

**E-Learning And Education In The 21st Century In Nigeria. Trends, Issues,
Challenges And Prospects**

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Abstract

Shawinina (2001), ICT is all the digital technologies including: computer, scanner, printer, telephone, internet, digital satellite system (DSS), direct broadcast satellite (DSB), pocket switching, fiber optic cables, laser disc, microwaves and multimedia system for collection, processing, storage and dissemination of information all over the world. This study was conducted to investigate e-learning and education in the 21st century in Nigerian, the purpose was to determine the following: Availability of facilities for e-learning in Nigerian, availability of e-learning materials in Nigerian colleges of education, if students make use of e-learning in their studies in Nigerian colleges of education. A total of two hundred and twenty eight students constituted the sample for the study in some selected colleges in Enugu. Percentages statistic was employed in analyzing data of the study. The findings of the study revealed that formidable obstacle to the use of information and communication technology is infrastructure deficiencies. Majority of the students reported that their colleges do not have e-learning library domain, no online seminars and no discussion with lecturers, no online examination, and there are limited bandwidth. The paper finally made useful recommendations that can ensure adequate application of ICTs in Nigerian schools.

Keywords: E-learning, Education, 21st century in Nigeria, information and communication technology

1.0 INTRODUCTION

Education is the bed rock for national development. It is a catalyst that accelerates the social, political and economic development of every nation. Daurillard, (1993) in agreement with this, defined education as aggregate of all the process by means of which an individual develops abilities, skills and other forms of positive behavior in the society in which he lives. However, in the recent time, e-learning and e-teaching has revolutionized the face of education in the world. E-learning refers to using electronic applications and process to learn. E-learning is also called web based learning, distributed learning, computer assisted instruction, or internet based learning. Content is delivered through the internet, extranet, satellite TV and CD-ROM with multimedia capabilities (ISP, 2004). E-learning is an individualized instruction delivered over public (internet) or private (internet) computer networks. E-learning was first called “internet-based training” then web-based training. Today, you will still find these terms being used, along with variations of e-learning (Lim, 2001). Meanwhile, Eya (2006) sees ICT as a newer, better,

faster and more robust means of information generation and dissemination. The author further disclosed that, ICT encompasses the application of sophisticated electronic approach. In the view of Duru (2008), ICT involves the process of learning through electronic means and accessing knowledge from the global world through the internet system. Eya (2006) agreed that ICT is a tool that has led to the integration of computer technology and tele-communication. As a result of this new technology, the world is now knowledge-driven and leading to globalization. The world is presently marked by increasing emphasis on information, and with modern networking technology, one's ability is enhanced to access and communicate with the wider world (Nnajifor, 2007). Reviewing the relevance of ICT application, Mbachu (2008) declares that most of the developed countries have explored the potentials of ICT to transform, particularly in instructional process. Information and Communication Technologies (ICTs) is a capacity building tool that can empower our youths, as they gear for more knowledge acquisition in their day to day activities. They are eager to catch up with the rest of the youths in the developed economies, as they try to mark their positions in the global economy. With their accelerated interest in computer related gadgets, learners in Nigerian classrooms can be stimulated to learn better as they play and learn with ICT tools. With the use of ICT in education, Nigeria is likely to acquire more knowledge and more connected, and learners cum teachers will develop more positive attitudes to schooling. Villanueva (2000) posits that the above facts could be achieved through the diversity of learning goals, projects, activities and exercises created by ICT-rich classrooms. He affirmed that these cannot be easily present in the traditional classroom. Villanueva outlined the true picture of an ICT-rich classroom thus: The use of ICT in our education system leads to incitation of a curriculum reform, development of a more positive attitude to schooling with learners having more control over educational content and activities, breaking the professional isolation which many teachers in the traditional classroom suffers, present an interactive feature of learning resources that enables learners to become increasingly engaged in the construction of content and having in built technical tools that makes learning easier. He also, disclosed that with the help of ICT, teachers and learners are stimulated to research and impact knowledge on learners because of easy access to information gathering. Technology has indeed made the world a global village and it has more impacts than traditional classroom learning. E-learning has the capacity to play a pivotal role in improving the state of education in Nigeria. Therefore, Nigerians should see the urgent need to use electronic learning of the 21st century as a solution to the falling standard of education. Schools across the country should adopt e-learning as a role model in reviving educational standard in the country. The new innovation enhances teaching and learning through the applications of ICT tools. Teachers as an agent of change, guidance, innovators, creative thinkers, experimenters and researchers should focus more on e-learning method to expose their students on new learning trends. The curriculum planners should also develop content on software with e-learning platform to help in sustaining them with e-teaching and e-learning respectively. With the growing trends of ICT being a tool for teaching and learning in Nigeria, it will pave way for educational reform. It will be recalled that in Nigerian, Governments formulated and launched an ICT policy in 1987. The policy was titled "The National Policy on Computer Literacy and Education". This is geared on equipping Nigerians at all levels of education with the preliminary ICT tools.

According to 11 (102) (a & b) of the National Policy on Education (FRN, 2004) stipulates thus: A network of educational service Centre's in Nigeria (NESCO) shall be set up to provide a forum for exchange of ideas on the development and use of innovative materials for improvement of education. All states, teachers, resource Centre's, institutes of education of

Universities and other professional bodies, shall belong to the network of ICT. _ That government shall provide facilities and necessary infrastructure for the promotion of ICT at all levels of education . These remarkable objectives of the government indicates that plans have to be made on the proper integration of ICT into the Nigerians educational curricula. Teachers and students have to prepare to use ICT facilities in their teaching and learning. In agreement with the above assertion, UNESCO (2003) stated that teachers and teacher educators are of central importance in tapping the potentials offered by ICT, to enhance the quality of education. As a chief actor in teaching and learning, UNESCO guidelines states:

- Understanding the regional guideline for ICT integration in teaching and learning
 - . Comprehending the analytical framework of competency standards for ICT-integration.
 - _ Integrating productivity-enhancing ICT tools, in the teaching-learning context.
 - _ Enhancing teaching and facilitating learning using multi-model courseware cum shareware.
 - _ Integrating ICT using pedagogical innovations, to develop higher order thinking skill among earners
- From the training modular pictured above, the document now filed below instructional methodologies and strategies for efficient and effective training of teachers:
- _ Interactive theme presentation.
 - _ Group discussion and round table tasks.
 - _ ICT integration and its demonstration.
 - _ Sharing of experiences, and
 - _ Hands-on-practice.

It is believed that if these modules and their methodologies are properly used during teacher training, it will lead to faster ways of integrating ICT technology in our education system. The present study is focusing on “Electronic learning in the 21st century: A solution to the falling Education Standards in Nigeria. The impacts of this topic to Nigerian educational system cannot be over emphasized. According to Naidoo (2003), he perceives that e-learning is a tool for disadvantaged learners, and a good access route to teaching, learning and research materials. He said that e-learning is a tool that makes delivery of lesson flexible, interactive and long lasting. Supporting Naidoo, Eya (2006) stressed that e-learning is the largest and the most challenging application of ICT in the delivery of education. The author pictured e-learning as the process of elite rate teachers communicating with e-literate learners, with up-to-date books and information using electronic skills. E-learning according to Oye et al. [9] refers to the use of ICTs to enhance and support teaching and learning process. E-learning ranges from the way student use e-mail and accessing course work online while following a course on campus to programs offered entirely online. E-learning allows for efficient transfer of knowledge anywhere and anytime, regardless of subject matter. It opens up a world of learning unavailable in most corners of the world, while at the same time empowering learners with the information technology awareness and skills crucial to succeed in today global knowledge economy. Ahmad, maintained that e-learning is all about learning with the use of technologies, presumably computers and other modern day tools.

E-learning with its web-based facilities provide the learners with exciting opportunities to reach for more educational information. This paves way for the development of inquiry of the mind, creativity and good study habits. Professional segregation that many teachers suffer in the traditional classrooms becomes a thing of the past. This is because e-learning connects teachers with other professional colleagues worldwide. By so doing, teachers have direct access to their colleagues, materials, information and new innovations and also have the opportunities of sharing their teaching experiences cum challenges. E-learning provides direct interaction

between teachers and learners of diverse background. In the process, they share real life experiences and also E-learning with its web-based facilities provide the learners with exciting opportunities to reach for more educational information. This paves way for the development of inquiry of the mind, creativity and good study habits. Professional segregation that many teachers suffer in the traditional classrooms becomes a thing of the past. This is because e-learning connects teachers with other professional colleagues worldwide. By so doing, teachers have direct access to their colleagues, materials, information and new innovations and also have the opportunities of sharing their teaching experiences cum challenges. E-learning provides direct interaction between teachers and learners of diverse background. In the process, they share real life experiences and also discuss events as it happens immediately. E-learning is indeed a panacea for teachers who lack certain pedagogical principles for their traditional classroom system and a practical e-learning offers the ability to manage quality of scale, and share resources across networks, its greater flexibility of provision of time and place makes it good for widening participation.

2.0 REVIEW OF RELATED LITERATURE

The concept and nature of innovation according to Chauhan (1981) is a trend that shows up either by multiplying or adjusting or erasing entirely issue or policies in the curriculum. This implies that educational change involves a deviation in policies and programmes or its methods, from its original plans or schedule corroborating this assertion, Agabi, (1999.1) argues that such change can be quantitative or qualitative in nature, planned or unplanned, adopting any style or method. Further, he defines educational innovation as a constructively planned and direct change that is aimed at achieving a specific goal (s). discussing the diverse views on innovation, Mkpa and Izuagba (2004) define innovation as a transformation of an earlier practice to something better, introduce something new and disseminate information and to acquire knowledge, skills and attitudes. Innovation of any kind is based upon a broad and purposeful concepts drawn from the facets of the society. This can come as an introduction of a new idea or a change from the old traditional practices that has been abandoned by the people. Therefore, an innovation is a technological process to improve educational goals. There is need to improve educational goals. There is need to introduce new ideas into our teaching methods to improve the standard of education. The National Policy on Education (FRN, 2004) supports this assertion and said that, the quality of teachers produced shall determine the level of improvement of our education system. Change is dynamic and brings about challenges, needs or and problems that may require new knowledge or skills to tackle them, (Mkpa, 1987). Since education is an instrument purposely designed to equip individuals in any society to live a happier life, it has to change from time to time. Such will explore opportunities with potentials for improved education that can fit into the contemporary situation in any society. With the ICT-based education globally, any education system of any country must gear to fit into the global system. This brings in exploring and embracing new techniques and ways to update education system for total reorganization of the education system. This will aid the citizens digitally to face the challenges in life. In 1987, the Nigerian government launches an ICT policy titled “The National Policy on Computer Literacy and Education” aimed at equipping Nigerians at all levels of education. It was a network of educational services Centre’s for exchange of ideas and programmes on the development and use of innovative materials for the improvement of education. The cardinal objectives of the government was for the proper integration of the ICT into Nigeria’s curricula. Also, for the

teachers and students to be equipped to use ICT facilities in their teaching and learning. Electronic learning (E-learning) is an online education or online learning or virtual education has diverse applications with information technologies and communicating same through sophisticated electronic approach (Naidoo, 2003). Supporting this view, Eya (2006) perceives e-learning as the use of computer-aided-gadgets to aid learning. Further, Rees, Mackay, Martins, Canole and Davis (2008) see e-learning as the application of advanced learning technology that is computer based. E-learning is a good remedial backup tool for teachers who lack certain pedagogical principles for their traditional classrooms, to improve on their teachings (UNESCO, 2003; Naidoo, 2003 and Nnajiolor, 2007). E-learning accommodates better selection of content and methodology in order to aid individual differences in learning. Inyama and Nwafor (2006) say that, learners come into the classroom with diverse learning styles, and they have to be encouraged. Further, they emphasized that perpetual learning methods of the students must be monitored and utilized in the teaching process. These learning styles according to them are: visual, Aural and Kinesthetic/Tactile. To make learning exciting for students, they should be allowed to use their individual learning styles. In essence different and varied course wares are developed and presented. The course wares in an e-learning format are arranged in two styles or methods: (i) The learning object concept and

(ii) The learning Nugget concept.

Wiley (2000) defines the learning objects as texts, graphics, exercises, assignments and interactions. In another form, he sees learning object as a programme, a course, a module or a lesson segment. Also, Wiley, regards learning object concepts to have basic attitudes, such as Accessibility; Interoperability, Reusability, Durability and Granularity. According to Rees et al (2008) the learning nugget concepts, is to develop a platform for collaborative work, and to develop the met-data needed for easy transfer of e-learning materials from one institution's Virtual Learning Environment (VLE) to another. He further explains that the process involves identifying common elements called 'Nuggets' on which to base the merger. These nuggets contain learning materials, students' assignments and evaluation of students' achievements modules.

Adibe and Inyama (2005) state that, learning materials i.e. e-learning formats are divided into 'Chunks' i.e. learning bits. These bits come in the form of modules or book chapters, to make learning easier. These Chunks' according to the authors, if applied and scheduled appropriately will encourage frequent and meaningful interactions among the learners, and between the learners and teachers. Presenting the learning procedures in e-learning, the authors state; Learning activities for an online course should encourage human interaction. Students' involvement with the instructor and other students is an integral part of an online/internet course. Some strategies to do this include-Email; Web Board, Social Chartrooms, Electronic Mailing lists, Phone Conferencing, Personal Web Page with photos, Collaborative projects and Discussion Groups.

Adibe and Inyama encouraged interactivity between learners and members of staff such institutions to aid the students' learning experiences. Further, they perceive that, students should be motivated to get deeply involved and display interest in the subject matter using these styles or methods: Case study, Journal, Research Report, Test/Quiz, and Bulletin Board or Chart Discussion. Buttressing this point, Davis (1997) says that, the most effective way of promoting students' participation in e-learning class is to carry them along in all the stages of learning. That, participation in e-learning ranges from attendance, which is called 'Logging on, Reading in the class, posting messages in discussion forums, and taking part in small group activities.

E-learning displays levels of technological investment and preparation. Its success involves the provision of Computers, Internet Connections, Virtual Learning Environments (VLEs); specialist softwares, digital or Computerized e-learning materials, Teachers who can implement these resources, and students who are able to use such systems (Rees *et al*, 2008).

Teaching Methods, Devices and Techniques in E-learning

Teaching Method	Teaching Techniques	Teaching Techniques
One-online	Online Learning Documents, Online Database; Online Software Applications; Online Interest Groups and Interview	Information Retrieval Systems mainly Web browsers linking to Learning Management Systems or Web Resources E-mail System (E-mail)
One-to- One	Learning Contracts; Apprenticeships; Internships Correspondence Studies; Teacher-Students Question/Answers	
One-to- Many	Lectures; Symposiums and Management Skits Systems (LMSs)	
Many-to- Many	Debates; Simulations or Games, Role Plays; Case Studies; Discussions; Transcript-Based-Assignments 'Brain Storming, Delphi-Techniques; Forums; Projects, Students' Presentations	

(Adapted from Paulsen in Rees *et al*, 2008:7)

E-learning evaluation presents a cleaner and clearer reinforcement patterns than the traditional approach. E-learning reinforce the positive outcomes rather than the negative ones, as is the case in the traditional classrooms (Adibe and Inyama, 2005). E-learning evaluation patterns focus on how performances can be improved in the future, rather than dwell on the past. Skinner (1986) explains that, the feedback gotten from the e-learning evaluation helps to re-shape and re-pattern the programmes. He further emphasized that, when feedback is delivered as soon as possible after the act that provoked it, it becomes a very powerful reinforce. He further posits that, the immediate feedback will likely lead to quick change in behaviours in the learners, and maintains its strength for a long period of time.

2.1 Characteristics of E-learning

Eya (2006:65) and Adimabua, Obukohwo and Okechukwu (2006:134-135) outline the following characteristics of e-learning:

- Easy process of operation:** E-learning facilities materials according to the authors are arranged in a simplified format to make them interesting and exciting for both teachers and students.
- **It is open and transparent:** E-learning facilities in time and space, except for coded centres/information that require a password to open them.
- **Information in e-learning format is reliable:** This means that any information stored in this format does not change, but remains the way it is kept. It can be retrieved at any point in time.

-E-learning is a world of community communicating: The authors posit that e-learning open a wide door for exchange of ideas from diverse geographical location. This leads to a powerful academic revolution characterized by death of space.

- The process of e-learning is life-long: In essence, staff/students can get into the net at their own convenience to search for materials or to communicate with each other. Having examined the above characteristics, Adimabua (2006) noticed that educational processes are restructured through e-learning:

-Learning pattern will be changed from group to individual learning.

-Passive learning will be changed from teacher centered to self-initiating.

-Source of knowledge will be changed from simple to multiple.

-Periodic study will change into life-long learning.

-Education will have the purpose of obtaining the ability to learn knowledge, and

-Updating the cycle of knowledge will be done more quickly (p. 134).

2.2 COMPONENTS OF E-LEARNING

Creating e-learning material involves several components: Once content is developed, it must be managed, delivered, and standardized. Content comprises all instructional material, which can range in complexity from discrete items to larger instructional modules. A digital learning objects is defined as my grouping of digital materials structured in a meaningful way and tied to an educational objective. Learning objects represent discrete, self-contained units of instructional material assembled and reassembled around specific learning objectives, which are used to build larger educational material such as lessons, modules, or complete courses to meet the requirements of specified curriculum. Content management includes all the administrative functions (for instance, storing, indexing, cataloging) needed to make e-learning content available to learners. Examples include portals, repositories, digital libraries, learning management system, search engines, and portfolios. A learning management system can serve several functions beyond delivering e-learning content. It can simplify and automate administrative and supervisory tasks, track learners' achievement of competencies, and operate as a repository for instructional resources twenty-four hours a day. Content delivery may be either synchronous or asynchronous. Synchronous deliver refers to real-time, instructor-led e-learning, where all learners receive information simultaneously and communicate directly with other learners. Examples include teleconferencing (audio, video or both). Internet chat forum, and instant messaging. With asynchronous delivery, the transmission and receipt of information do not occur simultaneously. The learners are responsible for pacing their own self-instruction and learning. The instructor and learners communicate using e-mail or feedback technologies, but not in real time. A variety of method can be used for asynchronous delivery, including e-mail, online bulletin boards, list serves, newsgroups, and weblogs. The vexing issue now is that it is becoming increasingly clear that standards are needed through the creation of new e-learning material. Such standard promote compatibility and use ability of products across many computer system, facilitating the widespread use of e-learning materials.

2.3 THE SCOPE AND IMPORTANCE OF ELECTRONIC LEARNING

The term-electronic learning is often used as a related term to online education, online learning, web-based learning, electronic education, distributed learning and virtual education (Eya, 2006). Its different names are as a result of its diverse applications. E-learning is a subset of newer ICT, encompassing the application of information technologies, and communicating same through

sophisticated electronic approach (Naidoo, 2003). Eya (2006) simply perceives e-learning as the use of computer aided-gadgets to aid learning.

Telecommunications technology and personal computers provide the general timeline of electronic learning. E-learning plays important roles in the nation educational sector. Globalization is focused on e-learning due to its potentials to improve learning opportunities to large audiences than has ever been possible. E-learning promotes self-reliance skills. It also helps in training new generation of teachers as well as upgrading the skills of the existing teaching force to use the 21st century tools and pedagogies for learning. E-learning has played increasing roles in fostering economic and educational growth of industrial nations. Yang (2011 p. 19) puts it that, many nations are not only coping with storage of lectures but with the challenges of updating the knowledge and skills of the existing teaching force.

Advancement in ICT has revolutionalized e-learning and e-learning in various creative ways. For instance, increasing access to post-secondary instruction, improving the availability of educational interactions among learners. The power of the ICT has become a critical strategy among institutions willing to aid environment for rapidly growing and diverse communities of learners. Many school of thought viewed distance and online education as alternative education. With the present electronic age, technology has enhanced learning process with distance and online instruction recognized as veritable tools necessary for the preparation of the citizens to involve the technologically driven global environment. A multi-disciplinary approach to online pedagogical research recognized the value of technology in enhancing teaching and learning as a crucial means in the mix of diverse strategies. It's centrality in the global market place has been enhanced by a new culture shared by many educators. The culture has been exemplified by an open movement, with diverse champions from remote village classrooms to ivory towers. Unfortunately, Nigeria as a developing nation is still backward in ICT application and use (Aduwa Ogiegban and Iyamu, 2008).

2.4 LEARNING STYLES IN EDUCATION SYSTEM.

Individual learning styles differ, and these individual differences become more important in the area of education. Therefore, the real challenge in e-learning is keeping the people it is designed for in mind (Canavan, 2004). Learning style is defined as an individual's inherited foundation, particularly past life experience and the demands of the present environment that emphasize some learning abilities over others (Kolb Rubin and Mcntyre, 1974). Educators should be aware of how people obtain and present skills and how they access information to help their progress. (Hultz, 1993) indicates that, a primary goal in studying a new medium of communication for educational delivery must be the identification of its impact on learning style. Students may benefits from understanding their own learning style by taking measures to adjust the way they acquire knowledge (Ivowi, 2008). While instructors cannot always accommodate each students need, it is important that several learning opportunities are provided (TU and MC Isaac, 2002). It is expected that when the learning experience is more effective for the students, an increased level of user acceptance of information system will result. Researchers believe that learning is a good predictor of an individual's preferred learning behaviour (Bostrom, Olfman and Sein, 1993). Lindsay (1999) found that a match between learning style and teaching style reveals increases in student achievement and satisfaction.

2.5 APPLICATION OF ELECTRONIC LEARNING IN TEACHING PROFESSION

It was necessary to review empirically based ICT perceptions and applications as it relates to the present study. This is because the current works done so far rest solely on ICT application in

education generally. Also, skeletal empirical works so far done on e-learning under ICT. Hence, a brief examination of some of these studies done under ICT may likely present a picture of e-learning, which is the focus of the present study. Meanwhile, Ikechi and Arodo Kalu (2005) worked on children's surfing activities in the slums of Lagos State. The study was specifically designed to:

a) Observe the children's attitude towards the world wide web (www) and b) Determine their interests in regular learning activities. Ikechi and Arodo uncovered these through their research:

(i) In early age, the children are interested and satisfied with regular classroom studies. As they grow older, their interests are waning, and they become dissatisfied with classroom work. In the process, they avoid classes, and complain of hostile learning environment and overcrowded classrooms, among others.

(ii) The more the children are exposed to the internet, the more unfavorable posture they take towards learning. Uncovering these trends the authors concluded that early socialization of children into the web may contribute to a positive stand for learning. Through the surfing activities, the interest to learning maintained. The authors suggested that classroom activities should be packaged using the internet. The process will lead to deeper involvement of children in the whole process of learning. Digitalization of the nation's classrooms was deemed necessary in this era in line with the global trend. This led to the development of the NERDC (2002) "National Computer Education Curriculum" for the Nation's primary schools. The main aim of the digitalization curriculum was to establish basic computer rudiments in the learners. In order to ascertain its implementation compliancy, Oyebola (2006) carried out a study on the implementation of the curriculum in Kubwa-Abuja. The study was geared on the following:

a) Find out if the teachers are aware of the existence of a primary computer education curriculum.

b) Check if teachers have access to copies of the curriculum.

c) Assess if teachers based their teaching on the curriculum.

d) Ascertain if teachers received adequate training to enable them teach with computers, and

e) Find out if the schools have computers, and whether the pupils are allowed to use it.

The design of the study was a descriptive survey type. The sample size for the study was not specified. A structured copies of questionnaire was used to collect data, which was subsequently analyzed using percentages. The findings show that:

(1) Over 50% of the respondents are not aware of the existence of the computer curriculum.

(2) Some of the respondent claim that they don't have access to the computer curriculum, as such, their teachings are not based on it. Oyebola now concluded that Nigerians are yet to be sensitized on the need for a digital education at any level of our education system.

In another development, Kayode-Isola, Olisama and Bayulaye (2008) designed another study to ascertain the application of ICT principle in teaching and learning. They carried out a study to examine the availability and utilization of ICT in curriculum delivery in public schools, in Oshodi-Isolo L.G.A of Lagos. The study focused on:

1) Investigate the extent of ICT applications in curriculum delivery in our schools.

2) Examine how adequately equipped the schools are in terms of computers, and well qualified resource personnel, to impact ICT-based teaching process, and how essential it is to the overall intellectual development of our students. The study used descriptive survey design, and sample size of one hundred (100) was drawn using non-probability purposive sampling techniques. The

researcher used a structured questionnaire to collect the data. The data was analyzed using simple percentage. The study reveal that:

(a) Though computer education was taught in the schools, ICT-based teaching was not employed, and

(b) All the schools were not adequately equipped with computers, and qualified resource personnel to impact ICT-based knowledge were scared. From the study and its findings, Kayoed-Isola, Olisoma and Bayulaye emphasized that computer education is essential for the overall development of students. They posit that if ICT-based teaching is effectively used in curriculum delivery, it will lead to the enhancement of the learning process of the students.

2.6 NEEDS FOR E-LEARNING IN EDUCATIONAL INSTITUTIONS IN NIGERIA

The phenomenon of change is inevitable because our society is dynamic and it keeps changing. Changes in world events bring about challenges, needs or skills to tackle them, (Mkpa, 1987). Since education is an instrument deliberately designed to equip individuals in any society to live worthy and happy life, it has to change from time to time, the need for e-learning in educational institution in Nigeria are to:-

-Enable Nigerians cope with pressures and problems from social change especially in education sector.

- Utilize research findings geared towards teaching and learning.

-Explore opportunities with potentials for improved education and

-Search for more relevant education that can fit the contemporary situation in any country. (Unrub and Alexander in Mkpa, 1987:494-510, Agabi, 1999:5) persecuted the explanation of the above points thus;

(a) Need to Cope with Pressures from social change

Changes occur in various facets of life. In this era of new technology, obsolete techniques and knowledge are dropped and new ones are utilized in the education system. There are changes in societal value system, and new challenges and problems emerge. Ways of tackling them must be devised immediately, hence innovative techniques and ideas are devised to solve the problems. Agabi (1999) sees *“these new pressures emanating from societal changes, demanding new values, technology, skills and knowledge to tackle them. In essence, this will lead to total reorganization of the education system”*.

(b) Need to Adopt Research Findings

The aim of any research is to put in new ideas or theories that need to be tried out and adopted. These works may be carried out to solve problems in the society. Also research may be carried out to enrich existing knowledge or as a routine training exercise for students in higher institutions. (Mkpa and Izuagba, 2004). With time, some of these research findings may be tried out and adopted into the education system as an innovation to improve teaching and learning.

(c) Need to improve Teaching and Learning.

Education content needs to be delivered to the learner in the most effective way. Mkpa and Izuagba (2004) states that *“teachers who want to achieve improved quality of instruction must explore variety of ways of doing so. This need become obvious as teachers face learners with diverse learning styles. Agbai (1999) observed that series of researches have been carried out on daily basis to explore new ways of improving teaching and learning. Olagunju, Adesoji, Iroegbu and Ige in Oluwole (2007) discovered that innovation raises the standard of teaching production. The authors also noted that teaching and learning is important because:*

(i) With emerging newer theories of behaviour, newer teaching and learning is needed.

(ii) Academic achievements of students need to be improved continually.

(iii) Our education system needs to meet up with the challenges of modern society.
(iv) Innovations produce greater motivation in both teachers and learners alike, thus encouraging improved learning outcomes (p. 3). Farrant, Mkpá and Izuagba (2004) outlines, contain innovations aimed at improving teaching and learning:

- (i) Competency Based Education.
- (ii) Continuous Assessment.
- (iii) Credit Obtainable.
- (iv) Games and Simulations.
- (v) Incentive Schemes.
- (vi) Individualized Learning.
- (vii) Modules, i.e. Self-contained units of study materials.
- (viii) Open-plan Teaching.
- (ix) Resource Centers for easy location of study materials.
- (x) Team Teaching.

2.7 TRENDS, ISSUES PROSPECTS AND CHALLENGES OF E-LEARNING IN NIGERIA

Nigeria as a developing nation can only accelerate to be at par with the globalized economics in her vision 2020. When her educational system is developed, it shall embrace e-learning (ICT) as a tool to global best practices and the urgent responds to the needs of the society to speed her economic development. E-learning is expected to improve education, for instance, the classroom will no longer be demarcated by brick walls rather students can communicate with their teachers from their homes or centers without having face-to-face interaction with their instructors. Currently the innovation in global education are centered on structural shifts in the content of the curriculum, application of ICT and scientific innovation in education; “education for all” including the physically challenges group among others. The wave of globalization emphasizes knowledge creation and transfer, critical thinking, problem solving and creativity. E-learning is at the center of global education as it facilitates system consciousness, perspectives consciousness, preparedness and process mindedness and involvement consciousness. Education sector in the developing country like Nigeria need e-learning method of teaching to support the face-to-face challenges in classroom. However, research in Nigeria such as on-line/internet connected computers, e-mail facilities, multimedia television, multimedia computer and digital library. It was also discovered that the few available ones such as off-line/ordinary computers, scanner, printer and ready-made courseware are not utilized because of inadequate power supply and lack of requisite knowledge and skills from the teachers.

Educational System in Nigeria and Steps in Enhancing E-learning

The Nigeria educational system is made up of pre-primary, primary, secondary, vocational, tertiary, Adult, Non formal and special education. The educational system involved over-time, even prior to the amalgamation of the Northern and Southern protectorates and the colony of Lagos. The amalgamation took place in 1914. The most active era in the 1950 when constituent parts of the country (Northern, Eastern and Western Regions) was made self-governing. In 1962, all regions established Universities, University of Nigeria was established in Nsukka by the Eastern regional governments, Northern Nigeria established Ahmadu-Bello University in Zaria, and Western regional established University of life at Ile-Ife. The Universities of Lagos and Ibadan were created as Federal Education in Nigeria started in 1943 with the commencement of the Elliot Commission by the British Colonial Government. In enhancing the educational needs of Nigerians, Distance education was introduced. This system of education paved way for

technological and scientific needs of Nigerians. Its basic corresponding teaching techniques include the following:

- (a) Educational Broadcasting.
- (b) Audio-Visual aids.
- (c) Mobile Learning Experience.
- (d) SMS and voice based VAS mobile education.
- (e) Sterior me platform.
- (f) E-learning via mobile web.
- (g) Tutorong app.

The system above provides extra learning process and made education easy. It also encourages students to be more enthusiastic about what they are learning. It serves as a complement to what they are taught in the class because learning is a continuous process and the more educated you are, the social responsibility function of the Nigerian Government, Universal Basic Education (UBE) was introduced as a replacement of the Universal Primary Education. This innovation was geared on enhancing the success of the first nine years of schooling. It involves six (6) years of primary school education and three (3) years of Junior Secondary School Education.

The programme initiated nine (9) years of uninterrupted schooling, and transition from one class to another. This scheme is monitored by the Universal Basic Education Commission (UBEC), and has made it “free” “compulsory” and a right of every child. Therefore, the UBEC Law section 15 defines UBE as early childhood care and education. The Law stipulates a nine (9) years formal schooling, Adult Literacy and non-formal education, skill acquisition programs and the education of special groups such as nomadic and migrants girl child and woman, Al-majiri, street children and disabled people. After the basic nine (9) years compulsory education, any children that want to continue schooling spend additional three (3) years to complete the Senior Secondary. Nigerian child is qualify to go to tertiary institution after the West African Certificate Examination (WACE) or National Examination Council (NECO). The child must pass English and Mathematics in addition to three (3) subjects that relates to his/her field of study. The child says two, three, four or five years in tertiary institution depending on the institution and course of study. The government has the major control of tertiary education in Nigeria. The country has a total number of 138 university registered by NUC among which Federal and State Government own 40 and 39 respectively while 59 universities are privately owned. Meanwhile, a Nigerian child secures admission into any tertiary institutions as from 16 years onwards. Education has been recognized as a basic human right since the 1948 adoption of the Universal Declaration of Human Rights. The Universal Basic Education if well implemented can solve the failure of Nigerian education system. This can be achieved through the use of appropriate technology in educational process. New technologies and techniques engender information and communication revolution and also sharpen the knowledge and skills of the educators and learners. According to Onyelemezie (1988), *Instructional materials otherwise known as educational technology help the teacher to convey the intended message effectively and meaningfully to the learners so that the learner receive, retain and apply the experience gain to reach overall educational goal.* By educational goal, it means the intent of education stated as a long range outcomes to work towards an overall foreseen and schooling that gives direction to activities and motivates behaviours. Meanwhile, for e-learning to be thoroughly functional in Nigeria, the following steps should be taking when policies are formulated, they must be made practicable, implementable and measurable to be useful in its designed purpose. In pursuant of Nigeria’s quest to attain the status of a global giant and be able to proffer solutions to most of her

peculiar challenges, as well as those facing African and the world at large, its tertiary institutions must be innovative, technological and research driven. The research institutions must be given a pride of place. In the view of Bindir (2015) *positive transformation would be achievable only when Nigeria's educational institutions are dynamically transformed. He added that the educational curriculum must be tailored towards entrepreneurial studies, towards the production of employable and enterprising universities.*

3.0 CONCLUSION

E-learning in education is the wholesome integration of modern telecommunications equipment and ICT resources, particularly the internet, into the education system. Taylor (1996) defines the internet as the International Network of Communication in which computers in the Wide Area Network (WAN) talk to each other. E-learning as an aspect of ICT is relatively new in Nigeria's educational system. It is a departure from the conventional approach in curriculum implementation. The main purpose of e-learning is to transform the old methods and approaches to curriculum implementation and not to silence the curriculum. E-learning is driven curriculum. It should follow the curriculum and should not rob the curriculum of its essence. Findings revealed that, Nigeria ranked 112 out of 142 countries surveyed for network readiness to participate and benefit from ICT development. The future of countries now depends on Information and Communication Technology (ICT) and Nigeria could not afford to be left behind. Distance learning should be fully implemented and geared on enhancing productivity for the development of Nigeria. Innovation in e-learning technologies point towards a revolution in education, allowing learning to be individualized, enhancing learners' interactions with others and transforming the role of teachers. The full integration of e-learning into educational sector for catalyze teaching and learning in Nigeria. Despite the fact that e-learning exists for a relatively long time in other countries, it is still in its infancy in Nigeria. Enhance the need for a collective action in ensuring immediate full adoption of electronic learning in the 21st century to serve as a solution to the falling education standards in Nigeria. This is a current technological development in the study of education that involves the organization of e-learning data in software and hardware forms. Sabin (1999) captures, stores, manipulates, analyzes and displays all forms of educationally referenced information. With the introduction of e-learning, it involves diverse ways of gathering and storing some of the educational information. Ogunsanya (2007) supporting the ease of work in e-learning offers relates educational space with cyber space. He further said, educational space is marked by physical location, separated by physical distance and time. On the other hand, cyber-space is the space of the Information Technology marked by its spacelessness and timelessness. He expresses that both edu-space and cyber-space are channels with the same function, i.e. transmission of information, ideas, images and news.

Ogunsanya (2007), simply agrees with the I.C.T. principles which e-learning involves; that there is "despecialization" of interaction; the placelessness and timelessness of locations, the death of distance/location and free existence. This implies that the vast education data scattered here and there on the earth surface can be remotely gathered and collated without much stress again. It now simply involves the provision of ample time for the students to collate the data, and give useful interpretation that will enhance their studies globally. Rees *et al* (2008) after a thorough study and analyses of the nature of e-learning, and the evolving pattern of studies, present eight-

- points' consideration in the development of e-learning in education:
- The investment that is required to develop, launch and maintain e-learning should not be under-estimated.
 - The quality of the teaching materials must be raised substantially to compensate for lack of direct student - teacher contact.
 - Rees et al emphasize that the returns to investment are greatest where the learning content is relatively stable. So they make it clear that e-learning is well suited to teaching techniques/methods that are tried and trusted, rather than experimental process.
 - Rees et al state that there will of course be 'Refusniks'. These are teachers who will dislike" electronic media. This group according to them may think that the book and journal approach are still the best source of knowledge. For such group, they posit that they should be made to realize that the present era of digitalization has its added advantages for research and teaching.
 - The authors state that e-learning does afford the promise of immortality for good teachers because, deposited e-learning materials have a good chance of lasting long as research materials;
 - The authors point that there are new possibilities for collaboration in the development of e-learning materials, not just within the institutions, but also across the institutions. This they encourage through shared authorship of e-learning materials. Though challenging, they see it as rewarding in terms of exposure to new paradigms and ways of thinking about learning;
 - The authors finally conclude that different approaches to collaboration have both merits and demerits. They point that direct exchange of e-learning nuggets or direct use of repository materials is rarely possible, though adaptation is a necessity. They reiterate that some learning materials are easier to share, while others are not.

3.1 RECOMMENDATION

- (1) The government of Nigeria should embark on a massive computer literacy training program nationwide particularly for teachers and learners and learners at all levels of education. This should be enhanced through in-service training of teachers, workshops, seminars and conference. Computer education should be made compulsory at all levels of educational institutions in Nigeria.
- (2) Teachers in Nigeria should be motivated to develop interest in e-learning to enable them have access to knowledge that can ensure international best practices. The motivation should include increase in teacher's salary and other incentives that can induce aggressive research.
- (3) Educational administrators in Nigeria should plan the classrooms and centers in such a way that it will accommodate interest services.
- (4) Government should ensure adequate provision of power supply to enhance regular use of ICTs in Nigerian schools.
- (5) The government of Nigeria should make provision for e-learning libraries for regular research in every educational institution.
- (6) Government of Nigeria should employ team of technologist and ICTs experts who can educate the teachers on the rudiments of ICT to enable them transfer the knowledge to their students.
- (7) What new have we added to knowledge?

Paper's contribution to knowledge

Based on the importance of this paper to the educational development of Nigeria, it is very significant that stakeholders in educational sector in Nigeria uphold the above recommendations. The research contrition to knowledge:

- (1) The study paved way to Nigerians on various access to learning through e-learning and e-education.
- (2) It served as a catalyst to reviving the falling standard of education in Nigeria.
- (3) It also exposed Nigerians scholars on the new trends og globalized teaching and learning.
- (4) The essay equally serves as a reference research document for various researchers who are questing for new ideas in ICT.
- (5) It will also help in re-shaping the standard of curriculum planning in Nigeria and at the same time reengineering the planners to meet up with the international best practices.
- (6) It is geared on getting teachers and students on the use of computer in teaching and learning process.
- (7) The study gives tips to Nigerian government on how to improve educational sector through ICT.
- (8) It uncovered various available learning processes in Nigeria.
- (9) The paper equally showcases the modern learning processes in our various houses.
- (10) The assay charged Nigerians to move along with the new innovation of learning with ease through the new technologies.

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