Assessment of E-Learning Facilities and Their Utilization in Curriculum Delivery of Colleges of Education Programmes in Lagos State, Nigeria

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Abstract
Electronic learning (e-learning) is one of the innovative approaches generally embraced in the present digital age as a delivery system of imparting knowledge into learners. Since its adoption, the availability of e-learning facilities and utilization vary across levels of education in Nigeria, and its status in Colleges of Education has not been much studied and documented. There is therefore the need for assessment with a view to enhancing the productivity of curriculum in Nigerian tertiary institutions. It is on this premise that this study fosters assessment of e-learning facilities and their utilization in curriculum delivery of Colleges of Education programs in Lagos State, Nigeria. The study adopted a descriptive survey which was guided by four research questions, while 150 Colleges of Education lecturers were purposely sampled for the study. E-learning Facilities and Utilisation Rating Scale (E-LFURS) with reliability co-efficient of 0.72 was obtained through the use of Cronbach Alpha statistical tool and the data collected were analysed using frequency distribution and mean. The findings reveal inadequacies in the available e-learning facilities, and only 51.5% are functional in curriculum delivery process. The Internet and multimedia facilities are mostly used with a percentage of 62.0 and 60.2 respectively in the Colleges of Education curriculum delivery. Also, the use of e-learning facilities have contributed immensely to professional preparation of teacher trainees, makes teaching and learning become more interesting and effective, and reduce classroom boredom and stress. It is recommended that web-based instruction should be promoted in Nigerian tertiary institutions, along with the provision of digital libraries with reliable server for storage, retrieval, updating and downloading, among others.

Key Words: Assessment; Electronic Learning; Information and Communication Technology, Nigeria

Introduction
Curriculum which anchors all the experiences offered to the learners plays significant role in formal education of the school-going youths worldwide. The planned curriculum is the formal activities, which the school organized in a systematic order for the learners, so as to attain the educational objectives (Mbakwem & Ukwuoma, 2016). However, the curriculum which is dynamic and ever changing cannot achieve the intended outcomes of Colleges of Education programs in this context, where human and non-human resources and facilities are inadequate.

Therefore, this paper examined the use of facilities as working instruments in the instructional practices of curriculum implementers so as to achieve the set objectives of teaching and learning in Colleges of Education in Nigeria.

The use of concrete facilities and local materials often improvised by teacher, educators and instructors in the process of teaching is quite aging in Nigeria. Notwithstanding, it has greatly contributed to teaching and learning as made obvious in the productivity of graduates of Nigerian tertiary institutions at various times in history. The dynamic nature of the society evidenced by civilization has ushered in information and communication technology (ICT) tools generally adopted by all levels of education in the delivery system of imparting knowledge into learners. This has translated into an effective means of self-development and it also has the capability to facilitate academic performance in tertiary institutions as well as in secondary schools (Fayomi, Ayo, Ajayi, and Okorie, 2015). Ibironke (2015) reiterated that many educational institutions all over the world have almost accepted this emergent technology as an inevitable tool for education services delivery. Due to its importance, Colleges of Education programs in Nigeria which serve as avenues for manpower development and economic growth has to align themselves with this emergent ICT. This is important because according to UNESCO (2008), ICT more than any other technology provides teachers and students access to vast amount of knowledge beyond the school, as well as multi-media tools which are capable of adding more knowledge to its users. Nwoke (2011) submitted that the huge growth of computers, the Internet and other electronic devices provide global opportunities for education, especially for learning outside the premises of the school. Thus, an innovative approach for delivering electronically-mediated, well-designed, learner-centred and interactive learning environment to anyone, anytime and anyplace by utilizing the Internet and digital technologies in connection with instructional design principles is e-learning approach. Various programs that use ICT to enhance the learning processes can be considered as be e-learning (Akomolafe, 2007).

Agumuo (2007) sees the use of e-learning as the use of network technology to design, deliver, select, administer and extend learning. E-learning involves the process of providing instructions which are delivered through an electronic media (Chilaoana, Makaza & Madzima, 2008). It involves the use of ICT which include computer networks, communication and mobile technologies to enhance and extend learning. The use of E-learning approach is becoming popular because of its potential for providing more flexible access to content and instruction at anytime, and from any place. It enables instructors to handle more students while maintaining learning outcome, quality instruction and effective learning that is perhaps comparatively of higher standard if placed side-by-side with face-to-face instruction (Al-Hassan, n.d).

According to Rosenberg (2008), curriculum implementation is the planning and execution of its contents in order to bring about certain changes in the behaviour of the learners and the assessment of the extent to which the changes take place. E-learning occupies a significant place in transforming the approaches to curriculum delivery or implementation and not to extinguish or slow down the curriculum in practice. E-learning approach as an instructional medium permits alternative approaches to curriculum delivery in an ICT age. With e-learning, curriculum implementers at the college of education level can encourage and influence the learners to learn with the aid of computers, mobile phones and Personal Digital Assistants (PDAs), but how they learn depends on their ability. The learners can decide to go on at a fast pace or slow pace, repeat the lesson several times or have a minimum repetition of the task involved in the curriculum instructional process.

Consequently, the adoption and utilization of e-learning is of importance to *edupreneurs* and academic administrators, more importantly, at the tertiary level of education to prepare "knowledge workers" for the "knowledge economy" (Chadha and Kumail, 2003). The use of this approach in curriculum delivery has increased exponentially in the 21st century due to innovations in ICT. The 21st century technology as a tool with revolutionary effect on the quality and quantity of teaching, learning and research has thus given rise to technology word tagged "e-era" comprised of e-government, e-banking, e-commerce, e-mail, e-library, e-learning and many others.

E-learning which has to do with ICT tools and Internet facilities can make teaching and learning more efficient and productive by engendering a variety of tools to enhance and facilitate teachers professional activities through the effective use of the Internet, intranet, extranet, video tape, power point and overhead projector among others. Udan and Wegsen (2011) in their research found out that e-learning enhances interactivity between students. It is flexible and also provides easy access to information and learning materials at any time and distance. E-learning tools actually strengthen traditional classroom delivery, and are not meant to replace the direct human-to-human contact of the classroom.

E-learning involves the use of devices such as computers and components attached to them (Internet servers, disk drives, printers, mouse, and modems), software packages such as Microsoft word, Microsoft excel, CorelDraw, PageMaker, and learning management systems such as moodle, blackboard and makau and so on. The utilization of e-learning facilities largely determines the actualization of program objectives through its curriculum in addition to human resources. Gross inadequacy of e-learning facilities and poor utilization of the available facilities are bound to affect the quality of education given to students. The studies by Ibironke (2015), Tashie (2012), Schuttle (2009), and Beerman (2008) indicate that learning outcomes achieved using technology are better, at the same time, learners show much enthusiasms with the use of e-learning devices and software, and they are more relaxed, compared with traditional settings. Similarly, several of such studies enhanced learning outcomes with the use of computer-mediated learning.

It is evident that Nigeria's educational system is faced with perennial challenges among which are high students to teacher ratio, shortage of teaching space/classrooms or lecture halls, and facilities and inadequate instructional aids among others. As a result, the sourcing for, and utilization of modern technological and instructional approaches have been on for sometimes now in Nigerian educational institutions. Meanwhile, assessment is at the heart of education (Ojerinde, 2014). It involves the process of gathering information for purposes of decision making, which covers the collection of information about an individual's knowledge, skills, attitudes, and using the data from such for taking relevant decisions about the individual, instructional process, curriculum or program (Ugodulunwa, 2008).

Since the sourcing and the acclaimed embracement as well as utilization of e-learning facilities have been on for some time now in Nigerian colleges of education, the use of the e-learning facilities call for assessment. This is with a view to promoting teaching and learning of educational programs in Nigerian colleges of education. It is against this background that the study becomes very significant.

Statement of the Problem

The assessment of delivery strategy of educational programs to the level of tertiary education and other levels of education is of paramount importance to national development. This assessment

provides education stakeholders with the timely and specific feedback that they need to make adjustments for effective learning and enhanced productivity of the implemented curriculum. Since the adoption of e-learning as one of the innovative approaches to effective instructional practices in Nigerian education in this e-era (electronic era), perennial challenges like shortage of technological devices, inadequate multi-media systems, digital library and digital classrooms have been identified as challenges to e-learning adoption and implementation (Anene, Imam and Odumuh (2014); Okiki (2011).

Curriculum delivery of educational programs in Nigerian Colleges of Education is also confronted with challenges of new technologies in terms of electronic facilities and use. Obviously, some of the tertiary institutions in Nigeria acclaimed that e-learning is already revolutionalising their teaching-learning process while e-learning approach has not been seriously embarked upon as expected elsewhere in the existing colleges of education. As a result, the ultimate objective of the curriculum delivery to prepare learners for the knowledge economy, as manpower for the society has not been maximally achieved. It is therefore important to use appropriate teaching strategies as means to help students overcome constraint to their learning activities (Tiamiyu, Ajiferuke, Longe, Nwagwu, Ogunsola, Opesade and Olatokun (2012). From the foregoing therefore, the researchers embarked on the assessment of e-learning facilities and their utilization in curriculum delivery of Colleges of Education programs in Lagos State, Nigeria.

Research Questions
The following research questions guided the study.
1. What are the available e-learning facilities for curriculum delivery of the Colleges of Education programs in Lagos State?
2. To what extend are the e-learning facilities available and functional for curriculum delivery of the Colleges of Education programs in Lagos State?
3. Do lecturers use e-learning facilities for curriculum delivery of the Colleges of Education programs in Lagos State?
4. What are the contributions of e-learning facilities to curriculum delivery of the Colleges of Education programs in Lagos State?

Scope of the Study
This study is limited to the assessment of e-learning facilities and their utilization in curriculum delivery of Colleges of Education programs in Lagos State, Nigeria. The study covered only the federal and state-owned Colleges of Education in Lagos State. Also, the academic members of staff in the school of vocational and technical education of the government-owned Colleges of Education in Lagos State were the respondents to the study.

Research Methodology
Research Design
The study is a descriptive survey in which the existing phenomenon which had occurred already was fostered for data collection and no variable was manipulated in the study. The population for the study comprised all the lecturers (male and female) of vocational courses like Business Education, Home Economics, Agricultural Education and Technical Education as available in the Federal College of Education (Technical), Akoka; Adeniran Ogunsanya College of Education, Ijanikin; and Michael Otedola College of Primary Education, Epe, Lagos State of

Nigeria. All the lecturers are the implementers of the curriculum of vocational courses within their respective departments in the colleges.

Sample and Sampling Technique

A three government-owned Colleges of Education (one Federal College of Education and two State Colleges of Education where vocational and technical education programs are offered were purposively selected due to the fact that computer-based instruction has become a compulsory aspect of their program implementation.

All the vocational and technical education (Male and Female) lecturers in the School of Education of the sampled Colleges of Education available during the period of the survey participated in the study because the population is not too large to cope with in this study. In all, 150 academic members of staff formed the total population for the study.

Instrumentation

The primary source for data collection was the field survey. The research instrument for data collection is E-Learning Facilities and Utilization Rating Scale (E-LFURS) adapted from Ibironke's (2015) E-Learning Utilization Scale (E-LUS). Section A of E-LFURS contains the bio-data of the research participants while section B is divided into four parts. Part 1 identified e-learning facilities in which the respondents were to respond on their availability for curriculum delivery. Part 2 centred on the functionality of the available e-learning facilities. Part 3 indentified 8 items to find out the frequency of use of the E-learning facilities while Part 4 contains 10 items on the contributions of e-learning facilities for curriculum delivery of the Colleges of Education programs in Lagos State of Nigeria.

The E-LFURS was validated by some computer educators who examined the items of the instrument in term of relevance, the wording, phrasing and its appropriateness for the intended study. Their technical inputs and suggestions were used to modify the research instrument. In order to establish the reliability of E-learning Facilities and Utilization Rating Scale (E-LFURS), 25 copies were administered once on tertiary institutions lecturers outside the scope of the study. The consistency/reliability co-efficient of 0.72 was obtained by using Cronbach Alpha Statistical tool as made available in Statistical Package for Social Sciences (SPSS).

Method of Data Collection

With appropriate permission and consent of the authorities of the three Colleges of Education covered in this study, the researchers were involved in the distribution, monitoring and adequate collection of the research instrument. The copies of the research instrument were administered based on the availability of the Colleges of Education lecturers in the School of Vocational and Technical Education. A total of 150 copies of E-LFURS were used for data analysis.

Method of Data Analysis

Descriptive statistics like frequency count, percentages and mean were used for data analysis. The analyzed data obtained were then used to discuss the research questions and the findings of the study. The benchmark of acceptance of the respondents' opinions is 2.50 while less than 2.50 were termed not accepted as a decision rule.

Results

Research Question 1: What are the available e-learning facilities for curriculum delivery of the Colleges of Education programs in Lagos State?

Table 1: Lecturers' Responses to the Availability and Adequacy of E-learning Facilities for Curriculum Delivery of Colleges of Education Programs

Items	Available and Adequate (AA)	Available and Not-adequate (ANA)	Not Available (NA)
Computer Laboratory Equipment with Desktop Computers	-	150 (100.0)	-
Laptop for Lecturers	3 (2.0)	147 (98.0)	-
E-learning laboratory – Laboratory server's lab and dame lab	5 (3.0)	145 (97.0)	-
Multimedia Projector	6 (4.0)	79 (52.7)	65 (43.3)
E-Learning Software Packages	7(4.6)	143 (95.4)	-
Digital/E-Library	3 (2.0)	87 (58.0)	60 (40.0)
Dome Cameras	9 (6.0)	101 (67.3)	40 (26.7)
Internet Connection	2 (1.3)	148 (98.7)	-
E-mail Facilities	70 (46.7)	80 (53.3)	-
Modem/Satellite	20 (13.3)	130 (86.7)	-
Average (%)	**8.3%**	**80.7%**	**11%**

(* Percentages are in parenthesis)

As shown in Table 1, 80.7% of the study participants responded that a good number of e-learning facilities identified are available in the Colleges of Education but not adequate. Internet connection though not adequate is the most available (98.7%) and this is followed by laptop for lecturers (98.0%). Perhaps most of these laptops are provided by the lecturers themselves to facilitate e-teaching and e-learning in the curriculum delivery process of the Colleges of Education programs. Only 8.3% of the e-learning facilities were considered available and adequate by the study participants (Table 1).

Research Question 2: To what extend are the e-learning facilities available and functional for curriculum delivery of the Colleges of Education programs in Lagos State?

Table 2: Functionality of E-learning facilities for Curriculum Delivery of Colleges of Education Programs

Item	Very Functional (VF)	Averagely Functional (AF)	Rarely Functional (RF)	Not Functional (NF)	Mean
Interactive Whiteboards	90 (60.0)	53 (33.0)	10 (7.0)	-	3.70
E-mail Facilities	72 (48.0)	76 (50.7)	2 (1.3)	-	3.47
Internet Connection	60 (40.0)	82 (54.7)	8 (5.3)	-	3.10
Institutional Laptops/Desktop Computer	77 (51.3)	73 (48.7)	-	-	3.01
E-Learning Laboratory	5 (3.0)	79 (52.7)	66 (54.3)	-	2.93
Modem/Satellite dish	-	120 (80.0)	30 (20.0)	-	2.89
Computer Laboratory Equipment	80 (53.3)	70 (46.7)	-	-	2.74
Interactive Multimedia Software	-	84(56.0)	2 (1.3)	64 (42.7)	2.67
Digital Library	-	90 (60.0)	-	60 (40.0)	2.61
Dome Cameras	3 (2.0)	60 (40.0)	87 (58.0)	-	2.50
Average (%)	**25.8%**	**51.3%**	**14.6%**	**8.3%**	**2.96**

(* Percentages are in parenthesis)

Table 2 presents the functionality of the e-learning facilities for curriculum delivery of Colleges of Education programs. As shown, 51.3% of the e-learning facilities are averagely functional with an average mean score of 2.96 also on the average. Meanwhile, 53.3% of the computer laboratory equipment is recorded as being very functional; 40.0% of the Internet connection is also very functional; 56.0% of the interactive multimedia software is averagely functional; 54.7% of the Internet connection is averagely functional; 52.7% of e-learning laboratory available is averagely functional; 60.0% of interactive whiteboards is very functional while institutional laptops/desktops computer are 51.3% very functional and 48.7% averagely functional respectively among others. The average mean score of 2.96 shows an acceptance functionality level of e-learning facilities being utilized in the Colleges of Education captured in this study.

Research Question 3: Do lecturers use e-learning facilities for curriculum delivery of the Colleges of Education programs in Lagos State?

Table 3: Lecturers' Use of E-Learning Facilities in Curriculum Delivery of Colleges of Educations Programs

Item	Often Used (O.U)	Averagely Used (A. U)	Occasionally Used (OCU)	Not Used (NU)	Mean	Total (%)
Directing students to source for information on their courses and related subject matter through the Internet	70 (46.7)	75 (50.0)	5 (3.3)	-	3.00	(60.0)
Use of the Internet facilities for e-learning	35 (23.3)	100 (66.7)	15 (1.0)	-	3.10	(62.0)
Use of multimedia instructional facilities for e-learning	90 (60.0	30 (20.0)	30 (20.0)	-	3.01	(60.2)
Use of e-learning facilities to promote students/lecturers interaction	35 (23.3)	40 (26.7)	60 (40.0)	15 (33.3)	2.46	(49.2)
Assessment of students' assignment through e-mail facilities	20 (13.3)	30 (20.0)	90 (60.0)	10 (6.3)	2.45	(49.0)
Use of the Internet by lecturers to discus and organize tutorials for students in the college	45 (30.0)	30 (20.0)	5 (3.3)	70 (46.7)	2.41	(48.2)
Collaborative teaching and learning through e-source forum	20 (13.3)	40 (25.7)	10 (6.3)	80 (53.7)	2.40	(48.0)
Lecturers' monitoring and supervision of students projects online	30 (20.0)	40 (26.7)	41 (27.3)	39 (26.4)	2.30	(46.0)

(* Percentages are in Parenthesis)

As shown in Table 3, Lecturers' Use of E-Learning Facilities in Curriculum Delivery of Colleges of Educations Programs is in the following order: Item 1 - Directing students to source for information on their courses and related subject matter through the Internet with a mean score of 3.00 (60.0%); item 2 - Use of the Internet facilities for e-learning with a mean score of 3.10 (62.0%); item 3 - Use of multimedia instructional facilities for e-learning with a mean score of 3.01 (60.2%). With this acceptable mean scores as determined with a benchmark of 2.50 (decision rule), it therefore means that students are directed to source for information on their courses and related subject matter through the Internet; Internet facilities are used for learning, and multimedia instructional facilities are use for e-learning, but there are challenges on:

assessment of students' assignment through e-mail facilities (x = 2.45 (49.0%)), use of the Internet by lecturers to discuss and organize tutorials for students in the college (2.41 (48.2%)); collaborative teaching and learning through e-source forum (2.40 (48.0%)); lecturers' monitoring and supervision of students' projects online (2.30 (46.0%)) and use of e-learning facilities to promote students-lecturers interaction (2.46 (49.0%)).

Research Question 4: What are the contributions of e-learning facilities to the curriculum delivery of the Colleges of Education programs in Lagos State?

Table 4: Contributions of E-learning facilities to Curriculum Delivery of the Colleges of Education Programs

Item	S.A	A	D	SD	Mean
E-learning facilities available in the college of education is fast improving collaborative teaching and learning	63 (42.0)	41 (27.3)	44 (29.3)	2 (1.4)	3.85
Use of the Internet as e-learning facility has enabled students' searching for information on their courses a bit smooth	85 (56.7)	50 (33.3)	15 (10.0)	-	3.65
Use of e-learning approach and facilities reduce classroom boredom and stress	60 (40.0)	70 (46.7)	20 (13.3)	-	3.42
With the use of the Internet facilities, students are able to share their academic problem with their peers and lecturers	90 (60.0)	35 (23.3)	25 (16.7)	-	3.31
Students academic performance is better with the use of e-learning facilities	50 (33.3)	60 (40.0)	40 (26.7)	-	3.13
Use of the available e-learning facilities makes students' submission of assignment less time consuming	30 (20.0)	80 (53.4)	20 (13.3)	20 (13.3)	3.12
E-learning resources make teaching and learning more interesting and effective	70 (46.7)	50 (33.3)	30 (20.0)	-	2.95
Professional preparation of college of education students has been enhanced with the lecturers use of e-learning facilities	40 (26.7)	50 (33.3)	40 (26.7)	20 (13.3)	2.65
Lecturers and students instructional interaction is made very possible and easier with the use of available e-learning facilities	30 (20.0)	35 (23.3)	40 (26.7)	45 (30.0)	2.46
Tutorials are easily organized for	21 (14.0)	24	60	45	2.35

		(16.0)	(40.0)	(30.0)	
students by their lecturers due to the available e-learning facilities					
Average %	60.3%		39.7%		

(* Percentages are in parenthesis)

In Table 4, accepted mean ratings of 3.85, 3.65, 3.42, 3.31, 3.13, 3.12, 2.95, and 2.65 were recorded for items 1, 2, 3, 4, 5, 6, 7 and 8 respectively because they fall above the 2.50 benchmark in each case. Similarly, on the average, 60.3% agreed that e-learning facilities greatly contributed to curriculum delivery of the Colleges of Education programs in Lagos State of Nigeria as against 39.7% who disagreed. Although, their responses on items 9 and 10 fall below the acceptance level, on the whole, the percentage contributions of e-learning facilities to curriculum delivery in the Colleges of Education surveyed is very high.

Discussion of Findings
The findings from the result presented in Table 1 established that most of the e-learning facilities identified in this study are available, but not adequate. This finding corroborates the findings of Akinola (2008) that not all institutions have all the necessary ICT tools needed for teaching of business education courses. It also supports the findings of Jegede and Owolabi (2008) that there are infrastructural deficiencies and lack of facilities such as computers, computer laboratories and online classroom for the study of Computer Education in many institutions of learning in Nigeria.
On functionality of the available e-learning facilities for curriculum delivery of the Colleges of Education programs, the e-learning facilities are functional at the average level (51.3% - Table 2). E-learning facilities like computer laboratory equipment, interactive multimedia software, the Internet connectivity, e-learning laboratory, interactive whiteboards and institutional laptops/desktops computers among others are relatively functional from one College of Education to the other in Lagos State. The findings agree with that of Seiden (2000) and Uhaegbu (2001) as cited by Ibironke (2015) that ICT facilities like digital library, e-learning laboratory, e-learning software packages in many institutions in Nigeria are inadequate and where available not very functional.
This study further recorded the extent of using e-learning facilities in curriculum delivery of Colleges of Education program. In this wise, use of the Internet facilities for e-learning, use of multimedia instructional facilities and students sourcing for information on their courses and related subject matter through the Internet are agreed upon as being often used/averagely used by the lecturers who are the participants in this study. There were challenges with the usage of e-mail facilities for students' assessment, use of the Internet by lecturers, collaborative teaching and learning via e-source forum, monitoring and supervision of students' projects online and use of e-learning facilities to promote students/lecturers interaction (table 3). With these findings, despite the fact that the use of e-learning facilities has a lot of gain in teaching and learning, the challenges observed in their usage in this study are partly in agreement with Tashire (2012) who identified the major challenges for effective utilization of e-learning by teachers as inadequate ICT infrastructure, lack of fund, lack of ready access to the Internet, lack of updated computer application and lack of the Internet service knowledge among others.
On the contributions of e-learning facilities to use for curriculum delivery of the Colleges of Education programs, classroom boredom and stress have been reduced, students academic performance has become better, teaching and learning has become more interesting and

effective, the submission of students assignment are less time consuming, professional preparation of students is enhanced, and students are able to share their academic problems with their peers and lecturers (Table 4), some inherent challenges notwithstanding. All these show that e-learning applications have made it possible to deliver educational services devoid of peculiar constraints (Ibironke, 2015).

Conclusion
This study has assessed e-learning facilities and their utilization in curriculum delivery of Colleges of Education programs in Lagos State, Nigeria. The usage of available e-learning facilities as veritable channels for curriculum delivery in Colleges of Education has been found out in this study. Also, the functionality of e-learning facilities and their corresponding contributions to teaching and learning for enhanced Colleges of Education programs in professional terms can only be made possible where they are appropriately provided and utilized by curriculum implementers.
It is evident from the findings of this study that where e-learning facilities are made functional, quick delivery of curriculum would be more realistic, and dissemination of knowledge and information would be made more possible as against the old traditional face-to-face teaching and learning. In conclusion, the whole essence of development is to make education accessible to all irrespective of distance, culture and environment. E-learning approach and its facilities would no doubt bring class nearer to the learner, learner to the subject matter, and trainers to trainees irrespective of space or distance. As a result, adequate attention to e-learning facilities and their effective utilization is a pragmatic approach needed to make optimum progress in the 21st century education.

Recommendations
Based on the findings of this study, the following recommendations were made:
There is the urgent need for adequately Internet connection in order to improve students-to-lecturers' interaction, as well as student-to-students interaction.
Web-based instruction should be gradually promoted in Nigerian tertiary institutions for worthwhile e-learning opportunities.
Digital libraries with reliable server for storage, retrieval, uploading and downloading of information should be made available in every tertiary institutions owned by government in Nigeria.

References
Agumuo, E. E. (2007). Business education in the "E" Era: implication for national education reform. A lead paper presented at the 19th annual national conference of the Association of Business Education of Nigeria (ABEN) held at Ebonyi State, October 16-20.
Akinola, C. I. (2008). The Challenges of reform, information and communication, technology in business education curriculum. *Business Education Book of Readings,* 3(5), 120-135.
Akomolafe C.O. (2007). Planning and Managing e-Learning Development in Tertiary Institutions in Nigeria. *Malaysian Journal of Distance Education,* 9 (1), Pg 29-44
Al-Hassan A. (n.d). A comparison of e-learning and Traditional classroom teaching: Petra University. https://www.uop.edu.jo/download/Research/members/67_1262_Ahma.pdf

Anene J.N., Imam H., and Odumuh T. (2014). Problem and Prospect E-learning in Nigerian Universities. *International Journal of Technology and Inclusive Education*, 3(2). Infonomics Society, United Kingdom.

Beerman, K. A. (2008). Computer-based multimedia: new directions in teaching and learning. *Journal of Nutritional Education,* 58(1), 15-18.

Chadha G. and Kumail N.S.M. (2003) *E-Learning: An Expression of the Knowledge Economy*. Tata McGraw-Hill.

Chilaoana, L., Mekaza, D. & Madzima, K. (2008). The current state of e-learning at universities in Zimbabwe: Opportunities and challenges. *International Journal of Education and Development,* 42(2), 1-11. http://ijedict.dec.uwi.edu/viewwaticle-phpped-450glayout-html.

Fayomi O., Ayo C., Ajayi L., and Okorie U. (2015). The Impacts of E-Learning in Facilitating Academic Performance among Private Secondary Schools and Tertiary Institutions in Ota, Ogun State, Nigeria. *Proceedings 9th International Technology, Education and Development Conference* Madrid, Spain. 2-4 March, **2015**

Ibironke, J. O. (2015). Utilization of e-learning opportunities in the teaching and learning of business education courses in Lagos state colleges of education. M. Ed. Dissertation, Department of Vocational and Technical Education, Tai Solarin University of Education, Ijagun, Ijebu-Ode, Ogun State, Nigeria.

Jegede, P. O. & Owolabi, A. J. (2008). Computer education in Nigerian secondary schools: Gaps between policy and practices Meridian: *A Middle School Technology Journal,* 6(2), 1-11. Retrieved from http://wwwnesu.edu/meridan/sun2003/nigeria:pdf.

Mbakwem, J. N. & Ukwuomo, C. N. (2016). Curriculum planning/development in the 21st century Nigeria: Some vital issues F. I. Ukozor, E. C. Ekwonye & C. N. Ihekwaba (Eds.) *Issues in science education, curriculum development, research and evaluation* A Festschrift for Emeritus Professor Obioha Chima Nwana. The Great Science Teacher (Okaa Nkizi Nmughasi) Owerri: Richgrip Publishing House, 195-208.

Nwoke, F. O. (2011). Optimizing e-learning for effective delivery of business education in tertiary institutions in the 21st century: N. Onyegegbu & U. Eze. (Eds.). Optimizing e-learning opportunities for effective education service delivery. A Publication of the Institute of Education (UNN).

Ogunsola K and Alade I. A. (2008). Situation analysis of the impact of Information Technology-Mediated Potentials (IT-MP) in the socio- educational practices of Nigeria citizens. Conference proceedings, at *the Fifth Pan- Commonwealth Forum on Open Learning*, London, United Kingdom, July 13-17 2008.

Ojerinde, D. (2014). New approaches on university placement examinations – Nigerian experience. Being a paper presented at the Abant Meeting from 22-23 February, 1stanbul, Turkey.

Okiki C.O. (2011). Information Communication Technology Support for an E-Learning Environment at the University of Lagos, Nigeria. *Library Philosophy and Practice,* (e-journal). 610.

Rosenberg, M. J. (2008). E-learning strategies for delivering knowledge in the digital age. New York: McGraw Hill.

Schuttle, J. G. (2009). Virtual teaching in higher education: The new intellectual super-highway or just another traffic jam? (Verified 18 February, 2004) http://www.csun.edu/sociology.

Tashie, G.A. (2012). Use of e-learning facilities to teach accounting to final year students. *Akoka Journal of Vocational and Technical Education, Akoka* 2.

Tiamiyu, Ajiferuke, Longe, Nwagwu, Ogunsola, Opesade and Olatokun (2012). Towards an Online Bachelor of Information Science Degree Program in a Nigerian University: Part 2—Lessons from a Market Survey. ***Education for Information.*** IOS Press. 29 (2), Pg. 121-145.

Udean, T. & Wegsen, C. (2011). Corporate e-learning: Exploring a new frontier. UK: W. R. Hambrechi and Company.

Ugodulunwa, C. A. (2008). Fundamentals of educational measurement and evaluation. Job: Fab Aireh, Nigeria Limited.

UNESCO (2008). Teacher education guidelines using open and distance learning technology, curriculum, cost and evaluation. Retrieved March 12, 2008 from http://unesco.org/images/0012001253/125396e.pdf