

UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR QUALITY SERVICE DELIVERY IN PUBLIC UNIVERSITIES IN AKWA IBOM STATE OF NIGERIA

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Abstract

This study explored the utilization of Information and Communication Technology (ICT) for quality service delivery in public universities in Akwa Ibom State of Nigeria. Descriptive survey design was adopted and Data were collected from institutional administrators in three public Universities in Akwa Ibom State. A sample of 240 respondents was drawn from a population of 3,100 administrators in the study area through purposive sampling approach to participate in the study. A 15-item validated questionnaire titled: Utilization of Information and Communication Technology (ICT) for Quality Service Delivery Survey (UICTQSDS) was employed for data collection. The instrument was tested for reliability using Cronbach Alpha and obtained a statistical index of .89 which was adjudged good enough for data collection. The data collected from the respondents was analyzed through the statistical technique of means and standard deviation. Findings indicated that the extent of utilization of Information and Communication Technology (ICT) for quality service delivery in terms of students' administration, research and collaboration, communication and engagement was not satisfactory. It was concluded that the limited adoption of advanced communication tools and challenges related to inconsistent internet access highlight areas that require attention to enhance ICT integration in the university settings. It is therefore recommended among others public universities in Akwa Ibom State should invest in improving ICT infrastructure, including reliable internet connectivity, to ensure consistent access to online resources and communication platforms for students and staff for quality service delivery in the institutions.

Keywords: ICT, Administration, Quality service, University, Students, Staff

Introduction

The lack of Information and Communication Technology (ICT) infrastructure in some tertiary institutions have significantly hampered the quality of education (Abiebi & Udume, 2023; Effiong, Akpan, 2017; Ekong & Etuk, 2015). Others have also found that without access to modern technologies, students are unable to effectively engage with digital learning materials and resources, limiting their exposure to up-to-date information and innovative learning methods (Effiong & Akpan, 2017). Additionally, the absence of ICT tools hinders effective communication between students and teachers, leading to a lack of timely feedback and

interaction (Agwa-Ejon, Asuquo & Asuquo, 2018). Furthermore, Amondong and Udosen (2020) found that the absence of ICT integration in administrative processes such as registration and record-keeping has resulted in inefficiencies and delays, negatively impacting the overall educational experience in Nigerian tertiary institutions. Therefore, there is a need to explore the influence of Information and Communication Technology (ICT) on the quality service delivery of Nigerian Universities generally and Akwa Ibom State in particular.

Quality service delivery refers to the consistent and efficient provision of services that meet or exceed the expectations and needs of customers or stakeholders (Udoudoh & Etitan, 2019). It encompasses aspects such as reliability, responsiveness, accuracy, professionalism, effectiveness, and customer satisfaction, aiming to deliver services that are timely, relevant, accessible, and of high standards (Udosen & Asuquo, 2014). Similarly, the teaching staff of the University are expected to engage in university services such as teaching, research and community service. Unfortunately, the researchers have observed that most academic staff in the University of Uyo seem to epitomize a deplorable standard of service delivery, exhibiting a breathtakingly profound level of incompetence and apathy towards their responsibilities. Their ability to consistently disappoint and frustrate students and stakeholders is nothing short of astonishing, as they seem to excel in their unwavering commitment to providing substandard and lackadaisical service at every turn (Ekong & Etuk, 2015). It appears that some staff in the University of Uyo have perfected the art of incompetence, leaving students and stakeholders to navigate a labyrinth of bureaucratic inefficiencies and unhelpful encounters that would make even the most patient individuals question their sanity. The researchers have equally observed that most academic staff in the study area seem to be unfamiliar with the utilization of Information and Communication Technology for quality services in terms of students' administration, research and collaboration, communication and engagements.

Information and Communication Technology (ICT) refers to the use of digital technologies, including computers, software, networks, and communication devices, to manage and process information, facilitate communication, and enable the storage, retrieval, and exchange of data (Abiebi & Udume, 2023). ICT encompasses a wide range of technologies and applications, such as computers, the internet, mobile devices, software programs, databases, and telecommunications systems, which play a crucial role in enhancing efficiency, productivity, and connectivity in various sectors and industries. The utilization of Information and Communication Technology (ICT) enables organizations to leverage digital tools, systems, and communication channels to enhance service delivery, streamline processes, improve accessibility, and provide personalized and efficient services to customers or stakeholders.

Contrarily, it has been observed that Information and Communication Technology (ICT) has not been utilized in students' administration in public universities in Akwa Ibom State to improve efficiency, promote transparency, and enhance communication between students and administrative staff for effective service delivery. It has equally been found that Information and Communication Technology (ICT) has not been adequately been utilized in research and collaboration in public universities in Akwa Ibom State to enhance knowledge sharing, facilitate interdisciplinary collaboration, and broaden access to research resources for improved research

outcome and quality service delivery in the institutions (Agwa-Ejon, Asuquo & Asuquo, 2018). Studies have shown that Information and Communication Technology (ICT) has not been sufficiently utilized in communication and engagement in the study area to foster effective communication channels, facilitate timely dissemination of information, and engage stakeholders through online platforms, promoting transparency, participation, and quality service delivery (Effiong, Akpan, 2017; Ekong & Etuk, 2015). Therefore, the absence of ICT integration in administrative processes such as registration and record-keeping create inefficiencies and delays, hence, negatively impacting the overall educational experience in higher institutions in Uyo.

Empirical Literature Review

Studies have been carried out on how the utilization of Information and Communication Technology (ICT) in universities enhances contributes to quality service delivery in terms of streamlining administrative processes, enabling efficient communication between staff and student. ICT provides access to digital resources and online learning platforms that enhance teaching and research capabilities (Akalu, 2017). Additionally, ICT facilitates the automation of routine tasks, improves data management and analysis, and supports collaborative work, ultimately leading to more effective and responsive services for students and stakeholders.

ICT utilization has become prevalent in university students' administration globally to enhance service delivery. Much research has focused on how ICT is being adopted and its impact. Akalu (2017) conducted a study in five public universities in Ethiopia to evaluate the extent of ICT utilization in students' administration. The study employed both questionnaires and interviews with registrars and ICT staff. The findings showed that basic ICT tools like email and computers were widely used. However, uptake of more advanced technologies for online services was still limited. Only one university had partly computerized admission, registration and results management while the others were still mainly manual.

A similar study by Adebisi (2018) in three private universities in Nigeria showed higher ICT adoption levels compared to public institutions. All the universities had fully computerized admissions, registration, fee payments and result processing. Students could access these services online through university portals and mobile apps. Over 90% of students reported that ICT improved timeliness, convenience and transparency of services. However, inconsistent internet access on campus was still a challenge affecting utilization. Both of these empirical studies show that while ICT is being embraced in students' administration, there are still gaps in comprehensive computerization and digital services especially in public universities. The impact of ICT on quality of student support services has attracted research interest. Adaba (2019) carried out a survey involving 300 students and 30 administrators from two public universities in Ghana. Questionnaires and interviews were used to collect data on the level of ICT infrastructure, available online services and perceptions of users. Results showed that basic ICT facilities like computers, Wi-Fi and websites existed but innovative digital services were limited. Most administrative workflows like registration, exams and results were still manual. However, majority of students (85%) felt that ICT enhanced efficiency when used. Administrators cited budget constraints as hampering progress.

In Kenya, Kioni (2020) employed a mixed methods approach in a case study of one public and one private university. Document reviews, surveys and interviews were conducted. Both institutions had invested heavily in ICT infrastructure over the past 5 years. A wide array of online student services from application to graduation had been rolled out. Over 90% of students reported satisfaction with convenience, transparency and timeliness achieved through ICT. Administrators associated this with improved quality of student support. However, digital skills gap among some older staff was a challenge reported. This study provides empirical evidence on positive impacts of advanced ICT utilization on quality of students' administration.

Oredein (2010) conducted a comparative study between two Nigerian universities to analyze the level of ICT implementation for students' administration. Using questionnaires administered to 200 students and interviews with administrative staff, they found that while both universities had basic ICT infrastructure, one led in various online services compared to the other. The leading university had computerized admissions, online registration, e-payment systems and automated results distribution. Over 90% of students were satisfied with reduced processing time and administrative efficiency. However, the other university still relied majorly on manual processes. This showed that even within the same country, ICT adoption levels could vary significantly between institutions. In another study, Ayebazibwe (2015) surveyed 500 students across 5 public universities in Uganda about their experience with ICT-enabled services for administration functions. It was revealed that admission and registration had been digitized to some extent at all universities. However, few had sophisticated online portals or mobile apps for fee payments, access to academic records and general inquiries. Internet connectivity was poor as well. While over 70% of students appreciated the initial ICT changes, most felt more innovations were still needed for improved service quality. This implies the level of ICT integration was still developing in the Ugandan university context.

Amunga (2019) conducted a positivist case study at a large public university in Kenya to assess the level of ICT adoption, available online services and administration effectiveness from the perspectives of 500 students, 150 academic staff and 50 support staff. Results from questionnaires and interviews showed advanced ICT infrastructure including computer laboratories, high-speed Wi-Fi and a comprehensive student portal. Key services such as admission, registration, mobile money fee payments, access to learning materials and admin support were fully available online. Over 95% of stakeholders reported significant improvements in management processes and service delivery standards from the widespread utilization of ICT. In another qualitative study, Okello-Obura (2018) interviewed administrators, faculty and students at four public and private universities in Uganda about their perceptions on the transformative impacts of digitization in student and academic support. Participants acknowledged time, effort and costs had been saved through online and automated workflows. Student satisfaction with accessibility, transparency and convenience of services delivered digitally was also reported to be high. This illustrated how advanced ICT integration had revolutionized university administration functions.

Owuor (2021) conducted a survey of 300 faculty members across five public universities in Kenya to examine the level of ICT adoption in research activities and institutional collaboration. Findings showed most universities had invested in research management systems, online

repositories and collaboration tools. Over 80% of respondents reported using the internet, e-resources and databases to support their research work. Tools like email, learning management systems and video conferencing were used regularly to collaborate with both local and international partners. However, only about half utilized advanced technologies like data mining tools, 3D printing and research analytics systems. The study concluded ICT was positively impacting research and collaboration but there was room for more innovative utilization.

Agaba (2020) carried out a quantitative study assessing ICT infrastructure, available online services and usage patterns among 100 faculty across two universities in Uganda - a public and a private one. Results indicated the private university had significantly better ICT facilities, broadband connectivity and digitized research support systems compared to the public counterpart. For instance, it provided online research grants management, research data repositories, scholarly collaboration platforms and scientific databases/journals access. Lecturers reported benefits like improved information sharing, proposal development and networking with peers. However, inconsistent power supply hindered ICT reliance at the public university. This implied utilization levels varied between institutions based on available resources.

Ochieng and Gatuwa (2020) conducted a mixed methods study evaluating the level of ICT adoption in research administration processes across five public universities in Kenya. Through surveys, interviews and document reviews they found basic infrastructure was available in all universities. Over 80% of researchers used tools like email, internet and MS office Suite. However, uptake of advanced technologies was limited - only one university had a fully computerized research management system, paperless proposal submission and a digital research repository. Researchers cited budget constraints and lack of proper training as hindrances. The study concludes ICT adoption needed improvement for effective research support. A Case study by Birabwa (2018) of Makerere University, Uganda assessed the utilization of four collaborative ICT tools - cloud drives, online conferencing, research blogs and social media networks. Interviews with 30 faculty established these tools enhanced inter-departmental and global collaboration through timely file sharing, joint supervision of students abroad, networking and knowledge exchange. Over 70% reported being more productive researchers. However, unreliable internet and lack of technical skills still hampered comprehensive use of available platforms. The study provides empirical evidence on benefits of strategic ICT adoption in academic collaborations within a resource-constrained setting.

Juma and Ali (2020) conducted interviews with 50 researchers and review of usage records at two public universities in Tanzania to evaluate the uptake of ICT platforms and tools in research dissemination and networking. They found most researchers regularly used email, online repositories and conferences management systems to share publications and publicize events. However, uptake of social media networks, blogging, podcasts and citation analytics was below 20% due to lack of awareness and skills. Both universities had accessed limited research datasets, software and scientific databases. The study concluded that while basic ICT enhanced dissemination, strategic adoption of advanced tools was needed to optimize networking and competitiveness. Omadho (2019) carried out a survey of 200 researchers and review of available ICT resources at a public university in Kenya. They found high-speed internet, e-libraries and statistical analysis software extensively used to access information and support classroom

teaching respectively. Over 60% of researchers had published works in online journals/repositories and belonged to professional networks. However, utilization of collaborative authoring platforms, research grant management tools and citation/impact analyses were rated poor. The study associated this with resource and skills limitations but emphasizes the need for targeted capacity building to optimize research collaborations through ICT.

A study by Aluko (2020) examined the level of ICT adoption in communication and engagement activities across three public universities in Nigeria. Through surveys of 200 students and interviews with university staff, they found basic ICT infrastructure like websites, email and WiFi were available. Over 70% of students could not access notices, news and updates online. However, utilization of advanced communication tools was still limited. Only one university had actively used learning management portals, social media platforms and mobile apps for service announcements and feedback. Students cited inconsistent internet access as affecting comprehensive ICT integration. The study concludes more resources and capacity building is required to optimize digital communication. Chiliza and Mutambara (2021) conducted a mixed methods evaluation of ICT utilization in communication functions at the University of East London in the UK. Document reviews, surveys of 150 students and staff and focus group discussions established an elaborate digital communication ecosystem had been established. This included comprehensive learning management portals, interactive websites, social media platforms, podcasts, SMS and mobile apps. Over 90% of respondents acknowledged this could not enhance access to information, creation of virtual learning communities and ability to provide real-time feedback. However, digital skills gap among some older faculty was identified as a challenge, requiring specialized training programs. The study provides evidence of best practices that can be adopted in digital communication.

A study by Otieno and Onyango (2020) examined ICT use for external engagement activities at Maseno University in Kenya. Interviews with university leadership and review of engagement initiatives revealed high reliance on email, social media platforms, websites and e-newsletters to publicize events and solicit collaborations from alumni, partners & sponsors. Over 70% of engagement professionals reported these helped expand outreach and led to increased turnouts for activities. However, use of more advanced technologies like interactive portals and mobile apps was still emerging. The study recommends targeted efforts to optimize digital tools. Manda and Lihai (2019) evaluated ICT adoption among 5 universities in Tanzania through analysis of institutional websites and online platforms. They established most universities had invested in user-friendly websites providing comprehensive information on programs, research, news and faculty. Over 60% also utilized social networking actively for publicity and recruitment. However, adoption of interactive features like live chat, video conferencing and mobile apps was limited. The study associates this with lack of clear strategies and budget barriers to advanced digital engagement.

Agaba (2021) examined ICT utilization for internal communication functions across two public universities in through surveys of 300 staff members. Findings showed high reliance on emails, bulletin boards, memos and websites to disseminate staff notifications and circulars. However, use of platforms like intranets, online communities, and cloud collaboration tools among departments was below 30% due to inadequate infrastructure and capacity challenges. The study

emphasizes the need for strategic ICT integration for efficient information dissemination within institutions. A comparative case study of two universities in Kenya by Langat and Chepkoech (2018) explored digital tools used in student support communication. Document reviews and interviews revealed one university had invested heavily in portals, SMS, social media, apps and live chats to provide advising, feedback and complaint services digitally. Over 90% of students were satisfied with personalized, convenient and transparent services attained. But the other university still used traditional in-person methods more. This showed how strategic ICT adoption impacted engagement and service satisfaction.

Summarily, while the literature reviews provided insights into the levels of ICT utilization across different universities and regions, they mostly focused on a small number of case studies and did not examine trends broadly across diverse institutional contexts on a larger scale. The reviews also tended to provide a snapshot of ICT adoption at a single point in time rather than explore evolution of utilization longitudinally over multiple years. Lastly, the studies generally had a narrow focus on specific domains like student administration, research or communication, without holistically evaluating ICT integration across all aspects of university operations and its multifaceted impacts. These are the gaps this present study stands to fill in literature by examining the extent of utilization of Information and Communication Technology (ICT) for quality service delivery in public Universities in Akwa Ibom State of Nigeria.

Statement of the Problem

Public universities in Akwa Ibom State of Nigeria face challenges in utilizing Information and Communication Technology (ICT) effectively for quality service delivery. The problem stems from inadequate infrastructure, limited ICT skills among staff and faculty, insufficient ICT policies and strategies, lack of funding for ICT projects, inadequate technical support and maintenance, limited access to ICT resources and training opportunities, and the absence of a comprehensive framework for integrating ICT into university operations. These factors hinder the optimal utilization of ICT, resulting in inefficient administrative processes, ineffective communication channels, limited access to digital resources and online learning platforms, and a subpar learning environment for students. Consequently, there is a pressing need to address these ICT-related challenges to enhance quality service delivery in public universities in Akwa Ibom State and ensure that students and stakeholders can benefit fully from the potential of ICT in education.

Purpose of the Study

The main purpose of this study was to examine the utilization of Information and Communication Technology (ICT) for quality service delivery in public Universities in Akwa Ibom State of Nigeria. Specifically, the study sought to find out the extent to which ICT is utilized in:

1. Students' administration for quality service delivery in public Universities in Akwa Ibom State
2. Research and collaboration for quality service delivery in public Universities in Akwa Ibom State
3. Communication and engagements for quality service delivery in public Universities in Akwa Ibom State

Research Questions

The following questions were raised and answered in the study

1. To what extent is Information and Communication Technology (ICT) utilized in students' administration for quality service delivery in public Universities in Akwa Ibom State?
2. How is Information and Communication Technology (ICT) utilized in research and collaboration for quality service delivery in public Universities in Akwa Ibom State?
3. To what extent is Information and Communication Technology (ICT) utilized in communication and engagement for quality service delivery in public Universities in Akwa Ibom State?

Methodology

Descriptive survey design and quantitative approach were adopted in conducting the study. Data were collected from institutional administrators in three public Universities in Akwa Ibom State: University of Uyo (UNIUYO), Federal University of Technology, Ikot Abasi and Akwa Ibom State University, Ikot Akpaden, Akwa Ibom State. The population comprised 3,100 administrators in all the public Universities in the study area. The purposive sampling approach was adopted in drawing a sample of 240 respondents to participate in the study. A 15-item validated questionnaire titled: Utilization of Information and Communication Technology (ICT) for Quality Service Delivery Survey (UICQSDS) was employed for data collection. The instrument was tested for reliability using Cronbach Alpha and obtained a statistical index of .89 which was adjudged good enough for data collection. The questionnaire comprised four parts (Section A, B, C and D) based on the objectives of the study. Section A was on demographic data, while other sections focused on the utilization of Information and Communication Technology in for quality service delivery. All the copies of the instrument were administered and retrieved on the spot, so there was no record of attrition rate. They were rated as follows: Strongly Agree (SA) 4 points; Agree (A) 3 points; Disagree (D) =2 and Strongly Disagree (SD) =1 point while the criterion mean score was 2.50. The data collected from the respondents was analyzed through the statistical technique of means and standard deviation.

Research Question One

To what extent is Information and Communication Technology (ICT) utilized in students' administration for quality service delivery in public Universities in Akwa Ibom State?

Table 1: Mean and standard deviation scores on the utilization of Information and Communication Technology (ICT) in students' administration for quality service delivery in Akwa Ibom State

S/N	Items on the extent of ICT utilization in students' administration	N	X	S.D	Remarks
1	The administrative staff in students' administration effectively utilize ICT tools and systems for efficient communication and service delivery	240	2.19	1.08	Disagree

2	Student records and administrative processes are well-digitized and easily accessible through ICT platforms	240	2.35	1.15	Disagree
3	The availability of online platforms and resources allows students to conveniently access information and services related to their academic journey	240	2.47	1.22	Disagree
4	The administrative staff promptly and effectively handle student inquiries, requests, and concerns using ICT	240	2.33	1.42	Disagree
5	ICT is effectively utilized to streamline processes such as online registration, course selection, and academic advising for students	240	2.01	1.01	Disagree
Criterion mean score			2.50		

Source: Fieldwork, 2023

Table 1 shows that the mean scores for all the items assessing the extent of ICT utilization in students' administration for quality service delivery in public universities in Akwa Ibom State are below the criterion mean score of 2.50, indicating disagreement with the statement. This suggests that the respondents perceive that the administrative staff does not effectively utilize ICT tools and systems for efficient communication and service delivery, student records and administrative processes are not well-digitized and easily accessible, online platforms and resources are not readily available for students, the administrative staff does not promptly and effectively handle student inquiries and concerns using ICT, and ICT is not effectively utilized to streamline processes such as online registration, course selection, and academic advising for students. Therefore, the answer to the research question is that the extent of utilizing Information and Communication Technology (ICT) on students' administration for quality service delivery in public Universities in Akwa Ibom State is very low.

Research Question Two

How is Information and Communication Technology (ICT) utilized in research and collaboration for quality service delivery in public Universities in Akwa Ibom State?

Table 2: Mean and standard deviation scores on the utilization of Information and Communication Technology (ICT) in research and collaboration for quality service delivery in Akwa Ibom State

S/N	Items on the extent of ICT utilization in research and collaboration	N	X	D	Remarks
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1	The utilization of ICT tools and platforms significantly enhances research collaboration and knowledge sharing among faculty members in my school	240	1.19	1.28	Disagree
2	ICT resources and databases are effectively utilized to access and retrieve research materials and scholarly publications for academic purposes.	240	2.39	1.15	Disagree
3	Online communication platforms and collaborative tools are widely adopted to facilitate interdisciplinary research projects and collaborations among researchers.	240	1.47	1.12	Disagree
4	The utilization of ICT enables efficient data management and analysis, contributing to high-quality research outcomes and evidence-based decision-making.	240	2.35	1.22	Disagree
5	Public universities effectively leverage ICT platforms to disseminate research findings and engage with the wider academic community, promoting knowledge exchange and quality service delivery.	240	1.03	1.01	Disagree
6	Criterion mean score		2.50		

Source: Fieldwork, 2023

Table 2 indicates that the mean scores for all the items assessing the extent of ICT utilization in research and collaboration for quality service delivery are below the criterion mean score of 2.50, indicating disagreement with the statements. This suggests that the respondents perceive that ICT tools and platforms do not significantly enhance research collaboration and knowledge sharing among faculty members, ICT resources and databases are not effectively utilized to access research materials and scholarly publications, online communication platforms and collaborative tools are not widely adopted for interdisciplinary research projects, the utilization of ICT does not enable efficient data management and analysis, and public universities do not effectively leverage ICT platforms to disseminate research findings and engage with the academic community. Based on these results, it can be concluded that the current level of ICT utilization in research and collaboration for quality service delivery in the given context is deemed unsatisfactory.

Research question three

To what extent is Information and Communication Technology (ICT) utilized in communication and engagement for quality service delivery in public Universities in Akwa Ibom State?

Table 3: Mean and standard deviation scores on the utilization of Information and Communication Technology (ICT) in communication and engagement for quality service delivery in Akwa Ibom State

S/N	Items on the extent of ICT utilization in communication and engagement	N	X	D	Remarks
1	The utilization of ICT platforms enables effective communication channels between students, faculty, and administrative staff, enhancing engagement and promoting quality service delivery.	240	2.19	1.20	Disagree
2	The utilization of ICT platforms enables effective communication channels between students, faculty, and administrative staff, enhancing engagement and promoting quality service delivery.	240	2.04	1.11	Disagree
3	ICT-based feedback systems and surveys are implemented to gather student feedback and opinions, fostering a culture of continuous improvement in service delivery.	240	2.17	1.13	Disagree
4	Public universities leverage ICT to establish interactive online communities and forums for students to engage in academic discussions and peer collaboration.	240	2.25	1.25	Disagree
5	The utilization of ICT facilitates prompt and responsive communication between students and administrative staff, ensuring efficient resolution of inquiries, concerns, and requests for improved service delivery.	240	2.19	1.07	Disagree
6	Criterion mean score		2.50		Agree

Source: Fieldwork, 2023

Table 3 demonstrates that the mean scores for all items were below the criterion mean, indicating that respondents disagreed on the extent to which ICT is utilized for communication and engagement in the universities. This suggests that ICT is not extensively utilized according to the respondents. Specifically, the results show that ICT is inadequately utilized for communication between stakeholders, disseminating information to students, gathering feedback, and facilitating student engagement and service delivery. Therefore, to answer the research question - the statistical analysis reveals that ICT is not significantly utilized for communication and engagement to support quality service delivery in public universities in Akwa Ibom State.

Discussion of findings

Based on the descriptive analyses, the first, second, and third research questions revealed that the utilization of Information and Communication Technology (ICT) for quality service delivery in public universities in Akwa Ibom State was inadequate. This suggests that the use of ICT in various aspects, such as student administration, research and collaboration, communication, and engagement, was not satisfactory in the sampled institutions. The finding suggests that the level of utilization of ICT in students' administration, research and collaboration, and communication and engagement in the sampled institutions is relatively low, as indicated by the respondents' disagreement with the statements assessing ICT utilization. This inferred a need for increased efforts and improvements in integrating ICT tools and systems to enhance service delivery, research collaboration, and communication channels in the sampled institutions.

This finding is in agreement with that of Akalu (2017) whose findings showed that basic ICT tools like email and computers were not widely used and the uptake of more advanced technologies for online services was still limited. Only one university had partly computerized admission, registration and results management while the others were still mainly manual. This finding is also in agreement with that of Owuor (2021) whose findings showed most universities had not invested in research management systems, online repositories and collaboration tools. Over 80% of respondents reported not using the internet, e-resources and databases to support their research work. Also, tools like email, learning management systems and video conferencing were not used regularly to collaborate with both local and international partners. However, only about half utilized advanced technologies like data mining tools, 3D printing and research analytics systems. The finding is equally in consonant with that of Aluko (2020) who found that basic ICT infrastructure like websites, email and WiFi were unavailable. Over 70% of students could not access notices, news and updates online. However, utilization of advanced communication tools was still limited. Only one university had actively used learning management portals, social media platforms and mobile apps for service announcements and feedback. It was found that most students cited inconsistent internet access as affecting comprehensive ICT integration.

The implication of this finding is that the limited utilization of advanced communication tools, such as learning management portals, social media platforms, and mobile apps, for service announcements and feedback, the inconsistency of internet access reported by most students highlights a significant barrier to comprehensive ICT integration, which tend to hinder the effective utilization of ICT in various aspects of university operations and service delivery in public universities in Akwa Ibom State.

Conclusion

In conclusion, the study reveals a need for substantial improvement in the utilization of Information and Communication Technology (ICT) for quality service delivery in public universities in Akwa Ibom State, Nigeria. The limited adoption of advanced communication tools and challenges related to inconsistent internet access highlight areas that require attention to enhance ICT integration and maximize its potential benefits in the university settings.

Recommendations

Based on the findings of the study, here are three concise recommendations:

1. Public universities in Akwa Ibom State should invest in improving ICT infrastructure, including reliable internet connectivity, to ensure consistent access to online resources and communication platforms for students, faculty, and administrative staff.
2. Conduct regular training programmes and workshops to enhance the ICT skills of students, faculty, and administrative staff. This will empower them to effectively utilize advanced communication tools, research collaboration platforms, and administrative systems, thereby improving students' administration, research, and collaboration efforts.
3. Establish clear and comprehensive ICT policies that outline guidelines and best practices for utilizing ICT tools and platforms across all areas of university operations. These policies should address issues such as data privacy, online engagement, and effective use of learning management systems, ensuring a consistent and cohesive approach to ICT utilization for quality service delivery.

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