

## **Relevance of Open Distance Learning to National Development**

# Kehinde Olufemi Ogunyemi<sup>[a],\*</sup>

<sup>[a]</sup> Faculty of Education, Adekunle Ajasin University, Akungba Akoko, Nigeria.

\*Corresponding author.

Received 4 March 2025; accepted 17 March 2025 Published online 26 March 2025

## Abstract

Open and Distance Learning (ODL) has emerged as a critical solution to addressing the educational challenges facing Nigeria, offering opportunities for inclusive and flexible education across the nation. This study explores the significance of ODL in Nigeria's educational landscape, examining its origin and global evolution, with a focus on its emergence within the Nigerian context. The chapter highlights the key features of ODL, including its flexibility, accessibility, and ability to bridge geographical, socio-economic, and demographic gaps. It further underscores the relevance of ODL to national development, particularly in terms of expanding educational access, improving workforce skills, promoting social inclusion, and supporting lifelong learning initiatives. Despite its potential, ODL in Nigeria faces several challenges, including inadequate technological infrastructure, limited awareness and acceptance, regulatory gaps, and financial constraints. The chapter discusses these challenges in detail and proposes a way forward, including the need for increased investment in digital infrastructure, enhanced teacher training, and regulatory reforms. Additionally, it emphasizes the importance of creating a more robust regulatory framework and expanding financial support for ODL students. By addressing these issues, ODL can significantly contribute to Nigeria's educational and socioeconomic development, empowering individuals and communities and fostering national progress. Ultimately, this study highlights the transformative role of ODL in shaping the future of education in Nigeria and its potential to drive inclusive growth and development.

**Key words:** Open distance learning; National development; Sustainable development; Tertiary education

Ogunyemi, K. O. (2025). Relevance of Open Distance Learning to National Development. *Higher Education of Social Science*, 28(1), 51-57. Available from: URL: http:// www.cscanada.net/index.php/hess/article/view/13761 DOI: http://dx.doi.org/10.3968/13761

## INTRODUCTION

In a rapidly globalizing world where access to education remains uneven, Open and Distance Learning (ODL) has emerged as a transformative model capable of democratizing knowledge and bridging educational gaps. For developing countries like Nigeria, where population growth, inadequate infrastructure, and teacher shortages challenge the conventional educational system, ODL offers a viable alternative. With its flexibility, inclusivity, and scalability, ODL contributes not only to individual empowerment but also to broader national development goals.

As nations strive to achieve the United Nations Sustainable Development Goal 4 — ensuring inclusive and equitable quality education for all — ODL presents a pathway to enhance literacy, workforce capacity, innovation, and social mobility (UNESCO, 2002). This study explores the concept of Open and Distance Learning, its global and Nigerian origins, key features, relevance to national development, associated challenges, and strategic recommendations for its optimization in Nigeria.

## THE ORIGIN AND GLOBAL EVOLUTION OF OPEN AND DISTANCE LEARNING

The concept of Open and Distance Learning (ODL) has evolved over centuries, shaped by advances in

communication technologies, changing societal needs, and a growing demand for inclusive education. While contemporary ODL is often associated with digital platforms and online education, its origins predate the internet era by more than a century.

## Early Beginnings: Correspondence Education

The earliest form of distance education emerged in the 18th century with correspondence courses, which enabled learners to study remotely using printed materials sent through the postal system. One of the first documented instances was in 1728 when Caleb Phillips, a shorthand teacher in Boston, advertised lessons by mail in the Boston Gazette. By the 19th century, the model gained popularity in Europe. In 1840, Sir Isaac Pitman in England began teaching shorthand through mailed instructional cards, which students would return for correction. This marked one of the first formal systems of distance education (UNESCO, 2002).

In 1858, the University of London became the first institution to offer external degree programs, allowing students anywhere in the world to earn degrees without attending campus. This innovation laid the foundation for the "open university" model by separating teaching from location (Peters, 2001).

#### The 20th Century: Institutionalization and Mass Education

The 20th century witnessed a major institutionalization of ODL. In the early decades, radio and television became significant tools for distance learning. In the United States, universities such as the University of Wisconsin and Penn State started offering educational broadcasts as early as the 1920s. Educational TV programs gained traction in the 1950s and 60s, reaching wide audiences.

A landmark moment came in 1969 with the establishment of the Open University (OU) in the United Kingdom, which used a blend of broadcast media (BBC television and radio), printed materials, residential schools, and tutor support. The OU set a new benchmark for openness in access - requiring no prior formal qualifications - and served as a model replicated worldwide (Daniel, 1996).

Around the same time, similar institutions were founded in other countries. These include Indira Gandhi National Open University (IGNOU) in India (established in 1985), Athabasca University in Canada (1970), and FernUniversität in Hagen in Germany (1974). These universities made higher education accessible to working adults, rural populations, women, and others traditionally excluded from mainstream academia.

### The Digital Era: E-Learning and the Internet Revolution

The late 20th and early 21st centuries marked a technological transformation in ODL. The advent of personal computers, CD-ROMs, and eventually the

internet revolutionized how distance learning was delivered. Online platforms enabled real-time interaction, access to vast digital libraries, and global collaboration among learners and tutors.

By the early 2000s, many universities had launched Learning Management Systems (LMS) such as Moodle, Blackboard, and Canvas, which facilitated fully online courses, assessments, and forums. The rise of Massive Open Online Courses (MOOCs) in the 2010s — led by platforms like Coursera, edX, and Udacity - further democratized education by offering high-quality courses for free or at low cost to millions of learners worldwide (Yuan & Powell, 2013).

## International Recognition and Policy Support

Global organizations have played a critical role in legitimizing and expanding ODL. UNESCO, for instance, has emphasized ODL as a strategic approach to achieving Education for All (EFA) and Sustainable Development Goal 4 (SDG 4): ensuring inclusive and equitable quality education (UNESCO, 2002; United Nations, 2023). The Commonwealth of Learning (COL), established in 1987, has also promoted ODL across the Global South by supporting member states in developing distance education systems.

Moreover, ODL has been instrumental during emergencies. For example, during the COVID-19 pandemic, distance learning became essential for educational continuity as institutions globally pivoted to online instruction almost overnight. This highlighted ODL's critical role in educational resilience and scalability (Bozkurt et al., 2020).

The global evolution of Open and Distance Learning reflects a continuous process of innovation and adaptation. From handwritten letters and radio broadcasts to interactive online platforms and virtual reality, ODL has expanded the boundaries of education. Its global history underscores a fundamental principle — that education should be accessible to all, regardless of geography, age, or circumstance.

## THE EMERGENCE OF OPEN AND **DISTANCE LEARNING IN NIGERIA**

The development of Open and Distance Learning (ODL) in Nigeria is rooted in both colonial legacies and postindependence efforts to expand access to education across the country. From informal correspondence learning in the early 20th century to the formal establishment of dedicated open universities and distance learning centers, ODL has played a strategic role in addressing Nigeria's chronic educational access challenges.

### Colonial Foundations and Informal Correspondence Learning

The seeds of distance learning in Nigeria were sown during the colonial period, when Nigerians began enrolling in correspondence programs with foreign institutions such as the University of London and Rapid Results College. These programs were particularly attractive to individuals who could not afford to travel abroad or access limited local higher education institutions (Okonkwo, 2012). The colonial educational system, with its restrictive admissions and elitist orientation, left many aspiring learners with no choice but to seek alternative routes for self-advancement.

Correspondence education became especially popular among civil servants, teachers, and clerks who needed higher qualifications to secure promotions. While largely unregulated, this mode of learning laid the groundwork for future institutional models of ODL in Nigeria (Jegede, 2016).

# National Teachers' Institute (NTI) and Early Institutionalization

A major turning point in Nigeria's distance education efforts came with the establishment of the National Teachers' Institute (NTI) in 1976 by the Federal Government. The NTI was created primarily to tackle the acute shortage of qualified teachers at the basic education level and to provide professional development for inservice teachers (NTI, 2017).

Using print-based instructional modules supported by face-to-face contact sessions and radio broadcasts, NTI became the first nationally coordinated attempt to use distance education as a tool for mass education. Its model combined flexibility with structure, enabling tens of thousands of teachers — many in remote and underserved areas — to earn the Nigeria Certificate in Education (NCE) and other qualifications without leaving their jobs (Okonkwo, 2012).

#### The National Open University of Nigeria (NOUN): Nigeria's Flagship ODL Institution

The most significant development in Nigeria's ODL history was the establishment of the National Open University of Nigeria (NOUN). Originally launched in 1983, NOUN was Nigeria's first dedicated Open University, modeled after the United Kingdom's Open University. However, shortly after its inception, it was suspended by the military regime in 1984 due to shifting political priorities and concerns about implementation logistics (Jegede, 2016). In response to growing demands for educational access and lifelong learning, NOUN was resuscitated in 2002 under the administration of President Olusegun Obasanjo. Its revival marked a new era for ODL in Nigeria, signaling a strong federal commitment to alternative education delivery systems.

NOUN operates as a full-fledged university offering undergraduate and postgraduate programs across various fields including education, business, law, health sciences, and arts. With over 75 study centers nationwide and a learner population exceeding 500,000, NOUN is now the largest university in Nigeria in terms of enrollment (NOUN, 2023). Its delivery system incorporates printed materials, online platforms, broadcast media, and occasional face-to-face tutorial sessions.

# Distance Learning Centres (DLCs) in Conventional Universities

Beyond NOUN, many traditional universities in Nigeria have established Distance Learning Centres (DLCs) to complement their full-time programs. Notable among these are:

i. University of Ibadan Distance Learning Centre,

ii. Ahmadu Bello University Distance Learning Centre,

iii. Obafemi Awolowo University Centre for Distance Learning,

iv. University of Lagos Distance Learning Institute.

These centers cater to working professionals and nontraditional students by offering flexible programs in fields such as education, public administration, accounting, and computer science. Instruction is typically delivered through blended learning formats — combining printed modules, online platforms, interactive forums, and physical contact sessions.

These developments have helped expand the reach of higher education in Nigeria, particularly to students who are working, physically distant from urban universities, or facing financial or social constraints.

#### **Policy Support and Regulatory Frameworks**

The growth of ODL in Nigeria has been accompanied by regulatory efforts to ensure quality, consistency, and relevance. The National Universities Commission (NUC) plays a central role in overseeing ODL through its Guidelines for Open and Distance Learning in Nigerian Universities (NUC, 2019).

These guidelines set standards for:

- i. Program design and courseware development,
- ii. Learner support systems,
- iii. ICT infrastructure,
- iv. Assessment and feedback mechanisms,
- v. Quality assurance processes.

The NUC also mandates that ODL institutions be equipped with adequate technological infrastructure, trained personnel, and learner management systems to ensure parity of standards with conventional education.

The Federal Government's broader educational policies, including the National Policy on Education (NPE), have also highlighted the importance of lifelong learning and the strategic role of ODL in achieving universal access to education, teacher training, and skill acquisition (Federal Republic of Nigeria, 2014).

## KEY FEATURES OF OPEN AND DISTANCE LEARNING

ODL is distinguished from conventional education by its learner-centered approach and structural flexibility. Its key features include:

**Open Access**: Admission requirements are generally more flexible, enabling broader participation, especially by non-traditional students (UNESCO, 2002).

**Flexible Learning**: Students can learn at their own pace, making it ideal for working adults and those with family responsibilities (Okonkwo, 2012).

**Multimodal Delivery**: Course materials are delivered through print, radio, television, mobile devices, and the internet, facilitating access for learners in diverse contexts (Jegede, 2016).

**Learner Autonomy**: Students are encouraged to manage their learning processes, supported by tutors, digital forums, and virtual resources (NUC, 2019).

**Cost-Effectiveness**: Compared to conventional education, ODL requires less physical infrastructure and can reach more learners simultaneously (UNESCO, 2002).

# RELEVANCE OF OPEN AND DISTANCE LEARNING TO NATIONAL DEVELOPMENT IN NIGERIA

Open and Distance Learning (ODL) holds significant relevance to national development in Nigeria, serving as a pivotal tool for addressing the country's persistent educational challenges while contributing to its broader social, economic, and political goals. As a nation of over 200 million people, Nigeria faces numerous educational barriers, including access limitations, infrastructure deficits, and disparities in quality. In such a context, ODL emerges as a transformative force capable of overcoming these obstacles and driving inclusive national development.

### **Expanding Access to Education**

One of the most immediate and impactful contributions of ODL to national development in Nigeria is its ability to expand access to education. Nigeria has an extremely high population growth rate, with a substantial youth demographic that continues to grow year after year. The country's traditional education system, which largely relies on brick-and-mortar institutions, struggles to keep up with this demand. Many Nigerians, particularly those living in rural areas, the northeast and northwest regions, and other underserved zones, face significant geographical, financial, and social barriers to accessing higher education (Jegede, 2016).

ODL helps bridge this gap by offering flexible learning options that allow students to study from home or in local centers without the need to relocate to major urban areas. For example, the National Open University of Nigeria (NOUN), with its wide network of study centers across the country, provides an accessible platform for learners who would otherwise be excluded from conventional universities due to factors such as distance, cost, and family obligations (NOUN, 2023). This accessibility ensures that education is no longer limited to urban elites but can reach citizens from all corners of the country.

Additionally, ODL plays a crucial role in facilitating lifelong learning for adults who may have missed out on formal education earlier in life or for professionals seeking to upgrade their skills. By offering part-time and full-time programs across diverse fields, ODL provides the opportunity for continuous skill development, empowering individuals to adapt to the evolving demands of the workforce (Federal Republic of Nigeria, 2014).

## Enhancing Workforce Skills and Employability

ODL significantly contributes to workforce development, a key factor for national economic growth and competitiveness. In a rapidly changing global economy, Nigeria faces challenges in providing its young population with the skills and qualifications required for the modern job market. Many job sectors, especially in technology, health, education, and management, demand higher levels of education and professional development (Jegede, 2016).

Through its flexible learning formats, ODL allows students to balance education with work, thus enabling them to gain relevant qualifications while remaining in their jobs. Institutions such as NOUN and various Distance Learning Centers (DLCs) offer programs in critical sectors like business administration, public health, information technology, and education, all of which are essential for nation-building (NOUN, 2023).

Moreover, ODL encourages the development of skills in entrepreneurship and self-reliance by providing courses tailored to the needs of small business owners, farmers, and local artisans. These programs foster a culture of entrepreneurship and innovation that is vital for economic diversification in Nigeria, especially as the country seeks to reduce its dependency on oil and gas exports (Federal Republic of Nigeria, 2014).

ODL also helps upskill the existing workforce, enabling employees to acquire advanced qualifications and certifications while maintaining their professional commitments. This enhances the productivity and effectiveness of industries, institutions, and government bodies, making a direct contribution to national development goals such as economic diversification, poverty reduction, and job creation (Jegede, 2016).

## Promoting Social Inclusion and Gender Equality

Another significant aspect of ODL's relevance to national development is its ability to promote social inclusion. In Nigeria, certain groups — particularly women, the physically disabled, and individuals living in rural or conflict-affected areas — face unique barriers to education. These barriers often limit their opportunities for personal and professional growth, thereby reinforcing existing inequalities (Federal Republic of Nigeria, 2014).

ODL addresses these disparities by offering inclusive educational opportunities that are accessible to marginalized groups. Women, for instance, benefit from the flexibility of distance learning, allowing them to pursue academic qualifications while simultaneously managing family responsibilities. This is particularly important in regions with traditional gender norms that limit women's mobility and educational opportunities (Jegede, 2016). Similarly, individuals with disabilities can access education from the comfort of their homes, circumventing the challenges associated with physical mobility and transportation.

ODL also provides a platform for reaching internally displaced persons (IDPs) and individuals affected by regional conflicts. Many such individuals have been cut off from traditional educational pathways, but through ODL, they can continue their studies and rebuild their lives, contributing to societal cohesion and peacebuilding efforts (Federal Republic of Nigeria, 2014).

# Supporting National Goals for Education and Sustainable Development

ODL is also closely aligned with Nigeria's national development goals and international commitments, particularly those outlined in the Sustainable Development Goals (SDGs). SDG 4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all," which is in direct alignment with the core values of ODL. By making education more accessible and flexible, ODL contributes to achieving these goals by ensuring that education reaches a broader population, regardless of geographical or socioeconomic barriers (United Nations, 2023).

In addition, Nigeria's National Policy on Education (NPE) emphasizes the need for expanding access to education and fostering a culture of lifelong learning. ODL is a vital tool in achieving these objectives, as it supports educational continuity, ensures equitable access to higher education, and contributes to the professional development of the workforce (Federal Republic of Nigeria, 2014). Furthermore, ODL is crucial for enhancing quality education, as it allows for more tailored, student-centered approaches to learning, which can be more suited to individual needs.

# Facilitating Educational Resilience and Crisis Response

ODL has proven to be an invaluable tool for maintaining educational continuity during times of national crises. The COVID-19 pandemic, for instance, highlighted the resilience of ODL in ensuring that education could continue during lockdowns and social distancing measures. Many Nigerian universities quickly transitioned to online and blended learning models, allowing students to continue their studies remotely. This crisis underscored the need for a robust ODL system that can rapidly adapt to unforeseen circumstances, ensuring that education does not grind to a halt (Bozkurt et al., 2020).

In addition to global health crises, Nigeria faces regular challenges such as flooding, terrorism, and insurgencies in certain regions. In such circumstances, ODL enables learners to continue their education regardless of local disruptions, providing a reliable mechanism for maintaining educational momentum across the nation (Jegede, 2016).

From the foregoing, it is evident that Open and Distance Learning is of paramount importance to Nigeria's national development, providing an avenue for expanding educational access, enhancing workforce skills, promoting social inclusion, and contributing to broader sustainable development goals. As Nigeria grapples with rapid population growth, infrastructural deficits, and regional inequalities, ODL offers a scalable and flexible solution that can meet the educational demands of a diverse and dynamic population. By embracing ODL, Nigeria is not only enhancing its educational framework but also laying the foundation for a more inclusive, educated, and prosperous society.

# CHALLENGES FACING OPEN AND DISTANCE LEARNING IN NIGERIA AND WAY FORWARD

Despite its transformative potential, Open and Distance Learning (ODL) in Nigeria faces a series of challenges that hinder its widespread adoption and effective implementation. These challenges range from infrastructural issues to cultural perceptions, and from technological limitations to regulatory gaps. However, these obstacles are not insurmountable, and a combination of strategic interventions, investments, and policy reforms can help overcome them. This section explores the key challenges faced by ODL in Nigeria and proposes ways forward to ensure its continued relevance and success in fostering national development.

## 1. Technological Infrastructure and Digital Divide

One of the most pressing challenges facing ODL in Nigeria is the lack of reliable technological infrastructure. Although Nigeria has seen significant advancements in mobile and internet connectivity in recent years, access to stable and affordable internet remains limited, particularly in rural areas (Akinyemi, 2019). For many Nigerians, especially those in remote regions, access to high-speed internet is not guaranteed, which hinders their ability to engage in online courses or distance learning effectively.

The digital divide is a critical issue, as the country's urban areas often have better access to internet services, while rural areas are left behind due to poor infrastructure and high costs of connectivity. This digital gap affects not only students but also educators and administrators who may struggle to adapt to online teaching platforms due to inadequate technical skills or access to reliable equipment (Jegede, 2016).

### Way Forward

To bridge the digital divide and improve technological infrastructure, both the government and private sector must make concerted efforts to enhance internet access across the country. Public-private partnerships could play a key role in improving internet penetration and reducing costs for students and institutions (Akinyemi, 2019). Additionally, government investment in telecommunication infrastructure, especially in underserved areas, is crucial. Universities and other educational institutions can also invest in offline learning solutions (e.g., downloadable materials, radio-based learning), which can help mitigate the challenges of poor internet access in rural communities.

## 2. Limited Awareness and Acceptance of ODL

Another challenge is the lack of awareness and acceptance of ODL among many Nigerians, including students, parents, and even some educational policymakers. In many regions of Nigeria, especially rural areas, there is still a strong cultural bias toward traditional, face-to-face education, with online or distance learning seen as inferior or less credible (Afolabi, 2018). This perception often leads to skepticism about the quality and legitimacy of ODL programs, which in turn discourages many potential students from enrolling.

Moreover, many Nigerian parents, particularly in the more conservative parts of the country, remain unconvinced about the educational value of ODL, seeing it as a less reliable option compared to traditional schooling (Okojie, 2009). This lack of awareness is compounded by the limited marketing and promotion of ODL programs, especially in rural areas where there may be little exposure to alternative learning methods.

### Way Forward

To address this challenge, there needs to be a comprehensive public awareness campaign aimed at promoting the benefits and legitimacy of ODL programs. This campaign should involve stakeholders across the education sector, including government, universities, professional bodies, and the media. Educational institutions offering ODL programs can work to improve their branding and visibility, showcasing successful alumni and the tangible benefits of distance learning to both students and society.

Additionally, policy reforms should prioritize the integration of ODL into the broader educational framework, ensuring that distance learning is seen as a credible and effective mode of education. Collaboration with international organizations and partnerships with reputable global universities can help improve the credibility of local ODL programs (Afolabi, 2018).

## 3. Inadequate Regulatory Framework

The lack of a robust regulatory framework for ODL poses a significant challenge to its growth and development in Nigeria. While institutions like the National Open University of Nigeria (NOUN) operate within an established regulatory environment, many private and smaller ODL providers operate without clear regulatory oversight. This regulatory gap can lead to inconsistencies in the quality of education, with some institutions offering substandard courses that lack accreditation or recognition (Jegede, 2016).

The absence of a clear framework also hampers the development of standards for course delivery, assessment methods, and learner support services, which are essential components of effective ODL. Without proper oversight, students may be left vulnerable to exploitation by unaccredited institutions, further diminishing the credibility of ODL as an educational option in Nigeria.

## Way Forward

To address this, the Nigerian government must strengthen the regulatory framework for ODL. This could involve the establishment of a dedicated regulatory body for ODL, which would be responsible for accrediting institutions, ensuring the quality of programs, and enforcing standards (Okojie, 2009). Furthermore, stakeholder collaboration between the government, educational institutions, and professional bodies is necessary to create a clear set of guidelines for ODL operations. This would help ensure that all ODL programs meet minimum quality standards, offering students a reliable and effective educational experience.

## 4. Teacher Training and Capacity Building

A significant challenge to the effectiveness of ODL in Nigeria is the lack of adequate training for educators in distance education methodologies. Many Nigerian educators are more accustomed to traditional classroom teaching and often lack the skills and experience needed to teach effectively in an online or blended environment (Jegede, 2016). This gap in teaching capacity can result in poorly designed courses, ineffective delivery, and inadequate student support, all of which undermine the quality of the educational experience.

Additionally, many ODL students require a different type of learner support compared to traditional students. Distance learners often face challenges such as isolation, difficulty in accessing learning materials, and lack of direct interaction with instructors (Afolabi, 2018). Teachers need to be trained not only in the technical aspects of online teaching but also in providing psychosocial support to students to help them stay motivated and engaged.

### Way Forward

To improve the quality of teaching in ODL, institutions should prioritize professional development programs for

educators, focusing on online teaching strategies, digital tools, and learner support mechanisms (Akinyemi, 2019). Educators should be encouraged to undergo continuous training to adapt to the evolving needs of distance learners and technological advancements in education. Furthermore, establishing mentorship programs and peer networks for ODL teachers can facilitate the sharing of best practices and enhance the overall teaching quality in the sector.

#### 5. Financial Constraints

Finally, financial constraints are a significant barrier to the growth of ODL in Nigeria. While ODL is often seen as a more affordable alternative to traditional education, the initial setup costs for technology, infrastructure, and course development can be substantial. Many students also face financial difficulties in accessing ODL programs, especially when they must pay for internet access, study materials, or registration fees (Federal Republic of Nigeria, 2014).

#### Way Forward

To overcome financial constraints, government intervention is crucial. Subsidies or scholarships for ODL students, particularly those from low-income backgrounds, could alleviate the financial burden and make distance education more accessible (Akinyemi, 2019). Additionally, ODL institutions can explore costsharing models or partnerships with technology providers to reduce the cost of learning materials and internet access for students.

## CONCLUSION

While Open and Distance Learning in Nigeria offers a wide array of benefits, its growth is hindered by several challenges, including technological barriers, limited awareness, regulatory gaps, inadequate teacher training, and financial constraints. However, these challenges are not insurmountable. By addressing these issues through targeted investments, policy reforms, and capacity-building efforts, Nigeria can harness the full potential of ODL as a catalyst for national development. With the right interventions, ODL can play a pivotal role in expanding access to education, improving workforce skills, and driving sustainable economic and social progress across the country.

### REFERENCES

- Afolabi, O. (2018). Open and distance learning in Nigeria: Challenges and opportunities. *Journal of Education and Social Sciences*, 3(2), 134-145.
- Akinyemi, S. (2019). Technological infrastructure and the challenges of open and distance learning in Nigeria. *African Journal of Educational Technology*, 10(4), 60-75.
- Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., ... & Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal* of Distance Education, 15(1), 1-126. https://doi.org/10.5281/ zenodo.3878572.
- Daniel, J. (1996). *Mega-universities and knowledge media: Technology strategies for higher education.* Kogan Page.
- Federal Republic of Nigeria. (2014). *National Policy on Education* (6th ed.). NERDC Press.
- Jegede, O. (2016). Open and distance learning practices in Nigeria: A long walk to success. *Turkish Online Journal of Distance Education*, 17(3), 89-108.
- National Open University of Nigeria (NOUN). (2023). *About us.* Retrieved from https://nou.edu.ng
- National Teachers' Institute (NTI). (2017). *About NTI*. NTI Publications.
- National Universities Commission (NUC). (2019). *Guidelines* for open and distance learning in Nigerian universities. NUC.
- Okojie, M. A. (2009). The role of open and distance learning in achieving the Millennium Development Goals in Nigeria. *African Journal of Educational Administration and Planning*, 6(2), 23-37.
- Okonkwo, C. A. (2012). A needs assessment for the National Open University of Nigeria (NOUN). *The International Review of Research in Open and Distributed Learning*, 13(2), 211-225.
- Peters, O. (2001). Learning and teaching in distance education: Analyses and interpretations from an international perspective. Routledge.
- UNESCO. (2002). Open and distance learning: Trends, policy and strategy considerations. UNESCO.
- United Nations. (2023). Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Retrieved from https://sdgs.un.org/goals/goal4
- Yuan, L., & Powell, S. (2013). MOOCs and open education: Implications for higher education. JISC CETIS. https://doi. org/10.4236/jss.2020.811018