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TECHNOLOGY IN OPEN AND DISTANCE LEARNING FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

Distance learning, which allows learners to study at their own pace and in their own style, has been a major mode of acquiring needed education all over the world, including Africa. With advances in information and communication technology (ICT), distance learning has become synonymous with ICT-mediated learning (popularly referred to as e-learning), one of the basic pillars that support open and distance learning today. This study, therefore, took a comprehensive inventory of the Nigerian universities that have a full open and distance learning programme and examined the structure and the mode of operation of the programmes in relation to the Nigerian university Commission's policy document on distance learning. This aspect of the study was to establish the extent to which Nigerian universities have exploited the opportunity provided by ICT to engineer and sustain overall development through education. The study also interrogated the administrative capacities and competence in running the programmes through in-depth interview of the members of the administrative unit set up for the operation of the programmes in different Nigerian universities. The study also interviewed a sample of the current beneficiaries of the programmes across the Nigerian universities that run the programme in order to determine the quality assurance and learners support services structured in the programme in the various Nigerian universities. The study established that Nigerian universities are yet to take advantage of education because only few of them have full open and distance learning programmes. The few that claim to have open and distance learning programmes could not be considered as meeting best practices in running

Keywords: Education, ICT, open and distance learning, sustainable development.

Introduction

As far back as the 1960s when issues of development mostly dominated social discourses about Africa, many scholars had different models of development. They had, therefore, seen development from different perspectives. Some considered it as an economic growth, whereas some saw it as a social change involving individual development. For imperialistic reasons, some had seen development as modernization. However, since the part of the United Nations First Development Decade, there seems to have been a consensus among scholars on what national development actually means. Development as is now understood is economic growth and social change.

It is against this background that Everett Rogers, the American sociologist who made one of the most classical and enduring contributions to the debate about development, saw development as

a type of social change in which new ideas are introduced into a social system in order to produce higher per capital income and levels of living through more modern production methods and improved social organization (Rogers, 1992).

In line with this notion, Walter Rodney, in his provocative book, *How Europe Underdeveloped Africa*, maintained that

Development in human society is a many-sided process. At the level of individual, it implies increased skill and capacity, greater freedom, creativity, self-discipline, responsibility and material well-being. The achievement of any of these aspects of personal development is very much tied in with the state of the society as a whole (Rodney, 1974)

From another perspective, Luis Beltran, a Latin American scholar, provided a new conceptual model of national development, which is a humanized, democratic, structural and integral conception of a nation's development based on a reverent vision of man's life and destiny. According to him,

National development is a directed and widely participatory process of deep and accelerated socio-political change geared towards

ecology and the environment of a country so that the moral and material advancement of the majority of its population can be obtained within conditions of generalized equality, dignity, justice and liberty (Beltran (1989).

By and large, development is about change having a great implication on the individuals in a society. According to Inayatullah (1976), development is about:

Change towards patterns of society that allows better realizations of human values; that allows a society greater control over its environments, and over its own political destiny, and that enables its individuals to gain increased control over themselves.

As supported by Rogers, development is not only about economic growth, but essentially about:

Human and material development that entails a widely participatory process of social change intended to bring about both social and material advancement including greater equality, freedom, and other valued qualities for the majority of the people through gaining greater control over their environment (Rogers, 1992).

In other words, development is the "process of positive socio economic change in the quality and level of human existence, which is aimed at raising the standard of living, the quality of life and human dignity" (Amodu, 2007). So we can then say that development is concerned with the quality and quantity of life. Quality of life refers to various opportunities including social, health and educational concerns. Quantity of life refers to the amount of economic and political participation of the people.

In summary, the objectives of any national development, according to Anaeto and Anaeto (Anaeto & Anaeto, 2010) should include:

To increase the availability and widen the distribution of basic life sustaining goods such as food, shelter, health and protection; to raise levels of living in addition to higher incomes, the provision of more jobs, better education, and greater attention to cultural and human value, all of which will serve not only to enhance material well being, but also to generate greater individual and national self-esteem; and to expand the range of economic and social choices available to individuals and nations by freeing them from servitude and dependence, not only in relations to other people and nation states, but also to the forces of ignorance and human misery.

ned as the "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It contains two key concepts, firstly the concept of needs, in particular the initial needs of the world's poor to which overriding priority should be given; and *secondly* the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

ing understood development and sustainable development from all these perspectives, we should ask at this juncture with the aim of leading us to the is of this paper how to achieve national and sustainable development. There are different models that answer this question. The models are as many as divergent views about the real meaning of development. One of the models suggests the path of modernization. What is paramount in the concept of modernization is essentially what Lerner (1958) identified as the social structures. The underlying proposition about the theory of modernization is that people in nations that were not developed were traditional, illiterate and, therefore, oriented towards stability and the past. The majority of people in such nations had a pattern of emotions, which included the ability to imagine oneself as being in a different position from the one was now. Such nations were unable to develop because the nation lacked not only the technical skills, but also the future-oriented activities that could lead them to work, save and plan for a different and better life. Instead, they were satisfied to continue in the ways of their fathers and grandfathers. Thus, the right mental structures that could initiate and sustain sustainable development should be the modern personality, which is the majority of people in developing nations to be literate, fluid, and open to change. Such a personality is mobile because it desires change, growth and self-advancement. Besides, such a personality is capable of what Lerner identified as empathy – ability to image oneself in different instances, a future orientation that was unavailable to the traditional personality. Therefore, modernity does not essentially lie in a set of techniques or knowledge, but in a state of mind, a psychological disposition, an inner readiness that make modern man open to innovations and change.

Education is supposed to be one of the ways in which people could be encouraged to adopt new ideas and beliefs, and therefore the best route to achieving national or sustainable development. It is supposed to be through education that mass literacy could be achieved. Indeed, various participatory

studies have consistently confirmed that the best way to attain development is through which individuals can escape poverty and for halting the transmission of poverty across generation, is education (Watkins, 2000). As Watkins (2000) also noted, development now is associated with new knowledge and skills acquisition. Thus, there is an economy driven by knowledge and skills acquisition. Thus, there is an utmost need for African countries to increase opportunities for the educational attainment of individuals if they are to compete successfully in the fast pace of market economies, and consequently achieve development and eradicate poverty and dependence (World Bank, 1999). It is the educational attainment that will enhance skills acquisition for individuals in the developing nations, which, will in turn, increase national growth since the national growth, according to Watkins (2000), largely depends on education and not on the stock of capital and natural resources. So failure to raise the educational attainment of their population will not only cost developing countries in terms of national growth but also widen the gap between them and developed countries, making it more difficult for them to catch up (Watkins, 2000). Indeed, it is through higher education that information, skills and knowledge can drive development for individuals in society (Morris & Murray, 2005). Thus, education, particularly higher education, is a tool of change and development. It is the means through which an individual in a society is open to change or innovation, and through which they aspire for better life.

Invariably higher education in Africa is becoming elusive to the majority of people that desire to have it. This is as a result of the limited access to such education. In Nigeria for example, about 1.7 million school leavers sort admission into universities for higher education annually. Out of this, only 10% have the opportunity of gaining admission into the university of about 128 in number (Nick, 2013). The only means of elevating this problem is in the provision of alternate access through Open and Distance learning Education. Meanwhile, the number of Nigerian universities that provide this opportunity is not known, and thereby it is difficult to assess how Nigerian universities have been able to exploit information Communication Technology in implementing robust open and distance learning programmes that will not only provide access to the majority of Nigerians that seek higher education, but will also bring about sustainable development.

To this end, this paper aimed at achieving the following objectives:

1. To establish a comprehensive inventory of the Nigerian universities that have a full open and distance learning programme.

distance learning programmes in relation to the Nigerian University Commission's policy.

To establish the extent to which Nigeria universities have exploited Information Communication Technology to engineer and sustain development through education.

To interrogate the administrative capacity and competence of Nigerian universities to run the open and distance learning programmes.

rich Questions

Following questions drive the present study:

How many Nigerian universities have a full open and distance learning programme?

What are the structure and mode of operation of the open and distance learning programmes in relation to the Nigerian University Commission's policy?

To what extent have Nigerian universities exploited Information Communication Technology to engineer and sustain development through education?

What is the nature and level of the administrative capacity and competence of Nigerian universities to run the open and distance learning programmes?

and Distance Learning

and Distance Learning education is a process in which a significant portion of the teaching is conducted by someone removed in space and time from the learners (Creed, 2001). Indeed, it is a form of organized education learning process that is based purely on the use of teaching and learning materials provided to students outside the traditional mode of learning in classrooms for the purpose of removing constraints of learning associated with additional mode of education such as access, entry, place, pace and duration of study. It is on this basis that UNESCO (2007:7) has defined open distance education as an "open access to education and training provision, freeing learners from the constraints of time and place, and providing flexible learning opportunities to individuals and groups of learners". Keegan (1999), perhaps, has provided one of the most comprehensive definitions of distance education by highlighting its six basic elements. He observes that distance education is characterized by: separation of learner and tutor as opposed to face-to-face teaching; the

influence of the conventional organization which distinguishes distance education from private study; the use of technical media, e.g. print, audio, or website to unite tutor and learner; the provision of a two-way communication so that the student may engage in dialogue with the tutor; the possibility of occasional meetings for purposes of interaction and the self-directed nature of the learner's involvement. Adebayo aptly captures all these elements in his succinct description of open and distance learning as the type of education that takes place outside the conventional school and through which knowledge is imparted without necessarily having personal interaction with students or learners.

From another perspective, Freeman (1997) considers open education as "...a system where learners are substantially responsible for their own learning but are still formally enrolled in a system which includes other learners. In this regard, Freeman (1997) provided three basic types of open learning systems. These include self-paced individual-based system, where the learners learn at their own pace. The major constraint in this type of open education, according to Freeman (1997), is that learners would be at different points in their courses and there is limited student-tutor contact, even if there is any. It also includes paced campus-based system, where study term or semester is followed. According to Freeman (1997), it also includes paced home-based system, where all learners are at the same point in their courses at the same time. This makes it possible for the organization to send out course materials to everyone at the same time. Deadlines for assignments and assessment dates can be fixed for everyone. So, open and distance learning is a distinct and coherent form of education, which is focused on new delivery method with a unique pedagogical philosophy (Levy, 2003) that emphasizes student-centeredness (Mudasiru, 2006).

Scholars seem to have agreed on the rationale and invariably the advantages of open distance learning. Gunton (2003) argued that distance and open learning is increasingly becoming a preferred means of enabling governments to increase access to education. It is thereby, to them, the veritable means of responding to demands of equity of opportunity to participate in learning and meet the ever-changing human resources needs that could possibly set any nation onto the road of development. Thus, the greatest advantage of open and distance learning is in its provision of opportunity for those that could not gain into institutions of higher learning or those that are already gainfully employed to gain higher skills and knowledge with which they could add to the value of development of their society. For the government and educational policy makers, according to

an affordable and cost effective way. So, in a way, it raises the internally generated revenue of higher institutions of learning; it also helps in reducing manpower with little stress, and in attaining mass literacy (Orishade, 2007).

The achievement of the objectives of open and distance learning is now remarkably easy owing to the integration of the Information Communication Technologies (ICT) in its process, method and delivery. The *United Nations Educational, Scientific and Cultural Organization* (UNESCO) uses the terms 'Open', 'Information and Communication Technologies', to describe: "...the tools and the processes to access, retrieve, store, organise, manipulate, produce, present and exchange information by electronic and other mediated means. These include hardware, software and telecommunications in the forms of personal computers, scanners, digital cameras, phones, faxes, modems, compact disc (CD) and *digital versatile disc* (DVD) players and recorders, digitised video, radio and TV programmes, database programmes and multimedia programmes" (UNESCO, 2003; Anderson, 2003). Therefore, open and distance learning is, initially, being delivered, in this new era of technological advancement, using a variety of print and electronic systems either through synchronous communication (learning in which all parties participate at the same time) or through asynchronous communication (learning in which parties participate at different times). The main systems are mediated by correspondence, audiovisual means (television and radio), multimedia (audio and text files), the Internet.

Meanwhile, the integration of ICT into open and distance learning process delivery, which is determined by a combination of factors such as technical, administrative, organizational, strategic, cultural and professional, initially, actually determines the degree or extent of the success of open distance learning in different environments for entrenching and strengthening developmental goals (Carril, *et al.*, 2013). Moore and Tait (2005) considered the arrays of factors as referring to the elements of the nature of open and distance learning that determine whether or not the aim of education can strengthen and support the developmental aspiration of a nation. Such elements, as identified by Moore and Tait (2005), include strategic planning, administration, staffing and training, control and monitoring for quality, policy, organization and culture, course development, organizational structure, teaching and learning, processes and challenges.

According to the organization of open and distance learning process, to make literature on the organization of open and distance learning successful in supporting developmental open and distance learning, its establishment, organization and delivery must be based on aspirations, its strategy, policy, systems and challenges. As explained in four basic strands: strategy, policy, systems and challenges. As explained in the template, open and distance learning must be built on noble goals, vision, the template, open and distance learning must be built on a system of ICT, mission and mandate; it must have a structure built on a system of ICT, support services, financial services, sound human resources and teaching and learning method, and challenges of infrastructure must be eliminated. This, no doubt, is likely to be a big challenge and problem of implementing open and distance learning education in developing nations like Nigeria. Various studies on the implementation of open and distance learning in Nigeria have documented challenges that connect with the elements in Anne's template (Nwaocha & Inyama, 2002), for example, classified such challenges into internal and external factors. As will be discussed shortly, this study confirms many of such challenges or problems impairing the successful implementation of open and distance learning education in Nigeria.

Open and Distance Learning in Nigeria

The need for an open and distance learning education has always been recognized in Nigeria for the overall development of the nation through which poverty could be eradicated with equal opportunities to education by all Nigerian citizens. Therefore, open and distance learning is not a recent initiative in Nigeria. According to Akinpelu (1982), the Department of Adult Education at the University of Ibadan began a distance learning programme in 1960. He stated that a pilot test of open and distance learning in science subjects was carried out with a view of extending it to other areas of study and professional that needed on-the-job training. As the programme expanded, it was redesigned and renamed as 'Correspondence Courses Leading to University Degrees and Diplomas'. This initiative, according to Owoeye (2004), was motivated and cued by the British Correspondence Programmes that had been conducting correspondence courses for interested Nigerians through 'Rapid Results' as well as others where courses in business-related subjects and administration were obtained. University of Lagos took the same cue from Ibadan to begin a correspondence that started as a Unit, the Correspondence and Open Studies Unit (COSU), in 1973. Open Studies Unit (COSU) in turn was to transform, a decade later in 1983, into the Correspondence and Open Studies Institute (COSIT), with the granting of the latter with some measure of autonomy and enhanced scope of operations.

professionals on the job to gain higher skills and certificates; part time teacher training programme (PTTP), National Teachers Institute (NTI), conventional universities designing dual mode of learning consisting of distance education and conventional classroom teaching and learning, and initially Open University System (Adebayo, 2007).

The National Open University of Nigeria (NOUN) was first launched in 1983 but was suspended in 1985 by the military government. President Iseun Obasanjo re-launched it in 2001 and NOUN is currently providing instruction for some 60,000 students as at 2002 (UNESCO, ODL Paris 2002 report). Indeed, NOUN is the first fully fledged university that operates exclusively open and distance learning (ODL) mode of education. The university focuses mainly on a distance teaching and learning system, and varies its course materials via print in conjunction with information and communication technology. The National Open University of Nigeria presently has 23 study centers, which are stratified into the six geopolitical zones of the nation.

Justification for the adoption and popularity of open and distance learning is premised on the need to provide all Nigerians equal access to education in order to stimulate national growth and development, which is in line with the main objective of the National Policy on Education. The policy indicates that "maximum efforts shall be made to enable those who benefit from higher education to be given access to it. Such access may be through universities or correspondence courses or open universities or distance, e-learning and work study programmes" (FRN, 2004:). A report by the National Universities Commission (NUC) indicates that the conventional university system in Nigeria can accommodate only 20 percent of the 1.5 million applicants that vie for places in Nigerian universities every year. Statistics put it that only 18 candidates out of every 100 applicants for university education are able to obtain admission yearly into the limited number of federal institutions in Nigeria. These statistics demonstrate the need for access that Nigerians have to higher education. It also confirms the SCO's view that if developing nations are to rely solely on traditional conventional methods of delivering higher education, the objective of education for all will be far from being achieved. As Moore and Tait (2005) stated, a developing nation like Nigeria needs to find new methods that can dramatically improve both its children's schooling and continuing

education system. The use of open and distance learning, whether in the form of print-based use of open and distance learning courses, interactive radio, computer-based learning or web-based distance learning. As Moore and Tait (2005) noted "these methods offer more based learning for the same unit of resource, easier access and higher quality than education can be obtained by traditional methods in countries with poorly financed education systems". Perhaps, this is why the National Universities Commission (NUC) has stipulated as a matter of policy that students enrolment into the open and distance learning mode of tertiary education is set at 35 000 students by 2015. The extent, in terms of quantity and quality, to which Nigerian universities have keyed into this objectives of stimulating national growth or development by expanding access to higher education through open and distance learning that is supported by ICT is the focus of this paper. The operation of open and distance learning programme in Nigeria University is guided by the NUC policy guideline, which stipulate *inter alia*, that:

For any academic programmes to be taught by ODL, interactive texts shall be at the heart of teaching and learning. These shall be supplemented with other resources such as: CDROM: DVD: or USB sticks to deliver; ebooks, simulations, assessment etc. ODL means that students should not be required to attend classes or have face-to-face contact, unless there are compelling reasons to justify it such as examinations, periodic facilitation and practicum. ODL programmes shall be predicated on a pedagogy that is led by resources and not reliant on face-to-face intervention. Students should be able to register to study anywhere in Nigeria or any part of the world with a common standard of service at any study centre. The study centre system should offer both academic and social support. Study centres should act as the focal points of learning communities and have agreed standards of accommodation in facilities and equipment. Students should be expected to be able to have access to ICT to assist their learning. For specific programmes, functional internet access would be required for all study centres. Learning objectives should be well defined. Pedagogy should be appropriate to meet the learning objectives. For all academic programmes offered by ODL, well written study guides should lead study. Learning resources should be tailored to ODL, i.e are interactive, comprehensive, accessible, contemporary etc.; make appropriate use of media and ICT and should meet international quality standards. Each academic programme should have adequate tutor: student ratio, normally 1:50. Tutors should be trained or have validated ODL qualifications

ODL programmes). Channels of communication should be diverse and cater for student need i.e. surface mail, phone, email etc. Marking and feedback meet international standards. Feedback on assignments and examinations should be prompt (within weeks and within 10 weeks respectively) and should reflect areas of students' weaknesses, strengths and appropriate corrections. Information, advice and guidance (IAG) facilities should be consistent with institutional policy and Learner Support Framework that reflect national policy and best practices. There should be verifiable evidence of strong general logistics to support the academic programmes of the ODL centre. There should be verifiable evidence of availability of special institutional support (e.g. advice, software, power supply) that has particular relevance within the programme. There should be a robust Management Information System (MIS) that enables programme monitoring (NUC Reviewed ODL Guidelines, 2010).

Methodology

The study adopted a combination of descriptive survey and in-depth interview. The descriptive survey was used to take an inventory of the Nigerian universities running ODL programmes, taking account (simple iterative/frequency) of such universities. This was carried out by administering a simple telephone questionnaire on the principal officer in the same Unit of all federal and state universities. In-depth interview was used to examine (qualitatively) the quality of the ODL programmes in an universities running such programmes in terms of their adherence to NUC's policy document on ODL, organization, mission, structure, of operation, student support and other services, challenges; and, finally, whether such programmes contribute to the development of the country by providing not only access to higher education, so quality education that can raise the standard of manpower for national growth.

of 21 respondents were interviewed, three selected from each of the main Nigeria universities running a full open and distance learning programme. The participant included essentially the principal officers in of the programmes and students running the programme in each of the main Nigerian universities with a full open and distance learning programme.

Findings

Inventory

Findings from the inventory of the Nigerian universities running open and distance learning establish that, out of the 104 universities in Nigerian university system (27 Federal, 36 State and 41 Private), there is only 1 registered (NOUN) single mode (ODL dedicated) university and six other dual mode universities running open and distance learning education. The six registered dual mode institutions include: University of Ibadan, University of Lagos, Obafemi Awolowo University, University of Abuja, Ahmadu Bello University, and University of Maiduguri. Student enrolment in the dual mode universities stand at 50,000 students, while the National Open University of Nigeria has an enrolment of about 70,000 students. Meanwhile, more than 90 percent of other Nigerian universities are proposing to begin the dual mode system of higher education by applying for NUC accreditation. The implication of this finding or statistics is that Nigeria is yet to optimize or has not fully exploited the use of open and distance learning mode not only for enhancing access to education, but also for human capacity development and overall development of the nation.

Nevertheless, the current position of the NUC is that, apart from NOUN (the single mode (ODL dedicated) institution), all Nigerian universities intending to run open and distance learning should reapply for accreditation, including the already six existing and registered dual mode institutions identified earlier. This new directive, as found in this study, was motivated by the wide gap existing between policy and practice of open and distance learning, and by its objective of seeking to bring ODL practice to comply with the global best practices. Some of the attributes of the best practices, as stipulated in the NUC reviewed guidelines include philosophy, admission, curriculum, pedagogy, learning resources, evaluation and assessment, staffing, learner supports, resources, and employer feedback.

As confirmed by this study, open and distance learning that is being practiced presently in Nigeria, does not conform to the desired attributes of the best practices in ODL, thereby diminishing its values for engendering human capacity building and consequently national development. As it stands currently, there is a wide gap between the noble desire of using ODL to assist in national development and its practice. The current practice of ODL in Nigeria could be rightly described as an analogue style of ODL, which can be largely considered as part time or correspondence study. Apart