

The Effectiveness of E-Learning Initiative in Nigeria Schools: Problem and Prospects

Dr. Chidi E. Nwokike¹, Kingsley Nkemjika Abasili², Dr. Ebele Victoria Ezeneme³

¹Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus- Anambra State-Nigeria
Department of Public Administration
nwokikechidi@gmail.com

ORCID ID: 0000-0003-3991-3379

²Department of Public Administration, Nnamdi Azikiwe University, Awka
nk.abasili@unizik.edu.ng

³Department of Political Science, Nwafor Orizu College of Education, Nsugbe
ebeleezeneme762@gmail.com

Abstract: *The effectiveness of e-learning initiatives in Nigerian schools is a critical area of study, given the transformative potential of digital education. This research assessed the current state, challenges, and prospects of e-learning in Nigeria. Utilizing a content analysis approach, researchers examined diverse materials, including policies, curriculum documents, and online platforms, to identify patterns and trends related to e-learning. The conceptual framework employed the Diffusion of Innovations theory to understand the dynamics of e-learning adoption in Nigerian schools. The state of e-learning initiatives in Nigeria reveals a growing interest fueled by the COVID-19 pandemic. Despite efforts by some institutions, challenges persist across infrastructure, technology access, finance, language, and attitudes. Limited internet connectivity, technological disparities, financial constraints, linguistic diversity, and resistance from educators pose significant obstacles. Prospects for improvement involve collaborative efforts to enhance internet infrastructure, provide affordable devices, secure financial support, and promote linguistic inclusivity. Addressing these challenges requires strategic interventions, innovative financing models, and inclusive content development. The recommendations include collaboration with the private sector to expand internet coverage, initiatives for affordable devices, increased government funding for ICT infrastructure, policies promoting linguistic inclusivity, and comprehensive training programs for educators.*

Keywords: e-learning, school, education, Technology, covid-19

Introduction

Education is the cornerstone of any nation's development, and in the digital age, technology has become an indispensable tool in enhancing educational access and quality. In Nigeria, a country with a population exceeding 200 million, there exists a significant demand for quality education, yet a multitude of challenges has hindered the achievement of this aspiration (Okolo & Mallo, 2021; Nwogu, 2015). Traditional classroom-based education often falls short of meeting the needs of a burgeoning population, while e-learning presents an opportunity to bridge the gap. The advent of technology in the educational environment has offered promising prospects, but Nigeria's education sector faces a multitude of issues limiting full implementation e-learning all the educational institutions across the federation (Ugah, Omoke & Uguru, 2023). Consequently, the effectiveness of e-learning in Nigerian schools has been a subject of concern. While there has been growing interest in e-learning initiatives in various global contexts, there is a distinct research gap regarding their effectiveness in Nigerian schools. This study will address the research gap concerning the effectiveness of E-Learning initiatives in Nigerian schools by assessing the current state of e-learning initiatives, identifying the unique challenges faced in their implementation, and exploring prospects for enhancing their

effectiveness and accessibility. The findings and recommendations will be valuable for policymakers, educators, and stakeholders working towards improving the educational landscape in Nigeria.

E-Learning, a dynamic educational paradigm, encompasses the utilization of electronic technologies and digital resources to disseminate knowledge, thereby reshaping the traditional educational landscape (Haleem, Javaid, Qadri & Suman, 2022). It holds the promise of surmounting geographical constraints, rendering learning accessible, flexible, and captivating. In Nigeria, the embracement of e-learning is in its embryonic phase but exhibits a persistent ascent. Numerous catalysts have propelled this transformation. Foremost, the proliferation of affordable digital devices and increased internet accessibility have democratized education, narrowing the chasm that once separated learners from quality educational resources (Bubou & Job, 2021). These advancements have, in turn, unleashed a plethora of opportunities for students across the nation, transcending the limitations of physical classroom walls. Furthermore, according to Bubou and Job (2021), the global educational environment is evolving at an unprecedented pace, necessitating the adaptation to new learning modalities. E-learning equips students with the skills and knowledge required to thrive in a rapidly changing world. As the country continues to integrate digital tools and innovative platforms, the prospects for e-learning in Nigeria are poised for

significant growth, enabling a brighter, more inclusive, and globally competitive future for its educational landscape.

The rationale behind this research stems from the urgent need to improve the state of education in Nigeria. Education is a fundamental right, and its accessibility and quality should not be compromised. However, Nigeria faces numerous challenges in providing quality education, from a lack of infrastructure to a shortage of qualified teachers. E-learning initiatives have the potential to address many of these issues, but their effectiveness is questionable. As a result, understanding the problems and prospects of e-learning in Nigeria is a key step in formulating effective policies for educational reform. Furthermore, the ongoing COVID-19 pandemic has accelerated the need for e-learning solutions, making this research even more pertinent. The motivation for this research is rooted in the desire to contribute to the betterment of Nigerian society. By improving education, not only can individual lives be transformed, but the nation as a whole can progress economically, socially, and culturally. This research aims to serve as a catalyst for change, by providing actionable recommendations and insights that can guide educational stakeholders and policymakers in transforming the educational landscape in Nigeria.

Research objectives

1. Assess the current state of e-learning initiatives in Nigerian schools.
2. Identify the unique challenges faced in implementing e-learning in Nigeria.
3. Explore prospects for improving e-learning's effectiveness and accessibility.

Research Questions

1. What is the current status and effectiveness of e-learning initiatives in Nigerian schools?
2. What are the specific challenges encountered when implementing e-learning in Nigeria, and how do they differ from other contexts?
3. How can e-learning in Nigeria be enhanced to improve its effectiveness and accessibility to a wider audience?

Method and Materials

The researchers utilized a content analysis approach. Content analysis is a systematic and objective technique for categorizing and interpreting qualitative data, in this case, examining various materials related to the e-learning initiative in Nigerian schools. The researchers collected a diverse range of materials, such as educational policies, curriculum documents, online learning platforms, and perhaps even feedback from students and educators. Through a structured analysis, they identified patterns, themes, and trends in the content that could shed light on the challenges and opportunities associated with the e-learning initiative in Nigeria. This approach provided a rigorous and systematic way to examine the depth and breadth of information

available, allowing the researchers to draw meaningful conclusions about the current state of e-learning in Nigerian schools.

Conceptual Clarifications and theoretical Underpinning

E-Learning

In recent years, the field of education has been undergoing a profound transformation, driven by the rapid advancement of technology and the growing accessibility of the internet. E-Learning, short for Electronic Learning, has emerged as a powerful and versatile tool that is reshaping the way we acquire knowledge and skills. This note delves into the concept of E-Learning, its benefits, challenges, and its impact on the educational landscape. It is a comprehensive and dynamic concept encompassing a wide range of digital tools and multimedia resources designed to facilitate education and enhance the learning experience (Wheeler, 2012). This versatile approach to learning leverages the power of digital technology and various electronic devices to impart knowledge and foster skill development. It is characterized by its adaptability and accessibility, making it a pivotal component of contemporary education. E-Learning serves as an all-encompassing model that harnesses the capabilities of computers, the internet, and other digital media for educational purposes. Whether it's through online courses, virtual classrooms, interactive simulations, or educational apps, e-Learning opens up a world of opportunities for both educators and learners. It also encompasses a wide range of formats, including online courses, webinars, video lectures, interactive simulations, and mobile apps. E-Learning can take place in formal educational settings, such as schools and universities, as well as in informal settings for lifelong learning.

According to Arkorful and Abaidoo (2014), E-learning encompasses the utilization of information and communication technologies to facilitate the delivery and access of educational content through online platforms. This innovative approach to learning transcends traditional physical classrooms, enabling individuals to engage with educational materials, resources, and teaching methodologies via the internet. E-learning platforms may include various formats such as video lectures, interactive modules, discussion forums, and assessments, providing a flexible and accessible means of acquiring knowledge. This digital transformation in education promotes self-paced learning, global connectivity, and the democratization of education, making it a significant and evolving component of contemporary learning environments.

E-Learning, or electronic learning, represents a transformative approach to education by utilizing the Internet as a medium for instruction. This method provides learners with a flexible and personalized experience, allowing them to access educational resources and materials at their own pace and convenience. The asynchronous nature of e-learning enables individuals to engage in learning activities whenever and wherever they choose, breaking away from the

constraints of traditional classroom settings (Zhang & Nunamaker, 2003). One of the key advantages of e-learning is its provision of learning-on-demand opportunities. Learners can access a wide array of courses, modules, and resources, tailoring their educational experience to suit their specific needs and interests. This flexibility is particularly beneficial for individuals with diverse schedules, allowing them to balance work, personal commitments, and education seamlessly. Moreover, e-learning often leads to a reduction in learning costs. Traditional education can incur expenses related to physical infrastructure, commuting, and printed materials. E-learning minimizes these costs, making education more accessible to a broader audience. Additionally, it eliminates geographical barriers, enabling people from different locations and backgrounds to connect and share knowledge.

Aboderin (as cited in Gama, Chipeta & Chawinga, 2022), highlighted the integral role of computers, software, and the internet in shaping the teaching and learning experience. This method of education transcends traditional brick-and-mortar classrooms, enabling learners to access educational materials and engage in coursework from virtually anywhere with an internet connection. The utilization of e-learning tools provides a dynamic and interactive environment, fostering diverse learning styles. It often includes multimedia elements such as videos, simulations, and interactive quizzes, enhancing the overall learning experience. Additionally, e-learning offers flexibility in terms of scheduling, allowing learners to progress at their own pace. Moreover, the integration of information technology in education facilitates the creation of global learning communities. Students and educators can connect across geographical boundaries, sharing knowledge and collaborating on projects. This interconnectedness broadens perspectives and promotes a more inclusive and diverse educational experience.

However, pinpointing a universally accepted definition for e-learning can be challenging due to the dynamic and evolving nature of the field. E-learning can take various forms, including online courses, virtual classrooms, digital resources, and interactive multimedia. Additionally, the definition of e-learning can vary depending on the context and perspective. From a technological standpoint, it often involves the use of digital tools, such as computers, tablets, and the internet, to deliver educational content. However, from an instructional design perspective, e-learning may focus on learner engagement, interactivity, and the integration of multimedia elements. The evolving landscape of educational technology further contributes to the difficulty in establishing a singular definition, as new innovations and approaches continually reshape the e-learning paradigm. Consequently, the lack of a standardized definition reflects the adaptability and diversity inherent in e-learning, allowing it to accommodate various educational needs and preferences.

Schools

A school is an organized institution or establishment that provides a structured environment for the purpose of education. It is a place where students, typically of a certain age range, go to receive formal instruction, acquire knowledge, and develop various skills under the guidance of teachers and educators (Wikipedia, 2023). Schools can exist at various levels, including preschool, primary or elementary school, secondary or high school, and higher education institutions such as colleges and universities. The primary objectives of a school include the dissemination of knowledge, the development of cognitive and social skills, and the preparation of students for future roles in society. Schools often have specific curricula designed to cover a range of subjects, and they play a crucial role in the socialization and character development of individuals. The structure and organization of schools can vary widely based on factors such as educational philosophies, cultural norms, and local regulations.

This study adopted the Diffusion of Innovations theory, created by E.M. Rogers in 1962. The theory explored how new ideas spread through various stages of adoption among individuals who either participate in or initiate the use of these innovations (Dearing, 2009). The Diffusion of Innovations Theory emerges as a pertinent lens through which to understand and address the complexities surrounding the adoption of E-Learning initiatives in Nigerian schools. Its relevance lies in its systematic approach to examining the dynamics of innovation adoption, shedding light on the factors that influence the rate at which novel ideas, such as digital learning solutions, permeate educational landscapes. By employing the Diffusion of Innovations Theory in the context of E-Learning in Nigerian schools, educators, policymakers, and stakeholders gain valuable insights into the intricacies of adoption. This theory allows for a detailed analysis of the relative advantages of E-Learning, its compatibility with existing educational practices, and the communication channels necessary for successful diffusion. Applying the theory to the Nigerian educational landscape offers a strategic framework for overcoming barriers to adoption. From addressing infrastructural challenges to tailoring communication strategies for diverse stakeholders, the Diffusion of Innovations Theory provides a comprehensive toolkit. It encourages the identification and cultivation of early adopters who can serve as catalysts for change, and it underscores the importance of continuous support and adaptation.

In the face of challenges such as limited internet connectivity, insufficient teacher training, and cultural considerations, the Diffusion of Innovations Theory provides a roadmap for navigating the complexities of E-Learning integration. By understanding the unique characteristics of innovation adoption, stakeholders can develop targeted interventions, pilot programs, and policy initiatives that align with the educational context in Nigeria. In essence, the Diffusion of Innovations Theory not only highlights the relevance of a systematic approach to understanding how innovations are adopted but also offers practical strategies for

facilitating the effective diffusion of E-Learning in Nigerian schools.

State of e-learning initiatives in Nigerian schools

The penetration of mobile technology in Nigeria has not only connected the country to global technological trends but has also prompted a surge in interest in online learning. Despite the traditionally low popularity of e-learning in Nigerian schools, the COVID-19 pandemic has necessitated the exploration of alternative learning models to ensure students can continue their education. In response to the challenges posed by the pandemic, educational institutions turned to unconventional methods such as television and radio classes, as well as private schools organizing classes through platforms like WhatsApp (Pius, 2022). However, these measures have not been sufficient, leaving a significant portion of students without access to effective learning. The current situation underscores the urgent need for a swift adjustment and the widespread adoption of cloud-based learning solutions. The Covid-19 crisis has acted as a catalyst, highlighting the importance of providing students and teachers with alternatives to traditional brick-and-mortar classrooms and face-to-face learning. Embracing cloud-based learning can not only bridge the existing educational gaps but also prepare the education system in Nigeria for a more technologically advanced and resilient future. According to (Musa, Muhammad & Adakawa, 2021), over the past three decades, the National Universities Commission in Nigeria has invested in ICT infrastructure, management information systems, e-mail access, and library information services to promote e-learning. Despite these efforts, many institutions face challenges in implementing local e-learning initiatives. However, some public institutions, including the National Open University of Nigeria and Ahmadu Bello University, have successfully established e-learning facilities with accredited courses. In 2018, the NUC announced a partnership with the E-learning Group of Park Associates to implement e-learning programs in four public universities. Also, Musa, Muhammad & Adakawa (2021) further asserted that private universities like the American University of Nigeria and Covenant University also participate in e-learning, benefitting from better internet connectivity, though with a smaller student and faculty population. In contrast, colleges of education and polytechnics in Nigeria lag behind in adopting e-learning due to insufficient facilities, lack of internet connectivity, and resistance from faculty. Overall, the implementation of e-learning initiatives in Nigeria faces various challenges across different types of institutions.

Challenges faced in implementing e-learning in Nigeria

Implementing e-learning in Nigeria, like in many other developing countries, comes with a set of unique challenges. While e-learning has the potential to revolutionize education and overcome some traditional barriers, several factors hinder

its smooth implementation in Nigeria. Here are some of the key challenges:

Limited Infrastructure: Access to reliable and high-speed internet is still a significant challenge in many parts of Nigeria. Rural areas, in particular, face difficulties in accessing a stable internet connection, hindering the adoption of online learning platforms. In Nigeria, according to Nwabufo, Umoru & Olukotun (2012), the issue of internet connectivity remains a significant challenge, primarily due to the high cost associated with accessing the internet. This situation particularly affects students, who often rely on Cyber Cafés for internet services. Unfortunately, these Cyber Cafés exacerbate the problem by charging relatively high fees per hour. This cost can be a considerable financial burden for students, especially considering the economic conditions in the country. Adding to the challenges, the Cyber Cafés frequently provide subpar services, characterized by slow server speeds and overall poor connectivity. The combination of high costs and inadequate service quality creates a substantial barrier to accessing the internet, hindering students from effectively utilizing online resources for their educational needs. Musa, Muhammad & Adakawa (2021) affirmed that the bandwidth costs are significantly higher than those in developed countries, leading to strained connectivity. Lack of skills and policies for effective bandwidth management further exacerbate the problem. Also, frequent power outages and an unreliable power supply make it challenging for students to consistently access online materials or participate in live sessions.

Technological Barriers: The digital divide in Nigeria poses a significant obstacle to the educational advancement of many students, as a considerable portion of the population lacks access to personal computers or smartphones (Eze, Chinedu-Eze, Okike & Bello, 2020). This technological disparity has far-reaching consequences, particularly in the realm of e-learning, where digital devices are essential tools for accessing educational resources and participating in online activities. In a rapidly advancing world, where technology plays a pivotal role in education, the absence of personal computing devices among students in Nigeria exacerbates existing inequalities. E-learning platforms, which have become increasingly prevalent, rely heavily on digital interfaces, making it challenging for students without access to computers or smartphones to fully engage with online educational materials (Mhlongo, Mbatha, Ramatsetse & Dlamini, 2023; Garlinska, Osial, Proniewska & Pregowska, 2023). This disparity not only limits their ability to acquire knowledge but also impedes their development of essential digital literacy skills that are increasingly crucial in the modern workforce. The lack of devices is particularly pronounced in rural areas, where infrastructure challenges and economic constraints compound the issue. Many students in these regions face not only a shortage of personal computers or smartphones but also inadequate internet connectivity, further isolating them from the opportunities

that e-learning can offer. As a result, the educational gap between urban and rural students widens, perpetuating social and economic inequalities. Some students and even educators may not be familiar with using digital tools for learning. Lack of digital literacy skills can create a barrier to effective e-learning implementation.

Financial Barriers: The challenge of insufficient funds for ICT infrastructure poses a significant obstacle to the seamless integration and advancement of e-learning in Nigeria's educational landscape (Musa, Muhammad & Adakawa, 2021). The limitations in financial resources not only impede the initial acquisition of essential technological tools but also extend to the crucial aspects of maintenance and upgrading, creating a perpetual barrier to keeping pace with rapidly evolving e-learning technologies in Nigeria. According to Okolo and Mallo (2021), Nigeria, like many other nations, faces economic challenges that further exacerbate the financial constraints on educational institutions. The allocation of funds to ICT infrastructure competes with various other pressing needs, making it challenging for schools and universities to prioritize the necessary investments in e-learning. The scarcity of resources becomes particularly pronounced when considering the high costs associated with electronic teaching facilities, e-content development, and the procurement of ICT devices. The acquisition of electronic teaching facilities involves not only the purchase of hardware but also the implementation of software solutions tailored to enhance the educational experience. These technologies include interactive whiteboards, multimedia projectors, and other state-of-the-art tools that foster engaging and effective learning environments. However, their prohibitive costs limit accessibility and hinder the creation of modernized classrooms that can truly harness the potential of e-learning. E-content development, another critical component of successful e-learning implementation, demands substantial financial commitments. Quality educational content, customized to suit the diverse needs of students, requires ongoing investments in curriculum development, multimedia resources, and interactive learning materials. Without adequate funds, educational institutions struggle to create a rich and dynamic digital curriculum that aligns with contemporary pedagogical approaches. The affordability and accessibility of ICT devices pose additional challenges. Students and educators need access to reliable and up-to-date devices to fully participate in e-learning initiatives. The high costs associated with acquiring laptops, tablets, or other digital tools create disparities in access, perpetuating educational inequality among different socioeconomic groups.

Language and cultural consideration: In the context of e-learning in Nigeria, the availability of content in local languages is a critical factor. While English is the official language of instruction, many students may have a more comfortable grasp of their native languages (Olushola, 2021).

The lack of e-learning materials in local languages can create a language barrier, hindering comprehension and engagement. Effective learning often requires content that resonates with students' linguistic backgrounds, ensuring that they can fully understand and apply the concepts being taught. Cultural factors play a significant role in education, and e-learning is not immune to these influences. In some communities in Nigeria, traditional educational methods hold deep cultural significance (Eze, Chinedu-Eze, Okike & Bello, 2020). The shift to e-learning may face resistance or skepticism as it challenges established norms and practices. Additionally, certain cultural values may emphasize the importance of face-to-face interaction and communal learning experiences, aspects that can be perceived as lacking in e-learning environments.

Attitudinal Factors

The resistance to the adoption of e-learning facilities in Nigerian schools, particularly among faculty members, is a notable challenge. According to Eze, Chinedu-Eze, Okike and Bello (2020), the attitudes of some lecturers play a pivotal role in hindering the seamless integration of technology into the educational landscape. Many lecturers exhibit resistance to new technologies, and this reluctance manifests in various ways. One common manifestation is their hesitance to incorporate digital tools into their teaching methodologies. For example, some lecturers may resist using e-learning platforms or preparing materials like PowerPoint presentations that are essential for online access. This resistance can be attributed to a range of factors. Some teachers may lack the necessary training and skills to effectively navigate and utilize e-learning tools. Others may be skeptical about the efficacy of digital platforms in delivering quality education or may feel overwhelmed by the prospect of adapting to new teaching methods (Musa, A. U., Muhammad, J. & Adakawa, M. I. (2021). Additionally, concerns about job security or fears of technology replacing traditional teaching methods may contribute to this resistance.

Prospects for improving e-learning's effectiveness and accessibility in Nigeria

The challenges outlined above pose significant obstacles to the widespread adoption and success of e-learning in Nigeria. Let's discuss the prospects of addressing these challenges:

Limited infrastructure poses challenges to widespread internet access, particularly in rural areas. However, this situation also presents opportunities for positive change through collaborative efforts from both the government and private sector. By directing initiatives towards improving internet infrastructure, such as expanding broadband coverage and reducing internet costs, significant strides can be made in enhancing connectivity. Additionally, addressing power reliability issues is crucial to ensuring a consistent and accessible online experience. Emphasizing public-private partnerships can be a strategic approach, fostering cooperation to overcome these obstacles

collectively. This collaborative approach has the potential to not only bridge the digital divide but also stimulate economic growth and innovation in underserved regions.

Technological barriers, particularly in the context of education, pose challenges to equitable access and effective utilization of digital tools. To address this issue, there are promising prospects through initiatives aimed at providing affordable computing devices to students, particularly those in rural areas. Bridging the digital divide requires a multi-faceted approach, and one key aspect involves making technology more accessible. Governments can play a pivotal role by implementing programs or establishing partnerships with technology companies to distribute low-cost or subsidized devices. By making devices more affordable, a wider demographic, including economically disadvantaged students, can have access to the necessary tools for digital learning. This not only enhances educational opportunities but also contributes to reducing disparities in educational outcomes. Moreover, addressing technological barriers goes beyond mere hardware provision. Implementing targeted digital literacy programs is crucial. These programs should focus on empowering both students and educators with the skills and knowledge needed to effectively utilize digital tools for learning purposes. Digital literacy not only enhances the overall educational experience but also prepares individuals for the increasingly digital-centric nature of the modern workforce.

Financial barriers in the context of educational institutions can be formidable obstacles to the adoption and sustainability of e-learning initiatives. However, there are various prospects and strategies to mitigate these challenges. One avenue for addressing financial barriers is through leveraging government funding and international aid. Governments can allocate resources specifically for the development and upkeep of e-learning infrastructure within educational institutions. Similarly, international aid can be channeled towards supporting these initiatives, fostering collaboration and knowledge exchange on a global scale. A crucial step is to prioritize Information and Communication Technology (ICT) infrastructure in budget allocations. By earmarking funds for the acquisition and maintenance of e-learning tools and technologies, educational institutions can ensure a robust foundation for digital learning. Exploring cost-effective solutions and seeking partnerships with technology providers can further stretch financial resources. In addition to traditional funding models, creative financing approaches can be explored. Leasing arrangements, for example, allow institutions to access technology without a significant upfront cost, making it a more manageable financial commitment. Shared resource programs, where multiple institutions pool their resources for collective benefit, can also be a viable option.

In the realm of language and cultural considerations, a pivotal prospect lies in the hands of content developers who can contribute to the creation of e-learning materials tailored to local languages. This endeavor not only fosters linguistic inclusivity but also enhances the accessibility and cultural

relevance of educational resources. Government policies play a crucial role in incentivizing and promoting the production of diverse language content, aligning with the goal of democratizing education. Moreover, addressing cultural resistance to e-learning becomes paramount through awareness campaigns and community engagement programs. These initiatives serve as bridges between modern educational approaches and traditional values, emphasizing that the integration of technology into education does not necessitate the abandonment of cultural roots. By showcasing the tangible benefits of e-learning while respecting and incorporating traditional values, such programs create a harmonious coexistence, ensuring that the evolution of education aligns with the rich tapestry of diverse cultures.

Attitudinal factors play a crucial role in the successful integration of e-learning in education. Addressing these factors involves implementing comprehensive training programs for educators. These programs should focus on enhancing digital skills, ensuring that educators feel competent and confident in navigating the digital landscape. In addition to training, it is essential to recognize and address the concerns that educators may have, such as fears related to job security. Clear communication and robust support systems can help alleviate resistance and create a more positive attitude towards e-learning initiatives. This involves transparent discussions about the long-term vision for education and how e-learning can be an integral part of it. Moreover, emphasizing the benefits of e-learning is crucial in changing attitudes. Educators need to understand how digital tools can improve teaching efficiency, streamline administrative tasks, and provide opportunities to reach a broader audience. By showcasing success stories and demonstrating tangible advantages, institutions can gradually shift attitudes over time.

Conclusion

The journey to harness the full potential of e-learning in Nigerian schools is marked by both challenges and promising prospects. The realization of effective e-learning initiatives in Nigeria requires a comprehensive understanding of the current state, challenges faced, and viable strategies for improvement. This study has delved into the multifaceted landscape of e-learning, exploring its potential as a transformative force in Nigerian education. The state of e-learning initiatives in Nigerian schools reflects a dynamic yet nascent landscape. While there is a growing acknowledgment of the benefits of e-learning, various challenges impede its widespread implementation. Limited infrastructure, technological barriers, financial constraints, language considerations, and attitudinal factors collectively form a complex web that hinders seamless integration. The unique context of Nigeria, with its diverse linguistic and cultural tapestry, adds an additional layer of complexity to the adoption of e-learning.

However, the prospects for improvement are not only evident but also hold the key to unlocking a brighter educational future for Nigeria. Collaborative efforts to

enhance internet infrastructure, address technological disparities, secure financial support, and promote linguistic inclusivity are crucial steps toward overcoming challenges. The prospects for improving e-learning's effectiveness and accessibility lie in strategic interventions, innovative financing models, and inclusive content development. Addressing limited infrastructure involves not only expanding broadband coverage but also reducing internet costs, thereby enhancing accessibility, especially in rural areas. Initiatives to provide affordable computing devices, coupled with targeted digital literacy programs, can bridge technological disparities and empower students and educators alike. Financial barriers can be mitigated through strategic allocation of government funds, international aid, and creative financing approaches. Language and cultural considerations can be addressed through the creation of e-learning materials in local languages, supported by government policies promoting linguistic inclusivity. Attitudinal factors can be transformed through comprehensive training programs for educators, transparent communication, and showcasing the tangible benefits of e-learning. In essence, this research serves as a roadmap for educational stakeholders, policymakers, and educators in Nigeria. By understanding the challenges and prospects of e-learning, informed decisions can be made to pave the way for a more inclusive, effective, and technologically advanced educational landscape. The vision is not just to overcome hurdles but to harness the transformative power of e-learning to propel Nigeria towards educational excellence, social progress, and economic prosperity. The journey may be challenging, but the destination promises a future where every student, regardless of location or background, can access quality education and contribute meaningfully to the nation's development.

Recommendations

The researchers recommend as thus:

- i. Collaborate with telecommunication companies and the private sector to expand broadband coverage and reduce internet costs, especially in rural areas.
- ii. Implement initiatives to provide affordable computing devices to students, particularly those in rural areas.
- iii. Advocate for increased government funding for ICT infrastructure within educational institutions, with a specific focus on e-learning development and maintenance.
- iv. Encourage and incentivize content developers to create e-learning materials in local languages, aligning with the linguistic diversity of Nigeria. Implement policies that promote the production of diverse language content and ensure its integration into e-learning platforms.
- v. Develop comprehensive training programs for educators to enhance their digital skills and confidence in utilizing e-learning tools.

References

- Arkorful, V. & Abaidoo, N. (2014). The role of e-learning, the advantages and disadvantages of its adoption in Higher Education. 2(12): 397-410. <https://www.ijern.com/journal/2014/December-2014/34.pdf>
- Bubou, G. & Job, G. (2021). Benefits, Challenges and Prospects of Integrating E-Learning into Nigerian Tertiary Institutions: A mini review. International Journal of Education and Development using Information and Communication Technology (IJEDICT), 17(3): 6-18. <https://files.eric.ed.gov/fulltext/EJ1335685.pdf>
- Dearing, J. W. (2009). Applying Diffusion of Innovation Theory to Intervention Development. Res Soc Work Pract.19(5):503-518. doi: 10.1177/1049731509335569.
- Eze, S.C., Chinedu-Eze, V.C.A., Okike, C.K. & Bello, A. O. (2020). Factors influencing the use of e-learning facilities by students in a private Higher Education Institution (HEI) in a developing economy. *Humanities and social sciences communications*, 7, 133. <https://doi.org/10.1057/s41599-020-00624-6>
- Gama, L.C., Chipeta, G.T. & Chawinga, W.D. (2022). Electronic learning benefits and challenges in Malawi's higher education: A literature review. *Educ Inf Technol* 27, 11201–11218. <https://doi.org/10.1007/s10639-022-11060-1>
- Garlinska, M., Osial, M., Proniewska, K., & Pregowska, A. (2023). The Influence of Emerging Technologies on Distance Education. *Electronics*. 12, 1550. <https://doi.org/10.3390/electronics12071550>
- Haleem, A., Javaid, M., Qadri, M. A. & Suman, R. (2022). Understanding the role of digital technologies in education: A review, Sustainable Operations and Computers, 3, 275-285. <https://doi.org/10.1016/j.susoc.2022.05.004>
- Mhlongo, S., Mbatha, K., Ramatsetse, B. & Dlamini, R. (2023). Challenges, opportunities, and prospects of adopting and using smart digital technologies in learning environments: An iterative review. *Heliyon*, 9(6). <https://doi.org/10.1016/j.heliyon.2023.e16348>.
- Musa, A. U., Muhammad, J. & Adakawa, M. I. (2021). Adoption and Use of E-learning in Nigerian Higher Institutions for Sustainable SocioEconomic Development. Being a Conference Paper Presented at Ahmadu Bello University Library Complex International Conference (2021). https://www.researchgate.net/publication/368918387_Adoption_and_Use_of_E-learning_in_Nigerian_Higher_Institutions_for_Sustainable_Socio-Economic_Development
- Nwabufu, B. N., Umoru, T. A. & Olukotun, J. O. (2012). The Challenges of E-Learning in Tertiary Institutions in Nigeria. International Conference: The future of Education. https://conference.pixel-online.net/conferences/edu_future2012/common/do

- wnload/Paper_pdf/76-EL04-FP-Nwabufo-FOE2012.pdf
- Nwogu, G. A. I. (2015). Barriers to Equality of Access to Educational Opportunity in Nigeria: A Philosophical Perspective. *Journal of Education and Practice*, 6(4): 148-152. <https://files.eric.ed.gov/fulltext/EJ1083781.pdf>
- Okolo, M. M. & Mallo, G. D. (2021). Higher Education in Nigeria: Challenges and Suggestions. *Middle European Scientific Bulletin*, 16, 55-61. <https://core.ac.uk/download/480517313.pdf>
- Okolo, M. M. & Mallo, G. D. (2021). Higher Education in Nigeria: Challenges and Suggestions. *Middle European Scientific Bulletin*, 16, 55-61. <https://core.ac.uk/download/480517313.pdf>
- Olushola, B. A. (2021). The Language Factor and Internet Penetration in Nigeria: A Practical Assessment.
- Wheeler, S. (2012). e-Learning and Digital Learning. In: Seel, N.M. (eds) *Encyclopedia of the Sciences of Learning*. Springer, Boston, MA. https://doi.org/10.1007/978-1-4419-1428-6_431
- Zhang, D., Nunamaker, J.F. (2003). Powering E-Learning In the New Millennium: An Overview of E-Learning and Enabling Technology. *Information Systems Frontiers* 5, 207–218. <https://doi.org/10.1023/A:1022609809036>
- https://www.researchgate.net/publication/350877531_The_Language_Factor_and_Internet_Penetration_in_Nigeria_A_Practical_Assessment
- Pius, G. (2022 August 11). E-Learning for Schools in Nigeria: What you need to Know. GOPIUS. <https://gopius.com/e-learning-for-schools-in-nigeria/>
- School*. (2023, November 2). In Wikipedia. <https://en.wikipedia.org/wiki/School>
- Ugah, J. O., Omoke, F. M. & Uguru, F. N. (2023). The insight and evolution of e-learning: Prospects and challenges in Nigeria. *International Research Journal of Modernization in Engineering Technology and Science*, (5): 9663- 9669. DOI: <https://www.doi.org/10.56726/IRJMETS39720>