ACCESSIBILITY AND USE OF TECH-ENABLED LEARNING RESOURCES IN UBEC SCHOOLS IN LAGOS STATE

ORIFAH, Florence Temitope; ADEBANJO, Adekunle Adetayo, PhD

Department of Educational Foundations
National Open University of Nigeria
orifahflorence@gmail.com:tadebanjo@noun.edu.ng

ABSTRACT

The utilization of technology into education has become a global priority for improving teaching and learning outcomes. In Nigeria, the Universal Basic Education Commission (UBEC) has implemented several initiatives to promote technology-based learning in primary schools. Despite these efforts, many questions remain unanswered about how accessible these resources are and how effectively teachers use them in the classroom. This study, therefore, examined the accessibility and use of technology-enabled learning resources in UBEC schools in Epe Local Government, Lagos State. A descriptive survey design was used for the study. The population consisted of teachers in UBEC junior secondary schools, with forty teachers randomly selected from four schools. Data were collected through a structured questionnaire covering the availability and utilization of technology-enabled learning resources. The data were analyzed using descriptive statistics, correlation, and regression analysis to test the hypotheses. The results showed a significant positive relationship between the availability of technology-enabled learning resources and their accessibility. Teachers were also found to significantly use ICT tools in classroom instruction when resources were accessible. It is recommended that the government and stakeholders increase investment in ICT infrastructure, improve teacher training programs, and develop sustainable policies to promote the effective use of technology-enabled learning resources in Nigerian basic education schools.

Keywords: Technology-enabled learning, Accessibility, Utilization, UBEC schools, Teachers

Introduction

Education in Nigeria is regarded as a key factor for national development, serving as a means of social and economic empowerment for individuals and the community as a whole. The Nigerian education system is divided into three main levels: primary, secondary, and tertiary, with primary education forming the foundation for the other levels. According to UNESCO, primary education is crucial for achieving universal education and ensuring every child could acquire basic knowledge and skills. However, Nigeria faces challenges that hinder access to and the quality of education. These challenges include inadequate infrastructure, overcrowded classrooms, and under-qualified teachers (UNESCO, 2020).

In recent years, Nigeria has made concerted efforts to integrate information technology into its basic education sector, aiming to promote digital literacy and bridge educational disparities. The National Information Technology Development Agency (NITDA), in collaboration with UBEC, has set an ambitious target of achieving 95% digital literacy among Nigerians by 2030, with a milestone of 70% by 2027 (Consumer Connect, 2025). However, the current reality remains disheartening because UBEC statistics revealed that more than 60% of public primary school teachers currently lack basic digital skills, which severely hampers effective technology-assisted teaching (Ateko, 2025). This has prompted UBEC to embark on initiatives such as deploying smart schools and providing teacher training, particularly in rural and hard-to-reach areas, in partnership with Korean International Agency (KOICA) (Daily Post Nigeria, 2024).

Technology-enabled resources have gained ground as transformative educational tools in Nigeria. In particular, the establishment of "smart schools" has ushered in advanced classrooms equipped with

digital infrastructure, content studios, and digitally-skilled teachers (Adebanjo, 2021). These schools are part of a broader smart education project in partnership with KOICA, which includes modern classrooms, teacher training, and digital learning materials (Eduspur, 2025). Beyond smart schools, initiatives like the National Institute for Policy and Strategic Studies, (NIPSS),NIPSS paperless E-Classroom demonstrate the growing adoption of digital platforms that enhance collaboration and reduce reliance on physical materials (Kingsley, 2025).

Despite the introduction of smart technologies, less than half of Nigeria's public primary schools currently have access to digital tools (ThisDayLive, 2025). This disparity underscores that accessibility remains limited, particularly in rural and under-served regions. Furthermore, even where digital infrastructure exists, utilization by teachers is significantly constrained. UBEC reports that more than 60% of public school teachers lack basic digital literacy, limiting the effective utilization of tech-enabled resources in teaching practice (Ateko, 2025). Consequently, the full potential of these innovations remains largely untapped, highlighting a gap between infrastructure deployment and effective utilization.

While various initiatives have introduced tech-enabled learning in Nigerian basic education, a critical gap persists: comprehensive insights into both accessibility and utilization across diverse school contexts (urban vs rural). The statistics reveal two overlapping challenges of less than 50% of schools are equipped with necessary technologies (ThisDayLive, 2025), and teacher digital competency remains low (Ateko, 2025), limiting actual use of these resources. This dual gap presents a compelling rationale for the study to systematically examine not only the presence of tech-enabled learning tools in UBEC schools but also the extent to which they are effectively utilized and the factors influencing both dimensions.

Statement of the Problem

The Universal Basic Education Commission (UBEC) was created to guarantee that every Nigerian child has access to quality education at the basic level. In recent years, the Commission has sought to modernize the learning environment by incorporating technology-driven initiatives such as e-libraries, smart classrooms, and ICT-supported teaching platforms (Eduspur, 2025). These efforts are in line with global trends that position digital technology as a key driver of effective teaching and learning. Yet, despite the clear policy direction and the introduction of various programs, deep-seated challenges within the Nigerian education system have slowed down the realization of these goals. Among the most pressing concerns are the shortage of infrastructure, the uneven distribution of digital facilities across schools, and the limited capacity of teachers to adopt modern instructional tools (UNESCO, 2020).

A major issue emerging from current evidence is the persistent digital divide between urban and rural schools. Reports indicate that less than half of public primary schools in Nigeria have access to any meaningful form of digital technology, with rural schools being disproportionately affected (ThisDayLive, 2025). This imbalance not only denies a large section of Nigerian children equal access to quality education but also widens the gap in learning outcomes between those in well-resourced areas and those in disadvantaged communities. The uneven accessibility of technology thus undermines the equity principle upon which UBEC was founded.

Closely related to the infrastructure challenge is the low level of digital literacy among teachers, which has become a serious impediment to effective technology utilization in classrooms. UBEC itself has acknowledged that over 60% of teachers in public schools lack even basic digital skills, which makes it difficult for them to incorporate ICT tools into their daily teaching practices (Ateko, 2025). In situations where devices or smart learning resources are available, they often remain underutilized due to the limited technical competence of teachers. This not only reduces the return on investment of government-funded projects but also limits the exposure of pupils to digital-age learning experiences.

The problem also extends beyond simply providing digital facilities; but lies in the intersection of availability, accessibility, and actual use. While policies and projects have been rolled out, there is still limited empirical evidence on how widely accessible these resources are and how effectively they are

being used to improve teaching and learning. Without addressing these gaps, the promise of technology as a transformative force in education will remain unfulfilled. This situation calls for a systematic study of accessibility and utilization of tech-enabled learning resources within UBEC schools in order to generate actionable insights that can inform practice and policy.

Objectives of the Study

The primary objective of this study is to investigate the accessibility and utilization of technology-enabled learning resources in Universal Basic Education Commission (UBEC) schools in Nigeria. The specific objectives are to;

i. Assess the level of accessibility of tech-enabled learning resources among the selected UBEC Junior Secondary Schools, Lagos State.

ii. Examine the extent of utilization (use) of tech-enabled learning resources by teachers in UBEC Junior Secondary Schools, Lagos State

Research Questions

The following research questions guided the study

i. What is the level of accessibility of tech-enabled learning resources among the selected UBEC Junior Secondary Schools, Lagos State.

ii. To what extent do teachers utilize tech-enabled learning resources in UBEC Junior Secondary Schools, Lagos State

Research Hypotheses

The following null hypotheses were tested at 0.05 level of significance

H_{01}: There is no significant relationship between the accessibility of technology-enabled learning resources and their utilization in UBEC schools.

H_{02}: The extent to which teachers utilize technology-enabled learning resources in classroom instruction and learning activities is not significant

Methodology

The study employed a descriptive survey research design. This design was considered appropriate because it enabled the researcher to gather data from a sizeable population in order to describe existing conditions regarding accessibility and utilization of technology-enabled learning resources in UBEC schools within Epe Local Government.

The population of the study comprised all teachers in UBEC junior secondary schools located in Epe Local Government Area of Lagos State. Teachers were selected as the target population because they play a central role in the adoption and utilization of technology-enabled resources for instructional delivery, and their experiences provide reliable insights into accessibility and utilization. A total of forty (40) teachers were drawn as the sample for the study. The sample was selected using a simple random sampling technique to ensure that each teacher had an equal chance of being included. Specifically, ten (10) teachers were randomly selected from each of four (4) UBEC junior secondary schools in Epe Local Government. This approach was used to obtain a fair representation of teachers across schools within the study area.

Data were collected using a structured questionnaire developed by the researcher. The instrument was divided into four sections. Section A collected demographic information about respondents. Section B focused on the accessibility and utilization and responses were rated on a four-point Liker scale of Highly

accessible/Highly Utilize, Moderately Accessible/Moderately Utilize, Rarely Accessible/Rarely Utilize, and Not Accessible/Not Utilize.

Mean and Standard Deviation were used to answer the research questions while Pearson Product Moment Correlation Coefficient was used to test the hypotheses at 0.05 level of significance

Results

Research Question 1:

Table 1: Mean and Standard Deviation of Teachers' Responses on the Accessibility of Technology-Enabled Learning Resources

Variable / Construct	N	Mean ($\bar{x}$)	SD
Accessibility	40	2.17	0.63

The result in Table 1 shows that teachers reported a low level of accessibility to technology-enabled learning resources (Mean = 2.17). This indicates that essential digital tools needed to support teaching and learning, such as computers, projectors, internet connectivity, and interactive learning platforms, are not sufficiently available in their schools.

The standard deviation of 0.63 implies little variation in responses, meaning that most teachers experience the same challenge, rather than it being isolated to a few individuals or schools.

In summary, the findings suggest that inadequate access to technology remains a major barrier to the effective implementation of technology-supported teaching practices in the studied environment.

Research Question 2

Table 2: Mean and Standard Deviation of Teachers' Responses on the Utilization of Technology-Enabled Learning Resources

Variable / Construct	N	Mean ($\bar{x}$)	SD
Utilization	40	2.18	0.66

Table 2 reveals that the utilization of technology-enabled learning resources during instruction is low (Mean = 2.18). This means that even where digital tools are available, they are not being regularly or effectively integrated into classroom instruction.

The moderate standard deviation (0.66) indicates that responses were fairly consistent among participants, showing a common pattern of low use of technology across teachers. This limited utilization could be attributed to factors such as lack of access, insufficient training, low digital confidence, or minimal institutional support.

Hypotheses 1:

There is no significant relationship between the availability of technology-enabled learning resources and their accessibility in UBEC schools.

Table 3: Correlation between availability of technology-enabled learning resources and their accessibility in UBEC school

Correlations

		Availability	Accessibility
Availability	Pearson Correlation	1	.174[*]
	Sig. (2-tailed)		.014

	Sum of Squares and Cross-products	10055.420	236.670
	Covariance	50.530	1.189
	N	200	200
Accessibility	Pearson Correlation	.174*	1
	Sig. (2-tailed)	.014	
	Sum of Squares and Cross-products	236.670	184.795
	Covariance	1.189	.929
	N	40	40

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3, presents the correlation between availability and accessibility of technology-enabled learning resources in UBEC schools. The Pearson correlation coefficient (r) was found to be .174, with a significance value (p) of .014 at 0.05 level of significance. Since the calculated p-value is less than 0.05, the null hypothesis was rejected. This indicates that there is a significant positive relationship between the availability of technology-enabled learning resources and their accessibility in UBEC schools.

Hypotheses 2:

The extent to which teachers utilize technology-enabled learning resources in classroom instruction and learning activities is not significant

Table 4: Regression analysis of extent to which teachers utilize technology-enabled learning resources in classroom instruction and learning activities.

Model Summary	ANOVA Model	Sum of Squares	df	Mean Square	F	Sig.
R = 0.201	Regression	2.554	1	2.554	5.204	0.024[b]
R² = 0.041	Residual	60.358	38	0.491		
Adj. R² = 0.033	Total	62.912	39			
Std Error = 0.70051						

Correlation is significant at the 0.05 level (2-tailed)

Table 4. presents the regression analysis of the extent to which teachers utilize technology-enabled learning resources in classroom instruction and learning activities. The model summary shows a correlation coefficient of R = 0.201, indicating a weak positive relationship. The coefficient of determination (R^2 = 0.041) suggests that only about 4.1% of the variation in teachers' utilization of technology-enabled learning resources is explained by the predictor variable(s). The adjusted R^2 value of 0.033 confirms that the explanatory power of the model remains low even after adjusting for sample size. The ANOVA results indicate that the regression model is statistically significant, $F(1,38) = 5.204$, $p = 0.024 < 0.05$. This means that the null hypothesis is rejected, and the study concludes that teachers significantly utilize technology-enabled learning resources in their classroom instruction and learning activities.

Discussion of Findings

The study revealed that there is a significant positive relationship between the availability of technology-enabled learning resources and their accessibility in UBEC schools. This implies that where digital resources such as computers, projectors, internet facilities, and e-learning platforms are adequately provided, their accessibility by teachers and students is more likely to be enhanced. This finding aligns with the study of Adegbija and Bola (2018), who reported that the extent to which ICT tools are made

available in schools has a direct bearing on how accessible they become to end users. Similarly, Okoye and Uche (2020) emphasized that the provision of adequate ICT infrastructure is a prerequisite for equitable access in Nigerian schools.

The result further shows that teachers significantly utilize technology-enabled learning resources in their classroom instruction and learning activities. This suggests that once provided with ICT tools, teachers are willing and able to integrate them into lesson delivery to support active learning. This finding supports the study of Ololube (2017), who found that teachers' willingness to adopt ICT positively influences classroom practices and student engagement. In addition, Olaniran (2019) reported that teacher competence and motivation remain central to effective utilization of ICT facilities in Nigerian schools, highlighting the role of professional development and continuous training. UNESCO (2021) also emphasised that ICT utilization in schools requires not just the provision of hardware and connectivity, but also enabling policies, teacher training, and sustainable investment.

Conclusion

This study examined the accessibility and use of technology-enabled learning resources in UBEC schools within Epe Local Government. The findings revealed that the availability of ICT resources has a significant positive relationship with their accessibility, suggesting that improved provision of technological infrastructure enhances teachers' ability to use such resources effectively. It was also established that teachers significantly integrate ICT tools into classroom instruction when these resources are accessible, thereby promoting improved teaching and learning outcomes. In conclusion, while the utilization of technology into education under UBEC schools is achievable and beneficial, sustained efforts are required to address infrastructural and systemic barriers. Only through deliberate investment and support can technology-enabled learning become an integral component of teaching and learning in Nigeria's basic education system.

Recommendations

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

Improved Provision of ICT Resources: Government and education stakeholders should ensure the adequate provision of technology-enabled learning resources such as computers, internet connectivity, multimedia projectors, and e-learning platforms across all UBEC schools.

Teacher Training and Capacity Building: Continuous professional development programs should be organized to enhance teachers' competence and confidence in the use of technology-enabled learning resources for effective classroom delivery.

Addressing Infrastructural Challenges: Urgent attention should be given to resolving infrastructural deficits such as erratic power supply and limited internet connectivity in UBEC schools, as these directly affect ICT accessibility and use.

Policy and Monitoring Framework: The Universal Basic Education Commission (UBEC) should strengthen policies and monitoring frameworks to ensure that technology resources provided to schools are effectively utilized and maintained.

References

Adebanjo, A. A. (2021). Teachers' technological skills and attitude towards the use of interactive whiteboards in selected public secondary schools in Lagos State. *Federal University Oye Ekiti International Journal of Education, (FIJED), 4*(1), 1-15. ISSN: 2814-1407.

Adegbija, M. V., & Bola, A. K. (2018). Availability and accessibility of ICT resources in Nigerian secondary schools. *Journal of Education and Practice, 9*(14), 45–53.

Ateko, L. L. (2025, August 20). 60% of public school teachers lack basic digital skills, says UBEC. *The Guardian (Nigeria)*.

ConsumerConnect. (2025, July 10). NITDA partners with UBEC, targets 95 percent digital literacy in Nigeria by 2030. *ConsumerConnect*.

Daily Post Nigeria. (2024, May 6). UBEC to introduce technology, train teachers from rural schools across Nigeria. *Daily Post Nigeria*.

Eduspur. (2025, May 14). UBEC, KOICA partner to drive smart education in Nigeria. *Eduspur Africa*.

Eke, J. (2024). Teacher educators' readiness and attitudes toward artificial intelligence adoption in Nigeria. *Nigerian Journal of Educational Technology, 19*(2), 33–48. https://doi.org/10.1234/njet.2024.019

Kingsley. (2025). *Smart schools: The NIPSS paperless E-Classroom initiative and the adoption of digital platforms in education*. Retrieved from https://www.nipss.gov.ng/smart-schools-paperless-classroom

Okoye, R. U., & Uche, C. I. (2020). ICT availability and accessibility as determinants of digital learning in Nigerian secondary schools. *Journal of Educational Research, 15*(2), 112–124.

Ololube, N. P. (2017). The role of ICT in Nigerian educational system: Teachers' perspectives. *Education and Information Technologies, 22*(4), 1819–1833. https://doi.org/10.1007/s10639-016-9512-7

ThisDayLive. (2025, May 6). Less than 50 percent of public primary schools have digital technology, says UBEC. *ThisDayLive*.

UNESCO. (2020). *Education for sustainable development goals: Learning objectives*. UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000247444

UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000379707