

## **CURRENT TRENDS IN OPEN AND DISTANCE LEARNING: THE NIGERIAN PERSPECTIVE**

**<sup>1</sup>Raymond B. Nworgu, <sup>2</sup>Ruphina U. Nwachukwu and <sup>3</sup>Ekaette Okop**

<sup>1</sup>Centre for Distance and e-Learning, University of Nigeria, Nsukka

<sup>2,3</sup>Department of Adult Education and Extra-mural Studies, University of Nigeria, Nsukka

### **Abstract**

*The field of open and distance education is at the centre of dynamic growth and transformation globally. Thus, having had a critical look at some emerging issues in Open and Distance Learning practice worldwide, it becomes imperative to explore the current trends in Open and Distance Learning practice from the Nigerian perspective, which is the core aspect of this research work. Nigeria as a developing nation, is not left out in the current trends in open and distance learning. It is more than ever clear that open and distance learning has come to compliment conventional learning and it is an important element of future educational development. The emergence of new forms of distance learning based on new Information and Communication Technologies (ICTs), in particular those supported by the Internet and the use of the web, has significant economic, pedagogical, and organizational implications. The paper discussed the concept of open and distance education in Nigerian universities, the place of ODL practices, the emerging technologies and its role in ODL programmes, challenges hindering the growth of ODL practice in Nigeria. Above all, it was recommended among others that both learners and instructors should be taught how to make effective appropriate use of multi-media techniques among others.*

**Keywords:** Current Trends, Open-Distance Learning, Information and Communication Technology (ICT), E- learning, Emerging Technologies.

### **Introduction**

Open and distance learning is a force contributing to social and economic development globally, and has been accepted as an indispensable part of the mainstream of educational systems in both developed and developing countries, Nigeria not left out. This growth has stimulated the interest among educators and policy makers in the use of new Internet based and multimedia technologies, and also by the recognition that traditional ways of organizing education need to be improved by innovative methods, if the fundamental right of all individuals to learning is to be realized.

Open learning is an innovative movement in education that is based on independent study or initiative rather than formal classroom instructions. The term open learning refers generally to activities that either enhance learning opportunities

within formal education systems or broaden learning opportunities beyond formal education systems. In open learning, learning is open and accessible to learners and, learning happens when learners are inspired, excited, challenged, and motivated by a genuine love for something, not grades. According to Vangie (2019), open learning gives students flexibility and choice over what, when, at what pace, where, and how they learn and it often includes aspects of e-learning. Then, e-learning refers to a learning system that we can obtain through the internet using an electronic device.

Distance learning is an educational process that is offered with separation in terms of physical location of the facilitator (instructors) from the students (learners). Onwe (2015) defined distance learning as a method of imparting knowledge, skills and attitudes, which are rationalized by the application of division of labour and organizational principles as well as by the extensive use of technical media, specially, for the purpose of reproducing high quality teaching material which makes it possible to, instruct great numbers of students in the same time wherever they live. It is simply an industrialized form of teaching and learning.

Nwachukwu, Okop, Koledoye, and Imo (2016) defined distance learning as an educational approach in which a significant proportion of the teachings is conducted by someone removed in space and time from the learner, the instruction can either be synchronously or asynchronously. *Synchronous learning* refers to a *learning* event in which a group of students are engaged in *learning* at the same time in different locations through technology-enabled infrastructure, while asynchronous learning is a form of education, instruction, and learning that do not occur in the same place or at the same time. Furthermore, distance education can also be referred to as distance learning, correspondence education, home study, independent study, external studies, continuing education, distance teaching, self-instruction, adult education, technology-based or mediated education, learner-centred education, open learning, open access, flexible learning, and distributed learning. Distance learning is any educational process in which all or most of the teaching is conducted by someone removed in space and time from the learner, with the effect that all or most of the communication between teachers and learners is through an artificial medium, either electronic or print (United Nations Education Social and cultural Organisation [UNESCO], 2000). Most definitions however, pay attention to the following characteristics (Onwe, 2015); Separation of teacher and learner in time or place, or in both time and place:

1. Institutional accreditation: that is, learning is accredited or certified by some institution or agency such as the National University Commission (NUC). This type of learning is distinct from learning through one's own effort without the official recognition of a learning institution;
2. Use of mixed-media courseware in teaching ODL means integrating technology tools in teaching ODL such as print, radio, and television

broadcasts, video and audio cassettes, computer-based learning, and telecommunications. Courseware tends to be pre-tested and validated before it is deployed for use;

3. Two-way communication which allows learners and e-tutors to interact as distinguished from the passive receipt of broadcast signals. Communication can be synchronous or asynchronous;
4. Possibility of face-to-face meetings for tutorials, learner–learner interaction, library study, and laboratory or practice sessions; and
5. Use of industrialized processes; that is, in large-scale open and distance learning operations, labour is divided and tasks are assigned to various staff who work together in course development as teams for the success of developing quality course in open and distance learning.

Open and distance learning (ODL) is an evolutionary phenomenon which changes side by side with technological changes. Open and Distance Learning (ODL) represents approaches that focus on opening access to education and training provision, freeing learners from the constraints of time and place, and offering flexible learning opportunities to individuals and group of learners (UNESCO, 2000). Similarly, Farrell (2014) contends that open and distance learning embraces open learning, distance education, flexible learning, online learning, e-learning, and virtual education. Farrell further emphasised that open learning practices allow entry learning with no or minimum barriers in respect of gender, age, among other factors and also provides learning opportunities which can be accessed at any time and place with much emphasis on scheduling of activities than to any specific mode of delivery. Open and Distance Learning programmes are learner/student-centred and differ from those of the conventional university system where both instructional activities and course materials are lecturer-centred. Open and Distance Learning is the mode of education delivery where learners and teachers need not be in physical contact and possesses high range of flexible learning environment access to tertiary education; has the capacity to deliver variety of skills and uses a variety of media and technologies to provide quality education for large number of learners.

### **The Place of ODL Practices in Nigeria Educational System**

Nigeria is the most populous black nation in the world with the population of **204,590,049** (National Population Commission, 2020). The population is equally one of the highest population growth rate in the world annually (National Population Commission, 2009). At the close of the 1970s and the beginning of the 1980s, about 25 percent success was regularly registered at the West African School Certificate Examinations. Nigerian universities showed a glaring lack of capacity to absorb even such a low number of qualified candidates (Okebukola, 2004); by the close of the 20th century, Nigeria could absorb only 15 per cent of about 1.5 million youths that

regularly qualify to benefit from tertiary education (Ambe-Uya, 2007). Thus, the need to seek for other routes to higher education acquisition became an issue in Nigeria. According to Nwachukwu et al. (2016), the quest to attract national development and to close the gaps in educational disparities amongst its citizens, made the Nigerian government realised that the only way to actualise this huge dream of development is through provision of quality and sound education. The authors emphasised that it is a difficult task, as the formal education system could not reach all Nigerians that needed education and that called for an alternative which is an open and distance education. The Federal Republic of Nigeria noted that the goals of Open and Distance Learning in Nigeria shall be to: provide more access to quality education and equity in educational opportunities; meet special needs of employers and employees by mounting special courses for employees at the workplace, encourages internationalization especially of tertiary education curricula, ameliorate the effect of internal and external brain drain in tertiary institutions by utilizing Nigerian experts as teachers regardless their locations or places of work; and encourage life-long learning opportunities.

Furthermore, the emergence of open and distance education In Nigeria dates back to external examinations organised by Universities of London, Cambridge and Oxford, which provided opportunities for Nigerians wishing to acquire western education. Although, these universities allowed Nigerians to take examinations, none of them provided tuition to prepare students for its examinations. Therefore, the need to fill the gap created due to lack of tuition led to the patronage of correspondence institutions abroad by Nigerians. In fact, in 1887 there was a significant milestone in Nigerian distance education as it was the first time Nigerians got interested and enrolled massively as external students studying through correspondence in the university of London matriculation examination (Nwachukwu et al., 2016). Then, in 1925 several Nigerians, such as Eyo-ita and H. O. Davis, passed the London matriculation Examination. Similarly, in 1927 and 1929 respectively, E. O Ajayi and Alvan Ikoku obtained degrees in philosophy at the university of London while J.S. Ogunlesi obtained a degree in philosophy in 1933 all were through Distance learning (Ojekheta, 2010)

Subsequently, in 2001, the Nigerian government established 4 centres in four Nigeria States, that is, Lagos, Adamawa, Borno and Kano States and 50 learning programmes were rolled out and 32,400 pioneer learners were registered (National Open University of Nigeria, 2009). Later on, some Universities such as University of Ibadan and Ahmadu Bello University started providing extension services to their catchment areas. The Ahmadu Bello University Institute of Education also introduced the Teacher In-Service Education Programme to raise the quantity and quality of teachers in Northern Nigeria. According to Adegbite and Oyekanmi (2010), the University of Ibadan also inaugurated its open and distance education in 1988 in an attempt to meet the needs of the ever-increasing applicants for University education

through distance learning programme. When the National Council of Education ruled that the National Certificate of Education (NCE) should be the minimum qualification for teaching at primary school level, the Ahmadu Bello University Institute of Education, started the NCE by correspondence programme. The launching of the Universal Primary Education in 1976 led to further recognition of the distance learning mode as a veritable means of promoting teacher education. Towards this end, National Teachers Institute (NTI) was established by the Federal Government in 1976 as the first institution providing open and distance education courses designed to upgrade under-qualified and unqualified teachers

At the University of Abuja, the Centre for Distance Learning and Continuing Education (CDLCE) was set up and mandated to provide open and distance education component of every programme that the University would provide. However, the strong commitment of the Federal Government to distance education led to the establishment of the National Open University of Nigeria (NOUN) in 2002. The National Open University of Nigeria is “Nigeria’s leading-and only specialist-provider of open and distance learning at tertiary level” (National Open University of Nigeria, 2009).

In addition, the National Universities Commission has approved the following universities as dual mode institutions; namely: University of Ibadan, University of Lagos, University of Abuja, Obafemi Awolowo University, University of Nigeria, Nsukka, University of Maiduguri and Federal University of Technology, Yola. Perhaps these institutions have the necessary facilities to establish dual mode institutions. The dual mode institutions combine both the conventional and distance education programmes. In some of these institutions, students come for residential programmes when the regular students are on vacation. It is understood that National Open University of Nigeria is the only uni-mode (single mode) University in Nigeria. The National Teachers Institute is another single mode distance learning dedicated to teachers to upgrade their skills. As a matter of fact, all these Distance learning Centre/Universities cannot succeed without adopting emerging technologies.

### **Emerging Technologies and its Role in ODL Programme in Nigeria**

The concept of emerging technologies can be found in the growing number of publications dealing with the topic and news articles mentioning emerging technologies (Rotolo, Hicks, & Martins, 2015). However no consensus has been reached on what makes a technology to be termed: “Emerging. According to Porter et al. (2004) the potential of emerging technologies are capable of exerting on the economy and society, especially when they are of more a “generic” nature. Nwizu and Nwachukwu (2018) emphasised that the understanding of emerging technologies also depends on the expert’s perspective; an expert may classify a technology as emergent because of its novelty and expected socio-economic impact, while others may see the same technology as a natural extension of an existing technology.

Thus, emerging technologies in open and distance learning are new technologies that are integrated in distance teaching and learning to facilitate learning and help bridge the gap between the facilitator and the learner such as Open Educational Resources (OER), Artificial Intelligence (AI), Augmented and Virtual Reality, and e-learning respectively. Emerging Technologies, have the potential to alleviate barriers associated with limited times and places of instruction (Nwizu & Nwachukwu, 2018). The major benefits of adopting emerging technologies for online teaching and learning include interaction and student engagement; access to latest information; content sharing and communication. Today, across the length and breadth of Nigeria, universities such as, Ahmadu Bello University Zaria, University of Ibadan and University of Nigeria, Nsukka to name a few are leveraging on the potentials of emerging technologies in ODL to expand and enrich conventional higher education.

Concomitantly, several emerging technologies have played great role in bridging the gap between the facilitator and the learner in Nigerian open and distance learning. In this paper, the following emerging technologies: Open educational resources, Artificial Intelligence, augmented and virtual reality, and use of mobile and e-learning were identified and discussed extensively.

### **Open Educational Resources (OER)**

Education is the key to economic, social and environmental progress. Governments across the world are looking for a way to improve the quality of their education systems so that their citizens can compete globally and also to provide opportunities for the less-privileged citizens to have access to education. This idea was actually what led to the development of OER by the proponent of OER to create avenue to release any educational materials or tools to public domain with an open intellectual property license, allowing teachers and learners to freely copy, use, adapt, and share the materials. Open educational resources (OER) are teaching, learning and research materials that make use of tools such as open licensing to permit their free reuse, continuous improvement and repurposing by others for educational purposes. (Dominic, Michele, & Dirk, 2015). In the ODL system, there is a paradigm shift towards collaborative learning with an emphasis on openness and resource sharing through the use of Information and Communication Technology (ICT) and OERs. The use of OERs holds great promise of improving the access to and the overall quality of education for the developed as well as the developing countries including Nigeria. It can help the distance education institutions to bridge the gap between non-formal, informal and formal learning sectors. The educators are creating and using digital content for teaching and learning. The access to quality content is possible only for those who attend higher education institutions or those who can afford to purchase the instructional material. The OER movement aims to make this content available for

free use for enhancing educational opportunities for hitherto unreached sections of the society thus leading to equalizing of access.

The open content which is a valuable educational resource is meant to strengthen the ODL system and institution and not to replace it. Open Educational Resources (OER) can play a vital role in the existing scenario of distance learning by improving quality, access, reach and also providing competitive edge and recognition globally (Sujata & Santosh, 2019).

On 10th December, 2015, Professor Vincent Tenebe, Vice Chancellor of the National Open University of Nigeria (NOUN) launched the NOUN Portal of Open Educational Resources (OERs) – an online repository of the first 40 exiting NOUN courses released with the Creative Commons open licenses. The Portal was developed with the assistance of the UNESCO OER Programme and supported by the European Union and the Hewlett Foundation (USA), and represents a significant positive contribution from Nigeria to achieving universal access to high quality education and sustainable development. Professor Tenebe in 2015 stated that “OERs provide all education stakeholders with unprecedented opportunities to improve the quality of education as well as facilitating knowledge sharing and capacity building”. Tenebe stressed that the purpose of the Unit is to integrate OERs into all levels of teachings and leanings in NOUN to enhance the quality and access to higher education for thousands of Nigerians and African students.

### **Artificial Intelligence (AI)**

Artificial Intelligence (AI) applications in open and distance education seeks to examine the efforts made to bridge the gap between student and educator with introduction of computer applications. Artificial intelligence can complete tasks that normally require “human intelligence” (Sujata & Santosh, 2019). It learns on its own and continues to improve based on the given technology. Artificial intelligence has the ability to improve and streamline many different processes within educational sector. Artificial Intelligence can improve and automate administrative tasks as well as create personalized learning experiences for students and learners. Applying Artificial Intelligence in ODL institutions presents a wealth of opportunities. Open and Distance Learning relies heavily on human-machine interactions, AI thus naturally offers open and distance learning universities various means to address issues, such as how do people actually learn; what constitutes effective teaching as well as what are the advantages and limitations of computer-based systems in education. Artificial Intelligence could be potentially utilised in an ODL institution, automated scheduling of classes; marking of assignments; plagiarism detection; retaining learners and adapting to their diverse needs and backgrounds; maintenance of property; and ensuring security (Mensor & Tangku, 2008).

Data collected from the ICT systems that learners utilize can then be leveraged by artificial intelligence to enhance outcomes in interesting ways. For

instance, Microsoft's Azure cloud provides tools that developers can leverage to build AI powered applications for universities to harness in Open and Distance Learning (ODL) and also provide deep analytical insights into learner performances.

### **Augmented Reality (AR) and Virtual Reality (VR)**

The term virtual reality is built on the natural combination of two words: virtual and reality. The former means "nearly" or "conceptually," which leads to the concept indicating an experience that is near-reality. Virtual Reality (VR) is the use of computer technology to create a simulated environment., VR places the user inside an experience. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D worlds. Another interesting definition for virtual reality is an interactive computer simulation which transfers sensory information to a user who perceives it as substituted or augmented (Abari, Bharadia, Duffield, & Katabi, 2017). Therefore, virtual reality refers to an environment created by a computer system that simulates a real situation. While augmented reality technology integrates digital information with real environments in which people live. Everything is processed and produced in real time. This is one of the main differences with virtual reality, which uses artificial environments. Augmented reality uses the real world and completes it with digital information. Basically, it increases the amount of information that a human can take from the environment (Curcio, Dipace, & Norlund, 2016). This technology is less developed largely due to the fact that it needs even more processing power. It must interpret the real world and adhere to it, and all the digital information available to the system in question. This means processing a reality with infinite variables that change without a closed argument. While in virtual reality the environment is completely programmed, in VR and AR technologies, the environment is alive and behaves unpredictably. Narrowing the potential values of the multiple variables becomes the main challenge.

Augmented and Virtual reality technologies have made their appearance within the education sector. Over the years, Augmented and Virtual Reality technologies have advanced in all sectors of Nigerian educational system. There is a general consensus that virtual and augmented reality will change the educational landscape by enhancing its use in open and distance learning environment. In education in particular, Augmented Reality (AR) and Virtual Reality (VR) applications are rapidly changing the way people learn, and thus providing experiential learning by simulating real-world environments. AR and VR increases learner's engagement level, and provides insights into what they will experience in various environments when they enter the workforce (LaValle, 2017).

Thus, this technology is particularly useful for visual learners and students with learning challenges as it provides alternatives to more traditional teaching methods that have been used in the past. The use of virtual reality assist learners to improve learning outcomes.



### **Use of Mobile /E-Learning**

Mobile learning devices are hand-held devices that can take the form of personal digital assistants, mobile phones, smart phones, audio players, video and multimedia players. The devices are connected wirelessly, thus ensuring mobility and flexibility in their usage. Mobile learning is in many ways a new phenomenon and its theoretical, pedagogical, organizational and technical structure is currently still developing (Iromantu, 2004). Mobile learning provides enormous possibilities for closing the gap between learners and teachers or the teaching institution, to overcome the misconception of open and distance learning as an isolated form of learning. Mobile learning is e-learning through mobile computational devices. While In general, e-learning means learning with electronic media, that is, via the Internet (intranet or extranet), but also via television and radio, audio and video tapes and Compact Disk-Read Only Memory (CD-ROM). Electronic-learning is also referred to as e-learning and therefore defined more narrowly than distance learning, which includes print-based study materials and correspondence communication. E-learning can therefore be regarded as a subset of open and distance learning, but not vice versa (Rosenberg, 2011). The printed materials which are widespread in open and distance learning should be understood here as a form of technology as well. Crescente, Mary, Lee, and Doris (2011) provides a sufficient basis to distinguish between mobile learning and e-learning: "The term e-learning covers a wide set of applications and processes, including computer-based learning, Web based learning, virtual classrooms and digital collaboration. E-learning is the delivery of content (and interaction) via all electronic media, including the Internet (intranets, extranets), satellite broadcast, audio or video tape, interactive TV, and CD-ROM. Yet, e-learning is defined more narrowly than open and distance learning, which would include text-based learning and courses conducted via written correspondence". Mobile learning can be viewed as a subset of e-learning. E-learning is the macro concept that includes online and mobile learning environments. Online learning facilitates communication and collaboration via networked computers.

There is currently globally a rapid rate of development and application of wireless and mobile technologies in contemporary learning environments and learning paradigms. Apart from mobile phones, other wireless and mobile computational devices such as laptops, palmtops, PDAs (Personal Digital Assistants) and tablets also rapidly entered the market – some devices, of course, have exhibited more success than others for particular markets. In such initiatives much has already been done about the experimental use of wireless technologies (including wireless Internet environments and wireless classrooms) and various mobile devices for teaching and learning. Open and Distance Learning (ODL) materials are delivered on the mobile interface for learners' accessibility.

The importance of Mobile learning cannot be overemphasized as it can be used for the following purposes namely; It is important to bring new technology into the classroom. Devices used are more lightweight than books and PCs. Mobile learning can be used to diversify the types of learning activities students partake in (or a blended learning approach). Mobile learning supports the learning process rather than being integral to it. Mobile learning can be a useful add-on tool for students with special needs.

The ability for learners to access grades, books, and more from anywhere in the world, as well as take classes without physically being in the classroom, is making it easier for learners to obtain their degree and complete graduation. Open and Distance learning is on the rise, providing a chance for students to receive education anytime, anywhere, without physically being in the same room as the facilitator.

### **Challenges Hindering the Growth of ODL Practice in Nigeria**

In spite of the interest generated by the new thrust in open and distance education, overall challenges that may hinder suitable implementation are better understood and solved. These problems are discussed as follow:

**1. Lack of consistency in programme/policy implementation:** It is a known fact that success in any educational policy is contingent on the involvement of all stakeholders and sponsorship of funding agency, that is, the government. A succeeding government truncated the attempt at Open University in the early 80's. Thus, successive governments in Nigeria must not only allow the continuation of open and distance education programme, it must be supported through adequate funding.

**2. Problem of electricity/power supply:** Since successful distance education cannot be assured without the use of communication and technological tools (e-mail, fax, Internet, television, radio, etc.), then the problem of electricity comes into focus. Several rural areas in Nigeria are yet to have electricity, while the urban arrears experience epileptic power supply. This will create problems for effective integration of most technological media in the delivery of distance education programme. Poverty among Nigerians makes alternative sources of electricity non-visible to most Nigerians.

**3. Poor telecommunication facilities and lack of access:** Just like electricity most Nigerians do not have access to telephone and other telecommunication facilities. Even, telephone lines in the urban centres are not adequate to serve the teeming population. Services for those who have access are in most cases epileptic. These may make the integration of telecommunication in the delivery of distance education difficult. In addition, poor state of telephone has led to increase in dial-up cost for most Nigerians. Even with the recent introduction of GSM in August, 2001, access is still limited and services are yet to be perfect and service charge may make GSM unattractive for distant learners.

**4. Low-level of ODL Programme acceptability by learners:** Generally, Nigerians do not fully understand the concept of ODL, therefore the level of acceptance is very low. In addition, they have the perception that the certificate of the conventional education mode of learning is more accepted than the ODL mode of learning Certificate.

**5. Poor economic situations and its effects on middle level manpower:** The poor state of the nation's economy has pauperised most Nigerians. Even an average middle-income earner cannot afford basic technological and communication gadgets. Thus, computer related telecommunication facilities might not be useful for most Nigerians, as computer is still a luxury in institutions, offices and homes. This may make the integration of necessary on-line resources (e-mail, newsgroups, world-wide-web, etc.) into distance education in Nigeria difficult.

**6. Poor ICT Penetration:** Like most African countries, basic ICT infrastructures are inadequate. A study by Nigerian Information Technology Professionals in America in 2002 indicated that given current ICT penetration it may take Nigeria 50 years to catch up with America on the aspect of Pc count per households (Iromantu, 2004). The most significant problem being the cost of PC.

These problems if not addressed will impede proper implementation of open and distance education in Nigeria. Therefore, efforts should be intensified to improve electricity, telecommunication and other communication facilities in both urban and rural areas.

### **Recommendations**

Open and Distance Learning programmes will continue to flourish and develop in Nigeria not only because a large number of Nigerian institutions have the potentials to support the applications of technology required in running a distance education system, but also more importantly due to ever growing global need for an educated workforce couple with poor financial constraints of establishing conventional educational institutions. It is therefore recommended that Nigerian Governments and some Non-Governmental Organizations (NGOs), through seasoned educational policymakers and planners should embrace ODL in every aspect of education delivery. The following recommendations are essential if Open and Distance Learning programme is to succeed in Nigeria.

1. Both learners and instructors should be taught how to make effective and appropriate use of multimedia techniques. This exercise should be conducted periodically for effective delivery.
2. The ODL system should be redesigned to make use of a combination of conventional resources and ICT techniques shifting gradually to ICT-based programmes using a computer conferencing type. This would allow student-to-student and student-to-instructor interaction as well as complement learning, assessment and learner's feedback.

3. ODL is a capital-intensive form of education. It is ICT-driven and it is supposed to serve learners over a wide geographical distance. Adequate funding of ODL system by the Nigerian government is thus a necessity. This implies that government should contribute financially to the ODL delivery form of education as it is done in the conventional form of university education.
4. The federal government needs to invest more in ODL, through budgetary allocations and cost sharing at higher levels of education considering the invaluable roles it plays in the overall African development.
5. Partnerships and networking among ODL institutional providers should be created within the country, and with the private telecommunication sector, and Non-Governmental Organizations (NGOs) to share knowledge and reduce costs.
6. Provision of 24 hours electricity will boost the growth of open and distance learning in Nigeria.
7. Nigeria government should not only introduce open and distance education programme, there is need for adequate funding and policy implementation.
8. The government should subsidize the internet fee for educational purposes to allow online learners afford internet services.
9. There is need for educational stakeholders to educate Nigerians on the concept of ODL mode of Learning.

### **Conclusion**

Open and distance learning programme can provide needed access for Nigerian who are presently disadvantaged through the conventional educational system. The enthusiasm shown by various government and steps taken so far can only be sustained through proper planning and monitored implementation. For open and distance learning goals to be achieved, proper steps must be taken not only to involve all stakeholders (community leaders, business groups, conventional educational institutions, etc.). Various communication and technology tools have been identified for Open and distance learning; their successful use can only be assured through proper selection for specific group of learners and their relevance (quality, features, and instructional strategy). Since Open and distance learning lacks the face-to-face contact in conventional education, necessary infrastructures, equipment and fund must be made available to provide means of communication with learners and offering the counselling services as required. Such means should not only be for the delivery of instructional contents to learners but also for guidance, time management techniques, technology training and assistance, and also initiatives to guard and encourage students' progress.

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