

Integration of Technology into the Classroom Activities for Enhancement of Students' Performance in Tertiary Institutions in Ekiti State, Nigeria

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ABSTRACT

The study sought to investigate the integration of technology into classroom activities to enhance students' performance in tertiary institutions in Ekiti State, Nigeria. The sample was a sample made up of two hundred (200) undergraduates and lecturers in tertiary institutions in Ekiti State. Purposive and stratified random sampling techniques were employed to select two hundred (200) students and lecturers from three (3) sampled institutions. The study used a descriptive survey research design because it enables information to be obtained from a representative sample of the targeted population to describe situations as they exist. The instrument for the study was a self-structured questionnaire designed by the researchers based on students' and lecturers' knowledge, usability, and integration of technology into classroom activities. The validity and reliability of the instrument were ascertained to ensure the instrument was reliable for the study. Three (3) research questions raised to guide the study were answered descriptively using simple frequency count, percentage, mean, and Standard Deviation. Three (3) research hypotheses formulated for the study were tested using Pearson Product Moment Correlation (PPMC) statistics. Based on the data analysis, the findings of the study established the effectiveness of the use of computing infrastructure, technology-equipped classrooms, and mobile gadgets in enhancing learning in tertiary institutions. The study concluded that having access to technology-equipped classrooms, computing infrastructure, and mobile gadgets including computers and internet-enabled devices, greatly improves students' capacity to conduct research, collaborate, and interact with academic material. The study recommended that institutions must guarantee that all classrooms are outfitted with interactive whiteboards, projectors, smart screens, and other requisite equipment to cultivate an engaging and technology-enhanced learning environment.

Keywords: Technology; Classroom Activities; Tertiary Institutions, Students' Performance, Ekiti State

INTRODUCTION

The incorporation of technology into classroom activities has become a crucial element of contemporary education, especially in higher education institutions aiming to improve students' academic outcomes. As digital tools and resources advance, they provide chances to convert conventional teaching practices into dynamic, interactive, and student-centered approaches (Ajayi, 2017). The influence of technology is evident in every aspect of human endeavour, significantly contributing to the medical revolution that promotes healthier and longer lives, facilitates health monitoring through advanced machinery, improves medical practices that treat previously incurable diseases, ensures access to essential water resources, enhances food production, enriches life experiences, and transforms entertainment, music, and sports, while driving advancements in communication technology. The influence of technology necessitates its incorporation as a school subject to aid in the learning process for the advancement of students and modern society.

Essential elements such as computing infrastructure, technology-enhanced classrooms, and the efficacy of mobile devices in promoting learning have surfaced as pivotal variables in this context. These factors constitute the basis for the design and execution of technology-enhanced pedagogical strategies, to foster an engaging learning environment that addresses varied student requirements (Ghavifekr & Rosdy, 2015). Nonetheless, the degree to which these technologies are effectively employed in higher education institutions is a significant concern, necessitating a thorough investigation of their influence on student performance.

Several variables delineate the efficacy of technology integration in the classroom. The necessity for seamless integration, the willingness of teachers and students to adopt changes in classroom instruction and learning, continual accessibility, and sustainable policies for enhanced efficiency.

The seamless integration of technology is crucial, since it involves the constant use of technological tools in daily classroom activities, aligning with the tasks at hand and enabling students to develop a deeper comprehension of the topic. Educators must be prepared to accept the tumultuous transformation of technology integration and focus on usability to enhance and enrich the learning experience through its efficacy in instruction. Technology is continuously evolving at a rapid pace. A primary incentive for integrating technology in the classroom is to enhance the effectiveness of learning, concentrating on students and improving their competency in target competencies through technological assistance. The use of digitally based technology and media has revolutionised all facets of our life, and its acceptance in education and teaching methodology is being vigorously advocated (Rathore & Sonawat, 2015).

The research utilises pertinent literature and empirical evidence, including frameworks suggested by scholars such as Cox, Web, Abbott, Blakeley, Beauchamp, and Rhades (2003), who investigated digital technology adoption in Nigerian education, as well as Balash, Farhad, Youg, Zhang, and Bin-Abu (2011), and Sherry, Bilig, Tavalin, and Gibson (2000), who evaluated the effects of e-learning tools on student performance in higher education institutions. This study underscores the advantages and constraints of technology integration, stressing the necessity for sufficient infrastructure, educator training, and policy endorsement to optimise its benefits.

Statement of the Problem

Incorporating technology into classroom activities is widely acknowledged as a catalyst for improving students' academic achievement. Tertiary institutions in Ekiti State, Nigeria, have commenced the integration of diverse technological technologies to enhance educational outcomes. Nonetheless, the degree to which these integrations have impacted student achievement remains little investigated. Research has demonstrated a significant prevalence and application of technology-driven pedagogical approaches among faculty in public tertiary institutions in Ekiti State. Hammed, Ajibare, and Oguntoye (2024) discovered that instructors often utilize developing technology in their instructional practices. Nevertheless, there is a lack of empirical evidence explicitly associating these behaviors with improved student performance. This disparity prompts inquiries on the efficacy of existing technological integrations in attaining intended educational results.

Moreover, although certain studies have indicated the beneficial effects of specific technological interventions on student performance in Ekiti State, including computer-aided learning in business education (Yahaya & Ogundola, 2024) and mobile applications in physics education (Gana, 2018), these investigations are confined to specific disciplines and fail to offer a holistic perspective across diverse fields of study. Moreover, obstacles such as insufficient training for academic personnel, restricted access to essential technological resources, and reluctance to change may impede the efficient incorporation of technology in educational settings. These impediments may diminish the beneficial impacts of technology on student performance; nevertheless, they have not been comprehensively examined in the context of tertiary institutions in Ekiti State.

Consequently, it is imperative to methodically investigate the correlation between technology integration in classroom activities and student performance across diverse disciplines in tertiary institutions in Ekiti State. This inquiry should also address the problems encountered in applying these technologies to achieve a comprehensive understanding of their effects on educational outcomes. Bridging this gap will provide critical

insights for policymakers, educators, and stakeholders seeking to improve academic quality via effective technological integration.

This study seeks to address pertinent questions, including:

1. Will the use of computing infrastructure be effective in enhancing learning in tertiary institutions in Ekiti State?
2. Will the use of technology-equipped classrooms be effective in enhancing learning in tertiary institutions in Ekiti State?
3. Will the use of mobile gadgets be effective in enhancing learning in tertiary institutions in Ekiti State?

Hypotheses

The following hypotheses were formulated for the study.

H₀₁: There is no significant effectiveness of the use of computing infrastructure in enhancing learning in tertiary institutions in Ekiti State.

H₀₂: There is no significant effectiveness of the use of technology-equipped classrooms in enhancing learning in tertiary institutions in Ekiti State.

H₀₃: There is no significant effectiveness of the use of mobile gadgets in enhancing learning in tertiary institutions in Ekiti State.

LITERATURE REVIEW

The use of technology in classroom activities has been a central focus in global educational changes. The investigation of technology's role in improving student performance at tertiary institutions in Ekiti State, Nigeria, highlights the necessity of assessing essential elements such as computer infrastructure, technology-enhanced classrooms, and the efficacy of mobile devices in education.

Computing Infrastructure and Learning Enhancement

A strong computing infrastructure underpins successful technology integration in education. Research indicates that access to contemporary computer systems and dependable internet connectivity is crucial for creating a learning-friendly atmosphere (Rathore & Sonawat, 2015). In Nigeria, the accessibility of computing resources in higher education institutions varies considerably, frequently determined by financial limitations and administrative priorities (Ajayi, 2017). In Ekiti State, the gap in access to computing infrastructure between urban and rural institutions has been identified as an impediment to fair educational possibilities (Ajayi, 2017).

Additionally, computing infrastructure facilitates the implementation of e-learning platforms, virtual simulations, and collaborative tools that improve student engagement and understanding. Murdock and Desberg (2014) demonstrate that students who regularly utilise digital platforms have enhanced problem-solving abilities and academic achievement. Nevertheless, issues such as inconsistent power supply and inadequate technical assistance in Nigerian institutions must be resolved to effectively capitalise on these advantages (Ajayi, 2017).

Technology-equipped classrooms and Interactive Learning

The notion of technology-enhanced classrooms entails the use of audiovisual equipment, interactive whiteboards, and internet-capable gadgets to establish engaging and interactive educational settings. Cox et al. (2003) assert that classrooms with these characteristics enhance active engagement, accommodate varied learning preferences, and augment information retention. This statement corresponds with constructivist philosophy, which underscores the significance of participatory and experience learning.

In Ekiti State, certain tertiary institutions have implemented smart classroom technologies, however to a limited extent. Empirical research demonstrates that students in these institutions display elevated motivation and collaboration (Ajayi, 2017). Moreover, technology-enhanced classrooms enable educators to integrate multimedia resources, which can elucidate intricate topics and promote critical thinking abilities (Kulik, 1994). However, the viability of these efforts relies on continuous funding, educator training, and regular assessment of the technologies' effectiveness. Rutz, Eugene; Eckart, Wade, and Maltbie (2003) advocate for a participatory strategy that engages stakeholders to guarantee the alignment of technology-equipped classroom design and execution with institutional objectives.

Effectiveness of Mobile Gadgets in Learning

Mobile devices, including smartphones, tablets, and laptops, have transformed the manner in which students access and engage with instructional material. The extensive utilisation of these gadgets by pupils has facilitated options for individualised and adaptable learning (Chigona & Chigona, 2010). Mobile devices facilitate access to e-books, online courses, and academic databases, empowering students to control their educational paths.

Jossey-Bass, Peeraer, and Van-Petegem (2010) emphasise that mobile devices enhance collaborative learning via social media platforms, cloud-based applications, and virtual discussion forums. WhatsApp and Google Classroom have emerged as prominent platforms for distributing course materials and facilitating peer-to-peer interaction. These methods have demonstrated efficacy in closing communication gaps between students and instructors, particularly during the COVID-19 pandemic (Dagogo, 2021).

The efficacy of mobile devices in improving learning depends on factors such as digital literacy, cost, and institutional policies. Despite the prevalence of smartphone ownership among students in Ekiti State, the exorbitant cost of internet data and insufficient awareness of educational applications impede its effective use (Ogbnuogwo, Ugwoegbu, Obunna, Apiti & Okunna, 2019). Enhancing cost and offering training on mobile device usage for academic purposes are essential strategies to address these obstacles.

Synthesis and Implications for Tertiary Institutions in Ekiti State

The examined literature highlights the capacity of technology integration to revolutionise education in higher education institutions. The interaction of computing infrastructure, technologically equipped classrooms, and mobile devices substantially affects students' academic achievement. Nonetheless, actualising this promise necessitates confronting systemic problems, including insufficient finance, deficiencies in digital skills, and infrastructural shortcomings.

A comprehensive strategy involving stakeholder participation, policy development, and ongoing capacity enhancement is crucial. Future research may investigate longitudinal studies to evaluate the enduring effects of technology integration on academic outcomes in tertiary institutions in Ekiti State.

METHODOLOGY

The study employed a descriptive survey design. A descriptive survey design was used because it enables information to be obtained from a representative sample of a targeted population to describe situations as they exist. This study was carried out in Ado and Ikere Local Government Areas of Ekiti State. This is because the sampled institutions were clustered in the two Local Government Areas. The study was directed at the population of tertiary institutions in Ekiti State. The target population involves lecturers and students in all five (5) tertiary institutions in Ekiti State. The sample for the study was made up of one hundred and eighty (180) students and twenty (20) lecturers. The study employed purposive and stratified random sampling techniques to select 180 students and 20 lecturers from three sampled institutions.

The instrument for the study was questionnaires designed by the researchers based on students' and lecturers' knowledge, usability, and integration of technology in learning in tertiary institutions. Section A of the questionnaire was on respondents' personal information. Section B consisted of items that are arranged in four-

point Likert scales: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The researcher administered the questionnaire personally to the respondents. Before the respondents started to respond to the items, the aims of the whole exercise were explained to them. They were asked to answer all questions as honestly as possible and they were assured of the confidentiality of any information given. The instructions on how to respond to the questionnaires were read to the respondents to ensure proper filling. Data collection was done immediately after the administration and the response sheets were collected from the respondents, it was collated and analyzed accordingly.

The data obtained was subjected to appropriate statistical tests. For the analysis of data, the researchers used descriptive statistical tools of frequency counts, percentages, and weighted mean to answer the research questions raised to guide the study. The Pearson Product Moment Correlation (PPMC) statistic was employed to evaluate the hypotheses established for the study at a 0.05 level of significance using SPSS Version 26.

RESULTS AND DISCUSSION

Research Question 1

Will the use of computing infrastructure be effective in enhancing learning in tertiary institutions in Ekiti State?

Table 1: Response to whether the use of computing infrastructure will be effective in enhancing learning in tertiary institutions in Ekiti State

S/N	Item	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1	The availability of computing infrastructure in tertiary institutions will improve the quality of teaching and learning.	179 (89.5)	11 (5.5)	6 (3.0)	4 (2.0)	3.07	.340
2	The integration of computing technologies in classrooms will make learning more interactive and engaging for students.	180 (90.0)	15 (7.5)	5 (2.5)	0 (0.0)	3.08	.361
3	Access to computing infrastructure will enhance students' research and academic performance.	148 (74.0)	35 (17.5)	9 (4.5)	8 (4.0)	3.22	.415
4	The use of computing tools will improve collaboration between students and lecturers.	111 (55.5)	82 (41.0)	7 (3.5)	0 (0.0)	3.04	.184
5	Adequate computing infrastructure will ensure equitable access to learning resources for all students.	164 (82.0)	36 (18.0)	0 (0.0)	0 (0.0)	3.18	.385
6	The use of computing infrastructure in tertiary institutions will increase the efficiency of academic administration and communication	166 (83.0)	34 (17.0)	0 (0.0)	0 (0.0)	3.17	.377

Table 1 shows the statistical analysis of responses to whether the use of computing infrastructure will be effective in enhancing learning in tertiary institutions in Ekiti State with a mean range of 3.04 – 3.22 and a standard deviation range of .184 – .415. Analysis revealed that (95.0%) of the respondents agreed with the assertion that the availability of computing infrastructure in tertiary institutions will improve the quality of teaching and learning while the remaining (5.0%) held a contrary perception.

It was further held by (97.5%) of the respondents that the integration of computing technologies in classrooms will make learning more interactive and engaging for students; (91.5%) of the respondents held that access to computing infrastructure will enhance students' research and academic performance while (96.5%) of the respondents held that the use of computing tools will improve collaboration between students and lecturers. It was further held by all the respondents (100.0%) that adequate computing infrastructure will ensure equitable access to learning resources for all students, and that the use of computing infrastructure in tertiary institutions will increase the efficiency of academic administration and communication.

Conclusively, the use of computing infrastructure was found to be very effective in enhancing learning in tertiary institutions in Ekiti State.

Research Question 2

Will the use of technology-equipped classrooms be effective in enhancing learning in tertiary institutions in Ekiti State?

Table 2: Response to whether the use of technology-equipped classrooms will be effective in enhancing learning in tertiary institutions in Ekiti State

S/N	Item	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1	Technology-equipped classrooms improve students' understanding of course materials.	150 (75.0)	50 (25.0)	0 (0.0)	0 (0.0)	3.58	.495
2	The use of technology in classrooms encourages active student participation during lectures.	128 (64.0)	57 (28.5)	14 (7.0)	1 (0.5)	3.57	.497
3	Technology-equipped classrooms enhance the overall quality of teaching and learning experiences.	182 (91.0)	18 (9.0)	0 (0.0)	0 (0.0)	3.61	.490
4	Students are more engaged and motivated in classrooms equipped with modern technological tools.	127 (63.5)	38 (19.0)	29 (14.5)	6 (3.0)	3.69	.526
5	Technology-equipped classrooms better prepare students for the digital demands of the modern workforce.	149 (74.5)	37 (18.5)	14 (7.0)	0 (0.0)	3.59	.511

Table 2 shows the statistical analysis of responses to whether the use of technology-equipped classrooms will be effective in enhancing learning in tertiary institutions in Ekiti State with a mean range of 3.57 – 3.69 and a standard deviation range of .490 – .526. Analysis revealed that all the respondents (100.0%) agreed with the assertion that technology-equipped classrooms improve students' understanding of course materials.

It was further held by (92.5%) of the respondents that the use of technology in classrooms encourages active student participation during lectures, all the respondents (100.0%) held that technology-equipped classrooms enhance the overall quality of teaching and learning experiences, (82.5%) of the respondents indicated that students are more engaged and motivated in classrooms equipped with modern technological tools while (93.0%) of the respondents agreed to the assertion that technology-equipped classrooms better prepare students for the digital demands of the modern workforce.

Summarily, the use of technology-equipped classrooms was found to be effective in enhancing learning in tertiary institutions in Ekiti State.

Research Question 3

Will the use of mobile gadgets be effective in enhancing learning in tertiary institutions in Ekiti State?

Table 3: Response to whether the use of mobile gadgets will be effective in enhancing learning in tertiary institutions in Ekiti State

S/N	Item	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1	Mobile gadgets provide easier access to educational resources for students in tertiary institutions.	180 (90.0)	20 (10.0)	0 (0.0)	0 (0.0)	3.64	.483
2	The use of mobile gadgets enhances collaboration and communication among students and lecturers.	174 (87.0)	22 (11.0)	3 (1.5)	1 (0.5)	3.68	.468

3	Learning through mobile gadgets increases student engagement and participation in academic activities.	129 (64.5)	42 (21.0)	12 (6.0)	17 (8.5)	3.36	.480
4	Mobile gadgets improve the overall quality and efficiency of academic work in tertiary institutions.	112 (56.0)	57 (28.5)	21 (10.5)	10 (5.0)	3.44	.498
5	The availability of mobile gadgets contributes to better learning outcomes for students in Ekiti State	131 (65.5)	61 (30.5)	8 (4.0)	0 (0.0)	3.43	.490

Table 3 shows the statistical analysis of responses to whether the use of mobile gadgets will be effective in enhancing learning in tertiary institutions in Ekiti State with a mean range of 3.36 – 3.68 and a standard deviation range of .468 – .498. Analysis revealed that all the respondents (100.0%) agreed with the assertion that mobile gadgets provide easier access to educational resources for students in tertiary institutions.

It was further held by virtually all the respondents (98.0%) that the use of mobile gadgets enhances collaboration and communication among students and lecturers, (85.5%) of the entire respondents held that learning through mobile gadgets increases student engagement and participation in academic activities, (84.5%) of the respondents indicated that mobile gadgets improve the overall quality and efficiency of academic work in tertiary institutions, while (96.0%) of the respondents held that the availability of mobile gadgets contributes to better learning outcomes for students in Ekiti State.

Conclusively, the use of mobile gadgets was found to be effective in enhancing learning in tertiary institutions in Ekiti State.

Hypotheses Testing

Hypothesis 1

There is no significant effectiveness of the use of computing infrastructure in enhancing learning in tertiary institutions in Ekiti State.

Table 4: Correlation between the use of computing infrastructure and learning outcomes

Correlations		Computing infrastructure	Learning outcomes
Computing infrastructure	Pearson Correlation	1	.036**
	Sig. (2-tailed)		
	The sum of Squares and Cross-products	25.815	.475
	Covariance	.130	.002
	N	200	200
Learning outcomes	Pearson Correlation	.036**	1
	Sig. (2-tailed)		
	The sum of Squares and Cross-products	.475	6.755
	Covariance	.002	.034
	N	200	200

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

The correlation between the effectiveness of computing infrastructure and learning outcomes among undergraduate students in tertiary institutions in Ekiti State is presented in Table 4. The table revealed that the calculated Pearson Correlation Sig. value (.036) which was less than the table value of 3.84 (at the 0.05 level of significance) obtained for responses on the effectiveness of computing infrastructure and learning outcomes. The covariance however was (.130) and (.034) respectively. This indicated that computing infrastructure has a positive correlation to students’ learning outcomes. Hence, the null hypothesis was not upheld. This implies

that there was a significant effectiveness of the use of computing infrastructure in enhancing learning in tertiary institutions in Ekiti State.

Hypothesis 2

There is no significant effectiveness of the use of technology-equipped classrooms in enhancing learning in tertiary institutions in Ekiti State.

Table 5: Correlation between the technology-equipped classroom and learning outcomes

Correlations			
		Technology-equipped classroom	Learning outcomes
Technology-equipped classroom	Pearson Correlation	1	.396**
	Sig. (2-tailed)		
	Sum of Squares and Cross-products	39.105	22.315
	Covariance	.247	.103
	N	200	200
Learning outcomes	Pearson Correlation	.396**	1
	Sig. (2-tailed)		
	Sum of Squares and Cross-products	22.315	55.155
	Covariance	.103	.277
	N	200	200

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

The data presented in Table 5 illustrates the relationship between the effectiveness of technology-equipped classrooms and the learning outcomes of undergraduate students in tertiary institutions located in Ekiti State. The table revealed that the calculated Pearson Correlation Sig. value (.396) which was less than the table value of 3.84 (at the 0.05 level of significance) obtained for responses on the effectiveness of technology-equipped classrooms and learning outcomes. The covariance however was (.247) and (.277) respectively. This indicated that the adequacy of technology-equipped classrooms has a positive correlation with students' learning outcomes. Hence, the null hypothesis was not upheld. This implies that there was a significant effectiveness of the use of technology-equipped classrooms in enhancing learning in tertiary institutions in Ekiti State.

Hypothesis 3

There is no significant effectiveness of the use of mobile gadgets in enhancing learning in tertiary institutions in Ekiti State.

Table 6: Correlation between the use of mobile gadgets and learning outcomes.

Correlations			
		Mobile gadget	Learning outcomes
Mobile gadget	Pearson Correlation	1	.409**
	Sig. (2-tailed)		
	Sum of Squares and Cross-products	33.520	19.280
	Covariance	.219	.092
	N	200	200
Learning outcomes	Pearson Correlation	.409**	1
	Sig. (2-tailed)		
	Sum of Squares and Cross-products	19.280	46.795
	Covariance	.092	.230
	N	200	200

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

The correlation between the effectiveness of mobile gadgets and learning outcomes among undergraduate students in tertiary institutions in Ekiti State is presented in Table 6. The table revealed that the calculated Pearson Correlation Sig. value (0.409) which was less than the table value of 3.84 (at the 0.05 level of significance) obtained for responses on the effectiveness of mobile gadgets and learning outcomes. The covariance however was (.219) and (.230) respectively. This indicated that the effectiveness of mobile gadgets has a positive correlation with students' learning outcomes. Hence, the null hypothesis was not upheld. This implies that there was significant effectiveness of the use of mobile gadgets in enhancing learning in tertiary institutions in Ekiti State.

DISCUSSION OF FINDINGS

The study investigated the integration of technology into classroom activities to enhance students' performance in tertiary institutions in Ekiti State, Nigeria. Firstly, the descriptive analysis of the study indicated that the use of computing infrastructure was effective in enhancing learning in tertiary institutions in Ekiti State. The inferential analysis indicated the significant effectiveness of computing infrastructure and technology-equipped classrooms in enhancing learning in tertiary institutions in Ekiti State. The study's findings align with the assertions of Ghavifekr and Rosdy (2015), who argued that the use of technology-based teaching aids, such as audio, visual, and audio-visual tools, enhances and facilitates the teaching process.

Secondly, the descriptive analysis of the study revealed that the use of technology-equipped classrooms was effective in enhancing learning in tertiary institutions in Ekiti State. The inferential analysis revealed that there was a significant effectiveness of the use of technology-equipped classrooms in enhancing learning in tertiary institutions in Ekiti State. This implies that technology in education pertains to pedagogy, specifically the methodologies employed. The study's findings support the assertion made by Rathore and Sonawat (2015) that digitally based technology and media have transformed various aspects of life, with a strong push for increased adoption in education and teaching pedagogy. The study's results corroborate the claims of Jossey-Bass et al. (2010), who asserted that Educational Technology can enhance teaching and learning practices and cultivate an "ideal" learning environment.

Lastly, descriptive analysis of the study further revealed that the use of mobile gadgets was found to be very effective in enhancing learning in tertiary institutions in Ekiti State. The inferential analysis revealed that there was a significant effectiveness of the use of technology-equipped classrooms in enhancing learning in tertiary institutions in Ekiti State. The study's findings indicate that Education Technology provides possibilities for learners to improve their cognitive capacities, critical thinking, information reasoning, and communication skills, as noted by Chigona and Chigona (2010).

CONCLUSION

This study's findings underscore the transformative influence of technology integration on education in tertiary institutions in Ekiti State, Nigeria. The results indicated a substantial efficacy of computing infrastructure in improving learning outcomes. This indicates that expenditures in technology-based instructional tools, including computer laboratories and software resources, are essential for enhancing students' academic achievement. The study demonstrated the considerable efficacy of technology-integrated classrooms in promoting improved learning experiences. These classrooms, outfitted with contemporary resources such as projectors, interactive boards, and high-speed internet, create an interesting and conducive learning atmosphere that promotes active student engagement and enhances comprehension of course material.

The findings demonstrated the substantial efficacy of mobile devices, including smartphones, tablets, and laptops, in improving learning outcomes. This highlights the significance of portable and accessible technologies in offering students chances for flexible, personalized, and mobile learning. The study underscores the imperative of incorporating technology into the educational procedures of postsecondary institutions in Ekiti State. The considerable efficacy of computing infrastructure, technology-integrated classrooms, and mobile devices highlights the pressing necessity for policymakers, educators, and stakeholders to prioritize investments in technological innovations to enhance the educational experience. These initiatives will enhance academic performance and equip students for the challenges of the digital era.

RECOMMENDATIONS

- i. Due to the substantial efficacy of computer infrastructure in improving education in tertiary institutions in Ekiti State, policymakers and institutional administrators should prioritize augmented investment in the enhancement and maintenance of these infrastructures.
- ii. Institutions must guarantee that all classrooms are outfitted with interactive whiteboards, projectors, smart screens, and other requisite equipment to cultivate an engaging and technology-enhanced learning environment.
- iii. Tertiary institutions must include mobile technology into their curriculum by promoting the utilization of educational mobile applications, e-books, and online collaborative tools. Collaborations with technology suppliers may enable discounted access to smartphones, tablets, and other mobile devices for students.
- iv. To optimize the advantages of these technological interventions, both academic personnel and students must undergo sufficient training to successfully employ computing infrastructure, technology-enhanced classrooms, and mobile devices for educational purposes.
- v. Institutions should implement Learning Management Systems (LMS) to provide courses, track student advancement, and promote interactive learning.

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