

Institutional Internet Accessibility and Academics' Technology-related Information Seeking Patterns in Usmanu Danfodiyo University, Sokoto

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Abstract

This study investigated institutional Internet accessibility and academics' technology-related information seeking patterns in Usmanu Danfodiyo University, Sokoto (UDUS). Survey research design was adopted to carry out the study. The population of the study includes academics across the faculty of social sciences with a total of 56 lecturers selected through enumerative technique which represent the sample for the study. The data for the study was obtained through the administration of structured questionnaire. Four research questions were developed and answered in the study. Findings reveal that Institutional LAN, Mobile Network and personally subscribed network are available for academics and browsing is their most prominent pattern of technology related information seeking. The findings also established varying level of access to Internet facilities. Adding into the curriculum of academics' in UDUS, they resort to other private network provider that gives them access to the Internet when other sources failed. The study concludes that poor Internet connectivity and frequent power outages happen to be the most prominent challenges faced by the academics' when seeking for technology-related information. The study recommends that the university management should increase their broadband network in order to enable the academics have free-flow of information access on the internet among others.

Keywords: Internet Accessibility, Academics, Technology-related Information Seeking, Information Seeking Patterns, Usmanu Danfodiyo University.

Introduction

Recent evolution in information technologies around the globe has transformed the way information users seek for needed information. Thus, information users have their information needs met via a number of options. These variations in the way information users gain access to and make use of recent technologies are often referred to as information seeking patterns (Lee, 2021). However, information seeking according to (George, 2019) is the process or an activity of trying to obtain information in both human and technological contexts. Information seeking pattern and behavior are often used interchangeably and it involves a set of actions such as: user's information need, methods of seeking information, evaluation and selection of information that meets the users need and the use of such the information (Sultana, 2016). To this end, information has become a significant tool for survival in the technology age and they are sought for different purposes. For instance, in the educational setting, information seeking is done basically by students, lecturer and the academic community for carrying out projects, research and or assignments. Academics constitute a large fraction of information users in the academic community; have been reported to use technology-related information to achieve many of their career goals (Nwone, 2018; Nangsangna, 2019). These goals include meeting required teaching information (Okoh, 2014) achieving effective teaching, research activities among many others. Purposeful information seeking begins when users select information sources and applying diverse criteria to value and prioritize the source.

Related to these is the internet which is a major driver of technology has become an important and preferred source of information. It is increasingly being viewed as a versatile unified system, providing an enormous variety of materials in different formats. Due to its ubiquitous nature, the internet has made access information convenient and at a low cost (Oduwole, 2018). With developments in internet technologies, academics can stay at their offices or remain at the comfort of their homes and access technology related information and online library resources and services via networks or authentication methods at any time (Costello, 2019). In the technology age, which is also regarded as digital age, information users do not necessarily have to physically visit the library or use information in print formats. The internet and its successor technologies have the essential features of a massive library system, where people can roam through the electronic equivalent of book stacks, with assistance from the

electronic equivalent of reference librarians (Thanuskodi, 2018). Thus, the electronic and virtual libraries powered via the internet appear so compatible with those of physical libraries because some of the internet's most significant capabilities resemble and dovetail the capabilities of physical libraries.

Thus, technology-related information seeking pattern is a kind of communication behavior which is surely influenced by many factors. Some of the factors are internet availability and accessibility, power supply, information literacy and retrieval skills. Internet availability is the availability of electronic information resources refers to readily access to information in electronic format with little or no stress to the library user. Availability of electronic information resources in the library is not just enough, users must know of their existence to be able to use them effectively; and to put to use what's available, users must possess requisite skills that will enable them to exploit these resources and services. Availability at any time of the day; hyperlinks to other resources; huge information reservoirs; quick information; various search options; easy citations; ease in uploading and updating; ease in storage and dissemination; flexibility; time, space and cost are not major hurdles; ease of archiving are via various networking technologies. Many organizations, including a growing number of municipal entities, also provide cost-free wireless access and landlines (Kravets, 2017).

Academics in universities need up to date information for teaching, research, publications and community services. Therefore, they seek information in ways that would help save their time while at the same time getting maximum satisfaction. The library, faculty and the university are therefore expected to provide the enabling environment for academics to discharge their responsibilities. Such an environment, for example should ensure the availability of and accessibility to the Internet. However, in recent times, there has been observed that there are complaints from both staff and students in the Nigerian Universities on low availability and poor accessibility to the Internet. The internet which is expected to be the quickest and most reliable source of technology-related information for academic activities has now become epileptic in our universities. Where there is low availability and poor accessibility to the Internet, the academics' technology-related information seeking patterns might be adversely affected. This could also result in low productivity at work. The study, therefore, seeks to investigate institutional Internet accessibility and academics' technology-related information-seeking patterns in Nigerian

universities, with particular focus on the Faculty of Social Sciences, Usmanu Danfodiyo University, Sokoto.

Objectives of the Study

The main objective of this study is to investigate institutional Internet accessibility and academics' technology-related information-seeking patterns in the Faculty of Social Sciences, Usmanu Danfodiyo University, Sokoto. The specific objectives are to;

1. identify the internet facilities available to academics in UDUS;
2. ascertain the technology-related information seeking patterns of academics in UDUS;
3. ascertain the level of accessibility to internet facilities available to academics in UDUS; and
4. find out challenges faced by academics when seeking for technology-related information in UDUS.

Literature Review

The emergence of internet facilities has greatly transformed information handling and management in Nigerian university communities. Internet facilities have gradually become a major resource in every university community. Chandrasekhar (2016) observed that the availability of internet depends on the availability of funds as well as the demand for their use. Aguolu and Aguolu (2012) argue that availability should be viewed from both national and instructional levels. They attribute the lack of availability of internet facilities to the steady proliferation of universities: federal, state, and private, along with increases in students and faculty, and the diversification of courses and academic and research programmes, without adequate information resources to meet the actual and information needs.

Aina as cited by Ugbagir (2019) wrote on accessibility to scientific and technological information in universities. For researchers to readily identify internet facilities, Universities must be able to integrate internet with its facilities. Universities have a mandate, to be strong advocates of open access to information. Therefore, when buying internet facilities, Universities should conduct contract negotiations with vendors/ network providers to ensure the least restrictive access in current and future products. Provision of internet services should be without fees to avoid creating a barrier to access. Aguolu (2017) revealed that efforts are being made

worldwide to promote access to internet facilities. He lamented that the attendant features of underdevelopment such as power failure, poor internet connectivity, insufficient search skills etc. which intermittently stall academics activities in universities in developing countries.

According to Adhena (2020), “information seeking has been an important human activity since the evolution of human kind.” Information-seeking pattern according to Adhena (2020), is expressed in various forms, from reading printed material to research and experimentation. The author further stated that “lecturers, scholars, students, and faculty actively seek current information from the various sources available where information can be derived e.g., encyclopedias, journals and, more currently, electronic media, internet and that information-seeking pattern depends on the reasons for seeking information and the starting knowledge of the individual” and that most of the times Academics’ information seeking pattern entails active and purposeful information seeking as a result of the need to achieve academic activities, prepare for class discussions, seminars, workshops, conferences, or research papers (Adhena, 2020).

However, Phabha, Connaway and Olszowski (2017) discussed the challenges that negatively impact information-seeking patterns. They included: the feeling of information users obtaining sufficient information and consulting trusted sources, lack of time, limited financial resources, nature of the problem to be answered or question to be solved, nature of task at hand and task-domain knowledge. Others are context, situation or setting in which the information user is living or working, the particular search system engaged and motivation level of the information user and his/her information-seeking ability. Perley et al (2017) itemized the factors (challenges) relating to information-seeking pattern contributing to the challenges lecturers encounter while seeking for technology-related information. These are: poor internet connectivity, insufficient search skills, power outages, accessing e-resources may be time consuming, non-availability of information, insufficient relevant e-resources in various disciplines, limited subscription to electronic resources. Azadeh and Ghasemi (2016) findings with respect to information seeking pattern of lecturers showed that the most important goal was academic purposes. Therefore, the unavailability of information to assist them in their academic activities will be a major challenge to them.

Aina (2018) investigated the extent at which internet facilities accessibility predict academics technology-related information seeking pattern with accessibility and utilization of electronic information resources for research and its effect on productivity of academic staff in selected Nigerian universities between 2012 and 2018. The results of the study revealed that lecturer's internet accessibility predicts their technology-related information seeking pattern, providing access to internet services in the library. It was also revealed in the study that lecturers were dissatisfied with non-availability of information for their discipline. Similarly, Okonoko et al. (2019) investigated the information seeking behaviour of faculty members of the Federal University of Petroleum Resources (FUPRE). Their research finding revealed that the respondents use books (print and online) as their preferred source of information, while the major information need of faculty members is research and academic need. It also revealed that faculties demand for information via Google and other online sources. The factors affecting the information seeking behaviour of respondents were identified as poor internet facilities, epileptic power supply, poor searching skills, insufficient time, while some faculty members said they are not satisfied with the materials that were found in the library. They recommended that faculty members should be educated on the importance and use of information in their academic and research work, and FUPRE should improve on its internet facilities to assist faculties in their search for information among others.

Methodology

The study employed a survey research design using a structured questionnaire as the data collection instrument. The study population comprised 81 respondents/lecturers drawn from the faculty of social sciences, and because the population was relatively small and manageable, a total enumeration sampling technique was adopted. The questionnaire consisted of two sections: Section A collected respondents' demographic information, while Section B contained items designed to address the study objectives. A total of 81 questionnaires were administered out of which 56 were completed and returned, yielding a response rate of 69.1%. The analysis was based on the 56 valid questionnaires returned. Data collected was analyzed using frequency count and the percentage for variables in the research instrument. The descriptive method was done with the aid of Statistical Package for Social Sciences (SPSS).

Results

This showed the results of data analysis presented and analysed as follows:

Table 1: Frequency distribution of Respondent by Demography

		N=56	
Demographic variables		Freq.	Perc.
Departments	Library & Info. Sci.	9	13.2
	Mass Communication	8	12.1
	Geography	13	27.3
	Sociology	10	24.1
	Political Science	9	13.2
	Economics	7	10.1
	Total	56	100
Gender	Male	38	67.9
	Female	18	32.1
	Total	56	100
Highest Educational Qualifications	B.Sc.	7	12.2
	MSc.	11	22.0
	Ph.D	38	65.8
	Total	56	100

(Source: Author's Fieldwork 2026)

Table 1 shows the demographic information of the respondents. 9(13.2%) of them were in the department of Library and Information Science, 8(12.1%) Mass Communication, 13(27.3%) Geography, 10(24.1%) Sociology, 9(13.2%) Political Science and 7(10.1) were from Economics department. This finding revealed that majority 38(67.9%) were Male and 18(32.1%) were female. In terms of educational qualifications, 7(12.2%) were B.Sc. holders, 11(22.0%) holds MSc; while slightly above half of them 38(65.8%) holds Ph.D degrees.

Table 2: Internet facilities available to Academics in UDUS

N=56		
Internet Facilities	Available	Not Available
1. Institution Wifi	56 (100.0)	0 (0.0%)
2. Institution LAN	41 (73.2%)	15 (26.8%)

3. Mobile Network (e.g glo, mtn, airtel, etisalat)	49 (87.5%)	7 (12.5%)
4. Personally subscribed network	43 (76.8%)	13 (23.2%)

(Source: Author's field work, 2026)

Table 2 shows the various internet facilities available for academics in UDUS. For institutional Wifi, all of them 56(100%) indicated that it is available. Institutional LAN 41(73.2%) indicated available, 15(26.8%) unavailable. Mobile network (Glo, Mtn, Airtel, Etisalat) 49(87.5%) were available, while 7(12.5%) unavailable. Lastly, to personally subscribed network, 43(76.8%) available, 13(23.2%) unavailable. This finding suggests that these internet facilities are available to the academics at varying degrees.

Table 3: Technology-related Information Seeking Patterns of Academics

N=56				
Technology-related information seeking pattern	SA	A	D	SD
1. Starting	6 (10.7%)	47 (83.9%)	3 (5.4%)	0 (0.0%)
2. Chaining	8 (14.3%)	42 (75.0%)	6 (10.7%)	0 (0.0%)
3. Browsing	14 (25.0%)	42 (75.0%)	0 (0.0%)	0 (0.0%)
4. Differentiating	11 (19.6%)	42 (75.0%)	3 (5.4%)	0 (0.0%)
5. Extracting	7 (12.5%)	48 (85.7%)	1 (1.8%)	0 (0.0%)
6. Monitoring	9 (16.1%)	46 (82.1%)	1 (1.8%)	0 (0.0%)

(Source: Author's field work, 2026)

Table 3 shows the technology related information seeking pattern of academic in UDUS. For Starting, 3(5.4%) disagreed, 47(83.9%) agreed and 6(10.7%) strongly agreed. To Chaining 6(10.7%) disagreed, 42(75%) agreed, 8(14.3%) strongly agreed. To browsing 42(75%) agreed while 14(25%) strongly agreed. To differentiating 3(5.4%) disagreed, 42(75%) agreed and 11(19.6%) strongly agreed. To extracting 1(1.8%) disagreed, 48(85.7%) agreed while 7(12.5%) strongly agreed. Lastly, to monitoring, 1(1.8%) disagreed, 46(82.1%) agreed while 9(16.1%)

strongly agreed. This finding indicates that greater percentage of lecturers disagreed to technology-related information seeking patterns of academics.

Table 4: Level of Accessibility to Library Internet facilities available to Academics
N=56

Level of accessibility to Lib. Internet facilities	1	2	3
1. Institution Wifi	0 (0.0%)	4 (7.1%)	52 (92.9%)
2. Institution LAN	5 (8.9%)	9 (16.1%)	42 (75.0%)
3. Mobile Network	2 (3.6%)	8 (14.3%)	46 (82.1%)
4. Personally subscribed network	2 (3.6%)	9 (16.1%)	45 (80.4%)

(Source: Author's field work, 2026) Not Accessible (1), Sometimes Accessible (2), and Always Accessible (3).

Table 4 shows the level of accessibility to Internet to academics in UDUS have internet facilities available to them. Institutional Wifi 4(7.1%) indicated sometimes accessible 52(92.9%) always accessible. Institutional LAN 5(8.9%) were not accessible, 9(16.1%) sometimes accessible, 42(75%) always accessible. Mobile networks 2(3.6%), not accessible 8(14.3%), sometimes accessible 46(82.1%) always accessible. Lastly, to personally subscribed network 2(3.6%) not accessible 9(16.1%) sometimes accessible and 45(80.4%) always accessible. These results show that level of accessibility to internet facilities available to academics is always accessible.

Table 5: Challenges face by Academics when seeking for technology related information
N=56

Challenges	SA	A	D	SD
1. Poor internet connectivity	37 (66.1%)	10 (17.9%)	9 (16.1%)	0 (0.0%)
2. Insufficient search skills	1 (1.8%)	16 (28.6%)	22 (39.3%)	17 (30.4%)
3. Power outage	37 (66.1%)	15 (26.8%)	4 (7.1%)	0 (0.0%)

4. Accessing e-resources is time consuming	27 (48.2%)	21 (37.5%)	8 (14.3%)	0 (0.0%)
5. Non availability of information	36 (64.3%)	8 (14.3%)	11 (19.6%)	1 (1.8%)
6. Insufficient relevant e-resources in various disciplines	34 (60.7%)	14 (25.0%)	8 (14.3%)	0 (0.0%)
7. Limited subscribed title	39 (69.6%)	9 (16.1%)	8 (14.3%)	0 (0.0%)

(Source: Author's field work, 2026)

Table 5 shows the various challenges faced by academics when seeking technology-related information. The specific challenges faced by the academics include: poor internet connectivity, 9(16.1%) disagreed, 10(17.9%) agreed, 37(66.1%) strongly agreed. insufficient search skills, 17(30.4%) strongly disagreed, 22(39.3%) disagreed, 16(28.6%) agreed and 1(1.8%) strongly agreed. power outage, 4(7.1%) disagreed, 15(26.8%) agreed, 37(66.1%) strongly agreed. Accessing e-resources is time consuming, 8(14.3%) disagreed, 21(37.5%) agreed, 27(48.2%) strongly agreed. Non availability of information, 1(1.8%) strongly disagreed, 11(19.6%) disagreed, 8(14.3%) agreed while 36(64.3%) strongly agreed. Insufficient relevant e-resources in various disciplines, 8(14.3%) disagreed, 14(25%) agreed while 34(60.7%) strongly agreed. Lastly, limited subscribed title, 8(14.3%) disagreed, 9(16.1%) agreed while 39(69.6%) strongly agreed. These results shows that majority of the respondents strongly agreed that there are challenges encountered when seeking for technology-related information.

Discussion of Findings

Demographically, respondents were drawn from all the departments in the Faculty of Social Sciences. The majority of the respondents were from the Departments of Geography and Sociology. This may be attributed to the fact that these two departments have the highest number of lecturers on site. Furthermore, more than half of the respondents were male, implying that the Faculty of Social Sciences has more male lecturers than female lecturers.

Regarding educational qualifications, more than half of the respondents were Ph.D. holders. This finding implies that the lecturers in the Faculty possess the relevant educational qualifications required for their academic roles.

Research Objective 1: Identify the internet facilities available to academic in UDUS

The findings of this study show that institutional Wi-Fi, institutional LAN, mobile networks, and personally subscribed Internet networks are available to academics in the faculty. This finding is consistent with the Internet facilities identified as necessary in university communities by Quadri, Adetimirin, and Idowu (2014) and Ankrah and Atuase (2018). These studies demonstrate the extent to which academics rely on Internet facilities to accomplish their academic responsibilities. The finding also corroborates the assertion of Nangsangna (2019) that academics use technology-related information to achieve various career goals. Despite the fact that UDUS provides Wi-Fi and LAN ports for lecturers, many academics still rely on alternative sources of Internet connectivity, particularly mobile networks and personally subscribed Internet services. This reliance may be attributed to the need for uninterrupted and reliable Internet access when institutional facilities are unavailable or inadequate.

Research Objective 2: Ascertain the technology-related information seeking patterns of academic in UDUS

The findings on the technology-related information-seeking patterns of academics in UDUS indicate that the identified patterns reflect the information-seeking practices of the lecturers. However, browsing emerged as the most prominent pattern of technology-related information seeking, while other patterns were less frequently reported.

This finding is similar to that of Kumar (2018), who observed that information seeking is triggered by perceived needs and shaped by personal, social, and environmental factors. Within this context, browsing can be described as a flexible and exploratory information-seeking strategy that provides individuals with opportunities to discover information that they may not have been specifically looking for. The prominence of browsing among academics in UDUS may therefore suggest that lecturers use the Internet not only to search for specific information but also to explore and discover relevant technology-related information.

Research Objective 3: Ascertain the level of accessibility to internet facilities available to academics in UDUS

The findings on the level of accessibility to Internet facilities available to academics in UDUS indicate that, although the facilities are available, their accessibility varies. In other words, the availability of Internet facilities does not necessarily guarantee easy or consistent

access to them. The study found that all four Internet facilities are available to academics; however, there are varying levels of accessibility across the facilities.

This finding confirms the assertion of Henry (2020), who identified a situation in which Internet facilities may be available but not easily accessible. Among the four facilities, institutional Wi-Fi emerged as the most accessible Internet facility provided by the university management. Similarly, institutional LAN facilities were widely available, as almost all lecturers had LAN ports in their offices. However, some lecturers reported difficulties accessing the Internet through these ports, although the majority indicated that they had satisfactory access to the institutional LAN.

The varying level of accessibility to mobile networks may be attributed to differences in network coverage among service providers within the university campuses. Some network providers have relatively poor coverage in certain areas of the campuses, thereby limiting access for academics that depend on mobile networks. Finally, the study found that when institutional and mobile Internet facilities were inadequate, academics resorted to privately subscribed Internet services to gain access to the Internet.

Research Objective 4: Find out the challenges faced by academics while seeking for technology-related information in UDUS

The findings revealed that academics in the Faculty of Social Sciences face several challenges when seeking technology-related information. Almost all the items identified under this category were reported as challenges, with the exception of insufficient search skills. This suggests that the academics possess adequate information-search and retrieval skills and are therefore generally capable of navigating information sources to locate and retrieve relevant information.

However, the major challenges identified include poor Internet connectivity, power outages, the time-consuming nature of accessing electronic resources, insufficient relevant electronic resources across various disciplines, and limited subscribed titles. These challenges were sufficiently pronounced that many lecturers expressed dissatisfaction with the existing conditions.

This finding corroborates the study by Perley et al. (2017), which reported similar challenges affecting teaching, research, database access, and scholarly publication. Among the challenges

identified in the present study, poor Internet connectivity and epileptic power supply were particularly prominent. Many respondents expressed concern about the unreliable state of electricity supply, especially within the faculty, over the preceding months. This finding is consistent with Aguolu (2017), who identified power failure and poor Internet connectivity as major challenges faced by academics in developing countries.

Conclusion

This study found that institutional Wi-Fi, institutional LAN, mobile networks, and personally subscribed Internet networks are available to academics in UDUS, with browsing emerging as the most prominent technology-related information-seeking pattern. Although Internet facilities are generally available, their accessibility varies, and academics continue to rely on alternative sources of connectivity when institutional facilities are inadequate or unreliable.

The findings further indicate that institutional Internet accessibility may influence academics' technology-related information-seeking practices in UDUS. In other words, the findings suggest that the availability, reliability, and accessibility of Internet facilities may be associated with how academics seek and access technology-related information. Therefore, improving the reliability and accessibility of Internet facilities, electricity supply, and electronic information resources is essential for enhancing the academic activities of lecturers in the university.

Recommendations

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

1. The management of UDUS should address the problem of epileptic power supply by installing solar backup systems, providing standby generators, and supplying uninterrupted power supply (UPS) systems for ICT facilities.
2. More funds should be allocated to the university to procure and maintain necessary Internet infrastructure and equipment, such as routers, LAN equipment, and other networking devices, across departments. Upgrading bandwidth, replacing obsolete networking equipment, extending Wi-Fi coverage, and improving network maintenance should be prioritized.

3. The university management should increase the capacity and coverage of its broadband network to facilitate seamless access to Internet-based information for academics. Continuous monitoring of Internet performance should also be implemented to identify and resolve connectivity problems promptly.
4. Since the study identified insufficient electronic resources as a major challenge, the university should increase subscriptions to relevant online databases, expand its electronic library collections, and strengthen the development and maintenance of its institutional repository.
5. Given the reliance of academics on privately subscribed Internet services, the university should improve the reliability and coverage of campus-wide Wi-Fi. Where feasible, Wi-Fi access should also be extended to staff residential areas to provide academics with more reliable Internet access beyond their offices.
6. Although respondents demonstrated satisfactory search and information-retrieval skills, the university should continue to organize digital literacy and information-search workshops to enhance academics' ability to identify, evaluate, and effectively use emerging technology-related information resources.

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