

ACCESS AND UTILISATION OF INTERNET FACILITIES FOR ACADEMIC PURPOSES BY STUDENTS IN PUBLIC COLLEGES OF EDUCATION IN KANO STATE, NIGERIA

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Abstract

This study investigated the accessibility and utilization of Internet facilities among NCE students in public colleges of education in Kano State, Nigeria. A quantitative methodology using cross-sectional survey was employed with a population of 13,417 students from Sa'adatu Rimi College of Education and Federal College of Education (Technical) Bichi. Using Krejcie and Morgan's sampling table, a cohort of 370 students was selected. Data were gathered using a validated questionnaire (Cronbach's Alpha = 0.963), with 341 responses obtained, resulting in a 92.2% response rate. The findings indicated that students utilised various Internet facilities, with computers (26.1%) and mobile broadband (25.8%) being the most prevalent, followed by Wi-Fi, modems, fiber-optic, and satellite connections. Approximately 45.2% of students utilised these services at least biweekly, predominantly for academic purposes including assignment submission, online discussions, lectures, and collaboration platforms such as Blackboard and Google

documents, whereas entertainment and online tests were utilized less frequently. Despite this low usage, problems like insufficient ICT infrastructure, inadequate Wi-Fi coverage, elevated subscription fees, lack of technical support, and unreliable electricity impeded effective utilization. The study reveals that while Internet connectivity is available, the institutional infrastructure is insufficient. It advocates for augmented ICT investment, subsidized Internet packages, dependable power supply, and improved digital literacy training to bolster academic performance.

Keywords: Access, Internet Facilities, Utilization, Academic Purposes

Introduction

The Internet is a global network of interconnected computers, differing in size, capacity, and functionality, which facilitates the exchange of information, resources, and services across geographical boundaries. The Internet, often referred to as the "information superhighway," has significantly altered global dynamics by connecting individuals, institutions, and organizations, thereby creating a "global village." The emergence of digital resources and global information networks have significantly transformed the operations of higher education institutions worldwide, with education, scholarship, and research increasingly dependent on these advancements. In response, higher education administrators in Nigeria have made significant investments in Internet infrastructure to enhance institutional effectiveness and bolster academic development.

The Internet transformation of colleges of education is powerful, but even more guttural in the realm of pedagogy and also in changing the way some institutions look and feel. Internet is a latest development in the field of information and communication technology (ICT) it finds wide application even in education and science. Such adoption has

led educators and learners to realize its academic scope (Kumar, Veena, Vastrad, & Nandan, 2019). The Nigerian ministries of education have called for the establishment of Internet access points in higher institutions, recognizing its impact on improving teaching, research and learning. The Internet is constructed as a technical network and facilitator of community organizing where new modes of knowledge production, circulation and collaboration are made possible (Emeka & Nyeche, 2020). The use of Internet resources in the educational system is generally accepted as an essential driver for improving academic achievement, scientific advancement and technological innovation in developing countries like Nigeria. Getting to online databases, electronic journals, e-books, and collaborative learning platforms is highly dependent on Core Internet infrastructure including computer laboratories, wireless connections (Jegade 2016) digital libraries, and mobile broadband services. These resources link students to global networks of knowledge, which enhances communication access and information flow, increasing intellectual productivity.] what if accessed through the Internet collection becoming more easier to sharing resources on local or international level. It provides individuals with the latest scholarly materials and enables them to participate in contemporary academic discussions.

In developing nations like Nigeria, the incorporation of Internet facilities into the educational system is often seen as a vital driver of higher academic standards, scientific advancement, and technological development. Core Internet infrastructure, such as computer labs, wireless connectivity, digital libraries, and mobile broadband services, is

critical for accessing online databases, electronic journals, e-books, and collaborative learning platforms (Jegade, 2016). With the use of these instruments, learners can connect to global knowledge a network, which enhances communication, makes information transfer easier, and increases intellectual output. Additionally, by providing access to up-to-date scholarly materials and promoting involvement in contemporary academic discourse, Internet connectivity fosters the flow of academic resources in both domestic and global contexts (Ajala, 2017). Despite these opportunities, issues like inadequate technology, erratic power supplies, a lack of technical know-how, and expensive Internet subscription fees continue to prevent effective access to and use of Internet capabilities in many Nigerian educational institutions. The limitations highlight the need for empirical research into the real scope of access, usage trends, and difficulties NCE students have when using Internet resources. This study looks at how NCE students in public education institutes in Kano State, Nigeria, use the Internet for academic purposes.

Statement of the Problem

The Internet is a valuable resource in higher education, providing access to academic information, facilitating communication, and increasing students' research and learning experiences. Reliable Internet access is required for Nigeria Certificate in Education (NCE) students to complete assignments, produce term papers, and participate in collaborative learning. In many Nigerian schools of education, notably in Kano State,

students encounter continuous obstacles that impede their capacity to efficiently use Internet resources for academic purposes. Inconsistent electrical supply, inadequate ICT infrastructure, restricted institutional funding, a dearth of competent technical workers, and increased Internet subscription costs are all factors to consider. These constraints impede students' ability to properly utilize Internet technology for academic and professional development. While research has explored ICT uptake in Nigeria's tertiary institutions, there has been insufficient focus on NCE students in Kano State's public institutes of education. This is an important issue because these institutions are critical for training future educators, who form the foundation of the educational system. Insufficient access to and use of Internet facilities has a negative impact on students' academic achievement and the overall quality of teaching and learning at the national level. This article examines the extent of Internet access and usage among NCE students in Kano State, with the goal of identifying difficulties and proposing evidence-based ways to improve digital learning environments in colleges of education.

Methodology

This paper adopted a quantitative methodology through a cross-sectional survey design. The population consisted of thirteen thousand four hundred and seven (13,417) NCE II and III students from Sa'adatu Rimi College of Education Kumbotso and Federal College of Education (Technical) Bichi. Krejcie and Morgan table was used to determine the sample size of the study population, and the table suggested that sample sizes of three

hundred and seventy (370) respondents are appropriate for the study. Questionnaire was used as instrument for data collection. The questionnaire was validated and tested at .963 using Cronbach's Alpha. Random sampling technique was applied to administer a total of three hundred and seventy (370) copies of questionnaire out of which three hundred and forty one (341) was retrieved which represent 92.2%. The data collected were analyzed using frequencies and percentages table.

Results and Discussion.

Response rate:

Questionnaire	Frequency	Percentage (%)
Administered questionnaire	370	100%
Retrieved questionnaire	341	92.2%
Not retrieved	29	7.8%

Source: Field work, 2025

Table 1 shows that 341 out of 370 questionnaires were returned, giving a high response rate of 92.2%. This indicates that the data obtained is adequate and reliable for analysis.

Question: 1. What are the various Internet facilities accessible to NCE students in public colleges of education in Kano State?

S/N	Statement	Frequency	Percentage (%)
1.	Computer	89	26.1%

2.	Modems	43	14.1%
3.	Mobile broadband	88	25.8%
4.	Satellite	20	5.7%
5.	Wireless (Wi-Fi)	67	19.6%
6.	Fiber-optic	29	8.5%
7.	Others	5	1.5%

source: generated by the researcher from questionnaire response, 2024

Table 2 indicates that the most accessible Internet facilities are computers (26.1%) and mobile broadband (25.8%), followed by Wi-Fi services (19.6%), suggesting a greater reliance on personal Internet access than institutional infrastructure. This finding implies that access to Internet facilities supports students' academic engagement and information-seeking behavior. It is consistent with the studies of Luambano and Nawe (2014) and Ul-Amin (2017), which highlight the role of Internet access in improving availability of diverse academic resources and enhancing learning outcomes. However, the finding contrasts with Shehu, Urhefe, and Aworo (2018), who reported limited access to Internet facilities among students in Nigerian university libraries.

Question 2. What is the frequency of NCE students' access to Internet facilities in public colleges of education in Kano State?

S/N	Statement	Frequency	Percentage (%)
1.	Daily	60	17.6%
2.	Twice a week	154	45.2%
3.	Once a week	47	13.8%
4.	Occasionally	80	23.5%

source: Generated by the researcher from questionnaire response, 2024

Table 3 reveals that the majority of respondents access Internet facilities twice a week (45.2%), followed by occasional use (23.5%), indicating a generally moderate level of usage rather than daily engagement. This pattern suggests that while students do utilize Internet facilities for academic purposes, the frequency of access is not intensive. The finding aligns with Ayatollahi et al. (2014), who reported regular Internet use among medical students for academic resources such as journals and databases. It also partially supports Hogan and Sweeney (2017), who observed more frequent daily Internet use among university students in Ireland, although at a higher intensity. Overall, the result reflects a moderate but consistent level of Internet utilization among NCE students.

Question: 3. What factors affect students' use of Internet facilities in colleges of education in Kano State?

S/N	Internet facilities	Frequency/ Percentage (Yes)	Frequency/ Percentage (No)
1	Internet services	102	29.9%

2	Online forum discussion	51	15.0%
3	Lectures online	39	11.4%
4	Submission of assignments	55	16.1%
5	Use of Module, blackboard, Google document, etc.	19	5.6%
6	Online exams	2	0.5%
7	Entertainment (like watching videos and gaming online)	15	4.4%
8	Others	58	17.0%

Source: Generated by the researcher using SPSS version 23.0 from questionnaire response

Table 4 shows that the most utilized Internet services are general Internet services (29.9%), followed by submission of assignments (16.1%) and online forum discussions (15.0%), indicating that students primarily use Internet facilities for academic-related purposes, particularly information access and assignment completion. This finding aligns with previous studies which emphasize that the Internet is widely used by students for academic tasks such as research, communication, and assignment submission. For instance, studies by Jones and Madden (2002) and Selwyn (2008) reported that students predominantly use the Internet to support learning activities, including accessing academic materials and submitting coursework. Similarly, Awolaye, Siyanbola, and Oladipo (2008) found that Nigerian students largely depend on Internet services for academic engagement rather than entertainment purposes. Overall, the result reinforces the view that Internet facilities serve as essential tools for academic support in higher education.

Question. 4 What is the extent of NCE students' use of Internet facilities for academic purposes in Kano State?

S/N	Extent of Use	Frequency	Percentage
1	Very high extent	86	25.2%
2	High extent	64	18.8%
3	Moderate	111	32.5%
4	Low extent	39	11.4%
5	Very low extent	41	12.0%

Source: generated by the researcher using SPSS version 23.0 from questionnaire responses

Table 5 indicates that the majority of respondents reported a moderate extent of Internet use (32.5%), followed by very high use (25.2%) and high use (18.8%), suggesting an overall moderate level of Internet utilization among NCE students in college libraries. This implies that while Internet facilities are actively used for academic purposes, their usage is not yet intensive or fully maximized. The finding is consistent with Chen and Peng (2018), who reported substantial weekly Internet engagement among students in Taiwan for both academic and non-academic activities. It also aligns with Chifwepa (2017), who observed frequent Internet use among university personnel in Zambia due to its accessibility, convenience, and ease of use. Overall, the result reflects a moderate but growing dependence on Internet facilities for academic activities in the study area.

Recommendations

1. Colleges of education should make investments in enhancing dependable institutional Internet infrastructure, including campus-wide Wi-Fi, fiber-optic access, and well-

equipped computer laboratories, to diminish dependence on personal mobile broadband.

2. Government and academic institutions should partner with energy suppliers to guarantee a reliable power supply or implement alternative energy options, such as solar systems, to maintain Internet connectivity.
3. Institutions ought to negotiate subsidized Internet packages with service providers or offer complimentary or low-cost data plans for students to improve academic accessibility.
4. Colleges should conduct frequent digital literacy training, workshops, and seminars for students and staff to enhance technical proficiency in utilizing Internet facilities for research and study.
5. Colleges must to enhance access to academic databases, e-journals, and e-libraries while incorporating systems such as Blackboard, Moodle, and Google Workspace to facilitate blended and flexible learning.
6. The Federal Government, in conjunction with educational partners, should augment financing for ICT infrastructure at colleges of education and enact policies that emphasise affordable, equitable, and sustainable Internet access.

Conclusion

The paper examined the access to Internet facilities and their utilization for academic purposes of NCE students in public Colleges of Education in Kano State. The

findings indicated that students utilized diverse Internet facilities, predominantly computers and mobile broadband, followed by Wi-Fi, modems, fiber-optic, and satellite connections. The majority of students utilized these services a minimum of twice weekly, primarily for academic activities including assignment submissions, engagement in online forums, attendance at lectures, and use of platforms such as Blackboard and Google documents, although amusement and online tests occurred less frequently. The results correspond with international studies emphasizing the Internet's significance in academic involvement, research, and communication. The study revealed ongoing issues, such as deficient ICT infrastructure, restricted Wi-Fi coverage, insufficient technical support, elevated subscription costs, and inconsistent electrical supply. These limitations impede students from fully leveraging the academic advantages of Internet facilities. The study indicates that although access and moderate utilization is there, the institutional infrastructure is inadequate, hindering the optimal use of Internet facilities to improve teaching and learning in colleges of education in Kano State.

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