internet has altered the way people throughout the world get and use information. According to Jagboro research, 38.24 percent and 22.06 percent of university students use the internet on a monthly and daily basis, respectively. Furthermore, 11.76 percent of users use the internet on a regular or bi-monthly basis. Many people (39.7%) have one hour of surfing time, down from 25% for 30 minutes to 5.88 percent for four hours. Despite the high usage, he noticed that Obafemi Awolowo University students use the internet infrequently. In his research, Ibegwam noticed that many students at the University of Lagos College of Medicine were not utilizing the internet. There are issues with internet technology, such as server slowness or failure, which Ibegwam described as frequent disconnection owing to inadequate phone connections. Low utilization is due to a lack of advice, incapacity to utilize, and poor internet facilities, according to Chifwepa. According to Chifwepa, 8.6% of respondents viewed traveling a considerable distance to acquire internet services to be a concern, while Jagboro highlighted that students spent a considerable amount of money at cybercafé facilities. According to Nwokedi, a lack of search abilities is still a barrier to internet use. Despite the numerous challenges that undergraduate students face when using internet facilities, it is clear that doing so will improve their academic performance in their various fields. As a result, they must overcome these obstacles and take advantage of the numerous opportunities provided by these technological resources to enhance their intellectual prowess and liberate themselves from educational, intellectual, and knowledge literacy.

#### *F. Summary*

Ibegwam (2002) claims that the internet has altered communication worldwide in the recent decade. It is the world's biggest computer network, a collection of networks across the globe. The internet is unique in that it is the cheapest and fastest way to get, distribute, and gather information (Leon and Leon, 1999). According to Jensen (2001), the internet has risen

significantly throughout Africa in recent years. According to Jagboro (2004), 38.24 percent and 22.06 percent of university students use the internet on a weekly or daily basis, respectively, while 11.76 percent use it monthly or bi-monthly. Similarly, Lumande and Mutshewa (1999) found that 42.6 percent of their respondents said they use the internet frequently. According to Ibegwam (2004), students' internet use will increase if universities implement Internet training, give free Internet services, employ VSAT to improve connection, and expand the number of workstations linked to the Internet.

Academic libraries are often developed to accomplish the three-fold goals of teaching, researching, and community work. The library is the principal source of printed, non-printed, and electronic information for its diverse clients. Before the introduction of digital, virtual, and interactive libraries, the poorest nations like Nigeria relied on books from traditional libraries as their primary source of knowledge. With the recent boom of information, the internet has transformed how current and future library users obtain and use information. According to Daly (2000), the internet is expanding at a pace of 10.15 per month, with global internet users increasing from around 56 million in 1995 to almost 200 million in 1999. It's no surprise that most higher institutions' libraries are already connected to the internet, allowing their patrons to receive any information they need quickly and easily. Users may speak with colleagues and acquire material needed to boost their academic pursuits thanks to the installation of internet facilities in libraries. That is to say, any individual or student who wishes to excel in his or her scholastic pursuit may find the internet useful in searching for and obtaining crucial information for that purpose. As a result, if students are to attain the aims for which they are in the institution, material sourcing and use via the internet in university libraries is a must.

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