UNIVERSITY OF PORT HARCOURT

MASSIFICATION OF EDUCATION IN NIGERIA: REDUCING THE DISTANCE THROUGH OPEN AND DISTANCE LEARNING (ODL)

An Inaugural Lecture

By

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INAUGURAL LECTURE SERIES

NO. 164

October 17, 2019

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DEDICATION

" . . . To the making of many books there is no end . . . What does a man really gain from all his hard work and ambition that drives him to work hard under the sun? This is what I have seen to be good and proper: that one should eat and drink and find enjoyment for all the hard work at which he toils under the sun during the few days of life that the true God has given him, for that is his reward. Also, when the true God gives a man riches and material possessions along with the ability to enjoy them, he should take his reward and rejoice in his hard work. This is the gift of God."

<div align="right">— Ecclesiastes 12:12; 2:22; 5:18, 19 (NWT)</div>

To

The memory of my late father, Mr. John Legbara Vikoo, who ensured that I saw the "light."

To

Burabari Vikoo, my love and wife;

And

Barizomdu and Barikpena, our sons and brothers—the three
Whom I love and toil for, my joy and crown
For adding spice to my life and furnishing the reason to live despite it all.

ACKNOWLEDGEMENTS

ORDER OF PROCEEDINGS

2.45P.M.   GUESTS ARE SEATED

3.00P.M.   ACADEMIC PROCESSION BEGINS

The procession shall enter the Ebitimi Banigo Auditorium, University Park, and the Congregation shall stand as the procession enters the hall in the following order:

ACADEMIC OFFICER
PROFESSORS
DEANS OF FACULTIES/SCHOOL
DEAN, SCHOOL OF GRADUATE STUDIES
PROVOST, COLLEGE OF HEALTH SCIENCES
LECTURER
REGISTRAR
DEPUTY VICE-CHANCELLOR [ACADEMIC]
DEPUTY VICE-CHANCELLOR [ADMINISTRATION]
VICE CHANCELLOR

After the Vice-Chancellor has ascended the dais, the congregation shall remain standing for the University of Port Harcourt Anthem.
The congregation shall thereafter resume their seats.

THE VICE-CHANCELLOR'S OPENING REMARKS.

The Registrar shall rise, cap, invite the Vice-Chancellor to make his opening remarks and introduce the Lecturer.
The Lecturer shall remain standing during the Introduction.

THE INAUGURAL LECTURE

The Lecturer shall step on the rostrum, cap and deliver his Inaugural Lecture. After the lecture, he shall step towards the Vice-Chancellor, cap and deliver a copy of the Inaugural Lecture to the Vice-Chancellor and resume his seat. The Vice-Chancellor shall present the document to the Registrar.

CLOSING
The Registrar shall rise, cap and invite the Vice-Chancellor to make his Closing Remarks.

THE VICE-CHANCELLOR'S CLOSING REMARKS.
The Vice-Chancellor shall then rise, cap and make his Closing Remarks. The Congregation shall rise for the University of Port Harcourt Anthem and remain standing as the Academic [Honour] Procession retreats in the following order:

VICE CHANCELLOR
DEPUTY VICE-CHANCELLOR [ADMINISTRATION]
DEPUTY VICE-CHANCELLOR [ACADEMIC]
REGISTRAR
LECTURER
PROVOST, COLLEGE OF HEALTH SCIENCES
DEAN, SCHOOL OF GRADUATE STUDIES
DEANS OF FACULTIES/SCHOOL
PROFESSORS
ACADEMIC OFFICER

PROTOCOLS

- ❖ The Vice-Chancellor
- ❖ Previous Vice-Chancellors
- ❖ Deputy Vice-Chancellors (Admin and Academic)
- ❖ Previous Deputy Vice-Chancellors
- ❖ Members of the Governing Council
- ❖ Principal Officers of the University
- ❖ Provost, College of Health Sciences
- ❖ Dean, Graduate School
- ❖ Deans of Faculties
- ❖ Heads of Departments
- ❖ Distinguished Professors
- ❖ Directors of Institutes and Units
- ❖ Visiting Academics and Colleagues
- ❖ Esteemed Administrative Staff
- ❖ Captains of Industries
- ❖ Cherished Friends and Guests
- ❖ Unique Students of UNIPORT
- ❖ Members of the Press
- ❖ Distinguished Ladies and Gentlemen.

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PREAMBLE

Vice-Chancellor, Sir, it is with a deep sense of humility and responsibility that I present the 164th Inaugural Lecture of the University of Port Harcourt and I appreciate and thank you most sincerely for the opportunity given to me to do so. This is of special significance to me for at least two reasons. Firstly, by delivering this lecture today my name will go down in the annals of history of the Faculty of Education as the first person to do so in my Department and in my area of specialisation—Educational Technology. Secondly, to do so at age 50, will evidently make me the youngest to have done so in the entire Faculty of Education up until now.

Nigeria regards education as "an instrument per excellence for social and economic reconstruction. . .", and a key to the realisation of its aspiration of being among the top 20 nations of the world by the year 2020 (FRN, 2014: xii). Despite the appreciable level of realisation of the importance of education in Nigeria, however, it has not been possible for the existing educational institutions to cope with demands of the citizens, to give access to its burgeoning population (Agwu, 1997:1). For instance, Pandit (1988:2), while examining issues affecting further development of education in Nigeria observed that:

i. Demand for all types of education far exceeds the provision of educational services in the country.

ii. The educational system has not succeeded in adjusting teaching-learning conditions to the fast changing social environment. In other words, there is a disequilibrium between the educational output and the nation's work force needs.

iii. The gap between the supply of and demand for the financial resources required to sustain the educational system is becoming wider and deeper.

Over the period 2004 to 2009, there was a continuous proliferation in the number of qualified applicants seeking admission into Nigerian universities, yet the intake did not surpass

19% during this time. According to UNESCO Institute for Statistics, the Gross Enrolment Rate (GER) for tertiary education in Nigeria was just over 13% in 2010. This is well below the Organisation for Economic Cooperation and Development (OECD) average of 40–50%, required for sustainable development. The general perception is that education is a way out of unemployment (Kanwar, 2016). What kind of education do we need to offer livelihood opportunities?

Corroborating the above views, Dike (2014) observed that over 1.7 million candidates sat for the 2013 Unified Tertiary Matriculation Examinations (UTME, which is the qualifying examination into Nigeria's higher institutions, conducted by the Joint Admissions and Matriculation Board, JAMB). Regrettably, however, only about 300,000 candidates obtained admission out of the total. This implies that the 129 universities in Nigeria at the time denied access to over 1.4 million candidates.

In 2015, the global community adopted 17 **Sustainable Development Goals** or **SDGs** that we must collectively achieve in 15 years from then. SDG Goal 4, which deals with education, aims to ensure inclusive and equitable quality education and lifelong learning for all by 2030. How do we plan to achieve this? One of the recommendations in the Framework for Action for achieving Goal 4 by 2030 is to develop policies and programmes for the provision of quality distance learning in tertiary education, with appropriate financing and use of technology to improve access (Kanwar, 2016).

Given the above background, it is obvious that the present provisions in terms of facilities and pedagogical methods cannot satisfy the educational needs of the Nigerian society. We therefore have to seek some radical alternatives to reach the numerous members of our society who for one reason or the other cannot get formal university education. Over the years, from independence to date, Nigeria has consistently had problems in implementing or delivering its educational plans to a greater portion of its population (Ebong & Agabi, 2004; **Vikoo**, 2007). The million-dollar question is, is there a better way of delivering education to make it get to a greater percentage of Nigerians?

We shall use one common expression in Nigeria to answer that question. Kindly permit me to express it in Nigerian Pidgin. It says, "*The tin wey you de find go Sokoto dey for mai shokoto*", which means that what you are searching for far afield at Sokoto State is already available in my undies, that the object of one's search might actually be close by in his immediate environment without his realising it. Applied to our context, the aphorism means that Nigeria does not need to explore any farther afield for a strategy to deliver educational provisions to a greater mass of its population; such a strategy is already available on ground if only she is prepared to adopt and use it. That sure bet and short cut to educating very large masses of people otherwise called **massification of education,** is **Open and Distance Learning (ODL)**, which is the thrust of this lecture and to which we now turn.

Vice-Chancellor, Sir, distinguished listeners; I understand that an Inaugural Lecture could take the form of sharing one's research experiences over the years, to demystify a perplexing contemporary problem in the society, or to explain an apparently puzzling situation to the public. This Inaugural Lecture subsumes aspects of these three fundamental elements. My task here this afternoon is to justify why a whole-scale adoption of ODL can actually reduce the time and distance Nigeria would need to massify education in the country.

What is open learning?
Open learning is a term with no universally agreed-upon definition. To some 'open' indicates open entry and access to learning opportunities, and removal of barriers to learning opportunities. Paine (1988:10) defined open learning as

> *A process, which focuses on access to educational opportunities and a philosophy, which makes learning more client- and student-centred. It is learning which allows the learner to choose how to learn, when to learn, where to learn and what to learn as far as possible within the resource constraints of any education and training provision.*

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That is, open learning means provision that gives learners some control regarding how they learn, where they learn, when they learn and the pace at which they learn. The term "open" implies removal of barriers created through distance, time and specific design. Thus, open learning means unrestricted learning.

The South African Institute for Distance Education (SAIDE) (2001) noted that the concept of open learning revolves around the following principles:

1. Learner-centeredness (i.e. it accepts the learner as an active participant with choices and possibilities to enable him develop problem-solving skills and competencies).
2. Lifelong learning (i.e. learning should continue throughout life and must be relevant to learner needs and life experiences).
3. Flexibility in learning through what to learn, how to learn, where to learn and when to learn.
4. Removal of unnecessary barriers to access (such as language, discrimination based on race, nationality, age, disability, academic qualifications, or gender).
5. Recognition of prior learning experiences/competencies, which need accreditation for the learner whenever and wherever it is applicable.
6. Provision of learner support system in the form of counselling services, access, communication facilities, etc.
7. Expectation of success and cost effectiveness. This involves providing opportunities for learners to complete learning programmes successfully.

However, Open learning systems are not identical to open universities or to distance education. In the views of **Vikoo** (2006),

> *While distance education systems are mainly concerned with reducing geographical barriers, open learning systems are concerned with geographical, socio-economic and psychological barriers. Openness refers not to maximizing access to education in terms of time and place but to*

supporting the learning process through choice of method and mode of communication (pp. 4−5).

For our purpose, open learning is 'any form of learning in which the provider enables individual learners to exercise choice over anyone or more of some aspects of learning' (Peters, 2016:4). The concept of open learning subsumes two distinct elements:

i. *a philosophy*—a set of assumptions about instruction and learning and
ii. *a method*—a set of procedures for teaching and learning

Much of the confusion occurs because individuals do not always realise that we can practise the philosophy without using the method. We can also use the approach without the philosophy.

Does the concept of open learning apply in Nigeria at present? There is yet no full-scale implementation of open learning at any level of the Nigerian school system *sensu stricto.* For example, at the tertiary level (the stage at which *openness* is best practised) of education, there are the National Board for Technical Education (NBTE), National Commission for Colleges of Education (NCCE), and the National Universities Commission (NUC), the government departments concerned with regulating polytechnic, colleges of education and universities in Nigeria. These three agencies operate in tune with JAMB, the legal agency concerned with testing and admitting qualified applicants into polytechnics, colleges of education and universities in Nigeria, to receive their supply of approved candidates. JAMB does this through its Unified Tertiary Matriculation Examinations (UTME), which candidates must pass to gain entry into any tertiary institution in Nigeria. A candidate must be at least 16 years and must have obtained at least 5 credit-grade passes in either the West African School Certificate (WASC) or the National Examinations Council (NECO) examinations—the two external examinations held at the conclusion of secondary education in Nigeria—in at most two sittings to be admitted into any Nigerian university, for example. The notion of compulsory examinations with their requirements invalidates the principle of *openness*, which requires eliminating impediments in

the admission process. It is only willingness, preparedness and commitment to learn, not age or past academic accomplishments that should count in the admission process in real open learning situations. Thus, what is in vogue in Nigeria in effect is *distance education* and *not* open learning.

How open is open learning?

We can dichotomise all educational systems into two broad types in terms of access to academic provisions and opportunities they offer (Jegede, 2017):

■ Closed educational systems and

■ Open educational systems, as shown in Figure 1

Access to academic provisions

Closed educational systems   **Open educational systems**

Rigid

Requires entry qualification   Flexible   Equitable   Equality   Cheap

Time-bound   Extensive learner support
Instructionally-designed materials
Learner-focused, modular, thematic
Individualised and self-paced.
Expensive   Allows for different levels of independent
programmes e.g. B.Sc., M.Sc., PhD

Figure 1: Types of educational systems based on access (Adapted from Jegede, 2017:41**)**

However, no learning process or project is ever fully open, nor is any fully closed. Openness is a standard toward which we must continue striving rather than a state we can hope to attain completely. What might an entirely open system look like? It should look like the following scenarios:

i. Whatever you need to study about, you could obtain a project adapted to your preferences and at a decent cost.

ii. You would have it when you need it, where you need it, and at your own pace.

iii. You would be responsible to set your own targets, determine the subject and arrangement of your project, and when and how to evaluate your learning.

iv. You would likewise be responsible to choose how you prefer to learn—such as with others or on your own, from textbooks or from broadcasts, with the stress on theory or on a practice—and who might support you in what kind of situations.

How would you get on a wholly closed system? Strictly, you would not have it at all. Nevertheless, if you did have it, you would again have a few of the factors in Figure 1. Among others:

a. The project organisers would inform you what you would study about, the objectives you would be required to learn to reach in a stipulated place, on fixed dates and they would set the pace.

b. The organisers would likewise set the learning approaches, sequence, and choose who might support you and what sort of support they might offer.

c. Your wishes or preferences would not count when making these arrangements.

Evidently, there are two extreme scenarios. Most learning projects and processes lie somewhere on the continuum between these extremes. Some systems and projects are more embracing and welcoming than others. So, how do we relate the openness of one process to that of another? We can convey all we mentioned under the following three primary headings—*Who*? *What*? and *How*?

- **Who?** How simple is it for someone to become a learner without constraints of age, qualifications, wealth, profession, gender, etc.?
- **What?** To what degree is the learner able to choose the subject and objectives of the project, and when and how will he or she be evaluated?
- **How?** To what degree is the learner able to choose where, when and at what pace he or she will learn, the instructional

approaches to apply and the directions to go, and how will he or she call on other individuals for help?

What is distance education (DE)?

With the annals of distance learning encompassing so many diverse situations, there has been many divergent interpretations put forward in contemporary literature. People are likely to explain DE variously as you might be aware. This is nothing strange if you recall the tale of the six blind men of Hindustan who travelled to examine an elephant. One blind man grabbed the tail and reached home satisfied that an elephant was like a rope. The second caught the tusk and asserted that the elephant was just like a spear. Upon striking the flank, the third blind man decided that an elephant was like a fence. The remaining three formed their own inferences, depending on the part they handled. When they all went back home, there emerged such a controversy that each fellow was left confirmed in his ignorance (Modesto & Tau, 2009).

So, what is this elephant called DE? We are happy that we are not blind. We are likewise happy that there has been much investigation into this "elephant" severally. For instance, Dodds (2001) and Perraton (1991) defined distance education as any make of organised educational practice in which teaching and learning takes place with the instructor removed in space and time from the learner. Keegan (1996:44) proposed one of the most complete definitions of DE, which contains six basic defining ingredients or characteristics:

i. separation of learner and tutor as opposed to face-to-face (f2f) teaching
ii. influence of an academic organisation, which distinguishes distance education from independent study
iii. instruction conveyed through an assortment of media including print, and other ICTs to learners
iv. arrangement of a two-way communication, to facilitate dialogue between the student and the tutor
v. prospect of intermittent sessions for interaction
vi. self-directed structure of the learner's involvement

That is, DE refers to instruction by a mode other than the conventional face-to-face method. Its other characteristics include:

a. cost-effective strategy of teaching independent of time, location, pace, and space

b. adaptability to a mixture of learning conditions: primary, secondary, tertiary, vocational and non-formal education

c. thrives on economy of scale

d. a focus on quality assurance (QA), well-designed instructional packages, and student support

This system of curriculum delivery possesses two unique segments, i.e. development of a sub-system distance teaching and a student support sub-system (distance learning). **Distance education** therefore means *distance teaching* and *distance learning*. **Distance teaching** is teacher-oriented, while **distance learning** is learner-based. Any educational programme can integrate DE, and use it in partnership with any other teaching and learning methods to provide academic opportunities, which require that learners and instructors be at the same or in diverse locations. Many researchers use the terms *distance education* and *distance learning* interchangeably. Their primary attribute is the disengagement of teacher and learner in space and/or time.

Therefore, distance education subsumes all education that gives training and information between two places. This may be (1) **synchronous**—training that takes place at the same time in two or more distinct places such as via the Internet, chat or videoconferencing, or (2) **asynchronous,** the exchange of information that takes place at various times such as by posting an e-mail or correspondence. There is **one-way transmission** of information from one place to another or many places but with no opportunity for response, e.g. a television newscast and **two-way exchange** of information where the learner can respond to the trainer. **Multi-point exchange** appertains to information presented simultaneously from one place to many places e.g. videoconferencing from one classroom to several other remote classrooms.

Research comparing DE, online learning and face-to-face education has proved that there is 'no significant difference' in outcomes. Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, Wallet, Fiset and Huang (2004) after a meta-analytical evaluation of 232 studies established that most times, the distance education (DE) group surpassed the conventional education group by over 50%. There were other occurrences to the discordant, and so, there is no confirmation whether DE is better or poorer than conventional education, acknowledging the inference that there is 'no-significant difference' between diverse kinds of academic arrangement. Another meta-analysis study by Shachar and Neuman (2010) pointed out that in 70% of the situations, students taking courses by distance education outperformed their counterparts in the courses instructed traditionally, which implies distance education is turning into the "new normal".

How open is distance learning? What kind of distance?
Understanding of distance depends predominantly on how promptly and convincingly one can obtain personal support or feedback from another individual such as a lecturer, an inspector, another learner or a co-employee whose views seem significant. Thus, one dominant aim of distance education is to scale down or reduce the distance between the teacher and learner, captured nicely in the *transactional distance theory.*

The **transactional distance theory (TDT)** describes pedagogical relationships prevailing in a distance learning situation, i.e. one that can be described as "the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours, including those that in contiguous teaching would be performed in the learner's presence by print, electronic, mechanical, or other devices" (Moore, 1972:76). According to the theory, three key constituent parts characterise every distance education programme: *dialogue, structure,* and *learner autonomy*. **Dialogue** refers to the degree to which tutors and learners can relate with each other. **Structure** relates to the "responsiveness" of an academic programme to an individual learner's needs (Moore,

1993). **Learner autonomy** is the degree to which learners make "decisions about their own learning" and "construct their own knowledge based on their own experience" (Moore & Kearsley, 1996:204–205).

Transactional distance, expressed as a relative term, implies there is a virtually boundless spectrum of synergies between the three core variables. At one end, transactional distance would be strongest when the school or the individual teacher had no communication at all with students, and the study materials pre-arranged and designed to the slightest detail. Under such conditions from the perspective point of view of the producing agency the individual learner's freedom is not taken into account, even though from the learner's point of view it may be needed to enjoy substantial autonomy in choosing when, where and how to learn.

One of the most compelling issues experienced in the mainstream correspondence model of distance education is transactional distance, which emanates from paucity of convenient communication between learner and teacher. This gap becomes larger if there is no communication between the learner and teacher and has telling implications over the learning process and subsequent endeavours in distance education. Distance education providers introduced various systems, styles, and strategies to expand the volume of interaction between learner and teacher. The reason for creating these measures e.g. more frequent face-to-face tutorials, expanded adoption of ICTs including teleconferencing and the Internet, is to bridge the chasm in transactional distance (Casey & Lorenzen, 2010).

Objectives and rationale for the development of distance education
The purposes of distance education, as Okebukola (2000) pointed out, are to:
1. offer access to academic opportunities in a cost-efficient way for those who otherwise could have been refused access

2. offer a second chance for those who quit school for one reason or the other, but who having become more mature, would wish to make a re-entry into the education arena
3. offer a chance for those who did not avail themselves the opportunities to go to school but are still within the age range for them to make up for their deficiencies or to become educated and go on with life
4. enrich the knowledge base of students in formal school programmes and others who cannot afford to attend full-time schooling and
5. deliver more learner-friendly educational services that would motivate learners to understand that learning is a lifelong affair

One of the toughest challenges confronting education today is the capacity to serve students with low-cost high quality educational services. Constricted by dearth of resources, inadequacy of urban transportation, and questionable street safety, schools are shifting to distance education as a mode of service delivery (Harrington-Leuker, 1999).

Classification/types of distance education systems (DES)
Kaplan and Haenlein (2016) classified distance education into four groups along the dimensions of *time-dependency* and *number of participants*:

a. **MOOC** (Massive Open Online Course): Open-access online course (i.e., without specific participation restrictions) that supports unrestricted (massive) attendance. That is, MOOCs are online courses arranged for vast sums of participants. Anyone can obtain them, anywhere as long as he has an Internet hook-up. MOOCs are accessible to everybody without entry qualifications and give a complete course experience online free. Stanford University (USA) in 2010 offered the first MOOC that drew the enrolment of over 160,000 students (Mulder & Jansen, 2015).

b. **SPOC** (Small Private Online Course): Online course that merely allows a limited number of places and thus demand some kind of formal enrolment.

c. **SMOC** (Synchronous Massive Online Course): Open-access online course that allows for unlimited participation but requires students to be "present" at the same time (synchronously).

d. **SSOC** (Synchronous Private Online Course): Online course that only offers a limited number of places and requires students to be "present" at the same moment (synchronously).

Rumble (1986), outlined three forms of distance education systems (DES), *viz*:

- institute-centred
- person-centred and
- society-based

There is preponderance of systematic design of education in the **institute-centred DES**. The institutional mission focuses on cost-effectiveness and efficiency of the process. Academics become consultants to the school for material design and development. All other officials in the school receive key functions with personal responsibility and accountability.

The programmes in the **person-centred DES** are more individualised and negotiable as the purpose is to serve the individual learner. Tutors/Counsellors personally arrange and guide individualised learning.

Learning materials developed in the **society-based DES** conform to the demands of the society and applied in public situations where the teacher endeavours to engage the entire society in the research of learning materials. The tutor serves as a facilitator for identifying learning objectives, learning materials, assessment techniques and the like.

Another interpretation of open (distance) organisations, which evidently is the most prevalent and accepted classification

typology, proposed by Freeman (1997), describes six systems based on whether the system is:

    i.   campus-based
    ii. organisation-based
    iii. individual-based
    iv. campus-based self-paced
    v. organisation-based self-paced or
    vi. individual-based self-paced

      Campus-based, paced DES has the attributes of the formal system, like semester, lecture, timetable, still at the same time requires individual responsibility for studying. The computer-programming course at the University of Sunderland, UK is an example.

      Organisation-based, paced DES is one in which training and continuing education rests on the activity at hand, and not on the employees' needs. The in-company flexible learning schemes of the Open College, UK are the finest examples of this arrangement.

      Individual-based, paced DES is one in which a school provides direction and all teaching-learning materials. Provision of the programme occurs at a pace imposed by the institute's preparedness. There is specification of deadlines for all tasks that learners who wish to complete the academic programme within the designated time follow. Examples are the programmes of Open universities.

      Considerable tutor-learner contact and interaction characterise the **campus-based, self-paced DES**. Both tutoring and evaluation depend on the desires of the individual learner. There is also cooperation between learners. The basic IT course at the University of Lincolnshire and Humberside, UK is an example.

      Organisation-based, self-paced DES is analogous in many respects to the campus-based, self-paced DES. Here, learning takes place at the work place with the line-manager playing the part of tutor. The CBT course of the National Westminster Bank, UK, is an example of this system.

      Individual-based, self-paced DES is where an institution allows enough flexibility to the learner, which permits him to press

on at his own pace. In the lack of regular tutor-learner contact, the individual learners may be at varied stages in the learning continuum. The correspondence courses of the National Extension College, UK are examples.

What is open and distance learning (ODL)?

Learning is a dynamic process of constructing knowledge, attitudes and values and acquiring skills using a range of resources including people, printed texts, electronic instruments, experiential and work-integrated learning, reflection, research, etc (**Vikoo**, 2003; 2015). A combination of distance education (i.e. the ability to study from a distance) and open learning (i.e. the opportunity for anybody to access the educational offer) is referred to as **Open and Distance Learning (ODL)**. ODL assumes another name and acronym— **Open, Distance and e-Learning (ODeL)**—when it uses computer-based tools and other electronic communication technologies to promote and increase learning (Jegede, 2017).

We can observe from the foregoing that the acronym **ODL** comes from a merger of two methods to learning that focus on broadening access to education:

i. open learning and
ii. distance education

Openness refers to the philosophy, which manifests as flexibility and absence of traditional restraints. Adopting the term *open* climaxes this key element of the concept and operation of distance education. We accept the term **distance learning (DL)** as a synonym for the better broad and formal term **distance education (DE)**. *Distance education* here relates to the method of delivery, which may or may not be open. *ODL* applies usually when one wishes to discuss a full spectrum of complementary designs of teaching and studying that stresses openness about entry, organisation and techniques and flexibility in delivery and communication, and application of varied technologies in aid of learning at a distance. Open learning is not the same as distance education but they are evidently interdependent, which

is why we apply the two concepts together and the phrase open and distance learning or ODL (Kanwar, 2016).

Open and Distance Education (ODE) is that mode of learning which seeks to remove the constraint of time, pace and space, so that as many people as possible are able to take advantage of meaningful learning opportunities throughout their lives. This accelerates the production of globally competitive, high quality work force for national development in a quantum that face-to-face institutions cannot.

There are four fundamental ingredients to the explanation of open and distance education:

- it is institutionally based
- there is separation of tutor and learner in time and space
- it is administered through interactive telecommunication technologies and
- learning event is distributed via data, voice and video (Simonson, Smaldino, Albright & Zvacek, 2009)

From a functional viewpoint, this means that with technology as its base, ODL is a multi-dimensional concept directed at traversing the time, geographic, economic, social, and educational and communication distance between students and school, students and academics, students and courseware and students and peers. ODL concentrates on eliminating impediments to access education, flexibility of learning provision, student-centeredness, supporting students and designing learning programmes with the confidence that students can flourish.

Advantages of ODL

The following recapitulates the fundamental advantages of ODL we have pointed out so far:

1. ODL widens and gives equal access to education and training for both the general populace and organisations regardless of socio-economic status or income, area of residence, gender, race, age, or cost per student since its flexible scheduling structure minimises the effects of the many time-restraints forced by personal obligations and

responsibilities. Applying universal design approaches to ODL courses can enhance the accessibility of courses to students with a variety of competences, impairments, learning styles, and native dialects (Regan, 2014)

2. Many countries, including Nigeria, have declared commitment to provide education for all (EFA). ODL provides expanded access to education and can therefore serve as a "weapon of mass instruction" or **massification of education** as it delivers educational campaigns and information to wide audiences from diverse geographic, social, cultural, economic, and experiential backgrounds. That is, ODL democratises and liberalises education.

3. It provides prompt and adequate training for key target groups.

4. ODL offers partnership of education with job and family life. It allows the society to respond effectively to growing demand of working people who have difficulties in getting educated in conventional institutions due to lack of flexibility in the timing and location of courses.

5. It enhances internationalisation or broadens the scope of academic experience. Present-day online communication allows students to relate with accredited schools and programmes that are out of reach for in-person learning throughout the world.

6. The progress created in ODL is advancing in tandem with sustained technological advances. By accepting the opportunity of engaging with international institutions via ODL, students receive a divergent pattern of logic through communication with their mates elsewhere.

7. It offers flexible and lifelong education.

8. Devolving some activities off-site eases institutional capacity constraints emanating from the conventional claim on institutional buildings and infrastructure.

9. As the populace at large becomes further engaged in lifelong learning beyond the traditional schooling age, schools can benefit financially.

10. ODL programmes can serve as a motivation for institutional innovation and are at least as effective as face-to-face learning programmes, especially with experienced and proficient tutors.

11. ODL is a better cost-efficient plan of study, and can save students large sums of money as against conventional education. One way distance education does this is by eliminating the cost of transportation, and the monetary handicap of high-cost course textbooks. Many workbooks are now available as electronic or digital textbooks, identified as *e-books* and *e-publications* (*e-pubs*), at low cost in contrast to conventional textbooks. Also, the growing advancements in technology results in many school libraries having collaborations with digital publishers that present course materials for free, which can save educational costs for students significantly (Yuan & Gay, 2006). Thus, with respect to developing societies, Judith Adler Hellman in Garrison (2011:45) advised that, "In the face of the pressure on these countries to join the global information economy, distance education appears to offer the opportunity to train more people better and at lower cost".

12. Within the class, students are capable to learn in ways that regular classrooms would not be able to produce. For instance, students can examine their lectures more than once according to their need. Students can thus exploit the coursework to suit their learning by concentrating further on their weaker topics while hurrying through views that they already know or can conveniently comprehend.

13. When course model and the study situation are at their optimal conditions, ODL can prompt students to greater achievement with their learning experiences. Studies have disclosed that great satisfaction corresponds to enhanced understanding, since supervision occurs regularly and not restricted to a weekly supervision session. This again may

lead to the students having a better feeling of care, since they have constant access to their tutors and other students.

14. ODL may let students incapable of attending a conventional school in "person" owing to impairment, ill health or social catastrophes like wars pick up a decent education using robot proxies. In distance learning arrangements, a learner may "take his school with him" wherever he goes regardless of his biological, environmental or social handicaps. Over the last few years, more students are entering safely back into the classroom thanks to telepresence robots (Kirtman, 2009).

15. ODL may further offer an ultimate privilege for people that the general school systems are no longer willing to accept owing to behaviour problems. Instead of such people getting no alternative or further academic opportunities, they may pursue their education from their homes and get their certificates, presenting them another chance to be an integral part of community.

16. It allows individualised learning and at one's own pace.

17. Both ODL students and their counterparts in conventional universities can use ODL course materials.

18. ODL provides opportunity for applying existing mass communication tools to augment, supplement or complement institutional ICTs e.g. radio, television. (For example, there is no single state without at least three radio stations and at least two TV houses in Nigeria).

19. ODL programmes lend themselves to economies of scale.

20. ODL gives opportunity to maximise high-level academic personnel who could teach larger numbers of students.

21. ODL will reduce attempts by higher educational institutions in Nigeria to re-establish part-time/sandwich/outreach programmes that excessive workload, corruption and paucity of facilities erode the quality.

22. ODL practice inherently raises the literacy and reading level of the citizenry.

23. ODL programmes are not prone to distortions in academic calendar emanating from industrial disputes between labour unions in the universities and government. In fact, one cardinal requirement by NUC for the accreditation of a proposed Distance Learning Centre (DLC) is that it should be completely independent of the university and immune from the disruptive effects of incessant industrial strikes by the Academic Staff Union of Universities (ASUU) and diverse unions operating within the university context (NUC, 2016).

Drawbacks of ODL
There are many worries about implementing open education strategies, especially in developing countries. These include:
   a. A possible lack of adequate administrative oversight and quality assurance processes for educators/resources.
   b. Distance learning may not surmount not only geographical distance, but also other confining circumstances, such as personal constraints, cultural and social handicaps and paucity of educational infrastructural provisions, especially in developing countries.
   c. Absence of equal access (because of the "digital divide") to technologies needed for students' broad engagement in online education initiatives.
   d. Paucity of advanced technology skills can contribute to an unsuccessful encounter. Some students undertake to engage in ODL without proper training with the media required to be fruitful in it. Students must get training opportunities (if required) on each device applied throughout the programme. Schools have a responsibility to adopt a proactive policy for managing technology barriers (Taylor, 2001).
   e. Questions about handling of copyrighted materials.
   f. Parity of esteem or equivalence of certificates and graduates of ODL with those of conventional education systems.

g. Domestic disturbances and unreliable technology, students' programme costs, enough contact with tutors and support services, and need for more experience.

h. Research results (e.g. Saba, 2011) show attrition (dropout rates) to be far higher for ODL than for conventional (classroom-based) courses owing to obstacles in language, time administration, and study skill experience.

i. Some say one weakness of ODL is the absence of direct face-to-face social communication. This is because many individuals are still not used to personal and social interaction online (for example, using chat rooms, or blogs).

j. Not all courses may need online presentation. Health care professional programmes in particular, expect some patient interaction through fieldwork before a student may graduate. Studies have further showed that students seeking professional medical degrees, favour face-to-face contact over professor-mediated chat rooms and/or independent studies (Keevy & Chakroun, 2015).

k. There may likewise be institutional challenges. It may be more challenging for a tutor to create and organise a distance-learning programme, especially since their supervisory demands are distinct from conventional learning programmes.

l. ODL has cost and capital intensiveness, time constraints and other pressures on instructors, isolation of students from instructors and their peers, and instructors' enormous difficulty in evaluating students they never meet face-to-face adequately.

m. There are cultural disparities between students and tutors and among students that demand a proper knowledge and appreciation of the rules, variations, predispositions and possible conflicting issues that may prevail regarding race, gender, and religion.

However, through the years, by surmounting all the hurdles, the world atmosphere for ODL advances. We should bear in mind that: *Nothing is more dishonourable than an old man, heavy with years, who has no evidence of his having lived long except his age* (A Shona proverb in Zimbabwe).

HISTORY AND EVOLUTION OF THE ODL SYSTEM

ODL has grown over the years from correspondence education, to distance learning, to open learning, to open and distance learning, to open, distance and e-learning (ODeL), and to virtual learning (Jegede, 2017). There are at least two ways of viewing the evolution of the ODL system over the years (Peters, 2016):

- *Institutional convergence approach*, which is based on the continuous reforms within the school as an institution, and
- *Social convergence approach*, which considers adjustments in the authority or framework of the school system and the implications of the state's responsibility in the provision of education

Distance education as a system of education, emerged because of complications owing to advances in the society as man sought progress and enhancement of life. Perraton (1988) noted that distance teaching emanated from a concern to reach individuals who could not attend formal classes. For instance, the *Boston Gazette* announced in 1728 one of the first attempts at distance education by "**Caleb Philipps**, teacher of the new method of Short Hand" (stenography), who offered students who wished to study through mailed lessons. In the 1880s in Sweden, **Hans Hermod**, a teacher of Bookkeeping, instructed a student who went elsewhere from his city, by sending lessons through the mail. About the same date, an English teacher, **William Briggs**, who then ran a tutorial college, offered instruction by mail for students who could not attend. He called his institution **University Correspondence College**, using Cambridge as his address. Thus, distance education found its roots as a kind of teaching strategy at least 150 years ago as a correspondence course (Holmberg, 1989; 2005). Written and printed materials were the instruments for this first generation of distance education. During this stage, distance education was seen as correspondence course, home study, off-campus study, extra-mural study, distance study, etc.

Sir Isaac Pitman in 1844 introduced the earliest open and distance education practice in the modern sense of the term. Sir Pitman taught a system of shorthand by mailing texts transcribed

into shorthand on postcards, and receiving transcriptions from his students in return for correction (Tait, 2003). Student feedback was a decisive innovation of Pitman's strategy. Establishing the *Uniform Penny Post* across England in 1840 made this system workable. This fresh beginning proved fruitful, resulting in the establishment of the **Phonographic Correspondence Society** three years thereafter to provide these courses on a better and proper base. The Society paved the way for the later development of Sir Isaac Pitman Colleges across the United States (Moore & Kearsley, 2005).

The next crucial step in the historical development of open and distance education was the University of London's External Programme established in 1828, which Queen Victoria licenced or chartered in 1858, making the University of London the first institution to grant distance-learning certificates to graduates. At this point, students could follow the University of London curriculum for a range of degrees and sit for its examinations without ever setting foot in London. Charles Dickens, the popular English playwright and novelist, referred to the University of London as **"People's University"** because it provided access to higher education to students from less affluent backgrounds (Jegede, 2016). The University of London is therefore termed the first "open university" because of this move (Bell & Tight, 1993).

Inauguration of the Open University in the U.K in 1969 marked the take-off of the second generation of open and distance education. The then serving Labour Party government under the Prime Minister, Harold Wilson, established the Open University based on the vision of Michael Young. Planning began in 1965 under the Minister of State for Education, Jennie Lee, who created a design for the OU as one of broadening access to the loftiest ideals in higher education, and set up an organising board comprising university Vice-Chancellors, instructors and television newscasters, governed by Sir Peter Venables. The British Broadcasting Corporation (BBC) Assistant Head of Engineering at the time, James Redmond, had received most of his academic accomplishments at night school, and his genuine interest for the university did enough to surmount the technological obstacles of

utilising television to disseminate teaching programmes (Bunker, 2012).

The Open University revolutionised the sphere of correspondence programmes and started a proper learning opportunity to conventional scholarship. It has been at the vanguard of producing other technologies to advance distance learning and undertaking studies in diverse curricula. Walter Perry was the OU's first Vice-Chancellor in January 1969, and Anastasios Christodoulou its pioneer secretary. Election of another Conservative Party government in 1970 with Edward Heath as Prime Minister, culminated in budget cuts under Chancellor of the Exchequer Iain Macleod (who had initially dubbed the notion of an Open University a "blithering nonsense"). However, the OU accepted its first 25,000 students in 1971, choosing a radical open admissions practice. By then, the overall student community of regular universities in the United Kingdom was around 130,000.

Established in 1970, Athabasca University, Canada's Open University pursued a comparable, even though independently produced, variety. The Open University motivated establishment of Spain's National University of Distance Education (1972) and Germany's Fern Universität in Hagen (1974). There are now many comparable schools around the world, usually with the tag "Open University" (in English or in the local dialect). Later, the emergence of the term *open and distance learning* became useful in expressing the openness, flexibility and mode of the learning system (Byrne, 1989).

In the United States of America, the first correspondence school was the **"Society to Encourage Studies at Home"**, founded in 1873. In 1892, William Rainey Harper, President of the University of Chicago, started and promoted the notion of extended education and expansion of foreign university courses at the new University of Chicago, whereby the university had satellite colleges of education in the larger society. He likewise supported the notion of correspondence school courses to promote scholarship, a concept set into operation by Columbia University (Levinson, 2005; Von, 2012). Enrolment in the vastest private for-profit school based

in Scranton, Pennsylvania, the International Correspondence Schools, grew explosively in the 1890s. Founded in 1888 to give instruction for immigrant coal miners wishing to be state supervisors, or mine inspectors, it enrolled 2500 new undergraduates in 1894 and matriculated 72,000 new undergraduates in 1895. By 1906, total enrolments reached 900,000. The expansion was due to mailing out complete textbooks instead of separate lectures, and using 1200 aggressive in-person salespersons (Kett, 1996).

A setup came to Kentucky in 1948 when John Wilkinson Taylor, president of the University of Louisville, partnered with the National Broadcasting Corporation (NBC) to utilise radio as an instrument for distance teaching. The chairperson of the Federal Communications Commission approved the project and forecast that the "college-by-radio" would place "American education 25 years ahead". The city owned the institution, and residents paid the modest tuition fees, obtained their study through the mail, and listened by radio to live classroom conversations held on campus (Sterling & O'Dell, 2011:3).

Charles Wedemeyer of the University of Wisconsin, Madison, likewise supported new techniques. From 1964 to 1968, the Carnegie Foundation funded Wedemeyer's *Articulated Instructional Media* (AIM) project, which began a range of communication technologies aimed at providing learning to an off-campus society. The radio courses faded away in the 1950s. Many attempts to use television along the same lines proved futile, despite heavy funding by the Ford Foundation (Taggart, 2007).

From 1970 to 1972, the Coordinating Commission for Higher Education in California funded *Project Outreach* to investigate the potentiality of **telecourses**. The investigation covered the University of California, California State University and the community colleges. This research contributed to coordinated instructional practices' legislation allowing the spending of governmental finances for non-classroom teaching and paved the way for developing telecourses as the forerunner to contemporary online courses and programmes. *Adult Learning*

Service of the Public Broadcasting Service (PBS) came into being and the "Wrapped" series, an independently produced telecourse for credit, turned into a significant part of the record of distance education and online learning (Sterling & O'Dell, 2011).

The Open University of Catalonia, headquartered in Barcelona, Spain, established in 1994, was the first modern and fully online university. Jones International University inaugurated in 1999, was the first online university accredited by a regional accrediting organisation in the US. Between 2000 and 2008, enrolment in distance education courses increased swiftly in practically every nation in both advanced and developing countries. Many independent, governmental, non-profit and for-profit institutions worldwide now offer distance education courses from the most primary instruction through to the highest grades of degree and doctoral programmes. New York University, for example, offers online degrees in engineering and management-related fields through *NYU Tandon Online*. In the US, the Distance Education Accrediting Commission (DEAC) specialises in the accreditation of distance education institutions (Jegede, 2017).

Australia with its enormous distances was keen; the University of Queensland established its Department of Correspondence Studies in 1911 (White, 2009).

In Africa, the scenery of distance education is broadening. South Africa began its corresponding university, once a testing and certification body, the University of South Africa (UNISA) in 1946, and is now one of the largest open and distance learning universities in the world. The aim was to administer individualised education for students, at modest cost, by applying a pedagogy of testing, recording, classification, and differentiation (Lee, 2008; Bunker, 2012). Saint (2000) noted that over 140 public and private schools offer tertiary distance education services within sub-Saharan Africa, while 49 of the 55 African countries have access to the Internet in their capital cities. As Saint (2001) further indicated, other countries like Kenya, Zambia, Malawi and Botswana have since 1960 used distance teaching for teacher education programmes while between the 1980's and 1990's teacher upgrading was equally

pursued in Benin Republic, Burkina Faso, Burundi, Cameroon, Cote d'Ivoire, Mali, Togo, and Central African Republic, all Francophone states.

Furthermore, setting up the African Virtual University (AVU) in 1997 became necessary to serve countries in sub-Saharan Africa. It is another model of distance education that broadens access to educational works and services at modest costs, through digital satellite broadcast. Between 1999 and 2000 over 26 universities in Africa offered AVU courses. The World Bank and the African Development Bank (AfDB) finance the AVU (Magdalene & Geoffrey, 2001).

Most open universities use distance-learning technologies as delivery systems even though some need participation at local study centres or at local "vacation schools". Some open schools have advanced to become ***mega-universities*** (Daniel, 1998), a term coined to denote institutions with over 100,000 students.

The following summarizes some major strides in ODL development around the world:

1. 1728 – Caleb Phillips and Anna Tickner taught shorthand (stenography) by correspondence
2. 1828 – University of London's external degree programme established
3. 1844–Sir Isaac Pitman taught stenography and made feedback on assignments
4. 1858 – University of London's external degree programme chartered
5. 1882 – University of Chicago
6. 1889 – Queen's University, Canada
7. 1892–Distance learning first used at the University of Wisconsin
8. 1906 – Columbia University
9. 1911 – University of Queensland, Australia
10. 1946 – University of South Africa (UNISA)
11. 1969 – Open University, UK
12. 1972 – Athabasca University, Canada
13. 1990 – New Zealand Open Polytechnic

Development of open and distance education in Nigeria

Provision of education via ODL in Nigeria is not a new phenomenon. Its practice has spanned about 130 years and has no doubt witnessed tremendous growth and development over the years. ODL (which is the methodology of teaching that sits on the principles of ODE), leverages the technology (such as print and postage, telephone, radio, television and the Internet) of a specific era (Adesina, Lanshima, Sule & Etsegameh, 2018).

History of ODL system in Nigeria is traceable to the pre-colonial era. The earliest expression of distance education in Nigeria was in the form of correspondence study. This mode produced university graduates in Nigeria before the establishment of a university-grade institution in 1948. As Omolewa (2010) pointed out, during the period when there was no university in Nigeria, there was already a thriving university education system in the country. The University of London made this possible in 1887 when it allowed candidates located in Nigeria who were not its registered students to take its examinations as external candidates (Kanwar, 2016). The University had earlier introduced similar examinations in other countries in Asia, North America, and an African country, Mauritius, in accordance with the provisions of its Charter. This gesture by the University of London marked the watershed for not only ODE but also the advancement of university education in Nigeria. This was widely acknowledged, such that while contributing to the debate on the provisions of a legal instrument for the establishment of University of Ibadan in 1962, Honourable B. U. Nzeribe, Member of the Federal House of Representatives of the First Republic of Nigeria, stated that:

> *One of the virtues of the University of London is its comprehensive system of teaching and awarding external degrees. Many Nigerian leaders today, and for that matter, people from various parts of the Commonwealth, could not have risen to their positions but for the benevolence and the generosity of the examining Council, and the Senate of the*

University of London (Nzeribe, 1962, cited in Omolewa, 2010, pp.197−198).

Omolewa (2010) further observed that the University of London merely responded to the demand for university education by several Nigerians who did not have the opportunity to leave the shores of their country. Within that period, the Teacher Training Colleges that the Christian Missions established also became recruitment grounds for external students of the University of London. Two most important of such Colleges were St. Andrew's College, Oyo and the Church Missionary Society Teachers College in Awka, where the tradition for obtaining degrees by correspondence soon became very popular. There was conducive learning environment, a very high standard of educational provision and committed teachers. Lagos was the first and most popular centre for recruiting University of London's external students, partly because it had access to newspapers and periodicals that carried advertisements for the University's examinations. Moreover, Lagos had a larger concentration of well-paid workers willing to invest a part of their wages on tuition and examinations. From 1920, London examinations began gradually to follow the establishment of colonial administration and created its centres in Ibadan, Ijebu Ode, Abeokuta, Akure, Warri, Umuahia, Calabar and Port Harcourt (Omolewa, 1976; 2010, cited in Adesina, *et al*, 2018).

It is worthy to mention that prominent Nigerian leaders, such as late Chief Obafemi Awolowo, Nigerian nationalist and statesman, first premier of the Western Region, and Federal Commissioner for Finance, enrolled at the University of London in 1927 as an ODE student. He graduated with a Bachelor of Commerce degree before he later travelled to England to read Law. Alvan Ikoku, a prominent Nigerian educationist and political leader, Member, Eastern Nigeria House of Assembly and one of the 3 Representatives of the Eastern Region in the national Legislative Council in Lagos, also benefited from ODE. While teaching at St, Paul's Teachers' Training College, Awka, he earned his University of London degree in Philosophy in 1928. Afe Babalola, Lawyer and Founder of Afe Babalola University, Ado-Ekiti, obtained the 'A'

Level certificate of University of London. The London School of Economics admitted him later, where he received a Bachelor's degree in Economics via ODE. The Central Bank of Nigeria employed him with the certificate he obtained before he later travelled to England to read Law. The list of such distinguished Nigerians who benefitted from ODE is extensive (Omolewa, 2010). Other prominent Nigerians with ODL educational background include H. O. Davies, E. O. Ajayi (who obtained their University of London Degrees in Philosophy in 1927 respectively), and Mr. J. S. Ogunlesi (who also obtained a degree in Philosophy in 1933) (Salawu, 2017).

As Fagbamiye (2000) showed, the duration between the 1950s and 1960s witnessed the development and evolution of the Rapid Results College, Wosley Hall, Exams Correspondence College and Pitman's Institute as some of the most familiar correspondence schools in Nigeria. The tuition, which emerged from these colleges, prepared most private students for the GCE O/L and A/L examinations and the RSA examinations.

The University College, Ibadan, was established in 1948, as part of the University of London. Next was the establishment of the first indigenous university in Nigeria at Nsukka named the University of Nigeria in 1960, the year of Nigeria's independence from Great Britain. Then in 1962, the University College, Ibadan, became independent of the University of London as a full-fledged University. Some of the first generation universities in Nigeria, in addition to the conventional mode, embraced open and distance education to address the challenges of access and to uphold the principle of equity. For instance, Ahmadu Bello University, Zaria, according to records, was the first to employ open and distance learning mode at the tertiary level in Nigeria, when it began the **University of the Air** in 1972. The university used the mode to offer its Teachers In-Service Education Programme (TISEP) in 1975. In addition, one of the initial objectives of establishing the University of Lagos in 1962 was to train professionals to meet the country's labour needs. To achieve this, the University in partnership with the International Extension College in the U.K

established its own Correspondence and Open Studies Unit (COSU), which later mutated into the Correspondence and Open Studies Institute (COSIT) in the 1973/1974 academic session as a unit of the Continuing Education Centre (CEC), and later the Distance Learning Institute (DLI). Its mission rested on the recommendations of the 1961 Ashby Report, which was mainly

> *to provide opportunities for higher education for those already in some gainful employment; to widen access and diversify access to a flexible, innovative and cost-effective system of education to the ever increasing number of learners who either did not have the opportunity of university education or for some other reasons, could not engage in full-time studies* (Adedoyin, 2017, p.9).

Fagbamiye (2000) noted that COSU was the first deliberate attempt to start a distance education system as part of an institution in Nigeria using free radio broadcast regularly with the support of the Federal Radio Corporation of Nigeria (FRCN). However, by the close of 1988, state funding through the NUC ended, so likewise the free radio broadcast stopped when FRCN went commercial.

The University of Ibadan also embraced ODL. The Department of Adult Education initiated it in 1972, and presented it to the University Senate in 1976. When presented to the NUC, the Commission consented on the condition that it would be a self-sustaining programme. To be in line with global developments in ODL, the name was changed from Centre for External Studies to Distance Learning Centre (DLC) in 2002 (Adedoyin, 2017).

The establishment of the National Teachers' Institute (NTI) in 1978 as a dedicated institute for teacher education as spelt out by Decree No. 7 of 1978, advanced distance education programmes in Nigeria. Accordingly, the institute was to implement courses leading to the advancement, enhancing and certification of teachers (both unqualified and under-qualified) as pointed out in the relevant curriculum and applying distance-learning systems (DLS).

In pursuit of its national educational goals, and backed by an Act of the National Assembly (NOU Act of 1983), the Federal Government of Nigeria on 22nd July, 1983, established the National Open University (NOU) during the democratic administration of Alhaji Shehu Shagari. Its first appointed Vice-Chancellor was Professor Afolabi Ojo. The NOU Act of 1983 was to be a springboard for ODE in Nigeria. The institution was to run outreach programmes that could have enabled Nigerians to earn university qualifications and such other skills from the convenience of their homes and job environment. Unfortunately, before it could take off, the military usurped power in December 1983. A budgetary pronouncement by the then military head of state, General Muhammadu Buhari, suspended the NOU on April 25th, 1984 due partly, as the military junta claimed, to inefficient postal system, scarcity of trained work force to operate study centres, immense cost of infrastructural resources and high prospect of examination malpractices amongst students and instructors.

However, on January 1st 1988, the military regime of General Ibrahim Babangida established the University of Abuja as a dual-mode university with the mandate to run both conventional and distance learning programmes. However, there was a silent merging of the defunct NOU with the University of Abuja, which thereafter developed into the nucleus of the Centre for Distance Learning and Continuing Education (CDLCE) created in February 1990 as a dual mode institution. In fact, the University of Abuja Decree 110 of 1992, as amended, requires that the CDLCE should: "Provide Nigerians with opportunities for improving their academic standards through distance learning part-time courses, sandwich programmes and continuing education centres". The University of Abuja was, indeed, the first university in Nigeria to assume such dual mandate from inception, and this role identifies the university to date.

Starting from 1992 to 2002 there emerged an age of satellite campuses such that most, if not all, universities in Nigeria during this time developed and operated part-time or outreach education programmes on satellite campuses and study centres in every main

town. Their consultancy service units administered the outreach programmes as a way of generating internal revenue for them. However, the questionable academic standards of the programmes and the diverse degree certificates granted prompted the NUC, with Prof. Peter O. A. Okebukola as Executive Secretary to launch a verification exercise in 2001, which identified fifty-two (52) various satellite campuses across the country.

The Federal Government after receiving the report on satellite campuses submitted to it, agreed to shut down all the satellite campuses of all universities in 2002, and thereafter issued new stringent guidelines for establishing new ones. One of the workable options for replacing the proliferation of satellite campuses was to re-establish the NOU. The administration of Chief Olusegun Obasanjo consequently resuscitated and inaugurated the defunct NOU as the National Open University of Nigeria (NOUN) on 1st October 2002 with Prof. Olugbemiro Jegede as its pioneer Vice-Chancellor. The government did this in recognition of the essential role of ODE in mitigating the country's educational dilemmas and predicament, especially to fulfil its responsibility of providing more access to education for all (Adedoyin, 2017; Adesina, 2017; Jegede, 2016; NUC, 2014; Ramon-Yusuf, 2013; Omolewa, 2010; Aderinoye & Ojokheta, 2004; Ajadi, Salawu & Adeoye, 2008). Today, NOUN is the only Federal Government-established single mode university in Nigeria committed to quality open access to education through distance learning.

Distance and open education in tertiary institutions of learning received a further boost when the NUC also set up the Virtual Institute for Higher Education (VIHEP) in 2003 as part of the arrangement for the ultimate take-off of the National Higher Education Pedagogy Centre (NHEPC) in July 2004.

ODL Typologies: Contextual framework
There are two typologies of ODL, both of which could be mutually inclusive in operation (Peters, 2016), based on the following criteria:
   a. Institutional characteristics:

i. single mode
ii. dual mode
iii. mixed mode
iv. consortia/network models
v. virtual institutions

b. Use of technology: On this basis, Taylor (2000:2) identified five generations of distance education technology:
- 1st generation—the correspondence model
- 2nd generation—the multimedia model
- 3rd generation—the telelearning model
- 4th generation—the flexible learning model
- 5th generation—the intelligent flexible learning model

a. Institutional typology:

i. **Single mode institutions** are institutions founded to teach using only distance education strategies. Delivery might include some face-to-face interactions and teaching materials usually come in the form of print supplemented by multimedia technologies (audio, video, and computer). Their other characteristics include:
- dedicated/purpose-built institutions
- own custom-made rules, regulations and systems
- staff accept challenge, develop new expertise and create a different dynamic corporate culture

Examples of single mode institutions include:
a. Open University, United Kingdom (OUUK)
b. Indira Gandhi National Open University (IGNOU), India
c. National Open University of Nigeria (NOUN)
d. Open University of Hong Kong (OUHK)
e. Open University of Tanzania
f. University of South Africa (UNISA)

ii. **Dual mode institutions** are schools created to offer both conventional face-to-face education and distance education. Many begin as regular institutions and only thereafter start teaching using both modes of instructional delivery. The concept emanated from the University of London, which offers conventional and

external degree programmes. There are no detached units or academic departments dealing with distance learning programmes and campus-based teaching; the same academic and managerial staff administer both the campus-based and distance learning programmes to assure **"parity of esteem"** (Hope, 2005). However, there is much evidence from literature that people usually perceive distance education to be second best where there is **disparity** (*ibid*). University of Lagos, University of Ibadan, University of Nairobi, University of Botswana, and University of Zambia are examples of dual mode institutions.

iii. **Mixed mode institutions** present programmes using both face-to-face and distance teaching. It emanated from the 'convergence' of face-to-face and distance modes, and increasingly characterises organisations that were once 'single mode' or 'dual mode'. This design offers students an extensive choice of modes of study and maximises flexibility of location and pace of study. Examples include:

- **a.** Many universities in the UK
- **b.** Deakin University, Australia
- **c.** University of Mauritius and
- **d.** Zintec (Zimbabwe Integrated National Teacher Education Course).

iv. Consortia/Network models: Which comprises two or more distance learning institutions who take part in either the construction or delivery of programmes, or both. A unit coordinates the expertise of various institutions to facilitate academic transactions in this model. Examples include:

- ■ National Technological University, USA
- ■ Norwegian Distance Education
- ■ *Coursera*

v. **Virtual institutions:** This type combines the features of network model single mode institutions and depends entirely on ICT applications. Notable example is the African Virtual University (AVU) with headquarters at Nairobi, Kenya.

vi. The most popular distance learning design process is the **author-editor model** in which each course is based on a study

guide developed by an individual course writer. The study guide may be obtainable online rather than in hard copy where the Internet is accessible.

b. Technology typology: UNESCO (2002) found that development of distance education has been in four major phases, each with its own organisational form gained from the particular design of communication. They include:

Correspondence systems emerged at the end of the nineteenth century. The system is still the most generally practised design of distance education in less advanced countries. Interaction in the correspondence system is by letters and other printed or published documents sent through postal systems. It revolves around a study guide in printed word that may come with audio and video components such as records and slides.

Educational television and radio systems use different delivery technologies—terrestrial, satellite and cable television and radio—to send live or taped lectures to both individual home-based learners and groups of learners in distant classrooms. The system sometimes provide some face-to-face support. Some schemes allow limited audio or video-conferencing links back to the instructor or a moderator at a central place.

Multimedia systems encompass text, audio, video and computer-based materials, and often present some face-to-face learner support to both individuals and groups. In this method, adopted by open universities, teaching is no longer an individual's responsibility, but the job of squads of professionals. This system can disseminate developed programmes to vast numbers of learners living generally across an entire country.

Internet-based systems in which multimedia (textbook, audio, video, and computer-based) materials in electronic format are distributed to people through computers, along with access to databases and electronic libraries, and which enable teacher-student and student-student, one-to-one, one-to-many, and many-to-many communication, synchronously or asynchronously, through e-mail, computer conferences, bulletin boards, etc.

In line with the foregoing, and like we have pointed out, the second broad system of classifying ODL typologies is the technology or method used, marked off into distinctive 'generations' as spelt out under 'use of technology', the second point mentioned under 'ODL typologies' above (See Figure 2 for these generational advances). In this regard, **Vikoo** (2012) showed that the **first generation** or **correspondence model** (**CM**) that Taylor (2000:2) identified began in the late 1800s. Students and teachers communicated through writing and postal mail. This form of distance education is still possible now through the Internet's e-mail service instead of the postal mail, referred to derogatorily as 'snail mail', to explain its slow speed when contrasted with the fast speed of the Internet (Charmonman, 2004).

The **second generation** or the **multimedia model** (MM) of distance education was the Open University, created in the 1970s. The British Open University, established in 1969, presented her courses via radio and television. The notable distinction between an *Open University* (also called *virtual university* or *university without walls*) and conventional universities is in the mode of teaching (Jegede, 2006). Adopting the doctrine of 'anyone, anytime, anywhere' by open universities as Neil (1999) noted, implies that:

    a. anybody may enrol in courses without considering previous experience or education

    b. a student can enter and complete a course without time constraints and course work and study is served anywhere the student chooses

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┌──────────────────────────────────────────────────────────────┐
│ Fifth generation (Internet distance education model, IDEM)     │
│     ▪  Interactive multimedia (IMM)                            │
│     ▪  Internet-based access to www resources                  │  ↑
│     ▪  All facilities of the Internet                          │
└──────────────────────────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│ Fourth generation (Web-based learning model, WLM)              │
│     ▪  Interactive multimedia (IMM)                            │
│     ▪  Internet-based access to www resources                  │  ↑
│     ▪  Computer-mediated communication                         │
└──────────────────────────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│ Third Generation (Telelearning model, TM)                      │
│     ▪  Audio teleconferencing                                  │
│     ▪  Videoconferencing                                       │  ↑
│     ▪  Audio graphic communication                             │
│     ▪  Broadcast TV/radio and audio teleconferencing           │
└──────────────────────────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│ Second generation (Multimedia model, MM)                       │
│     ▪  Print                                                   │
│     ▪  Audiotape                                               │  ↑
│     ▪  Computer-based learning (e.g. CML/CAI)                  │
│     ▪  Interactive video (disk and tape)                       │
└──────────────────────────────────────────────────────────────┘

┌──────────────────────────────────────────────────────────────┐
│ First generation (Correspondence model, CM)                    │
│     ▪  Print                                                   │  ↑
└──────────────────────────────────────────────────────────────┘
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Figure 2: Five generations of distance education models
(**Source**: *EDUCAUSE*, 2006:185 cited in **Vikoo**, 2012:31)

The **third generation** or **tele-learning model** (TM) of distance education, which began in the 1980s, utilises videotape, broadcast and satellite systems. Large institutions like the US Department of Defence invested huge funds to build satellite systems and networks for training. In 1981, the US Public Broadcasting Service (PBS) and Adult Learning Service (ALS) collaborated with 190 public television stations and about 2,000 Colleges to offer over 80 telecourses with enrolment of 470,000 students (Charmonman & Bunchua, 2006).

The **fourth generation** or **Web-based learning model** (WLM) of distance learning is so termed because it is Web-based or takes place through the Internet. Thus, business travellers and students in isolated areas can use interactive classrooms no matter where they are and what time it is. That is, this model is very

flexible in its course delivery and hence its alternative name—the **flexible learning model (FLM).**

The **fifth generation** of distance learning is termed the **Internet distance education model** (IDEM). It reduces the cost of online learning significantly thereby increasing opportunities and access to education and training significantly worldwide and conveys a quantum leap in economy-of-scale-related cost-effectiveness. It can apply extant and any modern tools of the Internet.

Table 1: Four types of e-learning/ODL models

Proportion of content delivered online	Type of courses	Typical description
0%	Traditional	Course with no online technology used—delivery of content is in writing or orally.
1 to 29%	Web-facilitated	Web-facilitated course uses Web-based technology to facilitate what essentially is a face-to-face course. Might use *Blackboard* or *WebCT* to post syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course blends online and face-to-face delivery. Substantial proportion of content delivered online, typically uses online discussions, and typically has some face-to-face meetings.
80+%	Online or e-learning	A course where delivery of the vast bulk of the content occurs online. Typically has no face-to-face meetings.

Source: Allen & Seaman (2014). *Grade change: Tracking online education in the United States*, Babson Survey Research Group and Quahog Research Group. (p.6) Retrieved from *https://www.onlinelearningsurvey.com/reports/gradechange.pdf*

One significance of Figure 2 and Table 1 is that e-learning is the most current variation or form of distance learning arrangements. The continuous transformations in distance learning from conventional courses that do not apply online technology and convey content in writing or orally, have long become obsolete. Unfortunately, this is still the order of the day in Nigeria and many developing countries as against online or e-learning that transmits 80–100% of content online and generally involves no face-to-face contact. Organised courses are (51 percent or higher) **hybrid** (Tabor, 2007), or **blended** (Vaughan & Norman, 2010) or 100% complete online instruction.

It is possible to identify particular characteristics of face-to-face, distance and online learning that determine the different requirements for effective operation of labour and materials to achieve their goals. These are summarised in Table 2.

Table 2: Key characteristics of different instructional delivery modes

Face-to-face education (Teacher-centred)	Distance education (Resource-centred)	Online education (Learner-centred)
1. Instruction based on teacher performances	Instruction contained in materials	Instruction based on access, materials and interactions—all can be cumulative
2. Located in time, place and with fixed groups of people	Time and place more flexible	Flexible personal access, not limited in time or space
3. People are scheduled	Materials are scheduled	Asynchronous opportunities, choice determines
4. Ephemeral experience	Lasting resources	Ephemeral or lasting
5. High marginal cost limits scalability	High fixed costs requiring large scale operation	Variable fixed and marginal costs
6. Materials support teacher	Materials support learner	www-based resources produced just-in-time by (and for) teachers and learners

Source: Reproduced from Nunan, Reid and McCausland (2002:10)

Today, dedicated distance education universities and dual-mode providers (DMPs) continue to survive and fulfil their mission of broadening access to education for formerly deprived groups, but the ubiquitous presence of Internet-based technologies have destroyed the substantial divergences between distance, dual-mode and face-to-face education. MOOCs, providing full-scale interactive support and free access through the World Wide Web or new web technologies, are new advancements in distance education (Farrell, 2001).

Nigeria's brand of ODL

The NUC in its *Guidelines for Open and Distance Learning in Nigerian Universities* cited by Adesina (2015) informs us that the method of online course delivery recommended for the Nigerian University System (NUS) is termed **ICT-Enabled Supported Blended Learning (IESBL)** model. Adesina explains that there was consideration of the current state of physical, academic and infrastructural facilities in the NUS in choosing the IESBL model. For instance, it would have been rather unrealistic to adopt the UK model of ODL without duly considering the challenges of epileptic power supply, inadequate bandwidth, lack of enthusiasm for the use of technology, etc., prevalent in the NUS.

Adesina (2015:14) further explained that the Nigerian model of ODL, the IESBL, emphasises interactive texts (strengthened with other resources such as CD-ROMs, DVDs, USB sticks, e-books, simulations, tutorials, and computer-marked assignments, etc.) in teaching and learning. It is therefore a model that relies neither solely on face-to-face interventions nor on entirely online interactions. Rather, resources (course materials and learner support) drive it and have the following features:

a. Course material is central
b. Learning materials in mixed media format
c. Deployment of ICT
d. Face-to-face (f2f) interactions
e. Strong learner support
f. Formative and summative assessments and
g. Timely feedback

JUSTIFICATION FOR ODL IN NIGERIA

Higher education (HE)—the education and training at polytechnics, colleges, universities, etc.—is pivotal to human advancement. There has been and continues to be several international conventions to underpin and shore up this knowledge (Kuhn, 2011). In 2004, Professor Jim Taylor, then Deputy Vice-Chancellor of the University of Southern Queensland (USQ), one of the most innovative dual mode universities in Australia, moved even further

by asking, "Will universities become extinct in the networked world?" (Taylor, 2004). Taylor asserted that the present conventional methods based on traditional classroom instruction, studying, and a hierarchic, bureaucratic academic organisation could not meet the mounting need for higher learning in the knowledge-based society, and that universities must then adapt or suffer the fate of the dinosaurs—extinction.

To **justify** means to supply reasons why to do or not to do something is right and permissible, to prove the legality or otherwise of something. Therefore, the concern of this section is to establish whether it is reasonable, legal and justified to adopt ODL as an instructional delivery strategy in Nigeria. The concept of justification is one that calls for providing answers to many questions such as why, how, when, with what effect? (Salawu, 2017).

To discuss justification of ODL in Nigeria adequately, we need to inspect some relevant portions of Nigeria's *National Policy on Education*, and some other pertinent factors as our guide.

National policy on education and justification of ODL in Nigeria

The fundamental changes in the values domain of societies offer the impetus for altering educational goals. Most educational systems therefore change their (educational) goals to be more responsive to the needs of the society. **Recurriculation** is the act of evaluating, correcting, or modifying the curriculum of a given ODL course in response to learner and societal needs (Modesto & Tau, 2009). The changes in the goals of education are gradual rather than spontaneous because the transformation in societal values, goals and aspirations are also gradual except in times of political upheaval or revolution as was the situation in Russia in 1917 (Ivanov, 1993).

The most essential document in educational planning is a country's *national policy on education*, a nation's constitutional guidelines and provisions for education, based on her goals, objectives and developmental needs (Gbamanja, 1989; Awotua-Efebo, 1999). Thus, anything done in terms of educational provision

in a country, such as Nigeria, ought to be in tandem with its perceived national needs, goals and objectives as outlined in its national policy on education or else it will be illegal and unjustified.

The recommendations of the Phelps-Stokes Commission of 1927 and the National Curriculum Conference of 1969, revealed the inadequacies inherent in the colonial educational policy and the need to have an education policy that would be adaptable to the mentality, ability and socio-cultural environment of the people of Nigeria. Formulating a new national policy on education to cater to the yearnings, needs and aspirations of Nigerians did not happen until 1977. The objectives or goals of Nigerian education as stated in the sixth (2014) edition of the document include the following:

1. development of the individual into a morally sound, patriotic and effective citizen
2. total integration of the individual into the immediate community, the Nigerian society and the world
3. provision of equal access to qualitative educational opportunities for all citizens at all levels of education, within and outside the formal school system
4. inculcation of national consciousness, values and national unity and
5. development of appropriate skills, mental, physical and social abilities and competencies to empower the individual to live in and contribute positively to the society (FRN, 2014, pp.2−3)

The articulation of the goals of education in tandem with national objectives becomes a major criterion for determining the relevance of education and the "good life" it portends to the society. The Federal Government itself in its *National Policy on Education* (FRN, 2014) attests to the legality, justification and importance of distance education in Nigeria. According to Section 6, Unit 115 of this document, the goals of distance education 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 their workplace

- encourage internationalisation especially of tertiary education curricula
- ameliorate the effect of internal and external brain drain in tertiary institutions by utilising Nigerian experts as teachers regardless of their locations or places of work, and
- encourage life-long education (*ibid,* pp. 50–51)

In pursuance of these goals, Section 6, Unit 116 of the *National Policy on Education* (FRN, 2014:51) says that the Federal Government of Nigeria shall:

1. Ensure that programmes for open/distance education are equivalent in status to those offered by conventional face-to-face mode of delivery in the appropriate tertiary educational institution
2. Encourage and regulate open/distance education practice in Nigeria
3. Strengthen the existing coordinating agencies on open/distance education which shall:
    a. advise the government on the development and practice of open/distance education
    b. promote open/distance education nationwide in collaboration with the Federal, State and Local Government Education authorities
    c. ensure the maintenance of standards for open/distance education programmes in various institutions
    d. liaise with media houses, information and communication technology providers and other relevant bodies in enhancing open/distance education
    e. encourage private efforts and other non-governmental organisations in the provision of quality education using open/distance education
    f. encourage tertiary institutional participation in open/distance education

From the above it is clear that it is legal and justified to adopt ODL as the Federal Government of Nigeria recognises and enshrines it constitutionally as a mode of educational provision.

Other factors implicated in the justification of ODL in Nigeria
Adopting and deploying ODL delivery system in Nigeria is desirable and justifiable on several other grounds. These include:
1.   The need to provide education for all, lifelong and life-wide learning: Nigeria is a signatory to the 1990 Jomtien, Thailand, Declaration on Education for All (EFA). As we speak, achieving this goal is still far off. There is worldwide drive towards ODL because it is the fastest means of assuring lifelong learning, which is learning characterised by:
- a continuous lifelong activity
- a flexible, readily accessible mode
- development of a 'learning' or 'knowledge society'
- dealing with the continual adjustments in life

The need to provide lifelong and life-wide learning is the third index of indispensability of ODL in Nigeria as Jegede (2017) noted. Consequently, Jegede stressed that the need to manage daily existence successfully in today's life calls for making learning a continuing lifelong project, a sort of "cradle-to-the-grave" type of learning. Certainly, lifelong learning should turn into the rule rather than the exception as an instrument of making the entire nation to learn incessantly. He accordingly recommended that we should not consider lifelong learning as a privilege but a right and a compulsion for all people.
2.   Filling the gap created by the closure of outreach/satellite campuses: Outreach and satellite campuses mushroomed all over Nigeria over the years, especially the 1985–2000 period, with little regard for quality or resources. The result was a 'for-profit-only' education with less-than-desirable quality in terms of both programmes and products. In its wisdom, the Federal Government of Nigeria stepped in and ordered the closure of all satellite campuses, and banned the establishing of new ones in 2002 (Ogunleye, 2013). The ban affected several thousands of real and

potential "students". Such "students" can still undertake tertiary education studies by choosing the way of ODL. It is good for them, and it is necessary for the nation to enable them develop their full potentials through open and distance education.

3.   To provide cost-effective education: With increasing budgetary constraints to provide education, Nigeria requires an education delivery system that is cost effective. ODL is such a system. Distance education programmes, when properly planned, organised, manned and executed, are cost-effective to both nations and students on the long run. There is considerable saving on teachers/lecturers, buildings and textbooks because in an ODL programme the course materials would be the major teaching/learning resource. Teacher to student ratio is low, space requirements are minimal and a municipal facility expense is low.

4.   Improved economy of scale: Distance education programme lend themselves to economy of scale. That is, after meeting the initial capital outlay, developing and producing the course materials, unit costs decrease with expansion. Therefore, many new students can enrol at marginal additional cost and the more the students the lower the unit cost on the long run. This contrasts with expansion by conventional schools where cost grows in direct proportion to increment in student numbers.

5.   Flexibility of delivery system: Distance education programmes are attractive because of their flexibility. Learners study what they want, when and where they want it. Control over time and space is particularly valuable to those in full-time occupations and employment and those in remote areas. Eventually, synchronous learning has become possible with the introduction of e-learning.

6.   Maximum use of academic personnel: Distance education offers opportunity to maximise the use of high-level academic personnel who can teach larger numbers of students, especially after developing and distributing suitable distance learning materials.

7.   On-the-job teacher training: Teacher training is a particularly important area where distance education can work extensively. This includes pre-service training, upgrading of academic qualifications,

professional upgrading and in-service continuing training in particular subjects and topics without taking the teacher out of town. Using open and distance learning has proved further effective in other disciplines.

8.   Eradicating poverty through technical, and vocational education: Technical and vocational education play important roles, not only in contributing to advancement in productivity of the labour market, but also in assisting individuals to improve their employment prospects. The role of ODL in technical and vocational education is significant. Specifically, it allows a nation to:

   a. respond effectively to the increasing demand of working adults or any others who have difficulties in receiving training in conventional institutions due to rigidity or inflexibility and location of institutions

   b. offer opportunity for empowerment to those most deprived by existing provisions—the unemployed, the handicapped, women and ethnic minorities

Thus, there is no doubt that open and distance education would play significant roles in the poverty eradication efforts of government.

9.   Provision of national orientation and non-formal education: Non-formal education, national orientation and community development programmes are areas to deploy distance education in Nigeria. Distance education allows for dissemination of knowledge and information to target groups, particularly about government policies and activities thereby fostering better understanding of government's intentions. This will improve general understanding, reduce misconceptions and promote social and political harmony. It can also serve as a platform for promoting national ethics and values.

10.   Reaching the unreached: The *unreached* are people who live in obscure places without educational resources or are extremely impoverished to afford education (Kanwar, 2016). One aspect of the education gap in Nigeria is the discrepancy in opportunities in education for girls and women. For instance, data from the National Bureau of Statistics (NBS, 2017) reveals a huge gender gap in education in much of Nigeria. In Nigeria's northeast, with some of

the lowest literacy rates in the country and longstanding cultural beliefs, which deem education for girls a luxury, female students made up just a small portion of the total student population between 2010 and 2015 (see Figure 3).
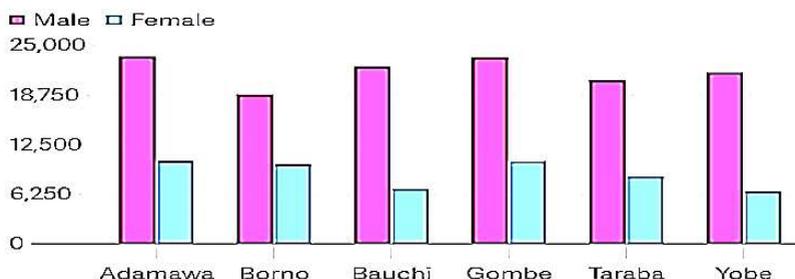
Figure 3: Students admitted to tertiary schools in northeast Nigeria (2010-2015) (Source: National Bureau of Statistics (NBS, 2017)**)**

Evidently, both formal and non-formal education programmes at a distance reach enormous numbers of women, including communities where women lack equal opportunities to take part in conventional forms of education and training. Efforts to tailor programmes particularly towards women in general, women in *purdah* in nomadic communities, disabled or handicapped people, prison inmates, etc., as target groups are bound to increase with ODL.

11.   Demographic trends: To address and handle the educational needs of the burgeoning population of Nigeria: Nigeria is the seventh most populous country in the world, one with escalating growth. From about 42.5 million people at the time of independence in 1960, Nigeria's population more than quadrupled to 186, 988, 000 million people in 2016. The UN also predicts that by 2050, Nigeria will be 399 million and the third most populous country in the world (UN projection). Notwithstanding the quantum leap in the number of universities and other tertiary institutions in Nigeria after independence in 1960 until date, such institutions have not been able to meet up the demands for admission spaces. In addition, that increase in number has not carried along with it

growth in competent workforce such as increase in number of qualified academic staff, etc. This scenario creates an unsavoury situation that burdens the few available staff with excess workload and low morale. ODL is the surest way of educating such increasing mass of people; it is the surest way of addressing and handling the educational needs of such a burgeoning population (Jegede, 2017). Looking at the large estimate of applicants seeking admittance to higher education, the potentiality for providing distance education through a dual-mode strategy is huge and worth attention as a policy move to enhance the **Gross Enrolment Ratio** (GER) in higher education (Kanwar, 2016).

Nigeria should not be an exception. Adopting ODL can improve this trend because distance education gives opportunity to maximise use of high-level academic personnel who could teach larger numbers of students.

12.   To increase access to higher education by reducing the deficit in the supply and demand for admission spaces in higher educational institutions in Nigeria: In response to demographic pressures Nigeria's higher education sector expanded over a relatively short time. In 1948, the country had only one university-level institution, the University College, Ibadan (UCI), originally an affiliate of the University of London. By 1962, the number of federal universities had increased to five—University of Ibadan, University of Ife, University of Nigeria, Nsukka, Ahmadu Bello University, Zaria, and University of Lagos.

The number of recognised universities in Nigeria grew tenfold from 16 in 1980 to 152 in 2017, as NUC reported (Ogunsola-Bandele, 2017). For the first few decades of growth, higher education capacity building was mainly in the public sector, driven by Federal and State governments. More dramatic growth occurred starting in the late 1990s, when the Nigerian government began to encourage the establishment of private universities. Since then, private institutions, which constitute about 45 percent of all Nigerian universities in 2017, proliferated at a rapid pace, from 3 in 1999 to 68 in 2017. About two thirds (⅔) of these institutions are estimated to be religiously affiliated schools.
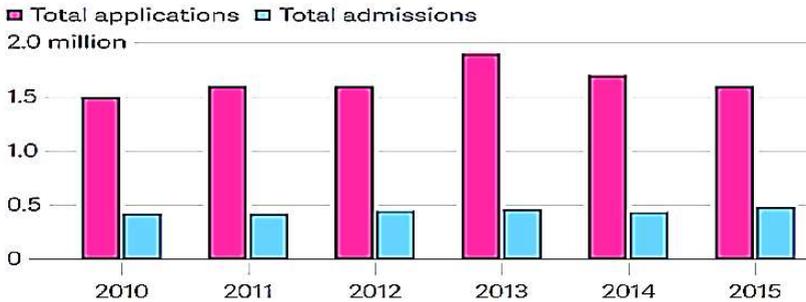
Figure 4: Applications/admission profile into Nigerian universities 2010−2015 (Source: National Bureau of Statistics (NBS, 2017)**)**

Despite the sheer number of private higher institutions now available, enrolment is still relatively low. Although statistics are difficult to get, the few Unified Tertiary Matriculation Examination (UTME) applications to private universities indicates that they account for only a little percentage of Nigeria's total tertiary enrolment, which UNESCO's Institute of Statistics (UIS) reported as 1,513,371 in 2011. Covenant University, Nigeria's largest private university, reportedly had a total enrolment of 6, 822 students in 2010/2011 (*ibid*).

According to data on the website of the Joint Admissions and Matriculation Board (JAMB), the federal government umbrella body that conducts examinations and places suitably qualified applicants into higher educational institutions in Nigeria, 1, 579, 027 students sat for the UTME examination in 2016. Out of this sum, federal universities received 69.6 percent applications, 27.5 percent to state universities, and less than 1 percent to private universities. Data from Nigeria's NBS (2017) and JAMB shows that between 2010 and 2015, of the 10 million applicants that sought entry into Nigerian tertiary institutions, only 26% gained admission. Figure 4 shows the application/admission profile into Nigerian universities between 2010−2015.
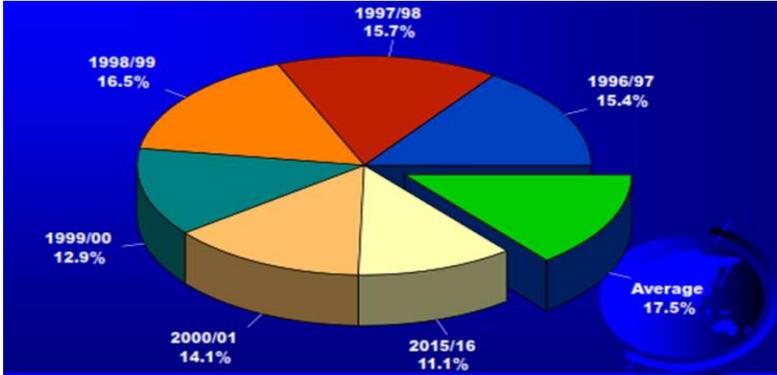
Figure 5: Deficit in the supply and demand for admission spaces in higher educational institutions in Nigeria 1996–2016 (Source: Jegede (2017:62**)**

According to the NBS (2017), nearly 75% of college applicants in Nigeria fail to get admission every year. The number of applicants now exceeds the number of available university seats by a ratio of two to one. In 2015, universities admitted only 415, 500 out of 1, 428, 379 applicants. Jegede (2017) illustrated this shortfall graphically in the supply and demand for admission into higher educational institutions (HEIs) in Nigeria, as in Figure 5.
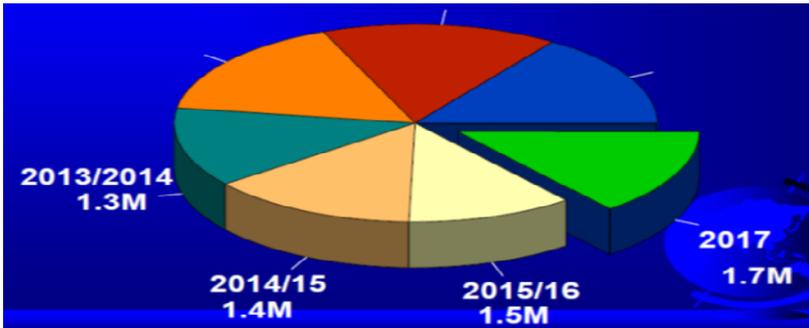
Figure 6: Demand for admission spaces in higher educational institutions in Nigeria 2013–2017 (Source: Jegede (2017:62)

In total, there are around 152 private and public universities in Nigeria, with a capacity to carry 600,000 students. For a country with 187 million people, 62% of them 24 or younger, that is

nowhere near enough. Figure 6 is a summary and graphic portrayal and depiction of more recent scenario of the demand for admission spaces in higher educational institutions in Nigeria.

The admission crisis continues to be one of Nigeria's greatest dilemmas in higher education, especially given the burgeoning growth in its youth population. Nigeria's system of education presently leaves over a million qualified college-age Nigerians without admission into tertiary institutions yearly (*ibid*). ODL programmes of studies offer and can give solution to millions of people desirous of spaces in higher institutions. It is no wonder then that many institutions in Nigeria are 'opening up' to be dual mode institutions.

13. **To curtail the perennial incidence of "out-bound students":** *Out-bound students* are students who emigrate out of their country to pursue their education in other countries, as opposed to "in-bound students" who seek their education within their home country (Ogunsola-Bandele, 2017).
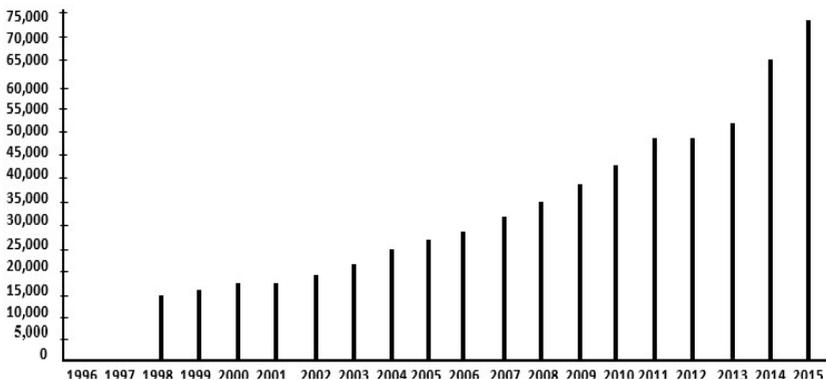
Figure 7: Number of out-bound Nigerian students between 1996 and 2015 (Source: NUC, cited in Ogunsola-Bandele (2017:6**)**

The current population estimate of about 187 million people lacking adequate arrangements to cater for them forces many Nigerians out of the country to seek for their educational "greener pastures" elsewhere. According to data from the UIS, the number of

Nigerian students abroad grew by 164 percent in the decade between 2005 and 2015 alone—from 26,997 to 71,351. Some of these students may have been constrained to leave the country because of their failure to get enrolled/admitted into any higher institution in Nigeria. This upsurge in out-bound students caused by the yawning disparity in the supply and demand for admission opportunities in HEIs in Nigeria leads ultimately to capital flight (amounting to billions of Naira) from Nigeria annually.

**14.   To eliminate consideration of age in admission processes:** Another factor on the need for ODL system in Nigeria is the assumption that most conventional universities exist to educate those who are at least 16-year-old within the collegial culture. However, what about interested applicants who are younger? The idea of "openness" in ODL negates and disregards age limitation by accommodating all aspiring learners. Thus, ODL opens up education in terms of age, time, place and pace!

15.   Need to respond to global application of technology in instructional delivery: Expanding convenience of access to the Internet creates a demand for modification in the conventional on-campus teaching paradigm. Online, web-based, delivery of information and interactions attracts attention of mainstream educators to the logic of distance education in a way that no other technology has done (Moore, 2000:3).

As a *force* contributing to social and economic advancement, ODL is rapidly turning into an accepted and pivotal segment of mainstream educational systems in both developed and developing nations, with particular emphasis for the latter. The curiosity among educators and trainers in applying new Internet-based and multimedia technologies*,* and by the acknowledgement that old-style ways of providing education need strengthening by innovative methods, if the *fundamental right* of all people *to education* is to be achieved prompted this expansion in part.

The globalisation of distance education offers sundry prospects for unindustrialized nations to achieve their education system-wide goals. Two primary factors have led to the eruption of curiosity in distance learning: the mounting requirement for

frequent skills improvement and re-education, and the technological progresses that have made it practical to teach more and more persons at a distance. Additional advantage of distance education is one for developing countries. As Judith Adler Hellman cited in Garrison (2011:20) states, "In the face of the pressure on these countries to join the global information economy, distance education appears to provide the opportunity to train more people better and at lower cost".

16.   Response to students' demands: In reaction to students' request for a more flexible and rich learning situations and in the face of ever-increasing expenditures and reduced government funding, the phenomenon of distributed or blended learning, which associates application of traditional face-to-face and online learning is emerging as a favourite choice globally. For instance, a study of US campuses issued in 2003 (Allen & Seaman, 2003:2) discovered that 81% of all US higher education institutions offer at least one completely online or blended course. Further, 34% of institutions provide fully online degree programmes and amongst public institutes, where the public good vs. public costs crisis is most intensely felt, 97% of institutions provide at least one online course while 49% offer at least one online course.

Substantial conventional universities are hurriedly transmuting themselves from single mode to dual mode universities, recognising the significance of distance education in offering students the best and most current educational resources obtainable besides the traditional teaching approaches they receive. The establishment of swelling number of open universities across the world suggests this development.

17.   Response to changes in the socio-economic context of higher education: Vicissitudes in the socio-economic setting of higher education compel universities to contest for revenue to sustain their operational expenses via a flexible conveyance of education.

For the student/learner ODL implies augmented access, flexibility, and blend of work and education. *For employers,* it provides great value and typically cost-effective specialised growth

in the workplace. It permits improvement of expertise, and amplifies output and growth of a new scholarship ethos. *For governments* the foremost prospect is to raise the ability and cost-effectiveness of education and training systems, to touch target groups with restricted access to education and training.

18.   The need to cushion the impact of globalisation: The realism of globalisation makes the time we live very ephemeral and transient. Dolence and Norris (1995) cited by Jegede (2017) noted the progression from the Industrial to the Information Age and advised that to survive organisations would need to turn from fixed, formula-driven systems to organisations that were "fast, flexible and fluid". Jegede (2017) therefore recommended the ensuing strategies as the step forward:

  i.   Lay a concrete base for education in the current century
  ii. Seek a cost-effective, economical, robust, and flexible mode to educate all
  iii. Be part of the global economy and use ICT for all aspects of our nation-wide and personal activities

19.   The need to provide knowledge as a commodity or the commodification of knowledge: Knowledge is the word! Social philosophers from Confucius through Buddha, Plato, Aquinas, Ibn Khaldun, Calvin, Newton, Rousseau, Comte, Mill, Marx, Gramsci and Nyerere to Wallerstein, Castro, and Castells all apportion a superior room to knowledge in their theories of development. Education for them is the bedrock for whatever design of advancement or progress one advocates (*ibid*).

This is palpable in the rapid and uncertain changes taking place on the world stage. The most crucial impact of the acceleration of history, and of the resultant globalisation, is the emergence of knowledge-based economies, a term beautifully caught in the following quotation from a World Bank report cited in Obanya (2004):

> *A knowledge-based economy relies primarily on the use of ideas rather than physical abilities and the applications of technology rather than the transformation of raw materials or the exploitation*

of cheap labour. It is an economy in which knowledge is created, acquired, transmitted, and used more effectively by individuals, enterprises, organisations and communities to promote economic and social development (p.4).

Knowledge economies rest on a concrete base of learning communities and learning organisations. Knowledge is both a decisive tool, and a prized produce in these social systems. However, commenting on the knowledge-based economy, Duderstadt (2001) cited in Jegede (2017), wrote that

> *There are increasing signs that our current paradigms for higher education, the nature of our academic programmes, the organisation of our colleges and universities, and the way that we finance, conduct and distribute the services of higher education may not be able to adapt to the demands of our time* (p.10).

Education should be the key to ensuring that Africa fits into the knowledge-driven world. The clarion call is for us to accept the challenge to ensure that education in Africa contributes to our competitiveness in a globalised world. That is where ODL comes in.

20.   To correct the limitations of conventional face-to-face institutions to meet societal needs. It is common knowledge that conventional face-to-face (F2F) institutions are replete with institutional, technological and regulatory encumbrances that inhibit their efficacy. Some notable impediments include the following (Okopi, 2016):

- Designed to cater for a fraction of available students
- Lacks swiftness to contain large inflow in student enrolment
- Inflexible managerial and operating arrangements
- Lacks promptness to adjust to global or societal demands for professional and technological needs of the society
- Teacher-centeredness

As anticipated, there is already a global acceptance and progressive application of ODL in providing virtually unrestricted access to educational services and in satisfying the diverse societal demands as delineated above. There is need to interrogate how and where future educational needs can best be satisfied. Does the conventional university, with its power in tradition, research, and scholarship, furnish us with the best hope? Alternatively, do open universities, with their outstanding aids to opportunity and equity, propose an arrangement of two separate university types, one fully committed to in-person education and the other to education at a distance? On the other hand, does the best answer lie somewhere between the two, or in both, with dual mode universities making a fresh assurance to the importance of teaching and learning, a pledge aided by the contributions of distance education and new partnerships between the two? (Croft, 1998).

Given the miserable state of educational provision in Nigeria, it is clear that the present arrangements in terms of resources and pedagogical approaches cannot meet the educational demands of the Nigerian population. We need to explore some radical alternatives to reach the large members of our nation who for one reason or another cannot get formal university education. Distance education appears to be an elixir, a panacea, in remedying this educational inequality. It is therefore justifiable for Nigeria to adopt and implement ODL to achieve her laudable national goals and be part of the league of modern states using ODL in resolving their socio-political and economic challenges. We advocate ODL for dealing with this headache of educational imbalance because it has capabilities for **large-scale education** or **massification of education** and it primarily supports individualised learning. ODL is a response to a growing demand to democratise and liberalise education, which the traditional method centred on the classroom cannot achieve (**Vikoo**, 2004; **Vikoo** & Kpolovie, 2010).

NOUN as a case study of the justification of ODL in Nigeria
Salawu (2017) presents the following "modest achievements" of NOUN as indices of justification for its establishment as an ODL

single mode institution, and which by extension also shows what other institutions in Nigeria can achieve if they go the ODL way:

- It has 77 established functional Study Centres across Nigeria
- Many prison inmates across Nigeria now have access to quality education at no cost.
- Use of ICTs for its activities—e-examination, e-learning platform, online admission, etc.
- Securing admission for a respectable number of Nigerian leaders, chiefs, politicians, youths, adults, women, and elderly individuals.
- Production of rich quality instructional media for use by not only NOUN students but also even lecturers and students in conventional educational systems.
- Turning out university graduates and post-graduate students in large numbers.
- Providing opportunities for Nigerians to pursue higher degrees in universities at home and overseas.
- As at the 2015/2016 academic session, NOUN had an overall student enrolment figure of 254, 676 active students distributed across the six geo-political zones in Nigeria as depicted in Table 3.

NOUN's student population figure of 254, 676 in 2016 makes it the largest university, the only mega-university, in West Africa based on population (Salawu, 2017). Yet no conventional university in Nigeria has as much active student enrolment figure or student population and geographical spread as NOUN (see Table 3). This demonstrates clearly the peculiar capacity of ODL institutions to expand access to educational opportunities.

Table 3: NOUN's enrolment data by geo-political zones in Nigeria 2015/2016

North-East	7,955
North-West	12,865
North-Central	36,294
South-West	73,363
South-South	62,326
South-East	61,873
Total	**254,676**

Source: Salawu (2017:8)

The number of Nigerian universities has increased significantly from 51 to 162 between 2001 and April 2018 (NUC, 2018), in response to rising demands for university education. Despite this increase, the gap between demand and supply of university education has not significantly improved. For example, the then 117 universities admitted only about 26.6% out of 1.5 million applicants in the 2011/12 academic session. In the 2012/13 session, with 128 universities and about 1.7 million applicants, only 15.7% secured admission. This shows that about 70% of qualified applicants were unable to gain admission into Nigerian universities annually. Meanwhile in 2016, NOUN had over 308,000-enrolment figure. This is by far higher than the enrolment figures of well over 20 private universities put together (Tenebe, 2016). Furthermore, with University of lbadan having about 33,000 students and Ahmadu Bello University, Zaria, having about 40,000, in 2016, the enrolment capacity of NOUN exceeded the total carrying capacity of the five first generation universities in Nigeria considerably. On the average, the initial carrying capacity of each of the newly established 12 Federal universities was 350 students. This meant a combined total enrolment figure of 4,200 students, a number that could easily be absorbed by any of the programmes of the existing Distance Learning Centres of the eleven dual mode universities currently in the Nigerian university system (NUS). This affirms the potential of the ODL mode in tackling the access issue in the NUS (Adesina, 2017; Adesina, *et al*, 2018).

What is your own justification?
  a. Is it internally generated revenue (IGR)?
  b. Is it capitalising on university brand name?
  c. Is it genuine concern for limited places in the academic programmes in your university?
  d. Is it social imperatives?
  e. Is it band wagonisation?

The prevailing situation leaves one in no doubt that ODL is the way to go not just for now but also for the future. Managers of

conventional universities should realise this and make structural adjustments to meet the new challenges. The big issue therefore is not about the justifiability and viability of ODL in delivering education, but whether Nigeria has the political will, human and infrastructural capability to build and sustain the system.

ESTABLISHING AN ODL CENTRE IN AN EXISTING INSTITUTION

To support both learners and teachers serving in the distance learning system, dual mode institutions frequently create a specialised **Distance Education Unit (DEU)** or **Distance Learning Centre (DLC)**, which operates as a storehouse of prevailing knowledge of the concept and process of distance education. There were eleven NUC-approved DLCs in Nigeria as at May 2018 (Adesina, *et al*, 2018) namely:

a. Distance Learning Centre, University of Ibadan
b. Distance Learning Institute, University of Lagos
c. Centre for Distance Learning and Continuing Education, University of Abuja
d. Centre for Distance Learning, University of Maiduguri
e. Centre for Distance Learning, Obafemi Awolowo University, Ile-Ife
f. Centre for Distance Learning, Modibo Adama University of Technology, Yola
g. Ladoke Akintola University of Technology Open and Distance Learning Centre, Ogbomoso
h. Distance Learning Centre, Ahmadu Bello University, Zaria
i. Lagos State University Open and Distance Learning Centre, Ojo and
j. Centre for Distance Learning, Joseph Ayo Babalola University, Ikeji-Arakeji

The DLC, also called Distance Education Centre; Virtual Campus/Centre/University; e-Learning Centre; Computer Enhanced Learning Centre; Open, Distance and Electronic Learning (ODeL) Centre, would be administratively liable for efficient handling of the institution's DE activities (Jegede, 2017).

The fundamental processes and strategies in establishing a DLC include (*ibid*):

1. Generating the concept or idea
2. A study tour of similar institutions and related organisations
3. Development of concept and blueprint
4. Approval by the VC and presentation to University Senate
5. Ratification by University's Governing Council
6. Seeking approval of the regulatory body (NUC, professional bodies, etc.)
7. Carrying along the entire institution

Point number 6 above is very central to the entire process. It involves getting the programme **accredited** (for a programme that has not achieved that status in the conventional system) or having a **resource verification** (if the programme scheduled to run in the ODL mode is present and accredited already in the conventional system of a dual mode university). Resource verification simply involves ascertaining if the intending dual mode university possesses the requisite human and material resources for the ODL mode. The NUC requires that a DLC should stipulate explicitly such materials as part of its "ODL Policy Document". Table 4 is a template the NUC supplied in its *Main features of a standard ODL Policy Document* (2016) regarding some pivotal human and material resources required for the accreditation/resource verification of a proposed ODL programme in Nigeria.

Table 4: Main features of a standard ODL Policy Document (NUC, 2016)

Issues	Features	Comments
1. Governance and administration	• Formidable governance and administrative structure. • Governing Board consisting of persons with relevant experience in ODL headed by the Vice-Chancellor or his representative. • Distance Learning Centre Management	• Make clear statements on the proposed Distance Learning Centre (DLC). Details should include specification of the constitution/membership of the Governing Board of the Centre. It should consist of persons with relevant experience and knowledge of Distance Learning, headed by the Vice-Chancellor or his representative. • Make clear statements on the leadership of the Centre, which a Director of Professorial cadre should head. Two Deputy Directors (Administration and IT Learner Support) should support the Director. • The university should design a comprehensive

	Board headed by a Director of Professorial rank with relevant ODL experience and knowledge. • Two Deputy Directors with requisite ODL knowledge and experience. • Comprehensive organogram of the Centre.	organogram displaying components of the Centre, and indicating how they link administratively with each other and the rest of the university.
2. **Vision, mission, philosophy and objectives of the Centre**	• Reflection of the parent university's vision and mission. • Accessibility. • Flexibility. • Opportunity for lifelong learning.	• Express clearly the vision and mission of the proposed Centre to reflect the elements of flexibility, accessibility and lifelong learning. They should be in tandem with the parent university's vision and mission. • State clearly the philosophy and objectives of the proposed Centre to include the issues of accessibility, flexibility and lifelong learning.
3. **Course materials development and acquisition**	• Design and development plan. • Composition of team. • Mixed media format. • Timelines and deliverables.	• Make clear statements on the various stages the university will adopt in the development and distribution of course materials from the content development stage to production and roll out for the distance learners. • Make clear statements on the constitution/composition of the team for the development of quality course materials. The course materials development team should consist of subject matter expert(s), instructional designers, ODL experts and a language editor. • Make clear statement(s) on the development and production of quality course materials in the required mixed-media format (hard print, electronic, on-line, off-line, flash drive, CDs, etc.).
4. **Open educational Resources (OERs)**	• Types • Usage • Regulations • Tools for identification • Criteria for selection	• The University should state clearly how it intends to source for and adopt Open Educational Resources (OERs) for the distance learners to supplement the developed course materials. • The statement should include the various types, the usage, the sources and the tools for the identification of the OERs.
5. **Course delivery modalities**	• Technology infrastructure • Print media • Interactive	• Make clear statements on how the Centre intends to deliver courseware to distance learners. • Standard ODL delivery modes include: a. The combination of virtual classrooms

		with audio/video and texting facilities (technology infrastructure);
	multimedia	**b.** Courseware well written according to ODL format (print media); and **c.** By using digital media such as CDs, DVDs, audio and video conferencing (interactive multimedia).
6. **Staff recruitment, retention and progression**	• Recruitment • Projected staffing structure • Professional development • Career progression • ODL qualifications	• The university should make clear statement(s) on staff recruitment and projected staffing structure (all cadres and categories) including proportion of staff with validated ODL qualifications that are core staff of the proposed Centre. • The staffing structure should take cognizance of the requirements for academic and non-academic staff who are core staff of the proposed DLC. • Stipulate also a well-defined pathway for professional development and career progression (for all cadres) up to the professorial cadre in the case of academics. • There should be administrative and technical staff with validated experience.
7. **Learner support**	• Robust mechanisms. • Academic learner support (synchronous and asynchronous) • Social learner support.	• There should be clear policy statement(s) on learner support mechanisms for ensuring that distance learners receive support academically and socially throughout their learning journeys. • There should also be clear policy statement(s) on the provision of synchronous and asynchronous academic support to distance learners including the following: **a.** a robust dedicated functional ODL portal; **b.** a Computer-Based Test (CBT) Centre with a minimum of 500 Internet-ready work stations; **c.** close user group mobile facility; **d.** radio station with online broadcast enablement; **e.** Video-teleconferencing facilities; **f.** multimedia learning resources including smart board; **g.** information, advice and guidance; **h.** minimal periodic face-to-face interaction, and **i.** Assessment and feedback mechanisms.
8. **Physical/ infrastructure development plan**	• ICT infrastructure. • Logistics/warehousing	• There should be clear policy statement(s) on the provision of physical and infrastructural facilities for the proposed DLC. These should include: **i.** ICT infrastructure: Adequate provision of a physical library/e-library, a hall with at least 500 Internet-ready work-stations for computer-based testing, video conferencing

		facilities, recording studio, audio-visual systems and smart boards dedicated exclusively to the DLC's use; and
		ii. Logistics/warehouse: Detailed strategies for storage/ware-housing of course materials and other learning resources including logistical arrangement for distribution of electronic and printed learning resources.
9. **Learning resources development plan**	• Constitution of Course Materials Development Team • 70% availability of course materials • Timelines and deliverables	• The proposed Centre should design a Course Materials Development Plan and constitute a team of experts (subject matter experts, instructional designers, IT specialists and experts in ODL) for the development of quality course materials. • The Course Materials Development Plan should take cognizance of the fact that at least 70% of course materials must be developed in the mixed-media format for any course or programme to be considered for approval by the NUC. • Provide timelines and deliverables in the Course Materials Development Plan. The aforementioned should be reflected in the proposed Centre's ODL Policy document (i.e. from content development stage to production and rollout)
10. **Degree of autonomy**	• Funding • Sharing of revenue • Financial independence • Academic independence	• Indicate clearly the degree of autonomy of the proposed DLC including policy on sharing of revenue by the Centre and the university to ensure the effective maintenance and sustainable development of the proposed Centre. • The financial independence of the Centre is also crucial to its well-being and qualitative development. Consequently, a level of financial autonomy is required for the Centre's operations. Spell this out clearly in the institutional ODL policy document, including the centre and the formula between the centre and the University administration. • It is necessary to reiterate that the guarantee of a steady stream of funds to the DLC, its recurrent and capital needs, is a critical factor in the operation of a DLC that will offer quality educational services to its distance learners. This is achievable generally, by ploughing back a significant proportion of revenue generated by the DLC into its operation. In this regard, the Commission recommends a sharing formula of at least 60:40 in favour of the proposed Centre. • The Centre should be completely independent of the University and exempt from the disruptive effects of incessant industrial strikes by ASUU

The NUC (2016) document reproduced above is not sacrosanct; the expectation is that universities will use it as a template on which to build policy documents that will be consistent with their institutional aspirations and mission. Besides an "ODL Policy Document", a proposed DLC shall equally present an "Action Plan", which should stipulate what it is doing or will do with respect to fulfilling the tenets of its policy document.

Role, focus and mission of DLCs

ODL organisations may have several decentralised "Study Centres" within and outside the State where the mother institution or DLC is situated. However, the NUC in Nigeria frowns at dual mode universities establishing "Study Centres" because of the fear they can easily transmute into "Satellite Campuses", as proscribed in 2002. The NUC prefers that such institutions should rather have "Resource Centres" or "Liaison Offices" that could cater to the demands of their clientele at their various stations. Only the National Open University of Nigeria (NOUN), owing to its essence as a unimode ODL institution, has permission to create "Study Centres" in the strict sense of the term (Peters, 2016). The DLC or "Study Centre" is the implementation point or the cutting edge unit of a DLC, "where things happen", as we would say. The following are some of the obligations of such centres:

1. Gives an approach of instruction characterised by separation of teacher and learner in time and/or place for most of the educational enterprise, mediated by technology for delivery of learning content. It may contain, for example, face-to-ace interaction for learner-teacher and learner-learner interaction, arrangement of two-way didactic communication and economies of scale.

2. To present a corresponding educational process with a focus on satisfying a compelling social demand for education on a large scale in places with improperly

established educational framework or where a current structure was elitist and closed.

3. DLCs give vent to silent course materials.
4. Enrolment of learners.
5. Provides learner-support services; learners may pass or fail because of the support a DLC provides or does not provide.
6. Helps in improving perception of the organisation.
7. DLCs make open learning reach the grassroots ultimately.

Resourcing ODL and Distance Learning Centres (DLCs)
That one cannot make bricks without straw is an infallible maxim. Similarly, one cannot effectively teach or learn without relevant teaching and learning resources (**Vikoo**, 2003; 2015; 2016). This section is devoted to issues bothering on how to provide various types of resources required to enable ODL institutions/DLCs perform their functions. We use the term **resources** here in its generic sense to include all that institutions and Centres running ODL programmes require to provide functional and qualitative service delivery to their clients. **Resourcing** is the term used in describing the process of providing the needed resources for ODL/DLCs (Salawu, 2017; Ogunshola-Bandele, 2017). The term **teaching and learning resources** subsumes all types of resources needed to facilitate achievement of the goals of education. These include *human* and *nonhuman* or *material* resources (**Vikoo**, 2017).
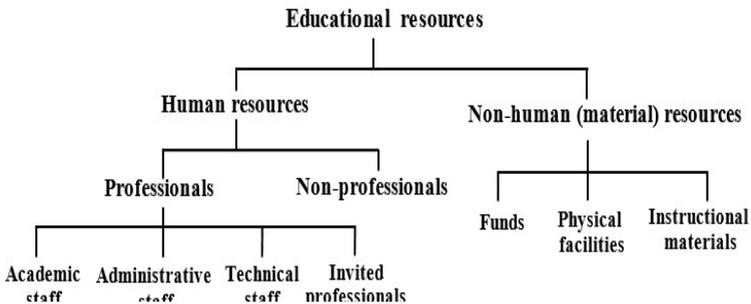
Figure 8: Types of educational resources in a school system
(Adapted from Vikoo, 2017)

Human resources are the different categories of personnel that provide various services in the school system. Using popular parlance, we can simply dichotomise the human resources in a school system into **academic** or **teaching staff** in contrast to all other types of staff that do not teach and who are accordingly lumped together and called **non-academic** or **non-teaching staff** (Ebong & Agabi, 2004). However, using *academic qualification*, *job description* and *residency* as criteria, we on our part can classify human resources (see Figure 8) as comprising the following types of personnel:

1. **Professionals:** These include:
    a. **Specialists** in specific school subjects like English language, Mathematics, Chemistry, etc. They are professional teachers with teaching qualifications. These **subject matter experts (SMEs)** are the **teaching** or **academic staff** engaged directly in the teaching and learning process in the school system.
    b. **Highly skilled and experienced staff** such as Registrar, Bursar, Librarians, Guidance Counsellors, Typists, etc., that provide administrative and other services. The primary duty of these **administrative staff** is to facilitate the day-to-day running of a school, such as an ODL programme.
    c. **Technical staff** who are engaged to provide services that are not only technical but relate directly to achieving the teaching-learning outcomes of the school system. They include Laboratory and Workshop Attendants, Web designers, etc.
    d. **Invited professionals** such as medical doctors, lawyers, business executives (like managers and directors of companies) and other such resource persons. Technically, these professionals are outside the school system, but they also help to educate learners when they receive invitation to present talks and seminars on choice of career and other educational issues.

2. **Non-professionals:** A school system engages these staff for duties that do not have direct bearing on achieving its teaching and learning objectives. This does not mean that their functions are unimportant, it only means that achieving the goals of teaching and learning is largely possible without them; their services only support the teaching-learning process indirectly. They include cleaners, gardeners, drivers, messengers, clerks, cooks/stewards, and so on, who lack professional skill of the job they do, because their work does not require long, intricate and specialised training.

Material or **non-human resources** subsume the following types of resources:

i. *Funds*: These are financial/fiscal resources required to acquire all other resources.

ii. *Physical facilities* which include:
   a. buildings, such as classrooms, lecture theatres, laboratories, auditoria, etc
   b. furniture, such as chairs, tables, book shelves, etc
   c. play grounds, such as football field, lawn tennis courts, etc

iii. *Instructional materials* or *educational media*, which are tools and devices through which people transmit and obtain stimuli or information. They are materials that can be used to record, store, preserve and transmit or retrieve information. Therefore, they refer to all forms of information carriers.

In Nigeria, uni-mode distance learning institutions presently have a model that entrenches centralisation of authority at the headquarters and establishing study centres all over the country. This is typical of the National Open University of Nigeria (NOUN) and the National Teachers Institute (NTI). On the other hand, there are dual-mode institutions that establish DLCs as semi-autonomous units of their central university systems.

Jegede (2017) suggested the following principles to guide proper resourcing, effective and efficient management and administration of ODL institutions and DLCs:

1. Administrators should recognise the fact that a DLC is a mini-university that can grow quickly to 'swallow up' the main university.
2. Potential of a huge student population.
3. The academic office must be prepared to work 24/7 if need be. ODL staff may require performing two to three times the volume of work staff in conventional institutions do.
4. A DLC should run as a business enterprise with a customer/ service front end.
5. A DLC should get a semi-autonomous status.
6. Management should present situation or progress report to the VC on a quarterly basis or at agreed intervals.
7. The administrative staff of an ODL system must be highly competent with background knowledge in ODL systems.
8. A visitor information and call centre must be central to all its functions
9. An ODL system must have a business and industry orientation to financial matters—transparent and flexible.
10. Customer service must be exceptional.
11. Highly effective and efficient public affairs and media unit.

Salawu (2017) and Olowola (2017) on the other hand, explained that resourcing a DLC involves three components that are needed to guarantee high quality distance education:

i. human resources
ii. infrastructural resources and
iii. capital resources

Human resources: DLCs typically include professionals in educational design and technology who would be liable for communicating with Faculty and tasked with constructing and transmitting courses to all students. There is need to have qualified and well-trained personnel in ODL to satisfy the hopes of stakeholders. However, to give up the administration of ODL/DLCs

entirely for the limited number of academics who are **ODL-compliant**, i.e. with sound knowledge in ODL in Nigeria, is impractical to say the least. We particularly endorse that non-professionals privileged to work at ODL institutions/DLCs should undergo short courses, and attend seminars, conferences, and workshops at local, continental and international levels as part of DLCs' capacity building policies in whatever form. Table 5 displays some of the basic personnel needed at a new ODL Centre.

Table 5: Core staff needed by a Distance Learning Centre

Title of Staff	Title of Staff
Director (1)	Instructional Designer (3)
Assistant Director (1)	Interactive Media Developer (3)
Administrative Secretary (1)	Learning Technician (3)
Finance Officer (1)	Editors (3)
Library Officer (1)	IT Specialists (3)
Quality Assurance Officer (1)	Administrative Staff (According to NUC requirement)
Programme Coordinators (1 per programme)	Course Coordinators (1 per programme)
Academic Staff (According to NUC requirement)	Instructional/Tutorial Facilitators (3)
Course Writers (3)	E-Tutors (2 per course, at least)

* Figures in parentheses represent minimum number of staff a DLC requires initially.

We can deal better with the auxiliary issue of quantity of staff for DLCs by applying the NUC's prescription and instructions for Nigerian universities intending or proposing to be dual mode. That is, academic staff mix-by-rank, for instance, should satisfy NUC's guideline of Professorial cadre: Senior Lecturers: Lecturer 1 and below in the ratio of 20:35:45.

For comparability of quality and standard,

a. Staff should possess appropriate skills *vis-a-vis* subject and ODL pedagogy, i.e. they should be ODL-compliant
b. Student advisers should be accessible for information, assistance and guidance (IAG)
c. There should be appropriately trained personnel for programme administration, assessment and resource generation, and tutor monitoring—normally a minimum of

six academic staff for each academic programme but staff may also have links with other programmes.

d. There should be a minimum of two administrative personnel for not more than a cluster of four academic programmes.

e. The institution should have the capacity to express technical support (in-house or outsourced)

f. Each study centre should have personnel (with at least a Senior Lecturer) in conformity with national policy including IT support staff.

g. Marking and assessment should meet global standards

h. Feedback on assignments and examinations should be prompt (within 3 weeks and within 10 weeks respectively) and should indicate areas of students' deficiency, strengths and proper corrections.

Infrastructure: A condition where just any building or vacant space is presumed suitable for ODL/DLC is deemed improper considering the different departments at the registry, programmes to offer, staff population, facilitation, auditorium (auditoria), e-examinations, laboratories, practical work in science, etc. In as much as a DLC can hire buildings to start initially, however, the conditions worthy of consideration in making a decision remain sacrosanct.

Jegede (2017) identified the following as some of the basic infrastructural needs of an ODL Centre:

■ A central stand-alone building
■ Academic block
■ Laboratories and libraries
■ Theatres
■ Radio and TV stations
■ Call centre facilities
■ Road networks on campus/centre

Capital: ODL operations are usually highly capital intensive especially at the very beginning. This is much more so if the centre started from the scratch, with no human and

infrastructural resource as "inheritance" from the parent university. A huge initial take-off grant is needed to kick-start the operations of an ODL institution in terms of renting a building or to construct a new one, recruiting and paying staff, developing course materials, purchasing furniture and vehicles, travelling expenses, training for new staff and diverse other activities. On the long run, however, with proper planning, organisation, and execution, ODL system is cost effective to both the nation, institution and students.

REVENUE AND COST STRUCTURES OF ODL INSTITUTIONS

Government priority to education is still very low, while funding of tertiary education is declining on a yearly basis. This has compelled most universities to review their operational activities by embracing distance learning to boost their internally generated revenue (IGR) to complement their existing revenue base (Feruke, 2017).

The major sources of revenue and funding available to ODL institutions in Nigeria include the following (*ibid*):

1. Government grants and subsidies
2. Students' fees and other users' charges
3. Community contributions (often in kind)
4. Sales of materials and other services
5. Donations from private sector organisations and bodies
6. Grants from non-governmental organisations (NGOs)
7. Grants from international funding agencies

Government ways of funding ODL: Government supports funding of ODL through the following means:

1. Operational expenditure
2. Capital expenditure
3. Development of study and course materials
4. Project-based funding
5. Provision of facilities
6. Secondment of staff
7. Loans, scholarship and bursaries to students to cover their tuition and other fees

Students' fees and its management: There are two types of students from whom ODL institutions do earn part of their income:

- Prospective students and
- Returning students

Prospective students are yet-to-be-admitted candidates who are seeking admission into any ODL academic programme of their choice. Revenue comes from them and accrues to the ODL institution when they:

a. Make enquiries
b. Obtain application forms
c. Fill the form online and obtain instant admission
d. Proceed to centre of choice for screening
e. Obtain matriculation number at the centre and make initial payment. This is true and applicable for undergraduate and postgraduate students.

Conversely, **returning students** are already-admitted and matriculated students in an institution. They are required to:

i. pay a stipulated amount for registration purposes at the beginning of each semester
ii. pay for courses and examinations to enable them partake fully in the semester activities

The **bursary department** is the unit of the university concerned with generation, disbursement and general management of its funds.

Table 6: Common online course development costs

Expenditure	Description
Materials	These include course syllabus or outline, textbooks, course materials, texts with Web-based content, reference materials, audio, video, simulations, and virtual reality.
Staffing	Includes staff for instructional design, content development, text authoring, software development, multimedia design and production, course-specific development, content integration and testing, post-test modification and training.
Staff equipment	Computer and software provided by the institution or staff.
Copyright clearance	Direct negotiations or outsourced.

Material production	Text, audio, video, graphics and software production including staff time and supplies.
Annual revision of materials	New assignments, examination questions.
Development testing	Payments to course testers, general costs of developmental testing.

Source: Meyer, 2006 cited in Feruke (2017)

Research (e.g. Feruke, 2017) indicates that we can break down costs associated with online and ODL learning systems into three categories:

- **a.** development cost
- **b.** delivery cost and
- **c.** administrative cost

These expenses vary between institutions, depending on their priorities and the volume of funds available and accessible at any point in time.

Development costs for creating an online programme can include among others, large upfront instructional support and staffing costs. Development costs for online programming is higher than on-campus courses. This emanates from all the expenditures, which may not be relevant in on-campus systems (See Table 6).

Table 7: Common online course delivery costs

Expenditure	Description
Materials delivery	Postage, courier, and other associated costs resulting from distribution of physical goods.
Instructor equipment	Network charges, computers, printers, and other software development efforts.
Instructor expenses and maintenance cost	Payments to Internet provider, increased energy costs, insurance for equipment, equipment repairs, facilitation expenses, payment for project supervision.
Instructor time	Tuition varies depending on whether full-time or part-time and the time required to teach a course and how much time instruction the Instructor requires.

Student/Instructor help desk	Staffing a helpdesk for both students and instructors for help with routine technical questions.
Call costs	Toll-free access to the helpdesk or other support functions.

While development costs can be higher for online programmes, **delivery costs** appear to be characteristically similar for online and on-campus programmes. In general, instructional costs are the same for both types of programmes, though on-campus programmes typically have to deal with higher facility costs to deliver a programme within a physical classroom (*ibid*).

  Administrative costs are the final major expenses for distance learning programmes. They include:

    i. Intranet costs
    ii. Website development support costs

Cost of course management system is as shown in the full analysis in Table 8.

Table 8: Common online course administrative costs

Expenditure	Description
Decision making	Includes development of an IT or distance learning or online learning strategy and travel to under-study other institutions, costs of consultants to help advice the institution on its online learning planning.
Institutional evaluation and quality assurance	Includes staff time and expenses such as survey costs, report production and dissemination.
Web site development costs	Includes staff time and Internet specialists, graphic designers, Internet designers.
Web site development support	Includes staff computers, software and repair for individuals devoted to web site development.
Web site implementation	Includes portion of network services and maintenance as well as domain name registration.
Learning platform software or course management system	Includes cost of purchase or licensing fees and costs to upgrade equipment and network server, network costs and access to the Internet, which increases with enrolment and courses offered.
Intranet costs	Includes computers, installing network connections, server, server software and other software.
Intranet start-up costs	Includes design consultants or in-house designers and technical support staff, training cost.
Intranet ongoing costs	Includes editorial and design staff, technical personnel, ongoing consultants, promotion, training and maintenance applications.
Local training centre	Includes accommodation costs, equipment (e.g. server, computers, printers, photocopier, and telephone), furnishing, Internet access, etc.
Digitised courseware and library	Includes cost of purchase, lease, or fee for use of digitised content, library support, including staff to create and maintain records, document scanning, indexation equipment, maintenance and repair of equipment.
Personnel cost and other expenses	Includes staff salaries, benefits and consumables.

Source: Meyer, 2006 cited in Feruke (2017:6)

Fixed costs and variable costs

There are two major categories of costs in ODL projects (*ibid*):

    i. Fixed costs and
    ii. Variable costs

      Fixed costs are costs autonomous of how many learners an ODL system is handling. In fact, the system incurs many of them before it even admits any learners. They include such components

as the wages of executives and course planners, fees to outside suppliers, publishing, computing costs, equipment, and application of resources, transport, warehousing, and lease. **Variable costs** are the added cost of serving each extra learner. Every learner will cost the DLC so much for a replicate of the supplies, any material, time from a counsellor, tutor, or auditor, etc.

A.   Conventional project

Costs

Total costs

Variable costs

Fixed costs

Number of learners

B.   ODL project

Costs

Total costs

Variable costs

Fixed costs

Number of learners
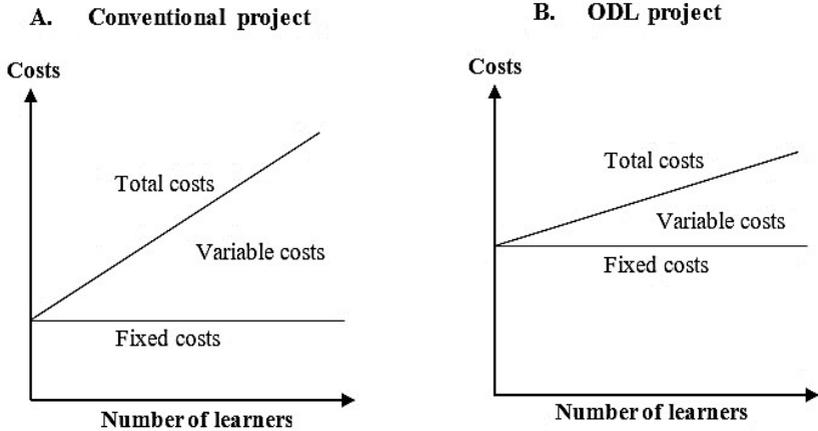
Figure 9: Costs of conventional project (A) and ODL project (B)
(**Source**: Rowntree, 1992: 23**)**

A combination of the two graphs in Figure 9 has an interesting outcome as shown in Figure 10. We can visualise the contrast between the cost arrangements. Figure 10 contrasts the total, fixed and variable costs of implementing a traditional and an ODL project for diverse numbers of learners. In a traditional project, we often have excessively little fixed costs, but total variable cost rises steeply as the volume of learners increase. In an ODL project, the fixed costs are considerably larger than in a traditional project but the total variable cost rises much more than the increase in the volume of learners. There is a **break-even** mark, described as the number of learners beyond which an ODL project becomes cheaper per learner than the conventional project. This is the point at which there is distribution of a huge fixed cost over a vast number of learners such that thereafter the average cost of all

learners is lesser than in the alternative project that had lower fixed costs.

Conventional project vs. ODL project
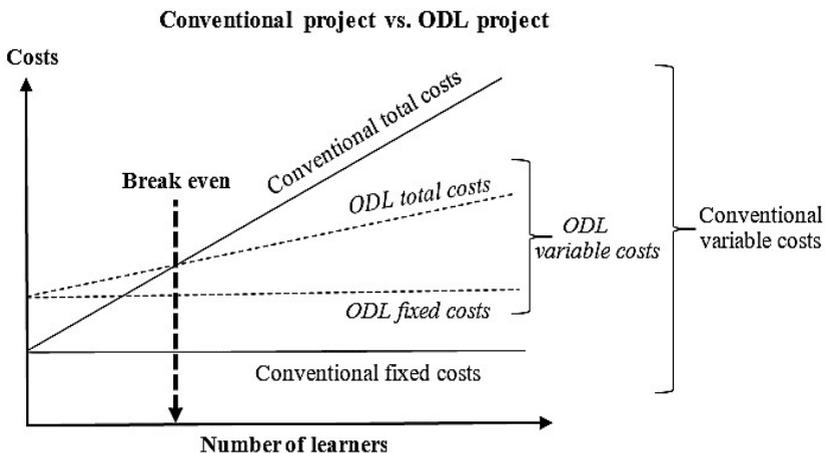
Figure 10: A combination of the two graphs in Figure 9A and B
(Source: Rowntree, 1992: 24)

This agrees with the views of Barikor (2003) and Salawu (2017) who observed that DE programmes lend themselves to economies of scale. That is, after meeting the initial capital out lay, developing and producing the course materials, unit costs decline with expansion. So new students can register at marginal added cost and which lowers the unit cost as number of students increases. This contrasts with expansion in conventional schools where costs grow directly proportional to increases in the number of students.

Estimating the costs
Rowntree (1992) proposes questions that will help in determining the costs in an ODL project:
   1. *Production costs*
      a. What will be the cost of preliminary activity before the DLC even start production, e.g. preparing recommendations, blueprints, etc.?
      b. What might the DLC offer people, either in-house (colleagues from the same institution) or through

adopting outside expertise for such needs as subject matter input, ODL advice, graphic design (typography, layout), word processing, editing, copyright fees, photographs (specially procured from a photo database), audio or video-tape production, etc.?

   c. If the DLC proposes to provide computer-based training, what other costs might it incur for programming and computer-based test (CBT) design?

2. *Post-production costs*
   - What will be the costs of developing many replicates of the material?
   - What will it cost to pilot-test and evaluate (and improve) the material before adoption?
   - Will the DLC need to up-date and enhance the materials in the future?

3. *Running costs:* What will be the wage costs for teachers/trainers?

4. *Overhead costs*
   a. What will be the costs of administering the entire project?
   b. What part of the general expense will the DLC require to commit to the project, e.g. administrative personnel wages, telephone, stationery, postage, etc.?
   c. What costs might the DLC encounter in procuring resources and machinery, such as computers, testing devices, etc.?
   4. *Development costs* (as in computer-aided learning) is allowable occasionally if massive numbers of learners will apply the material. If the DLC cannot provide the material it would actually prefer, do not worry. Just recall the reassuring words of Wilbur Schramm (Rowntree, 1992:7): "If the medium that seems ideal for a specific purpose is not available, an alternative medium is likely to do almost as well".

Factors affecting the cost of open and distance learning

The cost which distance teaching incurs for its comparative cost edge over campus-based instruction is too narrow with respect to both scope of courses taught and the grade of student support duties (Rumble, 1992). Guiton (1992:99) recognised that, for some institutions, differential funding by study mode would definitely subvert the **doctrine of parity** between the modes, and works considerably to shatter the incentive for institutions to take part. He proposed that **uniformity/parity of funding** may thus be a crucial prerequisite for an efficient dual mode university structure.

Rumble (2001:76) describes the elements, which in combination decide the costs of any academic (but especially for ODL) system, all of which are prone to executive control:

1. Course populations
2. Amount of courses offered
3. Periods of course lifetimes
4. The instruments and technologies chosen
5. The degree to which cost-generating activities, for instance, using patent works, are avoided
6. The degree to which learners bear the costs either as tuition or by changing the organisational boundaries so that students pay for services (like access to tutorial and library services) the university might have paid for formerly.
7. The degree to which the school uses people on contracts *for* service (i.e. salaried positions) to produce courses and instruct students, rather than on contracts *of* service (i.e. hired as casual labour, and paid by the manuscript/script/tutorial hour/test marked, etc.)
8. The degree to which the university adopts working operations that cut down wages of labour by, for example, arranging and wrapping courses around existing textbooks instead of producing new components, and using author-editor course design models instead of using big course team models
9. Application of technology to enhance student load per academic or administrator

10. Increases in the work load of academic personnel at the risk of diverse services, for example, research and community service
11. 'Labour-for-labour' substitution—replacing costly academic labour by students and adjunct labour, to trim personnel costs.

Within a conventional (1ˢᵗ–3ʳᵈ Generation) DE environment, the unit cost of a specific course is influenced by three primary elements. These are the fixed cost of developing courses, which is partly a function of the sophistication of the media applied in teaching it; the number of learners enrolled; and the recurrent cost of the tutorial support extended to students (Perraton, 2005b). Evolution of e-learning, however, further alters the cost framework of distance education. The institutional costs of a well-developed e-education scheme would include:

a. Developing e-materials
b. Teaching (and testing) students online
c. Accessing the web site
d. Administering students online
e. Developing the infrastructure and support within which e-education can operate
f. Planning and administering e-education at the macro-level (Rumble, 2001:78)

One risk related to inefficiently managed funds is the survival problem, which often ends in an organisation retrenching some of its employees. An unviable project is one that incurs losses. That implies the executive should cultivate an understanding of the significance of driving a scheme without essential awareness about project governance and the needed competence. The skill required to set up and drive an efficient operation implies two concepts:

■ market research
■ constant assessment of investment

These come in normally under the direction of **SWOT analysis**, perhaps a simple acronym to you, which means:

S—*strengths* (the strengths of your organisation over competitors)

W—*weaknesses* (the weaknesses compared to those of your opponents)

O— *opportunities* (the opportunities you have to make you succeed)

T— *threats* (the threats that could impede realisation of goals)

We need to examine the two components (market analysis and assessment of investment) about a particular organisation. The goal is that the executive should find out the strengths, weaknesses, opportunities, and threats (SWOTS) surrounding the scheme and then decide what programmes to run.

PROBLEMS ASSOCIATED WITH INSTRUCTIONAL DELIVERY AT A DISTANCE IN NIGERIA

Some peculiar challenges confronting open and distance education in Nigeria include (Adesina, *et al,* 2018, pp.28−31):

a. Slow acceptance due to erroneous perception of ODE: As we have noted, many early elites of the Nigerian society had their university education through distance learning, and the certificates, training, expertise and persons of such individuals were never in doubt. Sadly, Nigerian ODL institutions presently do not enjoy the same level of acceptance. In spite of the rigorous quality assurance processes applied in their delivery, many people perceive the qualifications obtained by graduates of ODE programmes/institutions to be inferior to those awarded in conventional face-to-face programmes.

b. Low capacity building for ODE within and outside the NUS: There is need for training and re-training of academics and ODE experts within the Nigerian University System (NUS) on current technological trends and best practices in ODE delivery.

c.   Quality of course materials: Another major challenge is the slow development of quality course materials in the DLCs due to paucity of ODE experts.

d.   ICT deployment: The issue of low level of ICT deployment in Nigerian universities, which is a critical tool in this new mode of teaching and learning, is a drawback on advancement of the ODE mode of university education delivery.

e.   Funding: ODL programmes require an initial huge financial outlay. Unfortunately, there is paucity of funds in the NUS and this affects many activities such as workshops and seminars to sensitise staff on global best practices on ODL.

We on our part have further expanded the existing problems confronting the ODL system in Nigeria to include:

1.   Political instability/constant policy summersault: Political stability is an important factor that affects the development of the curriculum. Many changes that occur in society, be it political, economic, or educational, actually take place because of the aims of the government in power; what it does or does not do. Since Nigeria attained political independence in 1960, there have been several changes in the government setup. Each change brings in individuals with different orientations, which translate into certain policies that affect the curriculum (**Vikoo**, 2016). For instance, as we have noted previously, the National Open University (NOU) Act of 1983 was to be a springboard for ODE in Nigeria. Unfortunately, before it could take off the military junta toppled and usurped power from the civilian government of Alhaji Shehu Shagari in December 1983 through a *coup d'état*. A budgetary pronouncement by the then military head of state, General Muhammadu Buhari, suspended NOU on April 25th 1984 consequently truncating the attempt by that civilian administration to establish an Open University in 1983. This shows that there is constant policy summersault by different administrations, a situation that also poses a major obstacle to smooth ODL development in Nigeria.

2.   Teacher factors: Many Nigerian teachers are yet to acquire the simple skills and knowledge of ICT to enable them benefit from the enormous wealth of information derivable from ICT. Many

teachers resist change and find it difficult to embrace ICT. Some are ignorant of the innovations ICT can bring to teaching and learning. Others perceive ICT as being too difficult to learn and therefore hold tenaciously to their old ways (Nzewi, 2009). There is also a huge gap in human capacity development in such areas as instructional design, development and delivery, examination and assessment, student support services and ICT. Thus, slowness of some staff and students in acquiring IT skills is a huge challenge on the path of ODL to surmount.

3.   **Unreliable electricity supply:** The problem of electricity supply in Nigeria is well known. Electricity supply is epileptic, and there is no connection to the national grid in most rural areas. Confirming the poor supply of electric power in most of Nigeria's tertiary institutions, Abdullahi (2009:11) pointed out that, "even stand-by generators are lacking". Therefore, adequate electricity supply is a major hindrance to the development of ODL in Nigeria, since the modern generation of ODL is ICT-based and ICT-driven, which in turn is electricity-dependent.

4.   **Poor economy and its effects:** Nigeria's economy is still very fragile and shaky. The poor state of the nation's economy pauperises most Nigerians to such an extent that even an average middle-income earner cannot afford basic technological tools. Thus, computer-based telecommunication facilities are not accessible and useful to many Nigerians as computer is still a luxury in institutions, offices and homes. This may make the penetration and integration of necessary online resources into ODL in Nigeria difficult.

5.   **Limited financial resources and high cost of computers and other ICT accessories:** Most educational institutions in Nigeria lack sufficient computers and other ICT-related equipment. The available few have no linkage to the Internet. Nigeria, like most developing economies, depends on the importation of computers and their accessories from developed counties like Japan, etc. Subscription for Internet hosting rights paid to the provider nations also contributes to the prohibitive cost of ICT. This is so because, as Dike (1989; 1999) noted, computers are "high technology" materials, which require high, specialised technical skills for their

production, a particular requirement that is not easy to come by in developing countries. Hence, they must be imported. Sadly, there is the problem of high foreign exchange, which makes computers to be grossly limited in supply (**Vikoo** & Kpolovie, 2010).

Aside from computers, there are other costs associated with peripherals such as educational software, printers, ink, scanners, papers, etc., which may be beyond the reach of the average school teacher. Most schools can also not afford Internet connection fees. Maintenance cost of ICT infrastructure is equally important because e-learning depends on hardware and software infrastructure or platforms that require constant attention. Because of the general state of technological and economic flux, planning and implementing new systems and skills is a precarious exercise. Thus, one of the major issues in a period of technological and cultural metamorphosis (such as the computer revolution) is estimating and managing the direct costs to determine whether the investment required is worthwhile, and this is one reason why computer is not yet dominating schools in Nigeria (**Vikoo**, 2007).

6.   **Poor ICT penetration:** A study by some Nigerian information technology professionals in USA in 2002 indicated that given the current ICT penetration, it may take Nigeria 50 years to catch up with America on the aspect of PC (personal computer) count per household (Iromanto, 2004), the most significant problem being the cost of PCs, poor Internet connectivity and bandwidth.

7.   **Low level of computer literacy and skilled personnel:** ICT is a recent advancement in developing economies. Consequently, most teachers today did not have the privilege of studying with computers to be knowledgeable in its application. Indeed, many Nigerians are still not computer literate and numerate. The human skills and knowledge needed to integrate ICT fully into ODL is still lacking. There is acute shortage of trained personnel in application software, operating system, network administration and technicians to carry out routine maintenance and minor repairs. As Carlson and Firpo (2001) noted, teachers need effective tools, techniques and assistance that can help them develop computer-based projects and activities especially those designed to raise the

level of teaching and improve students' learning. In Nigeria, professionals in the field prefer to work in blue chip companies instead of the poorly funded education sector. In her contribution, Osagie (2001:340) emphasised that, "the problem of shortage of ICT is compounded by graduates in Computer Science not being exposed enough to practical usages of the machine hence; they cannot manipulate the machines as it should be". Glenn and Carrier (1988) observed that critics claim that today's teachers are not adequately prepared to teach; that they lack basic skills and ability to develop effective instructional strategies. Although many factors may be contributing to this situation, teacher training is at the centre. This is because if teachers do not have the knowledge and skills to integrate computers into the instructional process, as is currently the case in Nigeria, we cannot expect them to do so. This is why most paths through the analysis of the constraints on ODL development in Nigeria seem to always end in a call for more or better training in the use of computers (**Vikoo**, 2007). There is a neat logic to this position. When the teachers are not using computers effectively then their deficiencies need rectification.

8.   Poor telecommunication infrastructure and lack of access: Just like the electricity supply issue, most Nigerians do not have access to telephone and other telecommunication facilities. The advent of the Global System of Mobile (GSM) communication in August 2001 has not made much impact. In addition, access is still limited and services are epileptic, limited and limiting. One direct consequence of this poor state of telephony is high dial-up cost and service charges, which may make GSM use unattractive for most distance learners and the integration of telecommunication in the delivery of distance education in Nigeria difficult.

9.   Inadequate software with local content: There is a dearth of relevant software that address issues peculiar to the Nigerian education system. Some of the software available on the Internet are obtainable only from outside the Nigerian socio-cultural milieu; they therefore fail to meet the needs of teachers and students. Those that are perhaps amenable to adaptation are cost-intensive because

of high foreign exchange and artificial scarcity that intermediaries cause.

10. Lack of curriculum review: It is sad to note that reviewing the curricular of most courses in Nigeria does not occur over long periods in spite of breakthroughs and technological innovations in all facets of human endeavour. In other words, there is no periodic review to reflect the realities of contemporary needs of students and the society, such as the use of technology in teaching and learning.

11. Instability and unreliability of technology: Advances in computer technology are not static. The rapid evolution of technology results in quick turnover in computer tools and techniques, which renders them obsolete in fast succession. Therefore, until technology becomes more stable and reliable, the democratisation of e-learning will be difficult (**Vikoo**, 2013).

12. Poor postal system: The postal system in Nigeria is not yet up to international standard in terms of safety of goods, quick delivery of correspondences, accessibility to remote areas, and so on. Although the Nigerian Service (NIPOST) has made some improvements in its services recently, the level of services cannot guarantee efficient two-way communication between distance learners and their institutions (Ikegulu, 2014).

13. Lack of maintenance culture: Nigerians are yet to imbibe maintenance culture. In support of this, Ogonor and Sanni (2001:15) observed that, "public school facilities in Nigeria are neglected and not maintained as it should be". Similarly, Ehiametalor (2001:308) pointed out that, "Equipment bought is still wasting away in their original crates". What this means is that, where technology equipment are available, they may not get the necessary routine maintenance to keep them functional. Instances abound where expensive school equipment imported with huge sums of money did not receive attention until they decayed beyond usage or stolen.

These constraints can be discouraging, but they should serve as a reminder that undertaking ODL requires unconditional commitment. In many African countries, governments are grappling more often than not with other national responsibilities, such as

fighting religious fundamentalism and terrorism, fighting hunger, poverty, and disease. Thus, ODL may not receive that urgent prioritisation, more especially when conventional education also competes for the same limited resources.

The future of ODL in Nigeria

The delivery of education through ODL has undergone tremendous transformation over the years as Adesina, *et al* (2018, pp.32–36) observed. What started as correspondence courses over a century ago has metamorphosed into a mode considered blended with the integration of technology and a good scaffold of learner support. Maruff and Abiodun (2014) observed optimistically that "without any equivocation, open and distance learning (ODL) is no longer regarded as a marginal educational activity, but rather, seen as a viable and cost effective system of providing better, individualised instruction. Thus, ODL programmes will continue to flourish and develop" (p.132).

Despite the many challenges that ODL has faced and is still facing in Nigeria, particularly with respect to acceptability and public esteem, there are indications that the narrative is changing. If an elder statesman of the nature of His Excellency, Chief Olusegun Obasanjo, GCFR, two time former head of the Republic of Nigeria, could subject himself to the rigours of independent scholarship at NOUN, from a diploma to a PhD in 2017, then there is a bright future for Open and Distance Education in Nigeria. He is an authentic living testimony for ODL, and by extension a silent advocate. At over 80 years of age, his studies at NOUN attest that age is not and should not be a barrier to engaging in an educational enterprise and that he has confidence in the ODL mode of university education delivery. For a person of his stature in society, and financial capacity, he could have shopped for some exclusive face-to-face university at home or abroad. Obviously, his choice was deliberate and based on other considerations, which ODL affords, mostly its philosophy of equity and flexibility. Furthermore, his participation has helped to clear any doubts and erroneous

perceptions about this mode of study, which seems to be an important outcome.

A look at the global developmental trend of ODE reveals that it has and continues to undergo transformation, beginning from when it was by correspondence through blended learning to a completely online mode of university education provision. Today, even the traditional face-to-face mode of delivery typical of the brick-and-mortar universities has now adopted some elements of online learning. Apparently, with the rapid rate of development and adoption of ICT and its tools in the teaching-learning process, there is no gainsaying the fact that ODE will eventually dominate the future of education delivery in Nigeria as it has the world. Jegede (2013) agreed with this view when he explained that technology will increasingly dominate domestic, economic and social life; the financial and economic world will change into a plastic world; there will be increase in demand for constant use of telecommunication, society will become less personal and there will be unrivalled demand for education.

With the progressive growth in ODE across the Nigerian university system (NUS), the NUC is likely to increase regulation. Integrity assurance is germane to any educational enterprise. There will also be more rigorous quality assurance standards and guidelines. Thus, in the near future, a greater number of Nigerians will come to the realisation that they may study via the ODL mode and compete favourably with their counterparts in the f2f mode.

In the pedagogy in ODE in Nigeria, there will most likely be a paradigm shift from the old methods of delivering content into new modalities of exploring content. Open educational resources (OER) and MOOCs will play a major role in teaching and learning in Nigeria. With such success, in the future, ODE in the NUS will gradually and ultimately, move into the realm of complete online learning. Current global trends make the transition seem inevitable.

The cost of operating and managing distance learning in Nigeria will drastically reduce, as more and more universities will embrace it. Why? DLCs will learn to collaborate and share cost in capacity building and production of software and course materials.

The current efforts of the NUC to build capacity across the NUS for quality delivery of university education through the ODL mode by collaborating with the University of London is a significant step portending bright prospects for ODL in the NUS. In this collaboration, the University of London is to provide expertise because of her wealth of experience in the practice of ODL. Similarly, there are ongoing efforts by an NUC high-powered task team to review the quality assurance instruments and modalities for ODL delivery in the NUS. These are some of the measures to secure a brighter future for ODE in Nigeria (Adesina, *et al*, 2018).

Now that we have explored several areas together, we should conclude the lecture with some kind of evaluation and reflection. As a distance educator, awareness of challenges and how best to convert them into success, is a primary requirement. Wills (1993:111) gives us this appropriate reminder, "It is important to remember that potential is one thing and substance is another . . . potential without substance is short-lived". So, how can we ensure there is substance in our new system? In the attempt to address this matter, educators have asked some questions like the following:

1. What guarantee is there that the culture, economy, and the society will benefit from this alternative educational practice?
2. Will a newly established DE system achieve the same quality of education as a conventional system?
3. Do developing countries have the work force and financial wherewithal to develop efficient DE systems? This question relates to the many and new technologies that have revolutionised open learning in industrialised countries.
4. Will the society respect learners who achieved their qualifications by distance learning? This is a general concern regarding the quality of DE programmes.
5. How competent are course writers and developers in writing materials against a background where subject textbooks are not available extensively?
6. How can government ensure there are managers competent enough to run such complex systems?

The foregoing questions contain some of the major challenges in new environments such as Nigeria. Since DE has come of age in industrialised societies, Nigeria can also make a success of it with adequate planning and conscious efforts.

The way forward

What are some of the lessons learned and what do we need to do to provide education and training to the last person in the queue? Let us follow the lead of Kanwar (2016:10–14):

1. **Go dual mode:** In a large country like Nigeria, with such a huge demand for tertiary education and skills training, it will be important to offer more ODL programmes at all levels. What are the reasons for going dual-mode and what will we do to achieve our goals? How will faculty contribute—would they require training or additional incentives? How will we provide support to the distance learners? What systems do we need to put in place to cater to the large numbers and deal with the logistics of preparing and distributing study materials?

2. **Invest in quality assurance:** The next step is to invest in quality assurance (QA) processes and practices. We believe that open universities and campus providers have the same purpose that all universities serve. In addition, if there is judging of all institutions according to the same benchmarks, there is less likelihood of considering ODL as second rate. The Quality Assurance Agency (QAA) assesses the Open University, UK like any other university. It is true that many open universities have a social mission and a more flexible delivery mode. However, if the judgements depend on fitness for purpose, quality of courses, effective learner support, and student achievement, there is no need for separate QA regulations only for ODL provision.

3. **Capacity building:** The third step would be to train staff in the different aspects of effective ODL delivery. Capacity building in curriculum, effective learner support, assessment techniques and the adoption and adaptation of

OER would be some areas of focus (Crosling, Heagney & Thomas, 2009; Simpson, 2009).

In September 2000, a national workshop on distance education was organised at the ECOWAS Secretariat, which developed a plan for a decade of distance education. One objective was to reopen NOU and to provide higher education to one million qualified candidates annually. Another was to build the capacity of 20,000 distance educators in the country. Have we achieved these targets? What new targets do we need to set for ensuring quality education and lifelong learning for all by 2030? (SDG 4). Like Albert Einstein, one of the most eminent scientists of all time, once observed, "Education is not the learning of facts, but the learning of how to think". So think.

Recommendations

We agree with Adesina, *et al*'s (2018, pp.36−37) recommendations that:

1. Government should provide adequate capacity building for personnel of distance learning institutions in the Nigerian University System (NUS). Such training should encompass critical areas of ODL practice such as ICT deployment since ICT drives the ODL mode today.
2. The NUC should expose officers of ODL institutions in the NUS to global best practices in the operation and management of ODL institutions and programmes.
3. The NUC should insist on appointing only academics with the requisite training and qualifications such as a Diploma in Distance Education, competence, and experience as Directors of DLCs in the NUS.
4. The NUC and ODE institutions should organise regular awareness and advocacy workshops to sensitise stakeholders on ODL mode of university education delivery. This will enable stakeholders grasp a better understanding of the ODL mode and debunk the erroneous perception that some people still hold about it in Nigeria.

5. The NUC should initiate, promote, and sustain a centralised development and sharing of ODL course materials through collaborative effort of ODL institutions within the NUS.

6. The NUC should continuously advocate and ensure a massive digital literacy programme for the NUS. The Commission should also encourage deployment of robust structured cabling/wireless ICT infrastructure to implement campus area networks in the universities that are yet to implement one. And

7. Government should improve funding of DLCs, since the implementation, and management of ODL programmes requires substantial funding.

   To the above we add the following:

8. Successive governments in Nigeria should not only allow the continuation of ODL programmes, they should always support such programmes through consistency in policy formulation and implementation.

9. Government should provide adequate technical support because of the vital link of technology in course delivery and support services for students. Technical support should be available for planning, implementation and troubleshooting when technical problems occur.

10. Universities must use technologies that are appropriate, affordable and available. Mobile technology has emerged as a solution to reach the unreached at low-costs.

11. Universities should adopt a targeted approach. It is important to have an institutional policy in place to identify and support the unreached groups.

12. Universities should develop need-based courses through which the local communities can get employment and livelihoods, and the local industry and service sector get trained human resources. Industry partnership in programme development would be necessary to create curricula that are appropriate and relevant to make learners employable.

13. Universities should provide opportunity for staff growth and development in line with new developments.
14. Universities should develop effective evaluation strategies for DLCs and their learners. Since effective implementation is content-specific, it is important to understand the unique characteristics and constraints of distance education within the context of Nigeria and the envisaged audience.

Conclusion

This lecture has traversed the history, growth, development, achievements, and challenges of open and distance education (ODE) in Nigeria. There was also an attempt to forecast the future of ODE in Nigeria. We established that university education and award of degrees in Nigeria actually started via ODE. After diversifying to include the conventional mode, Nigeria has discovered that if it must educate a critical mass of its populace and bring about the desired development, ODL must be widely embraced and implemented. It is evident from all that we have presented that it is justifiable for Nigeria to do so for her to achieve her laudable national goals and be part of the league of modern states using ODL in resolving their social, political and economic challenges of the 21st century.

We must do so urgently. Can you recall Taylor's (2004) thought-provoking question, "Will universities become extinct in the networked world?" Taylor argued that the present traditional approaches based on conventional classroom teaching and learning and a hierarchical, bureaucratic academic structure would not be capable of meeting the escalating demand for higher education in the knowledge society. Universities must therefore adapt or face the fate of the dinosaurs—extinction.

In the words of Kenneth Kaunda, former President of Zambia, "To affirm the worth of an end is to create an ideal. The ideal is created today for a fulfilling tomorrow". For that "fulfilling tomorrow" to come for distance learning systems, we have to overcome challenges if we are to secure progress and stability. We

are convinced that it is hope, rather than despair, that will lead to a prosperous distance education future.

The Nigerian Government must provide the enabling political backing, steady electricity, dependable infrastructure and technological environment, and adequate funding for ODL to thrive. This is necessary if Nigeria is to achieve its vision 20-20-20, which requires that the majority of her citizens have access to education. The failure of the Universal Primary Education (UPE), launched with great expectations in 1976, engendered its re-launch as the Universal Basic Education (UBE) in 1999, which is yet to make any appreciable impact on the enrolment, quantity and quality of instruction in Nigerian primary and secondary schools. Several aspects of the *National Policy on Education* (FRN, 1977; 1981; 2004, 2014) still beg for implementation. The computer education programme, which was to take off in Nigerian secondary schools in 1987, is yet to commence in most schools. In the light of all these, we should not see ODL as a cost-saving educational measure or a means of generating income only; we should rather see it as an educational innovation that requires greater attention to planning and guided implementation. It is not a question of jumping into setting up some framework overnight and expecting immediate results. Preparation that is more careful is required as the following words remind us: *Dig the well before you are thirsty* (A proverb from the Basarwa of Kgalagadi in Botswana).

Happily, Jegede (2017:8) quoted a certain Cindy Jacobs, who in October 2002 in Guatemala City, said the following as part of what has come to be called the *Guatemala Prophecy*: "There is going to be a revival in Nigerian universities and this revival will be of a large magnitude. That revival in the universities will affect the secondary schools and primary schools. And God will change Nigeria to the next generation". Realistically, that predicted change could quickly happen if Nigeria finally decide to adopt and tenaciously and pragmatically implement ODL fully. The time to do so is now!

Vice-Chancellor, Sir, distinguished Ladies and gentlemen, you have so far made a tremendous contribution to this lecture by

your very presence. By your sitting in through this lecture, I believe that you have laid the foundation for a practical approach to Open and Distance Learning (ODL) in Nigeria. People should now hear your own ideas on how best to improve the future more and more regularly. You are no longer a spectator, but an active participant, an agent of change, someone that could help in reducing the distance in the massification of education in Nigeria through ODL, for

> *Lives of great men all remind us*
> *We can make our lives sublime,*
> *And, departing, leave behind us*
> *Footprints on the sands of time.*
>
> —Henry Wadsworth Longfellow

Thank you for coming and for listening.

Professor Baribor Vikoo,
October 17, 2019

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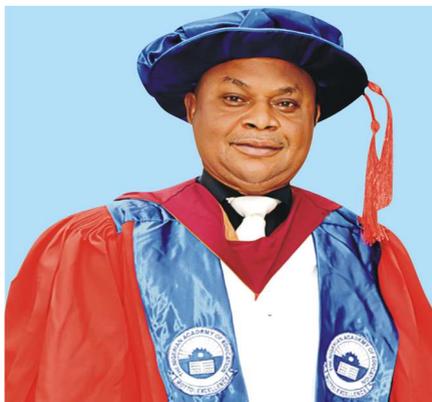
PROFESSOR BARIBOR VIKOO
B.Sc(Ed), M.Ed, PhD (UPH), MNAE
Professor of Educational Technology

Ladies and Gentlemen,

It is my pleasure and honour to tell the story of this amiable and special man, Baribor Vikoo, Professor of Educational Technology and Instructional Design, who is to deliver the 164th Inaugural Lecture of the University of Port Harcourt today. Baribor Vikoo was born into the family of Late Mr John Legbara Vikoo and Mrs Daughter Koo Vikoo (Nee Chief Dimkpa Dee) of Mogho Central in the Gokana Local Government Area of Rivers State at the waning part of the Nigerian Civil War on the 25th day of December 1969.

The primary education of Baribor Vikoo criss-crossed four different primary schools. He started his primary education at State School, Ibadan Street, in the New Lay Out Area of Port Harcourt Township in 1974, changed to State School, Mogho in 1976, returned to Port Harcourt in 1977 and continued at State School II, Churchill Road, Port Harcourt, and eventually completed it at State School II, Mogho in 1980. Later that year, he proceeded to Government Secondary School, Luumene Bangha in Khana Local Government Area of Rivers State for his secondary education. He, however, changed to Community Secondary School, Biara Gokana where he obtained the West African School Certificate (WASC)

with the pioneer set of that school in 1985. His record as the only candidate to obtain 7 Credit-grade and 2 Passes in that year's (i.e. 1985) West African School Certificate Examination (WASCE) still subsists and endures in that school to date. He gained admission into the Faculty of Education, University of Port Harcourt in 1986 to study Science Education (Biology), which he completed in 1990. After his mandatory 1-year National Youth Service Corps (NYSC) at Yelwa Government Secondary School, Yola, in the defunct Gongola State (now Adamawa and Taraba States) in 1991, the Science and Technical Education Board, Sokoto State (STEBS) hired Baribor Vikoo as a Contract Teacher. Under this arrangement, he served as a Senior Biology Teacher at Nagartha College, Sokoto from December 1991 to February 1993. He returned that same year and continued his educational sojourn in the Faculty of Education, University of Port Harcourt, which had admitted him for his Master's in Education (M.Ed) degree programme in Educational Technology, which he completed in 1995. Between May 1995 and June 1999, he was a Senior Biology teacher at Community Secondary School, Mogho Gokana, his hometown. While on the staff at C.S.S Mogho, he applied for and again the Faculty of Education, University of Port Harcourt admitted him in 1997 for his Doctor of Philosophy (PhD) degree in Educational Technology, which he completed in 2003. With the active support of and facilitation by Late Professor J. M. Kosemani, Baribor Vikoo joined the services of the University of Port Harcourt as an Assistant Lecturer on 14th June 1999. By a dint of hard work, dedication and commitment, he rose steadily through the ranks to become Professor of Educational Technology in December 2014.

Prof. Vikoo is respected locally and internationally as an authority in his field. He has served the University of Port Harcourt meritoriously in various capacities for the past twenty years, even in addition to his tasks as a teacher. He has supervised over 100 Post Graduate Diploma in Education (PGDE) candidates' research projects, over 300 undergraduate research projects, over 30 Master's degree theses and 6 Doctoral Dissertation. He has served on several committees, panels and boards established by the University and has

worked closely with all the Deans of the Faculty of Education and the Vice-Chancellors under whom he has served to develop facilities and maintain policies that enhance the University's image at home and abroad. For instance, Prof. Vikoo has served the University of Port Harcourt at different times as Timetable Officer Institute of Education (2001-2005), Member, Committee on Review of Criteria for the Appointment and Promotion of Academic Staff in the Faculty of Education (September 2005), Coordinator of the PGDE Programme (Port Harcourt Centre, 2005–2009), Coordinator, PGDE Programme (Yenagoa Centre, 2006-2009), Editor, *Trends in Educational Studies* (*TRES*), the official journal of the Institute of Education (2006-2009), Coordinator Post-NCE Sandwich Programme (2009-2012), Faculty of Education Representative to the University of Port Harcourt Entrepreneurial Centre (February 2013), Member, Ad-hoc Committee on Programme Development for Proposed Faculty of Curriculum Development and Technical Education (June 2013), and presently Director of the Open, Distance and e-Learning (ODeL) Centre (2015-Date).

Prof. Vikoo has authored several books including *The Mogho people and the development of modern Ogoni Nation* (2003), *Learning theories and instructional processes* (2003; 2015), *Computers in educational research and development* (2009; 2013), *Curriculum development—A process approach* (2016), and *Educational media systems* (2017), co-edited one book, several book chapters and over 50 scholarly articles in local and international journals of repute. Prof. Vikoo has research interest in instructional material design and development, instructional design, distance learning systems and curriculum and instruction.

Prof. Vikoo's sterling qualities and abilities have been recognized and tapped beyond the University of Port Harcourt. Even before joining the University of Port Harcourt, he served as an Assistant Examiner to the West African Examinations Council (WAEC) at the Sokoto State and Port Harcourt Marking Centres (1992-1999). He was appointed as External Moderator (Examiner) for the Nigeria Certificate in Education (NCE) Programme, Department of Primary Education Studies, Ignatius Ajuru University of

Education, Rumuolumeni, Port Harcourt, Rivers State (2010-2012), Member of the National Universities Commission (NUC) Programme Accreditation Team to the Tai Solarin University of Education (TASUED), Iganju, Ogun State (2017), and External Moderator for Teaching Practice (TP), Federal College of Education (Technical), Omoku, Rivers State (2018-Date).

Professor B. Vikoo is a Certified Teacher, duly registered with the Teachers' Registration Council of Nigeria (TRCN), Member, Educational Media and Technology Association of Nigeria (EMTAN), formerly known as Nigeria Association of Educational Media and Technologists (NAEMT), Member, Curriculum Organization of Nigeria (CON), Member, Philosophy of Education Association of Nigeria (PEAN), Member, Association of Sociologists of Education of Nigeria (ASEN), Member, Nigeria Association for Educational Administration and Planning (NAEAP), Member, National Association for Research and Development (NARD), Member, National Association for the Advancement of Knowledge (NAFAK), Member, Association for Promoting Quality Education in Nigeria (APQEN), Member, Nigerian National Association for Gender Equity (NNAFGE), Member, e-Learning Guild, USA, Member, Nigerian Academy of Education (NAE) (2018).

Professor B. Vikoo is one of Jehovah's Witnesses. He is happily married to Mrs Love Burabari Vikoo and their union is blessed with two boys.

Distinguished Ladies and Gentlemen, I present to you this certified teacher of our time, a teacher of teachers who rose from grass to grace, a consummate teacher and educational administrator, a loyal, amiable and committed husband to present the 164th Inaugural Lecture titled **Massification of Education in Nigeria: Reducing the Distance through Open and Distance Learning (ODL).**

Prof. Ndowa E. S. Lale
Vice-Chancellor