



INTERNET USAGE AMONG ACADEMIC STAFF OF AUCHI POLYTECHNIC: A CRITICAL ANALYSIS.

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ABSTRACT

The use of the internet has brought revolutionary changes in human life with a major impact on their ideas and behaviour. It has affected every aspect of mankind. The current study was planned to examine and investigate the level of Internet usage among the Academic Staff of Auchi Polytechnic Auchi, Edo State for the promotion of education and research in the process of learning and teaching. The study investigated the computer and internet skills, activities engaged in, type and point of Internet access, factors that motivate Internet usage, and problems encountered by Academic Staff in internet usage in the Polytechnic. The survey research methodology was adopted in this study while the Questionnaire was the research instrument used for data collection. A sample size of 400 academic staff was employed. The results were analyzed using descriptive and inferential statistics. The findings indicated that the respondents had good computer skills and used the internet for providing quality education and research. The high cost of internet access and poor internet facilities within the polytechnic limit respondent active usage of the internet for academic development. The point of access significantly influence internet usage among the academic staff. The major recommendation of the research is the provision of adequate internet facilities; regular power supply and free internet access to all the Academic Staff.

Keywords: *Internet, ARPANET, Research, Technology, protocol, Academic.*

1.0 INTRODUCTION

Information and communication technologies (ICTs) especially the internet was introduced into the educational system to bridge the prevailing information gap (Anasi, 2006). The internet began in 1969 as Advanced Research Project Agency Network (ARPANET) by the US Department of Defense to share military intelligence and research with university resources (Anasi, 2006). Today, the internet has grown to include hundreds of millions of interconnected computers, cell phones, PDAs, televisions, and networks. The internet has since the 1990s become an integral part of our educational system as widely used in communication, research, entertainment, education, and advertisement, and a new phenomenon was included in the field of education learning via the Web, or online learning (Chete and Odighi, 2020). The use of the internet has brought a revolutionary change in human life with a major impact on their ideas and behaviour. It has affected every aspect of mankind. This amazing technology has now become a natural part of our lives and has transformed every field of world routine. It has brought a dramatic increase in the advancement of learning and education, especially higher education.

The Internet or simply the Net as it is often called stands for an interconnected network of networks on a global scale. It makes it possible for computers all over the world to send and receive messages. It is an



internet-work of several hosts and their networks together form a larger network of global magnitude (Awolaye *et al* 2014). Odighi (2019) defines the internet as a global collection of computers and networks that connects millions of people, organizations, military, and government to a wide range of information resources through a common protocol to communicate among themselves. Considering the global nature of the Internet, which involves several systems, running on different platforms, inter-system communication becomes an issue. This problem is solved using the transmission control protocol/Internet protocol (TCP/IP), which defines the rules for communication on the Net. This global network serves as the basis for various resources or possibilities of the Internet such as web communication (www), email (e-mail), chat on the Internet (online chat), video communication, file sharing, online gaming, and so on (Raovan, *et al.*, 2018).

The internet is an important tool being used in higher education for information access, learning, teaching, research as well as a communication medium (Bear, 2011). Also, there are many problems in terms of access by the lecturers and students. The higher education sector in developing countries such as Nigeria is essential for the proper economic and social status development of such countries. Therefore, in the present knowledge economy, seamless information access by the lecturers is a major key to academic improvement in the universities. (Fasae and Aladeniyi, 2012). In Nigeria, most higher education institutions have acquired high bandwidth technology for improving the quality of education and research. Most Academic Staff were bound to rely on this emerging technology, not only for self-learning, preparation of lectures, and enhancement of research but also for new teaching methods and styles (Olateju, *et al.*, 19). The current study was planned to examine and investigate the level of Internet usage among the Academic Staff of Auchi Polytechnic, Auchi Edo State for the promotion of education and research in the process of learning and teaching.

In this paper, the authors investigate the level of internet usage among the Academic Staff of Auchi Polytechnic. Some of the questions that influence the conduct of this study include:

- i. What types of internet access do the Academic Staff use in connecting to the internet?
- ii. What are the online activities engaged in by the Academic Staff using the internet?
- iii. What factors motivate Internet usage by the Academic Staff of Auchi, Polytechnic?
- iv. What are the challenges/ problems encountered by Academic Staff in internet usage?

The following hypothesis were formulated to generate inference on internet usage among academic staff of Auchi Polytechnic.

H1: There is no difference among the gender of the academic staff's internet usage.

H2: The points of Internet access has no influence among staff of the polytechnic usage of the internet.



2.0 Review of relevant literature

The use of the internet has helped in facilitating library services, administrative processes, distance learning and instructional structures (Bankole and Oludayo, 2012). The internet has transformed education into students centered learning rather than the institution and faculty-centered instruction. It has also encouraged collaboration and collaborative arrangements between academic institutions (Hayes and Robinson, 2002). The internet is a reservoir of knowledge and information for students in their field or discipline of interest. Thus, the internet facilitates E-mail, instant messages and the posting of messages on websites (Bolu-Steve, *et al.*, 2015). The process of learning has gone beyond the consultation of text-books and other library resources.

Mishra (2013) revealed that the use of the internet has both positive and negative impacts on the academic performance of lecturers and students. The findings of the study revealed that internet usage among staff and students of the University of Ilorin had positively influenced their academic performance in their various disciplines though; it distracts students' attention and prevents them from attending lectures regularly.

Brändström (2015) explained that the research studies carried out on the effectiveness of technology on academic staff achievement, the findings revealed that the use of technology like the internet promotes learning among academic staff. Mishra (2013) discovered that lecturers and students can benefit from internet-enhanced collaborative learning methods and the interactive learning process can enhance the academic performance of lecturers. In Nigeria, Anasi (2006) in his paper showed that the low level of internet usage among Lecturers from the Faculties of Art and Law at the University of Lagos was due to a lack of adequate Internet facilities. However, Muniandy (2010) reported that though most lecturers access the internet, many of them lacked adequate knowledge and strategies skills even though their Internet use had a very high impact on their academic or career-related activities. Olufemi (2012) in his findings on the level of Internet usage among lecturers of Obafemi Awolowo University, in Nigeria, reported that lecturers have a high level of access to the internet and their major access was through the use of a modern and personal laptop, where they paid for data to access the network. Also, the problems experienced by the staff and students when using the internet include slowness of the server, poor electricity supply, and high cost of data to access the internet (Olufemi, 2012).

Also, Awoleye *et al.*, (2014) examined the level of internet usage among academic staff and undergraduate students of Obafemi Awolowo University in Nigeria and reported that the academic staff had a high level of internet usage and they also use the internet mostly for email, information research and online-chat. Mishra (2013) examined the use of the internet at the University of Maiduguri, Nigeria. The report showed that 74.6% of the lecturers and students use the internet for research and academic purposes; and concluded that adequate facilities should be put in place for faculty academic staff and students to make maximum use of information resources available on the internet. A study conducted by Patel and Darbar (2016) on internet usage among academic staff of CK Shah Vijapurwala Institute of Management Library, India reported that 100% of the respondents use the internet for their studies and social networking. As it is obvious that the internet is a multifaceted technology with a variety of information sources, the respondents were asked



about the purpose of using the technology. Email, social networking, sports, career development, research and teaching, and recreation and news were the options given to the participants (Tamara, *et al.*, 2016).

Furthermore, Ani (2010) examined the level of internet access in Nigerian universities and reported that lecturers and undergraduate students extensively use the internet. However, the majority of the respondents indicated that they relied on commercial internet services and cybercafés due to poor internet infrastructure in the university. The results showed that most lecturers use the internet for academic purposes. Adekunmisi *et al.*, (2013) reported that the internet access and usage by lecturers and undergraduate students of Olabisi Onabanjo University, Nigeria indicated that the majority of the respondents had access to the internet.

3.0 METHODOLOGY

The study was conducted to investigate the technological determinants of Internet usage among polytechnic academic staff. The survey research methodology with a focus on the case study proposed by Stake (2010) was employed in this study. According to Yin (2012), the application of case study research can be in the form of single or multiple cases. Multiple cases are like multiple experiments employed to compare and extend a previously developed theory with empirical results of the case study (Yin, 2017). Halkias & Neubert (2020) added that a multiple case study design is a valuable qualitative research tool in studying the links between the personal, social, behavioral, psychological, organizational, cultural, and environmental factors that guide managerial and leadership development.

Population: The target population was academic staff drawn from the seven schools in Auchi polytechnic (Art and Industrial Design, Applied Science and Technology, Engineering Technology, Environmental Studies, Business Studies, General Studies, and Information and Communication). Presently, there is 970 teaching staff at Auchi Polytechnic (Auchi Polytechnic Staff Directory, 2019). Using the entire population may be very cumbersome and non-economical hence the need for a sample size.

Sample Size: A sample is a subset of the entire population (Halkias & Neubert, 2020). A total size of 400 out of the 970 Academic Staff were targeted for conducting this research.

Data Collection: Data collection was conducted using primary data via a structured questionnaire. The use of structured questionnaires help to guide the respondent on how to respond/answer the questions in questionnaires. Here, the closed-ended questionnaire using Likert-type scale options was employed. Possible responses to core questions are represented using a five-point Likert scale namely: strongly agree (SA); agree (AG); undecided (UD); disagree (DA) and strongly disagree (SD). Some researchers used closed questionnaires of the Likert scale type to obtain perceptions with considerable success (Chalmers and Johnson 2012). The questionnaire was designed by the researcher and divided into two sections. The first section (section A) was constructed to collect background information about the demographic characteristics of the respondents such as sex, position, designation, and staff qualifications while the second section (section B) was designed to answer questions related to the study using the five Likert type scale.



Data Analysis techniques and Statistical Software used

This study conducts an in-depth review of academic staff internet usage for effective learning outcomes. Thus, both descriptive (frequency tables and charts) and inference statistical analysis (Chi-Square) were used. The software tool used for description was Statistical Package for Social Sciences (SPSS) version 22 and Microsoft Excel 2016 version.

4.0 RESULTS OF ANALYSIS AND DISCUSSION

4.1 Demographic distribution of respondents

| Variables | Options | Numbers of Respondents | Percentage |
|---|---|------------------------|------------|
| Gender | Male | 250 | 62.5 |
| | Female | 150 | 37.5 |
| Designation | Chief Lecturers | 24 | 6.0 |
| | Principal Lecturers | 30 | 7.5 |
| | Senior Lecturers | 80 | 20.0 |
| | Lecturer 1 | 72 | 18.0 |
| | Lecturer 11 | 84 | 21.0 |
| | Lecturer 111 | 70 | 17.5 |
| | Assistant Lecturers | 40 | 10.0 |
| Computer and internet skills | Yes | 370 | 92.5 |
| | No | 25 | 6.25 |
| | Absent | 5 | 1.25 |
| Mode of Access to the internet | School internet network | 95 | 23.75 |
| | Cyber café | 5 | 1.25 |
| | Mobile Phone | 395 | 97.5 |
| | Personal Laptop | 390 | 95.0 |
| | Friend/Colleagues | 25 | 6.25 |
| Online activities engaged on the Internet | Electronic mail | 375 | 66.25 |
| | Academic work/ Research purpose | 374 | 91.0 |
| | Information searching | 393 | 71.25 |
| | To Publish articles | 388 | 87.5 |
| | For current awareness/update of knowledge | 225 | 56.25 |
| | Instant messages | 214 | 53.5 |
| | Download music and video | 154 | 38.5 |
| Factors that motivate Internet usage | Inadequate materials in the library | 345 | 86.25 |
| | The Internet contain more information | 392 | 98.0 |
| | The Internet is more convenient to use | 395 | 98.75 |
| | Free access to the Internet | 45 | 11.25 |
| | Obsolete materials in Internet | 15 | 3.75 |

**Table 1: Demographic distribution of respondents**

| Variables | Options | Numbers of Respondents | Percentage |
|---|--|------------------------|------------|
| Point of Internet access can influence its usage. | Strong Agree | 175 | 43.75 |
| | Agree | 134 | 33.5 |
| | Disagree | 36 | 9.0 |
| | Strongly Disagree | 25 | 6.25 |
| | Undecided | 30 | 7.5 |
| | Total | 400 | 100% |
| Problem encountered by Academic Staff internet usage. | High cost of buying data for browsing | 323 | 80.75 |
| | Slowness of the Internet server speed | 298 | 74.5 |
| | Poor/ Inadequate power supply | 312 | 78.0 |
| | Lack of good knowledge for Browsing skills | 165 | 42.25 |
| | Overload of Information on the Internet | 283 | 70.75 |
| | Inadequate Internet access in the school | 375 | 93.75 |

Table 1: Demographic distribution of respondents (cont.)

Source: Field 2021

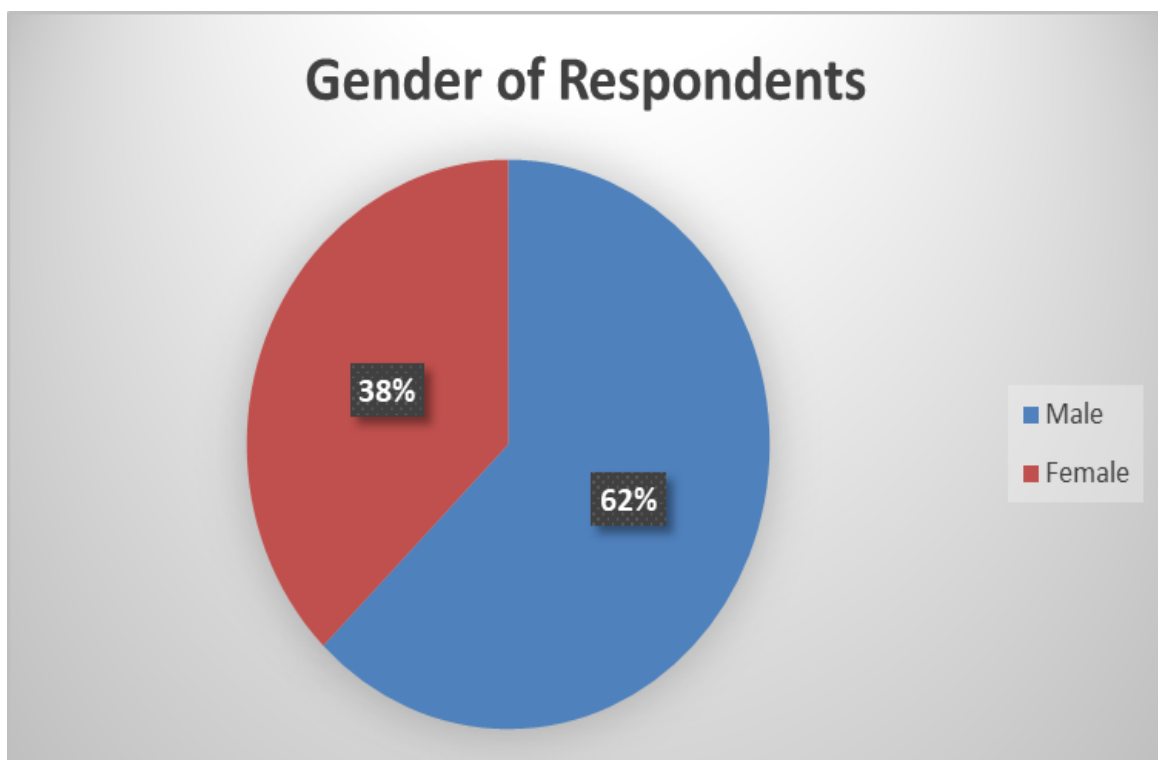


Figure 1: Gender of respondents (source: Field work, 2021)

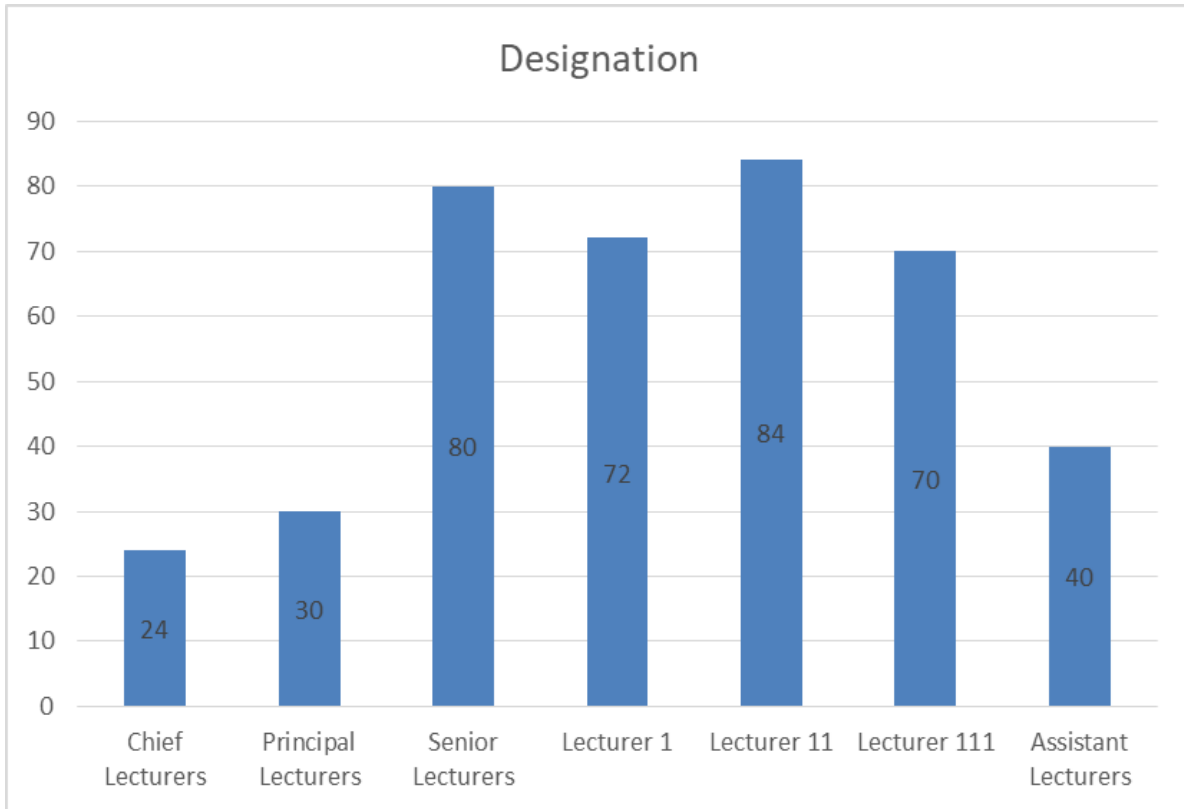


Figure 2: Designation of respondents (source: Field work, 2021)

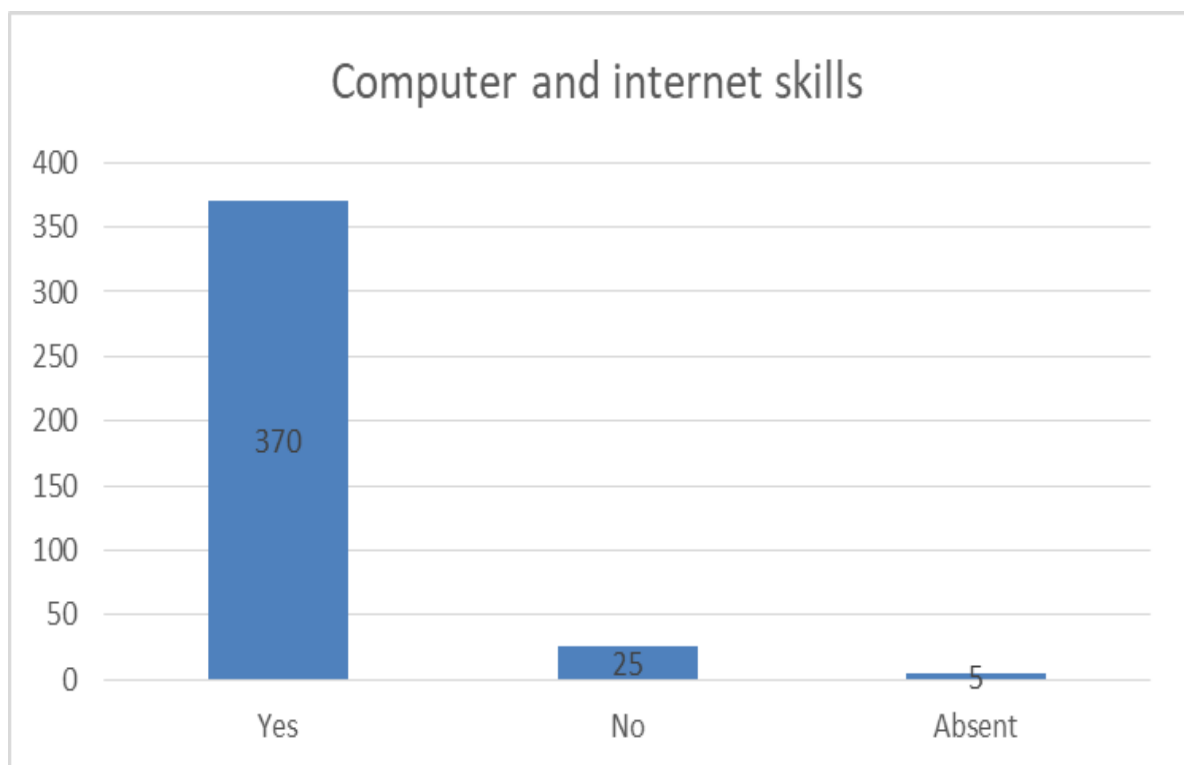


Figure 3: Computer and Internet skills of respondents (source: Field work, 2021)

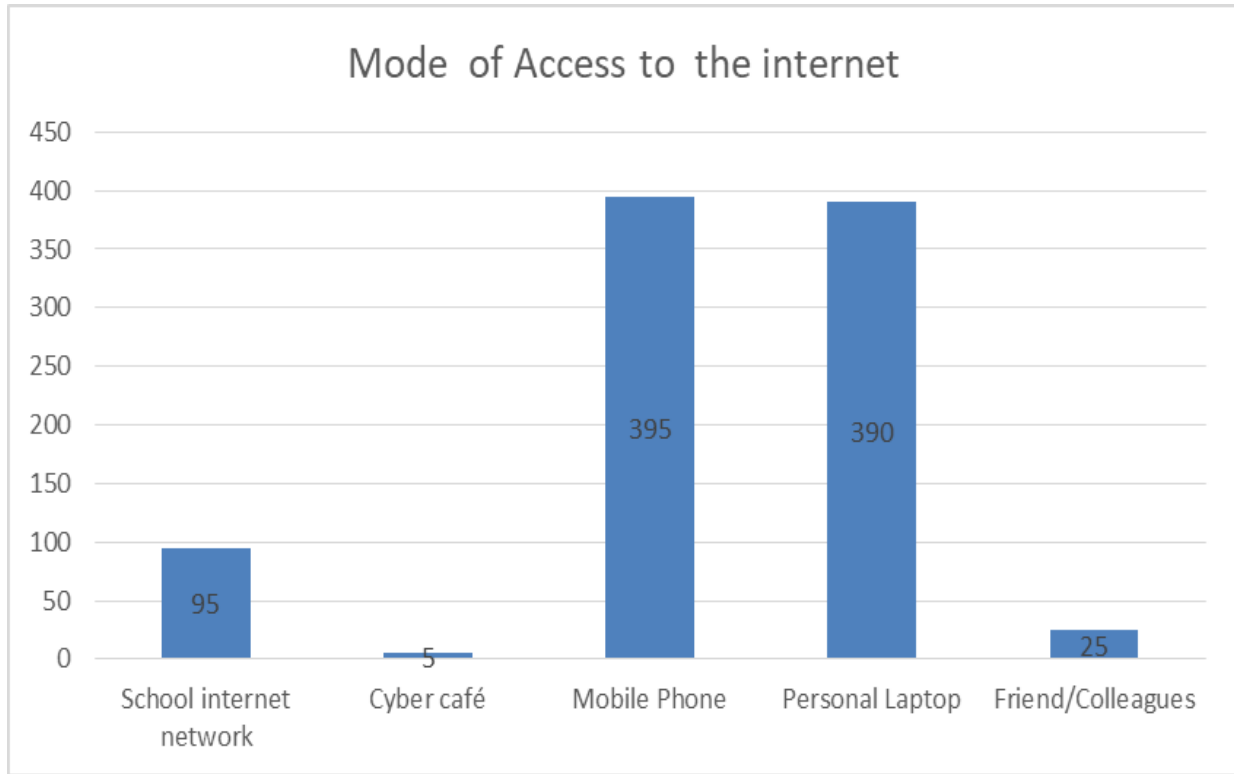


Figure 4: Mode of access of the internet of respondents (source: Field work, 2021)

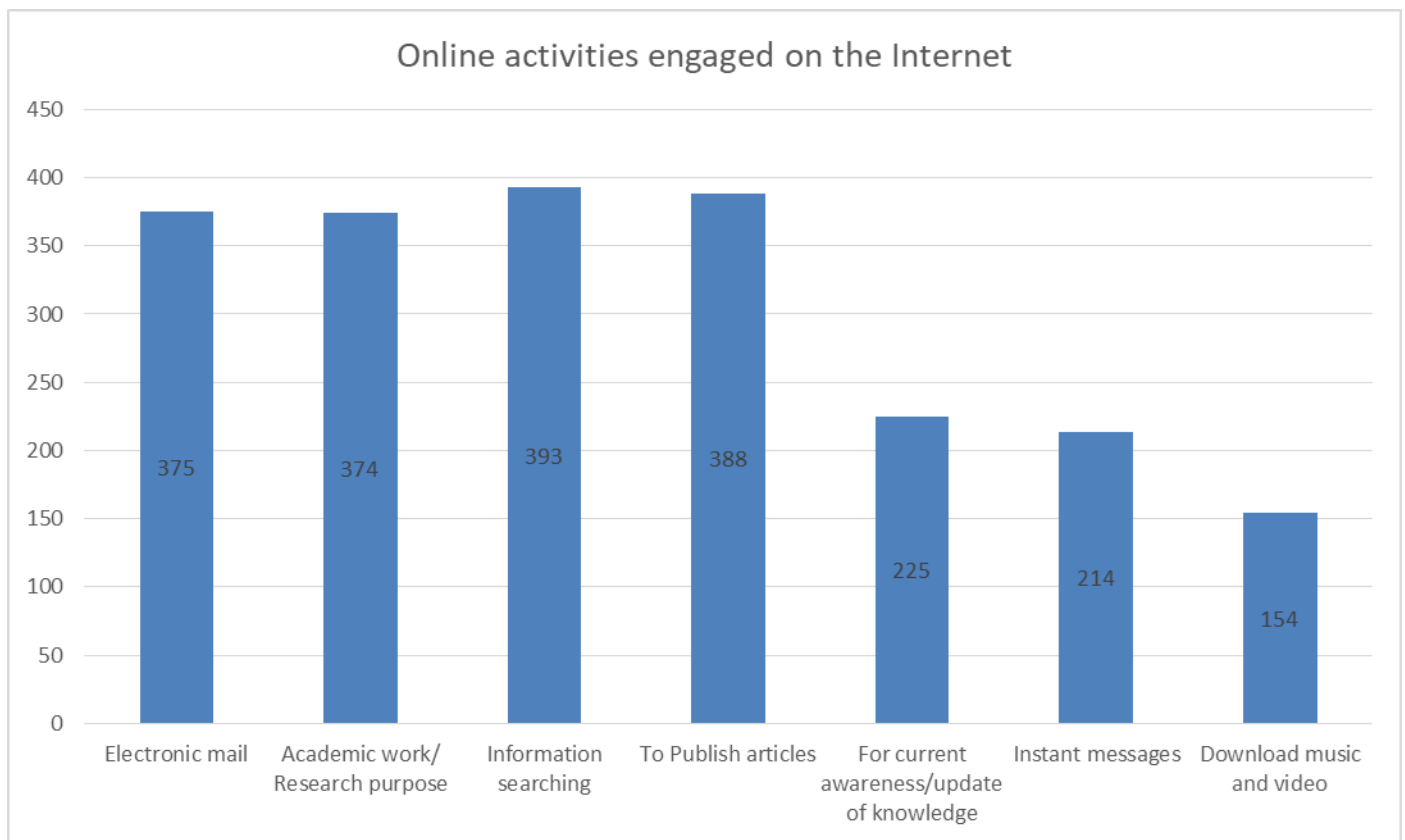


Figure 5: Online activities engaged on the internet of respondents (source: Field work, 2021)

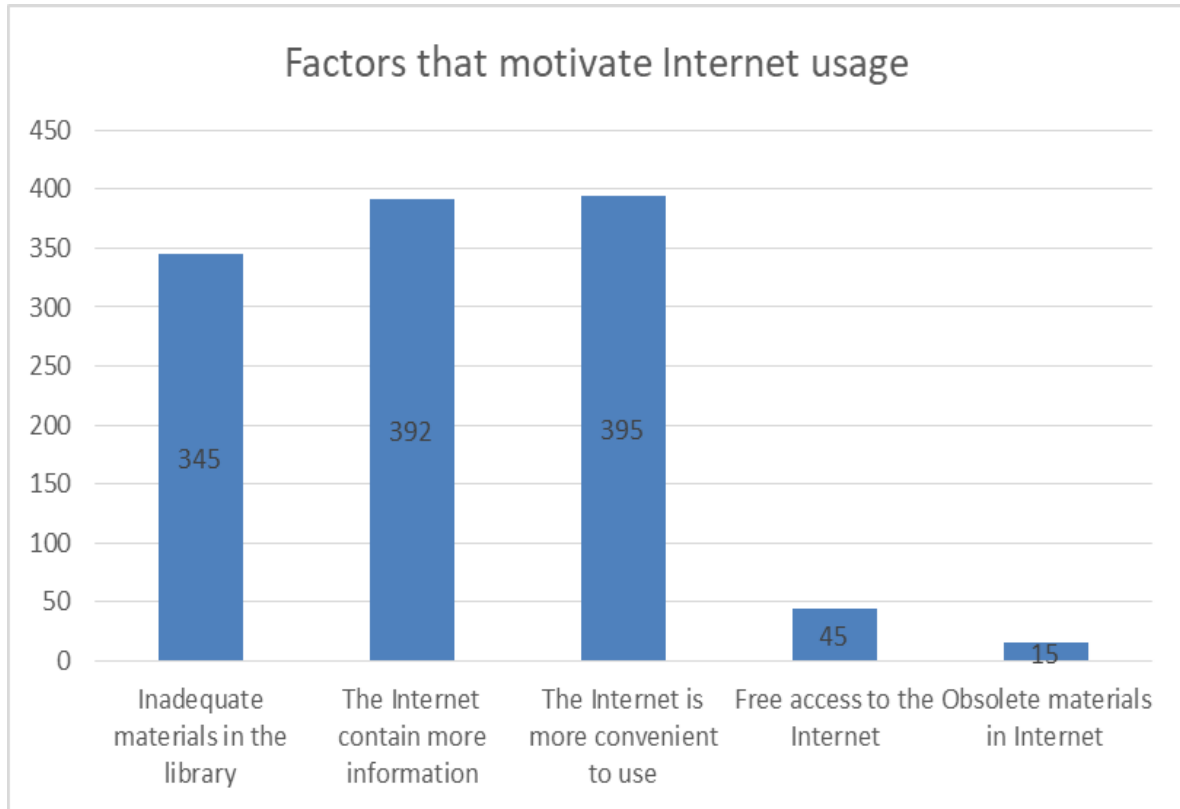


Figure 6: Factors that motivate internet usage of respondents (source: Field work, 2021)

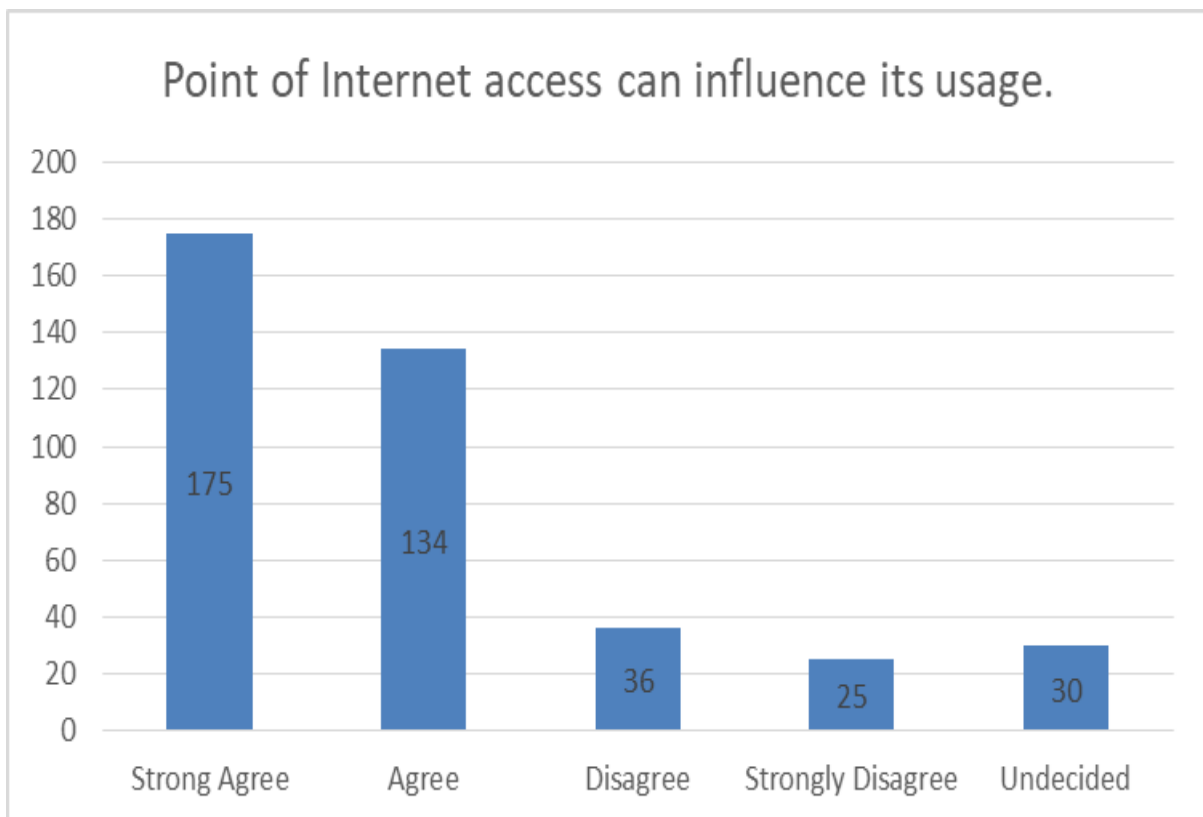


Figure 7. Point of Internet Access influence its usage

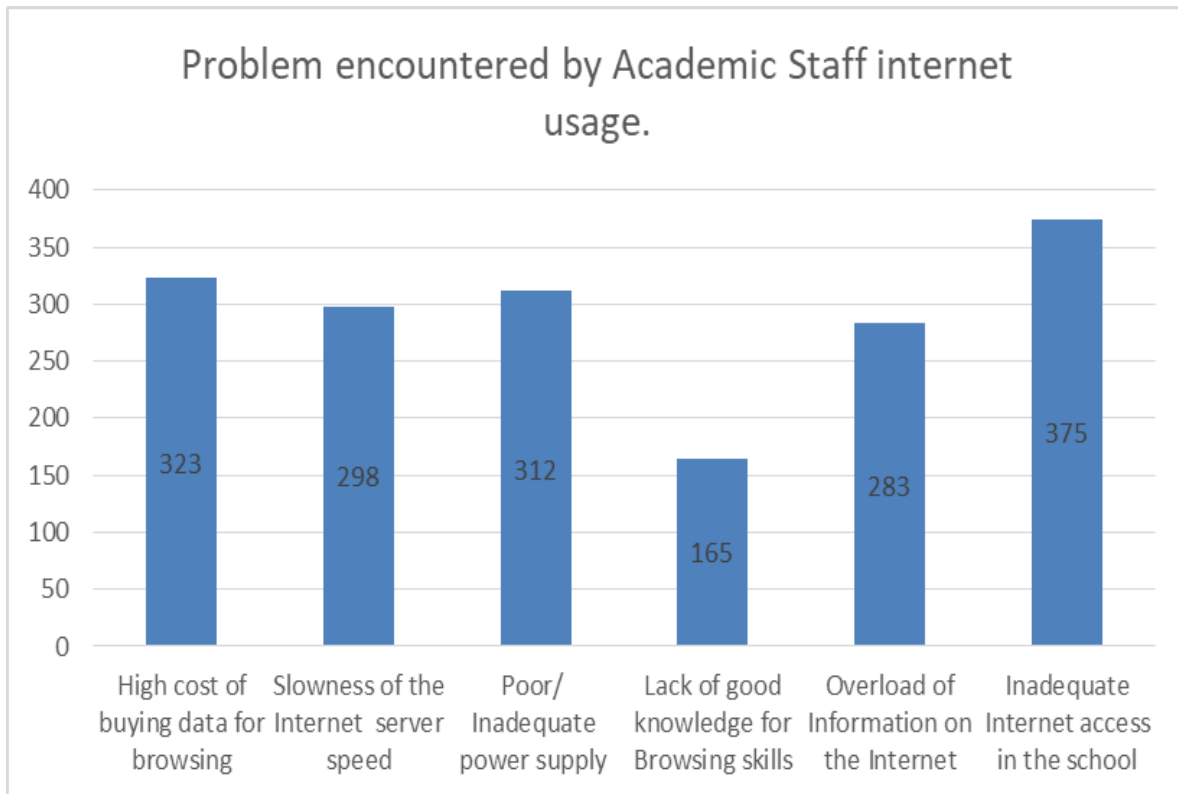


Figure 8: Problem encountered by academic staff internet usage (source: Field work, 2021)

From table 1, it was observed that 250 (62.5%) of the respondents are male while 150 (37.5%) are female. This result specified that there were more male internet Academic Staff users than female users in the sample studied.

In figure 2, 24(6.0%) of the respondents are Chief Lecturers, 30(7.5%) Principal Lecturers and 40(10.0%) Assistant lecturers. This shows that there are few lecturers in these categories, while the respondents in lecturer 1 and lecturer 11 categories are 72(18.0) and 70(17.0) respectively. This means there are more Academic Staff in the categories of senior lecturers and lecturer 11 in the sample studied.

370 (92.5%) of the respondents indicated they have computer and internet skills as shown in figure 3. This aligned with the study of Okello-Obura and Magara, (2008) who said Computer literacy is very important for the maximum use of internet services and internet skills while only 6.25% indicated that they do not have the skill. This means that the majority of the lecturers have personal computer which makes them have good internet skills. However, 5(1.25%) respondents did not return their questionnaire.

In figure 4, 395(97.5%) of the respondents stated that they accessed the internet from the mobile phone, followed by access through their personal laptop using modern 390(95.0%). This result shows that mobile phone and personal laptop play a significant role in the supply of internet facility to the Academic Staff of Auchi Polytechnic, Auchi, because the school has limited internet facilities. The proliferation of internet services to mobile phone users by telecommunication companies is also responsible for an explosion of internet use among the Academic Staff. This may be a reason why mobile phone and personal laptop topped highest and second in the number of internet access. 95(23.75%) of them however, access the internet through the Polytechnic internet network, while 25(6.25%) of the respondents access the internet through



friends/colleagues. The lowest of the respondents 5(1.25%) indicated access to the internet from the cyber-café and this was supported Ani (2010) in his study which examined the extent and level of internet access in Nigeria University. This study also shows that Auchi Polytechnic, Auchi, does not have internet facilities and the lecturers accessed internet facilities privately on their-owned cost. Therefore, non-use of internet effectively in country is often attributed to the problems of accessibility and cost.

In figure 5, 364(91.0%) of the respondents use the Internet to obtain information for academic/ Research work, which is the primary duty of an academic staff. This claimed was supported by Tamara, *et al*, (2016) and Adekunmisi, *et al*, (2013) who found out that majority of the lecturers use the internet mostly for research and academic purposes. 350(87.5%) and 285(71.5%) of them use it to published articles and browse for information to supplement their lecture note. 265(66.25) of the respondents use it to send and receive electronic message, 225(56.25%) of them use it to update knowledge and create awareness and 214(53.5%) use it for sending and receiving Instant messages. While the least 154 (38.5%) used the internet for music and video download. This finding agrees with Patel and Darbar (2016).

In figure 6, 392(98.0%) of the respondents use the Internet because the Internet contains more information. 395((98.75%) of the respondents use the Internet because it is more convenient to use. 345(86.25%) of them use the Internet due to inadequate materials in the library. However, 45(11.25%) of them use it because they have free access to the Internet, while 15(3.75%) of the respondents were motivated because of obsolete materials in the Internet. This means that majority of the Internet users were motivated because of the availability of information the Internet contains and the inadequacy of library materials compared to the Internet. Internet is very convenient to use. Finally, Internet users are not motivated by obsolete materials and free access to the Internet.

In figure 7, 175(43.75%) of the respondents strongly agree that the point of access affects Internet usage, while 134(33.5%) of them also agree. But 36(9.0%) of them disagree and 25(6.25%) strongly disagree. However, 30(7.5%) were undecided. This means that those who have Internet access through their personal laptop or at home and offices would use their Internet more frequently than those who access it through the cybercafé.

As shown in figure 8, the major challenge/constraint encountered by Academic Staff in internet usage was the high cost of buying data for browsing and inadequate Internet access in the school as indicated by (80.75%) and 93.75% of 400 lecturers. The other main constraint is Poor/ Inadequate power supply (78.0%). Bankole and Babalola (2012), finding also shows that slowness of the server is one of the major constraints facing Internet usage among Olabisi Onabanjo Staff of the University and also found that 74.5% (298) indicated slowness of the internet server speed as the leading problem in this study which may be due to the bandwidth capacity and/or several users browsing at the same time. Another challenge/ constraint encountered was overload of information on the Internet with irrelevant information as indicated by 70.75% of the respondents. This challenge was also reported by Waithaka (2013) in their studies on internet uses. The major challenges hindering Internet usage by the lecturers was lack of adequate Internet facilities such as poor electricity supply, high cost of buying data browsing and inadequate access to the Pol-



technic Local Area Network. The Polytechnic lacked adequate Wi-Fi connection. This finding was supported by Anasi (2006) in his study.

4.2 Testing Research Hypothesis

Hypothesis 1: There is no significant difference of computer and internet skills developed among sex of Auchi Polytechnic academic staff.

Table 2: Contingency table of Computer and Internet skills and Gender

| | Male | Female | Total |
|--------|------|--------|-------|
| Yes | 234 | 136 | 370 |
| No | 13 | 12 | 25 |
| Absent | 3 | 2 | 5 |
| | 250 | 150 | 400 |

The computed X^2 value was 1.277 with a p-value of 0.53. It was certain that there was no difference of computer and internet skills developed among the gender of Auchi polytechnics academic staff.

Hypothesis 2: The points of Internet access do not influence its usage among the staff of the polytechnic.

Table 3: Contingency table of Point of internet Access and Gender

| | SA | A | U | D | SD | Total |
|--------|-----|-----|----|----|----|-------|
| Male | 125 | 72 | 21 | 14 | 18 | 250 |
| Female | 50 | 62 | 15 | 11 | 12 | 150 |
| | 175 | 134 | 36 | 25 | 30 | 400 |

The computed X^2 value was 11.145 with a p-value of 0.024. It was obvious that the point of internet access affects the usage of internet among academic staff of Auchi polytechnic. We conclude that improving the access points is very important for facilitating internet usage among academic staff of Auchi Polytechnic.

5.0 CONCLUSION

The current study was planned to examine and investigate the level of Internet usage among the Academic Staff of Auchi Polytechnic, Auchi in Edo State and the study review that there is limited internet services in the Polytechnic. However, majority of the lecturers do not have Internet access for Academic activities as a result of inadequacy of the Polytechnic Internet facilities. Lecturers access the Internet through Personal Laptops and Mobile Phone in which they have to pay for the high cost of Internet access. Only few lecturers use the Internet provided by the school. Thus the point of access influences the frequency of the usages. Majority of the lecturers use the Internet because the library lack adequate materials. Finally, the staff are motivated because the Internet contain more information and is more convenient to use.



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