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CHALLENGES ENCOUNTERED IN THE IMPLEMENTATION OF ONLINE DISTANCE LEARNING IN AFRICAN COUNTRIES

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Challenges Encountered in the Implementation of Online Distance Learning in African Countries



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Abstract

Purpose: The objective of this study is to investigate the challenges encountered in the implementation of online distance learning in African countries.

Methodology: The study adopted a desktop research methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

Findings: The findings revealed that there exists a contextual and methodological gap relating to the role of parents in their children's education. Preliminary empirical review revealed that the challenges of implementing online distance learning in Africa are complex and multifaceted, requiring a comprehensive approach that addresses the digital divide, socio-economic inequality, and inadequate infrastructure. To address the challenges of implementing online distance learning in Africa, we recommend that policymakers prioritize investments in infrastructure development, including providing high-speed internet connectivity, increasing access to personal computers, and ensuring a stable power supply.

Unique Contribution to Theory, Practice and Policy: The Diffusion of Innovation Theory, Technology Acceptance Model (TAM) and the Community of Inquiry Framework may be used to anchor future studies on the challenges encountered in the implementation of online distance learning in African countries. Policymakers and stakeholders should collaborate to develop policies that promote equal access to education for all students, including those from low-income families and marginalized communities. Governments should provide incentives to private organizations and investors to invest in education and support the development of online learning platforms. In doing so, we can ensure that students in Africa have equal access to education, regardless of their socio-economic status or geographic location.

Keywords: *Communication, Engagement, Internet Connection, Learning Resources, Online Distance Learning (ODL)*

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INTRODUCTION

Online distance learning has emerged as a popular and effective mode of education delivery, especially in developed economies such as the USA, Japan, and the UK. The implementation of online distance learning involves utilizing digital technologies to provide educational content and facilitate communication between instructors and students. This mode of learning offers flexibility in terms of time and location, allowing learners to access educational materials and participate in interactive activities remotely. According to a study by Allen and Seaman (2016), the adoption of online learning in the United States has been steadily increasing, with nearly 6 million students taking at least one online course in the fall of 2015. The study also found that 28% of higher education students in the US were enrolled in at least one online course, indicating a significant shift towards online learning.

Online distance learning has experienced significant growth and transformation in developed economies like the USA, Japan, and the UK. In the United States, the expansion of online learning can be attributed to its flexibility and accessibility. A study by Seaman and Allen (2018) revealed that the number of students enrolled in online courses increased by 5.7% between 2016 and 2017, compared to a mere 1.9% increase in overall higher education enrollment. This suggests a growing preference for online learning among students in the US.

In Japan, online distance learning has gained traction, particularly in response to the challenges posed by geographic constraints and a declining student population. According to the Ministry of Education, Culture, Sports, Science and Technology in Japan (2021), the number of universities offering online distance learning programs has been steadily increasing. In 2019, there were 109 universities in Japan offering such programs, representing a 57% increase compared to 2015. This growth demonstrates the recognition of online learning as a viable solution to address the educational needs of a changing demographic landscape in Japan.

In Japan, the government has recognized the potential of online distance learning to address educational challenges. The Ministry of Education, Culture, Sports, Science and Technology (2018) launched an initiative to encourage universities to adopt online education, aiming to increase the number of online courses and improve the quality of digital learning materials. This initiative has resulted in a steady increase in the availability and accessibility of online courses throughout the country.

In the UK, the Open University has been at the forefront of online distance learning. Established in 1969, the Open University has been providing distance education through various online platforms. According to the Open University's Annual Report (2020), approximately 174,000 students were enrolled in online courses in the academic year 2019/2020. This represents a 15% increase compared to the previous year. The report also highlights that 76% of Open University students were studying part-time, indicating the flexibility and accessibility offered by online distance learning.

In the UK, online distance learning has gained momentum through institutions like the University of London International Programmes. This program, established in 1858, has been offering distance education for more than a century and has adapted to the digital era by providing online courses. According to the University of London (2020), the number of students studying its online

courses has grown by 18% in the past year, demonstrating the increasing demand for flexible learning options.

Online distance learning has also made significant strides in developing economies, offering opportunities to overcome barriers to education and foster lifelong learning. In countries such as India and Brazil, the implementation of online distance learning has shown promising trends. In India, the National Institutional Ranking Framework (NIRF) (2020) reported that the number of institutions offering online courses has been steadily increasing. Furthermore, a study by Kumar and Sahay (2018) highlighted that online education is gaining popularity among Indian learners, with a significant increase in the number of enrollments in online courses. The study revealed that from 2016 to 2017, there was a 58% growth in online enrollments in India.

In Brazil, the growth of online distance learning has been driven by initiatives such as the Open University of Brazil. According to a report by the Ministry of Education of Brazil (2019), the Open University of Brazil offers free online courses to expand access to higher education. The report stated that between 2015 and 2019, the number of enrollments in online courses increased by 46%. This growth demonstrates the increasing acceptance and utilization of online distance learning as a means to enhance educational opportunities in Brazil.

Online distance learning has also gained traction in Sub-Saharan countries, offering opportunities to bridge educational gaps and increase access to quality education. Two examples of the implementation of online distance learning in Sub-Saharan countries are Kenya and South Africa. In Kenya, the government has launched initiatives to promote online learning, particularly through the e-Learning Project in Primary Schools. According to a study by Otieno, Wambui, and Agak (2018), this project has resulted in a significant increase in access to digital learning resources, with approximately 21,000 primary schools equipped with digital devices and connected to the internet. The study also highlighted a positive impact on learning outcomes, demonstrating the effectiveness of online distance learning in improving educational quality in Kenya.

In South Africa, the growth of online distance learning has been driven by institutions like the University of South Africa (UNISA). UNISA, as one of the largest distance education universities globally, has been at the forefront of online learning in the region. A study by Leta and Cloete (2019) emphasized the significance of UNISA's online distance learning initiatives in widening access to higher education, particularly for underprivileged students. The study reported that UNISA's online enrollment numbers have been steadily increasing, with a 29% growth in online enrollments between 2012 and 2017, in the implementation of online distance learning is not without its challenges. Several key obstacles can arise, impacting the successful execution and adoption of this mode of education. One significant challenge is the lack of infrastructure and technological resources in certain regions. As noted by Ossiannilsson, Altinay, and Altinay (2017), inadequate internet connectivity, limited access to computers or mobile devices, and unreliable power supply can hinder the implementation of online distance learning in developing countries. Without the necessary infrastructure, students may struggle to access and engage with online course materials and activities.

Another challenge is the need for effective learner support systems. Online distance learning requires learners to be self-directed and motivated, but they may face difficulties without sufficient guidance and support. According to Liaw (2016), learners may experience feelings of isolation and lack of interaction with instructors and peers, leading to lower engagement and completion

rates. Providing robust support mechanisms such as online tutoring, discussion forums, and timely feedback is crucial to address these challenges and foster a supportive learning environment.

Ensuring the quality of online courses and assessments poses another challenge. As discussed by Anohina-Naumeca, Rubene, and Siksna (2019), maintaining high-quality instructional design, content delivery, and assessment methods is essential in online distance learning. The design of effective online courses requires careful consideration of pedagogical strategies, multimedia integration, and interactivity to engage learners effectively. Implementing robust assessment methods that ensure academic integrity, such as proctoring solutions and secure online examinations, is also critical for upholding the credibility and validity of online assessments.

Lastly, addressing the issue of digital literacy and skills among both learners and educators is a significant challenge. As highlighted by Tondeur, van Braak, Sang, Voogt, and Fisser (2018), individuals must possess the necessary digital literacy skills to navigate online learning platforms, interact with digital resources, and effectively participate in online discussions. Similarly, educators need to acquire pedagogical and technical competencies to design and deliver online courses. Training programs and support mechanisms should be in place to enhance digital literacy among all stakeholders involved in online distance learning.

Statement of the Problem

The implementation of online distance learning in African countries faces significant challenges that hinder its successful execution and widespread adoption, impacting educational access, quality, and equity. Limited internet connectivity and infrastructure contribute to the digital divide, with only 49.7% of the African population having access to the internet, and a mere 24% of households being connected (ITU, 2021; World Bank, 2020). Furthermore, the enrollment rates in online courses remain relatively low, averaging around 7% across the continent (Wendo & Mchome, 2020). These trends highlight the gap between the potential of online distance learning and its actual utilization, suggesting the presence of underlying obstacles that hinder its efficacy in African countries.

LITERATURE REVIEW

Theoretical Review

Diffusion of Innovation Theory

The Diffusion of Innovation theory, originated by Everett Rogers, explores the process by which new ideas or innovations spread within a social system. In the context of online distance learning in African countries, this theory is relevant because it helps understand the factors that influence the adoption and implementation of online learning initiatives. It examines how innovations, such as online distance learning, are perceived, adopted, and diffused among individuals and institutions in the African educational context (Rogers, 2003). The theory highlights the importance of factors such as relative advantage, compatibility, complexity, trialability, and observability in determining the success or challenges faced during the implementation of online distance learning (Rogers, 2003).

Technology Acceptance Model (TAM)

The Technology Acceptance Model, developed by Fred Davis, focuses on understanding the factors that influence individuals' acceptance and use of technology. It provides insights into the

perceptions and attitudes towards technology adoption and usage, particularly in educational settings. The TAM is relevant to the topic of challenges in implementing online distance learning in African countries as it helps to analyze the factors influencing the acceptance and utilization of online learning platforms by students and educators (Davis, 1989). It explores the role of perceived usefulness and ease of use in shaping individuals' intentions to adopt and utilize online distance learning technologies.

Community of Inquiry Framework

The Community of Inquiry (CoI) framework, developed by Garrison, Anderson, and Archer, emphasizes the importance of social presence, cognitive presence, and teaching presence in creating meaningful and effective online learning experiences. In the context of challenges encountered in implementing online distance learning in African countries, the CoI framework provides a lens to examine the effectiveness of instructional design, learner engagement, and interaction within the online learning environment (Garrison, Anderson, & Archer, 2000). It highlights the significance of building a sense of community, fostering meaningful learning interactions, and supporting cognitive engagement to overcome challenges related to isolation, lack of interaction, and limited learner support in online distance learning settings.

Empirical Review

Awoleye et al., (2020) investigated the challenges and prospects of online learning in Africa during COVID-19 pandemic. This study aims to identify and discuss the challenges and prospects of online learning in Africa during the COVID-19 pandemic. A quantitative research design was used to collect data from 361 participants, including students, instructors, and administrators from six African countries. Data were collected using an online survey questionnaire. The data were analyzed using descriptive statistics and correlation analysis. The study found that the main challenges associated with online learning in Africa during the COVID-19 pandemic were poor internet connectivity, limited access to technology, and a lack of training for instructors and students. The study also identified several prospects associated with online learning, including increased flexibility, improved access to education, and the potential to promote lifelong learning. The study recommends that policymakers and stakeholders in education in Africa should prioritize the provision of internet connectivity and access to technology for students and instructors. The study also recommends that institutions of higher learning in Africa should invest in training programs for instructors and students to enhance their skills and competencies in online learning.

Makoni et al, (2020) looked into the challenges of online learning in Africa: a case of a rural university in Zimbabwe. This study aims to identify and discuss the challenges of online learning in a rural university in Zimbabwe. A qualitative research design was used to collect data from 28 participants, including students and instructors, through semi-structured interviews. Data were analyzed using content analysis. The study found that the main challenges associated with online learning in the rural university were limited access to technology, poor internet connectivity, and a lack of technical support. The study also identified several factors that could enhance the effectiveness of online learning, including effective communication, learner support, and the development of a conducive learning environment. The study recommends that policymakers in Zimbabwe should prioritize infrastructure development and increase access to technology in rural areas. The study also recommends that institutions of higher learning should provide effective learner support and enhance communication channels to improve the effectiveness of online

learning. Additionally, the study suggests that instructors should design online learning programs that are relevant and responsive to the needs of rural learners.

Bwalya et al., (2019) explored the challenges of implementing online distance learning in sub-Saharan Africa: a systematic review. This systematic review aims to identify and explore the challenges of implementing ODL in sub-Saharan Africa. A systematic search was conducted on six databases to identify relevant articles published between 2008 and 2018. The search yielded 21 articles, which were reviewed using a thematic analysis approach. The study found that the main challenges associated with implementing ODL in sub-Saharan Africa were inadequate infrastructure, limited access to technology, lack of funding, and a lack of institutional support. The study also identified several factors that could enhance the implementation of ODL, including government support, effective policies, and institutional partnerships. The study recommends that governments in sub-Saharan Africa should prioritize infrastructure development and increase funding for ODL initiatives. The study also recommends that institutions of higher learning should establish effective policies and engage in institutional partnerships to enhance the implementation of ODL. Additionally, the study suggests that ODL providers should design ODL programs that are contextually relevant and responsive to the needs of diverse learners.

Ananiadou et al., (2018) conducted a study on the challenges and opportunities in online learning in Africa. This study aims to identify and discuss the challenges and opportunities associated with online learning in Africa. A mixed-methods approach was used to collect data from 70 participants, including educators, students, and administrators from five African countries. The data was collected through online surveys and interviews. The data were analyzed using qualitative and quantitative methods. The study found that the main challenges associated with online learning in Africa were inadequate infrastructure, limited access to technology, and a lack of training for teachers and instructors. The study also identified several opportunities associated with online learning, including the potential to increase access to education, improve the quality of education, and promote lifelong learning. The study recommends that policymakers and stakeholders in education in Africa should prioritize infrastructure development, provide access to technology and internet connectivity, and invest in training programs for teachers and instructors.

Chigona et al., (2016) conducted a critical analysis on the digital inequality and social exclusion in Africa. This study aims to provide a critical analysis of the digital inequality and social exclusion in Africa. A qualitative research design was used to collect data from 60 participants, including policymakers, industry experts, and academics. Data were collected through semi-structured interviews and analyzed using content analysis. The study found that digital inequality and social exclusion are caused by several factors, including inadequate infrastructure, limited access to technology, and high costs associated with digital technology. The study also identified several consequences of digital inequality and social exclusion, including limited access to education, limited economic opportunities, and limited access to healthcare. The study recommends that policymakers in Africa should prioritize infrastructure development and increase access to technology. The study also recommends that digital literacy programs should be implemented to enhance digital skills and competencies among citizens.

Mtebe et al., (2014) investigate students' readiness to adopt mobile learning in higher education in developing countries. This study investigates students' readiness to adopt mobile learning in higher education in developing countries, highlighting issues related to infrastructure, access to

technology, and the digital divide. A quantitative research design was used to collect data from 316 undergraduate students from three universities in Tanzania. Data were collected using a structured questionnaire and analyzed using descriptive statistics and logistic regression analysis.

The study found that students had a positive attitude towards m-learning, but there were several challenges that hindered their readiness to adopt it, including limited access to mobile devices, limited access to the internet, and a lack of technical support. The study also identified several factors that could enhance students' readiness to adopt m-learning, including the availability of relevant content, the use of user-friendly interfaces, and the provision of technical support. The study recommends that institutions of higher learning in developing countries should provide technical support to students to enhance their readiness to adopt m-learning. The study also recommends that policymakers should prioritize infrastructure development and increase access to the internet and mobile devices in developing countries.

METHODOLOGY

The study adopted a desktop methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

FINDINGS

Our study presented both a contextual and methodological gap.

A contextual gap occurs when desired research findings provide a different perspective on the topic of discussion. For instance, a study by Mtebe et al (2014) investigated students' readiness to adopt mobile learning in higher education in developing countries and found that students had a positive attitude towards m-learning, but there were several challenges that hindered their readiness to adopt it, including limited access to mobile devices, limited access to the internet, and a lack of technical support. The study also identified several factors that could enhance students' readiness to adopt m-learning, including the availability of relevant content, the use of user-friendly interfaces, and the provision of technical support. On the other hand, our current study sought to investigate the challenges encountered in the implementation of online distance learning in African countries.

The study also presented a methodological gap, that is, Mtebe et al (2014) in his study on students' readiness to adopt mobile learning in higher education in developing countries adopted a quantitative research design was used to collect data from 316 undergraduate students from three universities in Tanzania. Data were collected using a structured questionnaire and analyzed using descriptive statistics and logistic regression analysis. The study found that students had a positive attitude towards m-learning, but there were several challenges that hindered their readiness to adopt it, including limited access to mobile devices, limited access to the internet, and a lack of technical support. Whereas our current study on the challenges encountered in the implementation of online distance learning in African countries adopted a desk study research method.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the challenges of implementing online distance learning in Africa are complex and multifaceted, requiring a comprehensive approach that addresses the digital divide, socio-economic inequality, and inadequate infrastructure. Policymakers, educators, and stakeholders must work together to address these challenges and develop sustainable solutions that provide equal access to education for all students in Africa.

To address the challenges of implementing online distance learning in Africa, we recommend that policymakers prioritize investments in infrastructure development, including providing high-speed internet connectivity, increasing access to personal computers, and ensuring a stable power supply. Additionally, teacher training programs should be developed to equip instructors with the necessary skills to facilitate online learning effectively. Instructors should also design online learning programs that are relevant, responsive, and user-friendly to enhance students' readiness to adopt online learning.

Moreover, policymakers and stakeholders should collaborate to develop policies that promote equal access to education for all students, including those from low-income families and marginalized communities. Governments should provide incentives to private organizations and investors to invest in education and support the development of online learning platforms. In doing so, we can ensure that students in Africa have equal access to education, regardless of their socio-economic status or geographic location.

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