

THE IMPACT OF MODERN TECHNOLOGY ON STUDENT LEARNING EXPERIENCES IN HIGHER EDUCATION

- NIGERIA AS A CASE STUDY

1.0 INTRODUCTION

The introduction of digital technology and innovation has had a significant influence on individuals' learning patterns (Ghory & Ghafory, 2021). Modern technology to facilitate educational endeavours in Nigeria has been a topic of discourse and fascination for an extended period, with the aim of achieving its internationally recognized advantages (Adeoye et al, 2013). According to (Achugbue, 2011), the integration of technology into the learning process offers novel prospects for engaging in advanced cognitive activities, such as autonomy, creativity, problem-solving, and teamwork. Additionally, it empowers educators to cater to the unique requirements of individual students, particularly when utilizing web-based technology (Quaye et al, 2015). Despite being classified as a developing nation, Nigeria has made significant progress in its educational institutions with regards to the integration of a technologies, while there is still more work to be done (Usman ,2019). It is crucial to recognize the existence of many learning styles, and it is possible that traditional educational systems may not be fully equipped to cater to all of them. While conventional lecturing has demonstrated its worth in terms of simplicity and accessibility, it is crucial to conduct a thorough analysis of its ramifications and effects (Musa et al., 2019). This article presents an impartial evaluation of many data sources, aiming to facilitate comparisons grounded on a wide range of learning experiences inside Nigerian universities.

According to (Gambari et al. 2018), the inefficiency of the traditional lecturing approach has been demonstrated in Nigeria's overpopulated lecture rooms, mostly owing to gaps in its delivery. The use of contemporary technological advancements, such as mobile learning and e-learning, is imperative to effectively address the diverse learning needs of individuals. E-learning refers to the utilization of electronic technology for the purpose of delivering educational and training applications, as well as monitoring learners' performance and reporting their progress (Salawudeen, 2010). This approach has resulted in increased learner autonomy and enhanced engagement and motivation among introverted students, as well as improved time management skills (Gambari et al. 2018). Research done at the University of Central Florida examined the impact of e-learning on student achievement and retention. The findings indicate that e-learning is an effective technique that enhances students' capacity to succeed and persist in their academic pursuits.

2.0 RESEARCH QUESTIONS

The following research questions were raised to guide this study:

- (i) What is the difference in the experience of students exposed to modern technology to enhance learning in classrooms compared to those in the traditional classroom setting?
- (ii) How does the lack of financial capabilities affect the student's experience?
- (iii) To what extent do open educational resources help with the learning experience?

2.1 RESEARCH HYPOTHESIS

The following hypotheses were formulated:

- (i) There is a significant difference in the overall experience of students in private and federal universities exposed to modern technology
- (ii) There is a decline in the learning experience of students and schools without sufficient financial capabilities.
- (iii) Open educational resources has exposed students to diverse and advanced learnings outside of their geographical locations.

3.0 LITERATURE REVIEW

The primary objective of this systematic literature review is to provide a thorough and exhaustive examination of the current body of research in the specified topic. By doing so, this review intends to elucidate the significance of modern technology in the context of higher education in Nigeria, specifically examining its influence on student involvement and academic achievements. This study aims to provide a comprehensive knowledge of the problems and possibilities related to the integration of modern technology into the higher education system in Nigeria by combining empirical research, theoretical frameworks, and best practices. Furthermore, this study aims to identify the existing gaps in the present body of knowledge and suggest potential avenues for future research and policy formulation.

The following related literature sources were examined in the context of this research study.

IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON TERTIARY INSTITUTIONS: IJOV
Terlumun Mark, Ph.D Department of Educational Foundations, Faculty of Education, Federal University of Kashere, Gombe State – Nigeria WOMBU Ruth Nguzan, Ph.D Office of the Head of Service, Makurdi Benue State, Nigeria.

This research examines the influence of technology on higher education institutions in Nigeria, specifically addressing the difficulties and barriers encountered during the integration of ICT. This study its significance within the realm of education, specifically focusing on its potential to augment teaching, learning, and research within higher education. The paper encompasses several significant points, which are as follows:

- The significance of education in the advancement of human growth and the progression of civilization.
- The importance of modern technology in a knowledge-based economy.

This paper aims to provide details on technology together with its constituent elements, including computers, software, networks, and the internet to facilitate the process of teaching and learning. The potential for sustainable education to bring about transformative effects in the context of national development. The use of technology at universities presents a range of problems and impediments like insufficient financing, poor infrastructure, and a lack of teacher training. This study highlights the need of securing sufficient financial resources, establishing appropriate infrastructure, and providing comprehensive training to effectively incorporate ICT into the educational curriculum of tertiary institutions. Additionally, it underscores its potential advantages in the realms of research, and administrative operations. The authors propose that the utilization of Technology has the potential to augment the caliber of education and foster the cultivation of human capital within the context of

Nigeria (IJOV & WOMBU , 2019). In summary, this study emphasizes the significance of technology in higher education and highlights the necessity for a collaborative endeavor to address the barriers impeding its successful integration. There is a need for enhanced investment in infrastructure and training to enable Nigerian tertiary institutions to align with international standards and norms in the field of ICT (IJOV & WOMBU, 2019).

IMPACT OF ICT ON TEACHING AND LEARNING. A CASE STUDY OF SOME SELECTED UNIVERSITIES IN NIGERIA. *Adewoye, J.O1 Salau, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria*

This study highlights the considerable impact of technology within the field of education, specifically in Nigerian institutions, recognizing the evolving requirements of contemporary educational environments in contrast to conventional ones.

The text acknowledges the growing recognition of technology as a crucial instrument in many sectors, including the field of education. The statement underscores the notable disparities between 21st-century classrooms and traditional classrooms, with a particular emphasis on the pivotal role of technology. Nigeria encounters distinct obstacles, such as inadequate infrastructure and disparities in digital access, but also offers prospects for technological progress in the realm of higher education. The COVID-19 epidemic has served as a catalyst for the increased use of technology in Nigerian universities. Technology empowers both students and teachers since it facilitates self-directed learning and enhances the effectiveness of teaching and learning processes by increasing their level of engagement and efficiency. The utilization of this technology presents students with novel avenues for professional advancement, facilitates collaborative learning experiences, and elevates the overall standard of education (Adewoye, & Salau 2021). This study proposes many recommendations like enhancing organizational capability, securing more money and facilitating infrastructural development to enhance the utilization of ICT for teaching and learning in Nigerian institutions (Adewoye, & Salau 2021).

APPRAISING THE ROLE OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) AS A CHANGE AGENT FOR HIGHER EDUCATION IN NIGERIA. *Yusuf Musibau Adeoye*, Afolabi Festus Oluwole, Loto Antonia Blessing Department of Educational Administration and Planning, Adeyemi College of Education, Ondo, Nigeria*

This article, which was published in the December 2013 issue of the International Journal of Educational Administration and Policy Studies, examines the impact of ICT as a catalyst for change in the realm of higher education in Nigeria.

The research reveals that modern technology has had a substantial impact on the enhancement of education by facilitating interactive material, personalized training, and the availability of up-to-date information. Furthermore, it has enhanced the efficiency and productivity of educators in the field of education. The study also highlights many limitations to the adoption of technology including a shortage of instructors with computer training, insufficient financing, unreliable access to electricity, high prices associated with ICT equipment, and a dearth of suitable software (Adeoye et al., 2013). It also proposes an increase in financing and allocation of resources to enhance the successful use of technology in higher education institutions in Nigeria. This shows the necessity of providing instructors with computer training and the creation of appropriate software to facilitate educational endeavors

(Adeoye et al., 2013). Moreover, it posits that the need for the successful incorporation of technology in higher education lies in the augmentation of awareness and the provision of incentives to educators for the adoption of ICT tools.

THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON TERTIARY INSTITUTIONS' ADMINISTRATION IN NASARAWA STATE, NIGERIA - *Usman, Yunusa Dangara Federal Road Safety Corps (Plant) Awka, Anambra State, Nigeria.*

This study delves into the examination of the effects of technology on the administrative processes of postsecondary institutions located in Nasarawa State, Nigeria. The research study utilized a descriptive research strategy to address four specific research inquiries pertaining to the influence of information and communication technology (ICT) on different facets of administration inside tertiary institutions (Usman, 2019).

The study gathered data from personnel employed at public tertiary institutions in Nasarawa State through the utilization of a standardized questionnaire. The data underwent analysis utilizing statistical methodologies, such as the Pearson correlation coefficient and t-test (Usman, 2019).

The study suggests that it is advisable to allocate sufficient financial resources, human resources, and technology infrastructure to schools. Additionally, it is recommended to regularly assess and evaluate school activities, as well as provide ongoing training opportunities for staff to enhance their understanding and utilization of ICT. This study emphasizes the significance of information and communication technology (ICT) in improving several facets of administrative functions in tertiary institutions and proposes strategies to maximize the potential of ICT in the Nigerian educational sector (Usman, 2019).

4.0 ANALYSIS OF THE LITERATURE REVIEW IN RELATION TO THE RESEARCH QUESTIONS

The four publications investigate the influence of modern technology on the field of education, with a specific focus on Nigerian higher education institutions. The following is a comprehensive overview and critical examination of the articles categorized according to the designated headings:

RESEARCH QUESTION 1: What is the difference in the experience of students exposed to modern technology to enhance learning in classrooms compared to those in the traditional classroom setting?

Article 1: Emphasizes the importance of ICT in higher education and the necessity of investing in ICT infrastructure and training to conform to global benchmarks, the initial article underscores these points.

Article 2: Examines the effects of information and communication technology (ICT) in Nigerian universities and acknowledges the changing demands of contemporary learning environments. The opportunities that ICT affords for self-directed learning, engagement, and collaboration are discussed.

Article 3: Investigates the profound and far-reaching implications of information and communication technology (ICT) in Nigeria's higher education system, while also recognising its restricted influence within the field of education. Nevertheless, the article explores the ways in which ICT can augment the caliber and volume of academic inquiry, instruction, and education.

Article 4: The impact of ICT on administrative procedures in tertiary institutions is examined in the fourth article. Although the text does not explicitly discuss student experiences, it does underscore the significance of ICT in the domains of records management and academic achievement.

In each of the four articles, the significance of modern technology in advancing education, specifically in Nigerian higher education, is acknowledged. The potential for technology to enhance teaching and learning experiences is underscored, although the precise effects on students may differ.

RESEARCH QUESTION 2: How does the lack of financial capabilities affect the student's experience?

Article 1: Inadequate funding is one of the obstacles to technological integration in tertiary institutions that is discussed in the first article. This underscores the necessity for financial resources to surmount these obstacles.

Article 2: The second article acknowledges the existence of disparities in digital access and infrastructure challenges, both of which may have an indirect influence on the experiences of students because of financial limitations.

Article 3: Inadequate funding and a lack of instructors with computer expertise are cited in the third article as obstacles to the implementation of modern technology in education.

Article 4 proposes the allocation of adequate financial, human, and technological infrastructure resources to enhance the administrative capabilities of tertiary institutions.

Analysis: The ineffective integration of modern technology in education is hindered by financial constraints and resource limitations, as acknowledged in all four articles. These constraints have the potential to indirectly impact students' experiences through restricted access to technology and substandard education.

RESEARCH QUESTIONS 3: To what extent do open educational resources help with the learning experience.

There is a lack of explicit discussion regarding the direct influence of open educational resources (OER) on the learning experience.

Each article offers significant perspectives on the capacity of modern technology to augment education, while emphasizing the criticality of allocating resources and enhancing infrastructure in tertiary institutions in Nigeria.

5.0 RECOMMENDATION FOR FURTHER STUDY

The preceding analysis highlights the existing body of research on the impact of modern technologies on higher education. Nonetheless, potential research endeavours should involve collecting primary data to probe deeper into the direct impact of such technologies on students and its correlative consequences on their academic production. Due to the cost-effective nature (Hilton, 2020) and limitless advanced learning opportunities (Hysten, 2006) around Open educational resources, it is imperative that more research and awareness is conducted in Nigerian (Olufunke & Adegun, 2014). Furthermore, it is critical to explore the implications of potential distractions that may emerge during the process of absorbing new educational systems that provide students with a wide range of limitless educational materials. In this setting, a comprehensive performance evaluation should be carried out by careful observation and the collection, analysis, and interpretation of primary data (Tang, 2020).

6.0 CONCLUSION

The impact of modern technology on student learning experiences in higher education in Nigeria is profound (Faghihi et al, 2016). While it offers increased accessibility, personalized learning, improved engagement, and other benefits, it also poses challenges related to digital literacy, faculty development, and quality assurance. The Ministry of Education in Nigeria should proactively invest more in reliable internet infrastructure to support student's learning process and encourage Nigerian higher education institutions to embrace available opportunities while addressing the associated challenges to ensure that students receive a high-quality education in the digital age.

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