



## A COMPARATIVE STUDY OF THE CHALLENGES OF E-LEARNING IN NIGERIAN UNIVERSITIES

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### **Abstract**

*This is a comparative study of the challenges of e-learning in Nigerian Universities. The purpose of the study was to determine if there was a significant difference in the challenges faced by students in e-learning in Nigerian Universities. A total of two hundred and twenty eight students from nine Universities constituted the sample for the study. Simple random sampling technique was employed in selecting students from these universities in Nigeria. These universities were also randomly picked from the six geo-political zones of Nigeria and the federal capital territory. Questionnaire was used to elicit "Yes or No" answers to the questions. Frequency analysis using percentages was done and this was presented using column charts to compare responses of the students. The findings of the study showed that students in majority of the universities studied, indicated that their universities lacked appropriate learning software as well as good quality online educational content. They also indicated that sustainability of e-learning was not prioritized, that they had no access to appropriate content for ICT-enhanced learning/training and that they also had no access to affordable/ reliable computers. The study recommended that the Nigerian Government should provide the enabling environment for all lecturers and students to become computer literate. This should be done within a time frame, with proper certification. No student should graduate without passing the computer course. This computer certification should also be the first on the list of promotion requirements for lecturers.*

**Keywords:** computers, education, e-learning, university

### **Introduction**

In developing countries, e-learning is still a relatively new concept in the educational system. This is because, the traditional method of education, which involves interaction between teachers and students, is still prominent as resources are limited in some of these countries. Though, there is an increasing awareness of e-learning, however, learners in the developing countries have financial constraints which make it difficult for them to participate in the program as it is costly. They thus are limited in their ability to access the learning facilities because it relates with high tech equipment, in many cases (Akbar, 2005). Through the proliferation of Information and Communication Technologies (ICT), educational practices and knowledge transfer are changing; traditional education is shifting towards new methods of teaching and learning (Iahad, Dafoulas, Milankovic-Atkinson, & Murphy, 2006). The continuous advances in technology enable the realisation of a more distributed structure of knowledge transfer. This becomes critically important for developing countries that lack the resources and infrastructure for implementing cutting-edge education practices.

### **Statement of the problem**

While e-learning exists in some Nigerian Universities there are challenges militating against its smooth implementation. These challenges include mass unawareness, low computer literacy level and cost of equipment. These, according to Folorunso, Ogunseye and Sharma (2006) were identified as critical factors affecting the acceptability of e-learning by students and lecturers of Nigerian universities. There is non-availability of internet access in some tertiary institutions because of the recurrent cost of bandwidth. Inequality of access to technology has created the challenge of a digital divide among the students of Nigerian universities, thus, some of them are unable to afford computers due to the relatively high cost when compared to the average income of workers in the country. Hence this study sought to investigate and compare the challenges faced by students in Nigeria in accessing e-learning facilities in their various universities

### **Purpose of the study**

The study investigated and compared the challenges in accessing e-learning facilities amongst students in nine universities selected for study.

The study was specifically conducted to investigate:

1. If students made use of e-learning in their studies in the nine Nigerian universities selected for the study
2. If students faced challenges of accessing e-learning facilities in the nine Nigerian universities selected for the study
3. If there were significant differences in the challenges faced by students in accessing e-learning in Nigerian universities

### **Research questions**

1. Do students make use of e-learning in their studies in the nine Nigerian Universities selected for the study
2. Do students face challenges in accessing e-learning facilities in the nine Nigerian universities selected for the study

### **Hypothesis**

Ho<sub>1</sub>: There are no significant differences in the challenges faced by students in e-learning in Nigerian Universities

### **Literature Review**

E-learning has been described as one of the educational challenges of the modern era, where education is a commodity. As such, progressive academic institutions must make bold efforts to excel in it and compete favourably in the global market. The importance of e-learning cannot be over emphasized, because as it keeps growing in use and importance, an increasing amount of learning activities, within the academia, can be expected to occur through interactivity with e-learning materials (Zheng & Ferris, 2008). This means therefore that for a developing country such as Nigeria to achieve its goal of growth and development, she must embrace fully the world of e-learning. However it is the introduction of Information Technology that will provide the basis for e-learning. Academics must teach more than subject content, by putting away the chalk

and picking up active learning through the Internet and educational technology. The question however is “How prepared and ready is Nigeria to embrace this technology?” Some Universities in Nigeria are still far from embracing e-learning, as lecturers still prefer large lecture classes, correspondence courses, and instructor-led face-to-face classes. This is because most lecturers are not computer literate. While most have acquired laptops, only few actually make use of them. Those that do not have computer knowledge, appear not prepared to acquire computers skills. They would rather prefer to engage their students or children who are computer literate to perform tasks for them. Though Kruse (2012) noted that there is a vast movement towards e-learning because of the many benefits it offers, and e-learning is praised and innovated, computers will never completely eliminate human instructors and other forms of educational delivery. It is important, however, to know exactly what e-learning advantages exist and when these outweigh the limitations of the medium. E-learning will not replace the classroom setting, but enhance it, taking advantage of new content and delivery technologies to enable learning.

The origins of the term e-Learning is not certain, although it is suggested that the term most likely originated during the 1980's, within the similar time frame of another delivery mode - online learning. Horton (2006) defined e-learning as the use of internet and digital technologies to create experiences that educate our fellow human beings. E-learning has the potential to revolutionise the way we teach and how we learn. E-learning is the use of Internet and digital technologies to create experiences that educate our fellow human beings. Fery, Faul, and Yankelov (2003) noted that online course quality remains a concern of faculty and some administrators, while Shank (2005) observed that online course quality remains a concern of faculty and some administrators. Faculty issues included suitability of their subject for online delivery, isolation from students, and the additional time required to teach online

In Nigeria while there is growing demand for e-learning, the challenges are many. In the higher institutions in Nigeria, most lecturers and students are not computer-literate. While some are beginning to know how to access their e-mail, some don't even have an email address. Olakulehin (2007) noted that the infrastructure necessary for deploying an effective ICT platform is lacking in Nigeria. There isn't enough human skills and knowledge to fully integrate ICT into education. In line with these views, Aduwa-Ogiegbaen, and Iyamu, (2005) was emphatic that in Nigeria, a formidable obstacle to the use of information and communication technology is infrastructure deficiencies.

Mac-Ikemenjima, (2005) observed that there was inadequate ICT infrastructure, including computer hardware and software, bandwidth access; lack of skilled manpower to manage available systems and inadequate training facilities for ICT education at the tertiary level. Corroborating this, Oye, Salleh and Iahad (2011) added that, there was inadequate or non-availability of internet access and limited bandwidth in some tertiary institutions. There is an acute shortage of trained personnel to manage the application of software, operating systems, network administration etc. Folorunso, Ogunseye and Sharma (2006) observed that mass unawareness, low computer literacy level and cost were identified as critical factors affecting the acceptability of e-learning by students and lecturers of Nigerian universities. EDUCAUSE (2003) observed that, in adapting e-learning courses, several technical issues such as lack of course prototypes and software standards for both students and instructors' activities remained a hindrance.

## Methodology

A total of two hundred and twenty eight students from nine Universities constituted the sample for the study. Simple random sampling technique was employed in selecting students from these universities in Nigeria. These universities were also randomly picked from the six geo-political zones of Nigeria and the federal capital territory. These universities were Anambra State University, Uli (ASUU); Nnamdi Azikiwe University Awka (NAUA); Federal University of Technology Akure (FUTA); University of Lagos (UL); University of Ibadan (UI); Federal University of Technology Minna (FUTM); Federal University of Technology Yola (FUTY); University of Abuja (UA); University of Maiduguri (UM). Questionnaire was used to elicit “Yes or No” answers to the questions. Frequency analysis using percentages was done and this was presented using column charts to compare responses of the students.

## Analysis of data

Presentation, analysis and interpretation of the data based on the order of the research question and hypothesis is described below:

*Research question 1:* Do students make use of e-learning studies in their various Nigerian Universities?

Table 1 shows five questions on ‘if students make use of e-learning studies in Nigerian Universities’. 100 students answered ‘yes’, representing 44%, as against 128 students who answered ‘no’, representing 56%, to the question “You engage in online seminars and discussion with your lectures weekly”. 102 students answered ‘yes’, representing 45%, as against 113 students who answered ‘no’, representing 55% to the question “All my online Instructors or tutors could be contacted easily”. 98 students answered ‘yes’, representing 43%, as against 120 students who answered ‘no’, representing 57% to the question “You receive lectures online weekly”. 77 students answered ‘yes’, representing 34%, as against 151 students who answered ‘no’, representing 66% to the question “You receive and submit assignment online”. 91 students answered ‘yes’, representing 40%, as against 137 students who answered ‘no’, representing 60% to the question “You sit for examination online”.

**Table 1: Analysis of the Use of E-Learning by Students in Studying in Nigerian Universities**

| No | DESCRIPTION                                                             | YES | %  | NO  | %  | Total |
|----|-------------------------------------------------------------------------|-----|----|-----|----|-------|
|    | You engage in online seminars and discussion with your lectures weekly. | 100 | 44 | 128 | 56 | 228   |
|    | All my online Instructors or tutors could be contacted easily.          | 102 | 45 | 116 | 55 | 228   |
|    | You receive lectures online weekly.                                     | 98  | 43 | 120 | 57 | 228   |
|    | You receive and submit assignment online                                | 77  | 34 | 151 | 66 | 228   |
|    | You sit for examination online                                          | 91  | 40 | 137 | 60 | 228   |

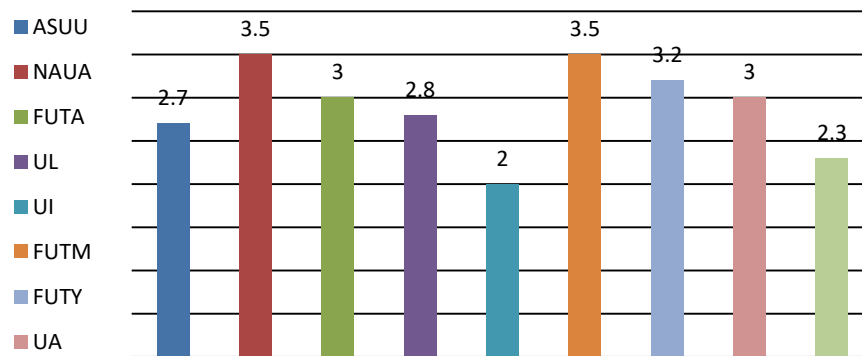
Research question 2: Do students face challenges of e-learning in the nine Nigerian Universities selected for the study?

Table 2 shows the mean score weights obtained by each institution after analysis.

**Table 2: Analysis of Challenges of E-learning in the Nine Nigerian Universities selected for the study**

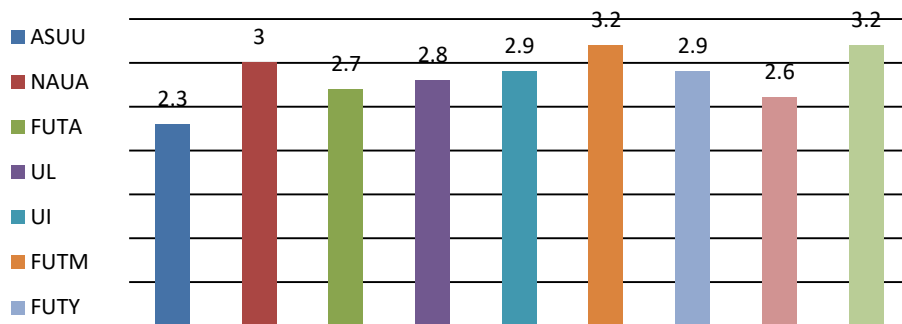
|    | E-learning Content and its Effectiveness                                     | ASUU | NAUA | FUTA | UL  | UI  | UTM | FUTY | UA  | UM  |
|----|------------------------------------------------------------------------------|------|------|------|-----|-----|-----|------|-----|-----|
| NO |                                                                              | MEAN |      |      |     |     |     |      |     |     |
|    | Lack of appropriate software.                                                | 2.7  | 3.5  | 3.0  | 2.8 | 2.0 | 3.5 | 3.2  | 3.0 | 2.3 |
|    | Online resources lack good quality educational content.                      | 2.1  | 3.0  | 2.4  | 2.9 | 1.2 | 2.2 | 2.5  | 2.5 | 1.3 |
|    | Sustainability of e-learning is not prioritized.                             | 2.8  | 3.1  | 3.3  | 2.9 | 3.3 | 3.5 | 2.9  | 2.5 | 3.6 |
|    | I have access to appropriate content for ICT-enhanced learning and training. | 2.3  | 3.0  | 2.7  | 2.8 | 2.9 | 3.2 | 2.9  | 2.6 | 3.2 |
|    | I have access to affordable and reliable computers.                          | 3.0  | 3.1  | 3.5  | 3.3 | 2.9 | 3.4 | 2.8  | 2.2 | 3.1 |

Figure 1 shows the nine Universities students’ responses to lack of appropriate software. The chart reveals that Nnamdi Azikiwe University, Awka (NAUA) and Federal University of Technology Minna (FUTM) had the highest mean of 3.5, followed by Federal University of Technology Yola (FUTY) with a mean of 3.2. University of Technology Akure (FUTA) and University of Abuja (UA) followed with a mean score of 3.0, University of Lagos (UL) with a mean of 2.8, and Anambra State University Uli (ASUU) with a mean of 2.7. These students agreed that there was that lack of appropriate software in their institutions. The University of Maiduguri (UM) and University of Ibadan (UI) had the slowest mean of 2.3 and 2 respectively as their students disagreed that they lacked appropriate software. The response of students in the rest of the Universities can be seen in the chart.



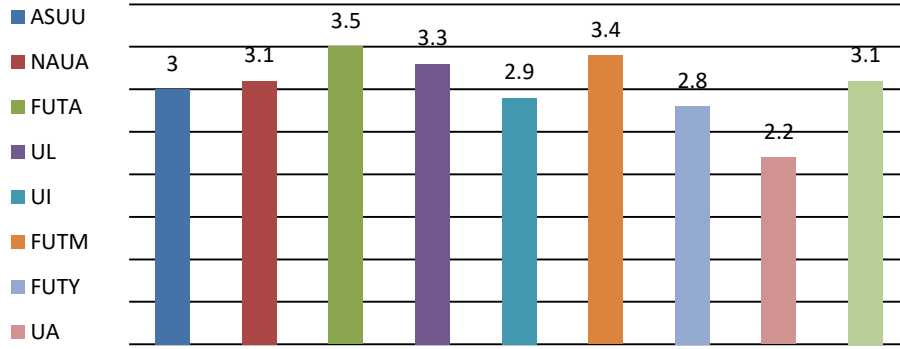
**Figure 1: Lack of appropriate software.**

Figure 2 shows the nine Universities students’ responses to whether they had access to appropriate content for ICT-enhanced learning and training. The column chart shows that Federal University of Technology Minna (FUTM) and University of Maiduguri (UM) had the highest mean of 3.2. Nnamdi Azikiwe University Awka (NAUA) had a mean of 3.0, Federal University of Technology Yola (FUTY) and University of Ibadan (UI) both had mean of 2.9. Students from Federal University of Technology Akure (FUTA) who had a mean of 2.7, and University of Abuja (UA) with a mean of 2.6 indicated that they had access to appropriate content for ICT-enhanced learning and training. Anambra State University Uli which had the lowest mean of 2.3 was the only University that disagreed that they had access to appropriate content for ICT-enhanced learning and training



**Figure 2: Access to appropriate content for ICT-enhanced learning and training**

Figure 3 shows the nine Universities students responses to whether they had access to affordable and reliable computers. The chart reveals that Federal University of Technology Akure (FUTA) had the highest mean of 3.5, closely followed by Federal University of Technology Minna (FUTM) with a mean of 3.4, University of Lagos (UL) with a mean of 3.3, Nnamdi Azikiwe University Awka (NAUA) and University of Maiduguri (UM) both with a mean of 3.1, University of Ibadan (UI) with a mean of 2.9 and finally, Federal University of Technology Yola (FUTY) with a mean of 2.8 whose students that they have access to affordable and reliable computers, While University of Abuja (UA) had the lowest mean of 2.2, which implies that most of their students do not have access to affordable and reliable computers.



**Figure 3: Access to affordable and reliable computers**

*Hypothesis: H<sub>01</sub>* There are no significant differences in the challenges faced by students in e-learning in the nine Nigerian Universities

Table 3 shows result of T-test analysis of differences of means between the nine universities on the challenges faced by students in accessing e-learning facilities in their institutions. The result showed a significance result of 0.397. At assumed 95% significance level and p value of 0.05, the result is not significant, hence H<sub>0</sub> is accepted.

**Table 3: T-test on differences in the challenges faced by students in e-learning in Nigerian Universities**

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 2.367          | 8  | .296        | 1.083 | .397 |
| Within Groups  | 9.836          | 36 | .273        |       |      |
| Total          | 12.203         | 44 |             |       |      |

## Discussion

The findings of the study revealed that students from seven out of the nine universities confirmed their universities’ lack of appropriate software, while the other two indicated that they had appropriate software. This confirms EDUCAUSE (2003) observation that in adapting e-learning courses, several technical issues such as lack of course prototypes and software standard for both students and instructors’ activities remained a hindrance.

The findings also showed that out of nine Universities, two indicated too that good quality, online, educational content was lacking, while seven indicated that they lacked good quality educational content online. This is in consonance with the views of Frey, Faul, and Yankelov (2003) that online course quality remains a concern of faculty and administrators. Also, that faculty issues included suitability of their subjects for online delivery, isolation from students, and the additional time required to teach online (Shank, 2005). The findings of the study also,

revealed that most of the respondents in almost all the Universities under study indicated that sustainability of e-learning was not prioritized. This was because most developing countries followed the traditional instructor-centred approach, lacked infrastructure and the implementation and full use of e-learning environments had not yet penetrated the existing educational organization (Iahad, Dafoulas, Milankovic-Atkinson, & Murphy, 2006).

## Conclusion and Recommendation

The study carried out a comparative analysis of the challenges of e-learning in Nigerian Universities. The study revealed that there were challenges in e-learning in Nigerian universities. To overcome these challenges, the following recommendations are made:

1. The Nigerian government should make concerted effort to provide the enablement for all lecturers and students to become computer literate. This should be done within a time frame, and at the end of the computer course, certificates should be issued, and no student should graduate in his or her field of study without passing the computer course. Integrated approach and support for different stakeholders for developing expertise on e-learning teaching modalities for professional development has become very necessary.
2. E-learning in Nigerian universities must be built on solid infrastructural base and with effective, high bandwidth internet connectivity that will enhance learning system. There is need for sustainable Internet availability and computer training for every staff and students in University in Nigeria that will enable them keep pace with latest development in e-learning.

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