



## E-Learning and Distance Education in Nigeria

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### ABSTRACT

Distance education or distance learning is a field of education that focuses on teaching methods and technology with the aim of delivering teaching, often on an individual basis, to students who are not physically present in a traditional educational setting such as a classroom. It has been described as "a process to create and provide access to learning when the source of information and the learners are separated by time and distance, or both. Therefore this paper discusses the relevance of e-learning in the position of distance education in Nigeria. It commences by discussing the meaning of e-learning and distance education. It also discusses the historical background of distance education in Nigeria as well as the operations of National Open University of Nigeria (NOUN) as the first federal University in Nigeria dedicated to the provision of education through distance mode. Furthermore, the paper highlights the revolutionary development of Information and Communication Technologies, the development of e-learning in Nigerian schools, the need for open and distance education in Nigeria, the prospects and challenges of e-learning in the operation of National Open University of Nigeria. The paper also examines the mode of delivery and quality assurance in NOUN.

**Keywords:** *Distance Education, e-learning, Quality Assurance, Information and Communication Technologies, National Open University of Nigeria.*

### 1. INTRODUCTION

In this age of Information and Communication Technology (ICT), there is growing concern for the use of ICT resources such as the computer, scanner, printer, Intranet, Internet, e-mail, videophone systems, teleconferencing devices, wireless application protocols (WAP), radio and microwaves, television and satellites, multimedia computer and multimedia projector in curriculum implementation. In e-learning, curriculum content in the form of texts, visuals, e.g. pictures, posters, videos, audio/sound, multicolor images, maps, and graphics, can be simultaneously presented online to students in both immediate locations (classroom model of e-learning) and various geographical distances (Distance Education model of e-learning).

The e-learning is not a new phenomenon in promoting education in some parts of world. Presently, some institutions in Nigeria are using it to promote distance education (DE) and lifelong learning. E-learning according to Sale (2002), is the use of electronic technology to deliver education and training applications, monitor learner's performance and report learner's

progress. Hedge and Hayward (2004), defined it as an innovative approach for delivering electronically mediated, well-designed, learner-centered and interactive learning environments to anyone, anyplace, anytime by utilizing the internet and digital technologies in concern with instructional design principles.

E-learning should ensure effective pedagogy and curriculum implementation in the computer age. According to Nicholls and Nicholls (1980), Mkpa (1987), and Offorma (2002), curriculum implementation is the planning and execution of the contents of curriculum in order to bring about certain changes in the behavior of the learners and the assessment of the extent to which the changes take place. The primary purposes of implementation are to achieve the objectives of instruction, and achieve retention and transfer of knowledge. E-learning is an instructional medium that permits alternative approaches to curriculum implementation in an ICT age. Richmond (1997) observed that, there is a great link between the curriculum and ICT and that there are three major areas that technology can influence learning, including:

- i Presentation, demonstration and the implementation of data using productivity tools.
- ii Use of curriculum – specific applications such as educational games, drills and practice, simulations, tutorials, virtual laboratory visualizations and graphics, representations of abstract concepts, musical composition and expert systems.
- iii Use of information and resources on CD-ROM, online encyclopedia, interactive maps and atlases, electronic journals and other references.

Similarly, the role of ICT in curriculum implementation is recognized by the Nigeria National Policy on Education (FRN, 2004) where it stated that, “the government shall provide facilities and necessary infrastructures for the promotion of ICT and e-learning.” It is against this background that the researchers intend to find out e-learning and distance education in Nigeria.

## 2. THE REVOLUTIONARY DEVELOPMENT OF INFORMATION AND COMMUNICATION TECHNOLOGIES

(ICT's) in education in the developed countries facilitated the establishment of 100% ICT – based University known as Virtual Universities. Here in Nigeria, very few of our conventional universities are now carrying out their academic activities through one form of ICT or the other. While the urge to embark on e-learning is still a dream to some people because their infrastructure of ICT's is very weak. The rapid expansion of ICTs in Nigeria offers an opportunity to consider its use in the promotion of DE. It offers students considerable benefits including increase access to learning opportunities, convenience of time, and place, making available a greater variety of learning resources, improve opportunities for individualized learning and emergence of more powerful cognitive tools (Khan, 1996, Pierre, 1998).

Distance Education (DE) is a system of education characterized by physical separation between the teacher and the learner in which instruction is delivered through a variety of media including print and other ICTs to learner who may either have missed the opportunity earlier in life or have been denied the face-to-face formal education due to socio-economic, career, family and other circumstances. Jegede, (2003) defined distance education as education provided by a mode other than the conventional face-to-face method whose goals are similar to and just as noble and practical as those of on-campus full time face-to-face education. Nigeria is the most populous nation in sub-Saharan Africa with about 140 million people (NPC, 2007), occupying a landmass of about 923,768 square kilometers and with over 274 ethnic groups making up the federation. The social and

economic dimensions of providing education for the population, within the context of prevailing national circumstances of dwindling financial and other resources in the face of development needs are heavy.

The ever-continuing growth in Nigeria's population, the attendant escalating demand for education at all levels, the difficulty of re-sourcing education through the traditional means of face-to-face classroom bound mode, and the compelling need to provide education for all (EFA) irrespective of environmental, social or cultural circumstances have meant that the country must of necessity find the appropriate and cost effective means to respond adequately to the huge unmet demand for education. All these emerging situations have signaled to the need for a comprehensive search for a more viable, robust, reliable, efficient, effective, and cost-beneficial educational solutions, which according to Jegede, (2003) and Sadeq, (2003) the most logical pathway to achieve these is by embracing distance education method.

## 3. HISTORICAL BACKGROUND OF DISTANCE EDUCATION IN NIGERIA

The history of distance education in Nigeria dates back to the correspondence education as a means of preparing candidates for General Certificate in Education, a prerequisite for the London Matriculation Examination. The first indigenous distance learning programme was an English Radio programme of Nigeria Broadcasting Corporation that followed independence in 1960. The programme was primarily targeted at primary and secondary school levels and covered core courses at both levels with more emphasis placed on the teaching and learning of Science, Mathematics and English. The technology driven distance learning came into existence almost the same time with the first indigenous distance learning with the emergence of Educational Television programmes of the then National Television of Nigeria (NTV).

There was also Schools Educational Broadcast of the Radio Nigeria stationed in Lagos and relayed all through the federation. All radio stations were required to hook at specific times of the day during school hours for broadcasting of programmes. In the last 31 years, University education programmes in the country began to witness a lot of changes in terms of instructional delivery mode in some of our tertiary institutions. The Correspondence and Open Studies Unit (COSU) of University of Lagos that started in 1974, which later changed to Correspondence and Open Studies Institute (COSI) and now known as Distance Learning Institute was the first attempt made to establish a distance education unit as part of a University in Nigeria. It began initially to offer programmes in science education at first degree level in Biology, Chemistry, Mathematics, Physics and Postgraduate Diploma in Education (PGDE) for

degree holders that did not possess teaching qualifications.

The National Teachers' Institute (NTI) started as a distance education institution in 1976 (as the first dedicated distance education institution) with the support of UNESCO. It began by training Grade Two Teachers (TC II). In 1990, the Nigerian Certificate in Education (NCE) programme was introduced when the expectation was that the minimum teaching certificate in Nigeria was expected to be NCE. The Institute also introduced the PGDE programme in the year 2005. Ahmadu Bello University (ABU) also started its distance education through a training programme known as Teachers-in-Service Education Programme (TISEP) for Grades Three and Two teachers and later the Nigerian Certificate in Education (NCE). Also in November, 1972, the University also established a University of the Air Programme for teachers in secondary schools and teacher training colleges. The Distance Learning Institute of the University of Ibadan which started in 1979 as External Degree Programme of the university is another institution which adopted the distance learning mode. The National Open University of Nigeria (NOUN), was established in July, 1983, by an Act of the National Assembly as the first distance learning tertiary institution in Nigeria when it became crystal clear to the then Federal Government that the ever growing demand for education by her people cannot be met by the traditional means of face-to-face classroom instructional delivery.

The institution was closed down few weeks after its establishment and the Act that established the University was suspended in 1984 by the then Federal Military Government that overthrew the civilian government. Many years after the closure, the compelling reasons that informed the earlier establishment of the university as well as the need to fill the gap created by the Federal Government clamped down on mushroom outreach study centres of many conventional universities all over the country and the need to take advantage of emerging developments in the field of ICTs which have revolutionized the techniques and methods of instructional deliveries in the distance learning mode necessitated the reactivation of the suspended NOUN Act of 1983 in 2002. This paved the way for the resuscitation of the NOUN.

#### **4. DEVELOPMENT OF E-LEARNING IN NIGERIAN SCHOOLS**

With the advent of Internet and mobile telecommunication in the world, much has changed in the way we live, work and interacts with each other. Although communication is as old as history, not so much has been seen of the aspect of human endeavour until technology changed the face of everything. The fast development of the information technology viz a viz the Internet has been

attributed to the ever dominance of globalization in today's economy and to the fact that the founding fathers had a not-for-profit attitude when they were developing them. No wonder Berner lee; the father of Internet was recently honoured with a prize for his invention. In his remark, he observed that, had he commercialized or patented his invention, it wouldn't have come this far. This is the recognition of the fact that, next to the three basic needs of man is the ability to communicate with one another. Having defined internet, the bedrock of information society; as the brain child of science, the wizardry of God, made manifest by man. It will be pertinent to look at how Nigeria, as a country, and a society, has fared, in integration this ever-evolving culture into the main stream of its affairs.

In Nigeria, the story of ever evolving affairs has been the same. The development of telecommunications in Nigeria began in 1886 when a cable connection was established between Lagos and the colonial office in London. By 1893, government offices in Lagos were provided with telephone service, which was later extended to Ilorin and Jebba in the hinterland. A slow but steady process of development in the years that followed led to the gradual formation of the nucleus of a national telecommunications network. With less than 30,000 telephone lines in the pre-independent period to 90,000 lines in the 60s and 1500 telex in the late 19th century to 2000 telex lines in the post independent era. The number of telephone line moved to 700,000. Though only 400,000 was in use during the late 90. The mobile sector, which started with just 10,000 lines in 1991, was upgraded to about 20,000 in 1994. While 14 Telex exchanges with total installed capacity of 12,800 and 20 voice frequency telegraph terminals has been installed. And with the commencement of GSM services, the number of phone lines jumped to a whooping figure of 4.2 million lines in 2004. (Olaniyi 2010)

The number of ISPs moved from 11 in 2000 to almost 30 in 2004. While internet user moved from 100,000 to more than 500,000 in 2004. Hitherto, telephones especially cell, were seen as a symbol of status and achievement. The GSM revolution changed that. Before now, the average Nigerian hardly dream of owning a land phone, talk less of a cell. This was strictly reserved for the rich. Access to basic telephone services was hindered by high cost of acquisition and bureaucratic bottleneck. Internet access was only used by NGOs, multinationals and very few, highly educated individuals with few people sharing one email address. This also changed as more people got on the net through public access point or café. The 90s witnessed a change in the telecom and information sector. Government started its liberalization policy of the telecom industry. Private companies were giving licenses to provide commercial telephone services. These companies complimented the state owned operator, NITEL. In spite of these achievements, the services rendered by the private operators were costly. Though with some

advantage over the state own, in the ease of acquisitions. (Olaniyi 2010)

The monopoly of NITEL was for the first time, in the history of Nigeria broken. Internet services grew remarkable also as more ISPs were licensed within this period. This led to fall in prices, with increased subscription and usage. Nevertheless, the spread of services offered by the PTOs was highly limited, as most of them concentrated in the big cities. Where there was an assumed assertion of profitability and viability. Going by this development, Nigeria still suffered a low tele-density, which averages around 0.68 in sub-Saharan Africa as at 1996. With 70% of the phone lines available in the cities.

## 5. E-LEARNING IN NIGERIAN SCHOOLS

The e-learning techniques mostly adopted by most of the Nigerian institution are in form of prepared lectures on a CD-ROM that can be played as and when the need arises. This has limited advantage because of the number of students per computer system in which most of these facilities are not interactive enough as compared with when the lecture is received in real time over the internet. The intranet facilities adopted in most schools are not well maintained because of its high cost of running especially in the absence of adequate power supply. Mostly, the students took the challenges upon themselves to go to the public internet cafes where there exist diverse attentions because of people with diverse interest on the net at the same time. The bandwidth shared on various systems at the cafes is very low hence; a multimedia interactive lecture will not be obtainable because of low bandwidth. The population of students is enormous and the facilities are inadequate. Despite all the hindrances/threats faced by e-learning in Nigerian institutions, institutions such as RECTAS, federal School of Surveying, Oyo, University of Ibadan and Obafemi Awolowo University (OAU) Ile-Ife among others have the facilities for e-learning. These statistics are very low as a result of the remoteness in the location of some of these institutions in terms of ICT. Though, most of the institutions of higher learning in Nigeria have started building their ICT centres but the focus is mainly to put up an internet facility alone without considering other components that make up an e-learning centre.

## 6. PROBLEMS OF E-LEARNING IN NIGERIA

In spite of the bright prospect of e-learning in the country, there are some obstacles militating against the effective use of the technology in Nigeria. Some of these obstacles are;

- High cost of hardware in Africa, which are substantially higher than in the United States.

- High import tariffs and less price competition.
- Transmission cost is equally high in Africa.
- Internet access in Africa is through a foreign gateway.
- Shortage of skilled manpower.
- Companies and institutions are reluctant to invest in training of staff due to the likelihood that trained staff will be poached by other institutions and companies.
- Africa has the lowest number of telephone lines per capital in the world.
- Existing telecommunication infrastructure is in very poor condition.
- Computer technology illiteracy among the students from the primary school level.
- Cost of acquiring and installing the gadget required for e-learning is very high
- Incessant Power Supply
- Lack of affordable dedicated/specialized e-learning centre.

## 7. NEED FOR OPEN AND DISTANCE EDUCATION IN NIGERIA

The need for Open and Distance Education (ODE) in Nigeria is an important issue for several cogent reasons. Firstly, the vast majority of the population lives below poverty level. They are unable to attend urban based institutions and thus remain deprived of higher education despite their superior merit. Secondly, those who joined workforce without completing their studies or education due to family commitments are unable to combine their work with studies and very few of them who have strong desire for higher studies could not do so because of the limited offer in the traditional institution of higher learning. Thirdly, the tradition of childhood, early marriage and religious belief in the country deprives the majority of female population from higher education. Besides, there are some other usual factors like physical disabilities, remoteness of localities, exorbitant tuition fees in most privately owned Universities and so on. These are some of the major issues responsible for why millions of Nigerians are deprived of higher education despite their keen interest and eligibilities. ODE provides avenues for higher education for such a vast underprivileged population. Nigeria is generously endowed with human resources that need to be well equipped with

literacy and skills to contribute to economic development, which is badly needed for this country. Thus, it is crystal clear that the way forward is to embrace ODE using both hands and supported by all necessary financial and infrastructural commitments.

## **8. ROLE OF NATIONAL OPEN UNIVERSITY OF NIGERIA (NOUN) IN THE PROMOTION OF DISTANCE EDUCATION IN NIGERIA**

NOUN, a federal government – owned university, has emerged as the first dedicated University in Nigeria to introduce education through distance learning mode. The vision statement of the University is that the NOUN is to be regarded as the foremost University providing highly accessible and enhanced quality education anchored by social justice, equity, equality and national cohesion through a comprehensive reach that transcends all barriers. While the Mission statement is that NOUN is to provide functional cost-effective, flexible learning, which adds life-long value to quality education for all who seek knowledge. In addition to the broad vision and mission statements, the university has eight major objectives which are listed below:

- i Provide wider access to education generally but specifically in University education in Nigeria.
- ii Ensure equity and equality of opportunities in education
- iii Enhance education for all and life-long learning
- iv Provide the entrenchment of global learning culture
- v Provide instructional resources via an intensive use of ICTs
- vi Provide flexible, but qualitative education
- vii Reduce the cost, inconveniences, hassles of and access to education and its delivery
- viii Enhance more access to education.

In NOUN, Study Centres are the main contact place for students learning activities. These centres are thus the backbone of the distance learning methodology of the University. Presently, NOUN has 28 study centres spread across the length and breadth of the country as against the initial 18 temporary study centres approved by the Federal Government for take-off of the University in the year 2002. In addition, the university has special study centres which cater for specialized groups, such as the Prison inmates and Armed Forces personnel. Projection of the university is to have a study centre in every state capital and at every local government of the federation. This will

enable the university to achieve its stated objectives. A detailed description of NOUN and its academic programmes are included in this report to understand the current operation of the institution towards achieving its vision and mission statements.

### **8.1 Mode of Delivery of Instruction in Noun**

Mode of delivery of instruction is very important for open and distance learning. There are two major types of mode of instruction for open and distance learning:

- i Mixed mode of instruction delivery system: this system uses several different media methods or deliveries such as video and e-mail.
- ii Single mode of instruction delivery system: this method according to Hirschbuhli (1995) does not provide enough instructional power to ignite student's interest because they fail to provide student involvement.

As a distinct mode of imparting education, NOUN relies heavily on print materials, and face-to-face tutorial services. The use of these techniques helps NOUN to take its academic programmes to the door steps of her students far and wide. It makes room for in-house education. Considering the rapid expansion of ICT's in the country, NOUN has commenced plan on the introduction of more electronic media like CD-ROM, e-mail, internet and interactive e-learning systems for its courses delivery. Indeed, NOUN has established its own radio station in its headquarters in Lagos. The radio station is also one of the strategies to disseminate NOUN programmes to its students in Lagos to start with. Efforts are being made by the institution management towards establishing more radio station across the country to further assist in transmitting their programmes to other students in the remaining states of the federation.

### **8.2 Staff in Noun**

New skills must be learned by faculty members to meet the needs of quality distance education (Sherry and Morea, 1995). NOUN has well-trained and skilled academic and management staffs. All academic and higher ranked officers received an advanced training in open and distance learning both at home and abroad funded by both the management of NOUN and Commonwealth of Learning (COL). The staff received training in all aspects of ODE including modern management, computer skill development, information technology, media production, communication skill development, editing, module writing etc. These skilled staffs are able to introduce and run any new technology for e-learning. Presently, some NOUN staff (both academic and nonacademic) has completed the Postgraduate Diploma in Open and Distance Education

programme and have also commenced their Masters of Arts in Distance Education (MADE) programme under the scholarship scheme offered by Indira Gandhi National Open University (IGNOU) Ajadi et.al. (2008)

### 8.3 Quality Assurance in NOUN

NOUN sees quality assurance as a deliberate and conscious planning, monitoring and evaluation of the sequential process involved in a system operation for efficient and effective performance of the system. Quality is the watch-word at the NOUN and it underpins every aspect of the experiences prepared for a student who has decided to be instructed at the NOUN. All the conventional universities in Nigeria are assessed through accreditation team of the National Universities Commission (NUC); the NOUN too took part in the accreditation. The programmes of the NOUN, its tutorial facilitation and degrees awarded are all subjected to the same quality assurance as all Nigerian universities. Besides, due to globalization, the NOUN collaborates with the Commonwealth of Learning (COL) in Canada, the International Council for Distance Learning (ICDE), the African Council of Distance Education (ACDE) and some well-established open and distance learning universities in the United Kingdom, Hong Kong, India, Australia, South Africa, and the Africa Virtual University in Kenya.

### 8.4 Prospects of e-Learning in NOUN

The e-learning has several advantages in promoting the activities of NOUN as an open and distance learning institution. Some of the important points are listed as follows:

- NOUN students will learn what they need to learn and go at their own pace • the internet will provide NOUN students with the opportunity to make choices about the type and direction of their learning and gain feedback quickly and efficiently. This has the potential to cater for individual learning and styles and requirement providing information about a topic of personal interest.
- The courses provided by NOUN in this model will have wide variety of courses based on IT and non-IT topics, which is an additional benefit to attract large number of learners from all the background.
- E-learning will provide NOUN students courses round the clock i.e. 7 days a week and 24 hours a day, which further attracts working class, students and individuals.
- Computers with high internet infrastructure will help NOUN management to reduce the overheads cost as there won't be any recruitment, training and up gradation of faculties.

- Internet activities will enable NOUN students to discover how the information they gain fits into the real life.
- The internet will provide NOUN students a culturally, racially, physically and gender anonymous medium for communication. Social behaviours can be reduced as students realized that they are judged solely on what they say and how they say it.

### 8.5 Challenges of e-learning in NOUN

E-learning in Nigeria Universities and educational institutions is still a dream because of poor ICT infrastructure and other socio-economic reasons. Due to very high primary cost of infrastructural development and to increase public access to internet and other ICTs, the developing countries are still far behind from getting benefit from the e-learning. The major problems facing the proper implementation of e-learning in Nigerian institutions in general and NOUN in particular are as follows:

- Inequality of access to the technology itself by all the NOUN students the so called digital divide: The cost of a Personal Computer (PC) and Laptop are still very high in Nigeria considering the income level of an average worker in the country. Few of the NOUN students that are privileged to have a PC/Laptop are not connected to the internet as this do attract extra cost which they cannot afford.
- Technophobia: Most of the students admitted by NOUN have no computer education background, hence they are afraid of operating one, some go to the extent of hiring expert at a cost to fill their admission, registration and other document meant for them to fill online. However, the very few who have access to the computer do not know how to use it and maximize it usage.
- Internet Connectivity: The cost of accessing internet is still very high in West Africa. It is as high as \$8/Kbps, while it costs a ridiculous amount of \$0.52/Kbps in North Africa and even lesser in Europe. Most of NOUN Students make use of Cyber Café who charges between #100.00 and #150.00 per hour despite their poor service and slow rate of their server
- School Curriculum: Most of the students admitted by NOUN have no information technology/computer education knowledge because it was not entrenched in the curriculum at their elementary and secondary education level. Not until recently when computer education is been introduced at elementary level and it is not yet a compulsory subject at the secondary level of our education.

- Attitude of NOUN Students: ICT refutes independent learning and most of NOUN students are reluctant to take responsibility for their own learning. But they preferred to be spoon-fed at all times.
- Software and License cost: It is very expensive to get some of the soft wares because they are not developed locally, they are developed in Europe and other developed countries to suit their own system and make their own living. The cost and even the interpretation of the software put off some of the NOUN students who showed interest.
- Maintenance and Technical Support: There are few technical staff to maintain the system, this make it very expensive for few NOUN students that has a PC to maintain when a technical problem is noticed.
- Electricity: The perennial problem in Nigeria is the problem of electricity instability which has been a major setback for our technological development. Some of NOUN students that reside in cities and towns are faced with the problem of epileptic supply of electricity. While majority of them live in rural areas that are not connected to the national grid

## 9. CONCLUSION

The survival of tertiary education institutions in the 21st century will increasingly rely on various forms of electronic delivery and communication inside a market place that requires education to be flexible. E-learning is now widely used in most of the developed countries to promote distance education (DE) and life-long learning in an effective way. In Nigeria, the recent developments and awareness of the Government on ICT have opened an opportunity to adopt e-learning to deliver distance education for educating mass of its uneducated or less educated peoples. Considering the recent expansion of ICTs in the country, NOUN could introduce some modern ICT like e-mail, web-based learning (e.g. open course wares), CD-ROM for delivering its course materials through e-learning for its learners. However, before going to introduce an advanced ICT in NOUN, it is suggested that enough research be conducted on learner's access, cost and other related parameters essential for it.

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