

Assessing Students Performance and the Use of E-Learning Resources by Lecturers in Tertiary Institutions in Anambra State, Nigeria

Ogochukwu Gloria Umelue

Department of Business Education, Nwafor Orizu College of Education, Nsugbe, Anambra State, Nigeria

Corresponding Author's Email: cedar4christ3@gmail.com

Abstract

The study seeks to examine the use of e-learning resources by lecturers in selected tertiary institutions in Anambra State, Nigeria. Four research objectives/questions guided the study. The population used for the study was 340 lecturers out of which 200 were sampled and used for the study. The instrument for data collection was a 20-item self-constructed questionnaire. It was validated by experts and has reliability coefficient of 0.83. Data were analyzed using the mean. The findings indicated that the lecturers use of e-learning facilities like digital library, Computer and even CD-ROM and slides have high impact on the performance of the students and also makes work to be easy on the part of the lecturers. On the other hand, it was found that lack of use of e-learning packages lowers the performance of the students to greater extent. Based on the findings, the researcher recommended that government should encourage lecturers to continue to use e-learning facilities, e-learning hardware and e-learning courseware through the award of honors to the best users of e-learning resources among lectures. Again, E-books which are high-tech reading materials should be adequately provided and the lecturers should be exposed or trained on the techniques of using e-books.

Keywords: E-learning resources, E-books, ICT, E-learning.

Introduction

The emergent of Information and Communication Technology (ICT) gave rise to the use of World Wide Web (www) which has brought the world into a global village. The use of the web led to surge of interest in electronic learning (e-learning). Nigerian is in dire need of e-learning at all levels of its educational system so as to meet with international standards. It is worthy of note that in 1988, the Nigerian government enacted a policy on e-learning by introducing computer education in schools and colleges. Over the years, government has recognized the relevance of e-learning as an aspect of ICT in the educational system. This is informed by the National Policy on Education (Federal Republic of Nigeria, FRN 2014) which stated that, the government shall provide facilities and necessary infrastructures for the promotion of ICT and e-learning in schools.

E-learning means electronic learning. It is the use of electronic application. The web and digital devices in teaching and learning process. (Albert, Dimitrios & Nati 2012). These authors produced an inclusive high consensus definition through an international expert project to create a framework for different e-learning models. They focused on agreed conceptual framework across professional approaches.

European Agency for Special Needs and Inclusive Education (2025) opined that E-learning, or electronic learning also referred to as web-based or online learning, encompasses a broad range of knowledge transferred through digital technologies, sometimes as a complement to traditional education channels. It was focused on reaching learners with no access to traditional education.

E-learning Coach Glossary (2024) defined e-learning as an umbrella term that refers to all types of training, education and instruction that occurs on a digital medium, like a computer or mobile phone. They focused their education/learning on broad term covering online, computer, and mobile-based

learning. Wikipedia (2025) stated that E-learning refers to the use of digital technologies to access educational curriculum and deliver instruction outside of a traditional classroom setting". It was focused on Academic, corporation, and professional development contexts.

It is used both in formal and non-formal education systems for curriculum delivery. It is a form of ICT that facilitates online delivery. It is a technology based instructional system which uses the computer, videophone system, teleconferencing devices, internet and intranet, audio and audio-visual systems, fiber optic cables, microwaves, satellite systems, packet-switching and multimedia system for curriculum implementation.

Through e-learning, curriculum can be presented online in form of texts, visuals, sound, multicolor images, maps and graphics simultaneously. Software packages like Ready – made instructional Packages (RMIP), Teacher–Developed Instructional Packaged (TDIP), Learning Activity Packages (LAP) are used in e-learning. Other software are CD-ROM, slides, flash drive, diskettes, audio discs and video disc. In e-learning, the students can have all their textbooks and reading materials in a CD-ROM which can be opened and displayed on computer built-in screens. These are technically called High–teach reading materials or E-books.

The two major types of e-learning are the synchronous and asynchronous e-learning. The asynchronous e-learning requires both the teacher and the learners to be physically present in one classroom, one lecture hall or one lecture location using media technologies during lectures. This type of learning emphasizes that both the teacher and the learners should be seeing themselves face-to-face and eyeball-to-eyeball during lectures. The synchronous e-learning is the type in which the teacher teaches online and the learners learn online. Lectures are online in real-time. This is to say that both the teacher and the learners are separated by geographical distances. In this type of teaching and learning, the teacher uses the internet connected computer, videophone systems, teleconferencing devices and direct broadcast satellite television (DBST) among others (Nwana, 2019).

From the foregoing, e-learning resources such as digital library, computer hardware, software and packages are needed both in the physical classroom and distance learning programmes in our schools. Their integration and use seem to be a challenge in our education system. It is against this background that the present study wants to find out the extent to which the e-learning resources are being used by lecturers in colleges of education in Anambra State.

Method

The study adopted a descriptive survey which seeks to obtain information from lecturers in tertiary institutions on their use of e-learning resources namely: e-learning facilities, hardware, courseware and packages. The population was 340 lecturers in two colleges of education in the state.. 200 lecturers were sampled and used for the study.

The instrument for data collection was a researcher developed questionnaire titled "Use of E-Learning Resources by Lecturers in Higher Institutions (UELRLHI)". It was validated by experts and the reliability co-efficient stood at 0.83. The instrument contained 20 items arranged in four sections of A-D. The items were weighted on a four–point Likert type scale. The response options ranged from Very High Extent (VHE) to very Low Extent (VLE). It was weighted 4, 3, 2, and 1. Each respondent was required to indicate the extent to which he/she rates each item. The mean was used in answering the research questions.

Results

Research Question 1

To what extent have you been using these e-learning facilities?

Table1: Mean Ratings of the Respondents on the extent to which they are using e-learning facilities

SN	ITEMS	MEAN	REMARKS
1	DigitalLibrary	2.83	High Extent
2	Lecturer halls with Multi media projector (MMP)	2.71	High Extent
3	Internet facilities	2.79	High Extent
4	Digital Laboratory	1.90	Low Extent
5	ICT parks / Cybercafes	2.68	High Extent

The data on table I revealed that the mean scores of 2.83, 2.71, 2.79 and 2.68 confirms that the respondents are using the e-learning facilities namely: digital library, lecture halls with multimedia projectors, internet facilities and ICT parks/cyber cafés to a high extent. On the other hand, the mean score of 1.90 indicates that the respondents are using the digital laboratory to a low extent.

Research Question2

To what extent have lecturers been using these e-learning hardware

Table 2: Mean Ratings of the Respondents on the extent to which lecturers have been using e-learning hardware

SN	ITEMS	MEAN	REMARKS
6	Computer for lecture delivery	3.06	High Extent
7	Printer for printing out lecture materials, assignment, quizzes and tests	2.85	High Extent
8	Multi media Project (MMP) For multi mediated learning	2.70	High Extent
9	E-whiteboard for writing and illustrations	3.10	High Extent
10	E-graphics board for graphs, sketches And diagrams.	1.95	Low Extent

Table 2 showed that mean scores of 3.06, 2.85, 2.70 and 3.10 indicated that the respondents are using the e-learning hardware namely computer, printer, multimedia projector and e-whiteboard to a high extent. On the other hand, the means score of 1.95 indicted that the respondents are using e-graphic board to a low extent.

ResearchQuestion3

To what extent have you been using these e-learning courseware?

Table 3:Mean Ratings of the Respondents on the extent to which lecturers are using e-learning courseware

SN	ITEMS	MEAN	REMARKS
11	CD-ROM for storing and retrieving lecture materials	3.15	High Extent
12	Slides for power-point presentations	2.72	High Extent
13	Video tapes/videos discs for audio-visual presentations	2.80	High Extent
14	E-books as high-tech materials in lecture delivery	1.93	Low Extent
15	Course ware template which provides a general Form at for lecture delivery, Drill and practice	2.77	High Extent

Table 3 reveals that the means scores of 3.15, 2.72, 2.80 and 2.77 indicated that the respondents are using e-learning courseware namely: CD-ROM, slides, video disc and courseware templates to a high extent while the mean score of 1.93 indicated that the respondents are using e-

books to a low extent.

Research Question 4

To what extent have lecturers been using these e-learning hardware?

Table 4: Mean Ratings of the Respondents on the extent to which they have been using e-learning packages

SN	ITEMS	MEAN	REMARKS
16	Compute Graphic Packages (CGP)	1.73	Low Extent
17	Computer Spread sheet Packages (CSP)	1.85	Low Extent
18	Audio-Tutorial Packages (ATP)	1.71	Low Extent
19	Data Processing Package (DPP)		
	e.g Statistical packages	2.89	High Extent
20	Learning Activity Packages (LAP) for drill and practice in Lecture delivery	2.11	Low Extent

Discussion

The findings of the study revealed that the respondents use e-learning facilities to a high extent. These are digital library, lecturer halls with multimedia projector (MMP), internet facilities and ICT parks/cyber cafés. This means that the lecturers understand the benefits and uses of e-learning facilities in this ICT age. This finding is consistent with Matogo (2019) that the teachers' understanding of the benefits and usage of ICT facilities will continue to enhance curriculum delivery. On the other hand. On the use of e-learning hard ware by the respondents, the findings revealed that they use them to a high extent. These are computers, printers, multimedia projectors and e-whiteboard. This finding agrees with Salim (2021) that after exposure to basic computer skills, the secondary school teachers in Rampal, Bangladesh improved their teaching to a great extent. This finding is consistent with Hamilton (2020) that the teachers in US use computers to a high extent in the teaching of English language and mathematics. The finding is also in tandem with Aburime (2016) that the teachers use computer as an e-learning device in the teaching of home economics to a high extent and in collaborative research activities.

The findings on the use of courseware by the respondents revealed that they use the courseware to a high extent. These are CD-ROM, slides, video discs and courseware templates. This finding is in consonance with Ajita and Kumares (2016) who exposed University Lecturers in Mumbai to the teaching of Mathematics with Mathematics courseware namely mathematics for general mathematics, win plot for graph plotting and MUPAD for general calculations and found that, they effectively used the courseware to solve problems in mathematics. Again, the findings of this study resonates with Brody (2015) that the use of video games as courseware by teachers improved teaching.

Finally, the findings on the use of e-learning packages revealed that the respondents used e-learning packages to a low extent. These are Computers Graphic Packages (CGP), Computer Spreadsheet Packages (CSP), Audio-Tutorial Packages (ATP) and Learning Activity Packages (LAP). This finding matches that of Nwagbo and Okoli (2018) who found that more than 70% of science and technology teacher educators in Universities in South East states of Nigeria are unable to apply ICT resources in science laboratory exercises. Also, the finding matches that of Kwache (2017) who reported that most of the institutions lacked computer literate experts for application of computer devices in the educational system.

Conclusion

From the findings of the study, the respondents were using E-learning facilities namely digital library, lecture halls with multimedia projector (MMP), internet facilities and ICT parks/cyber cafés to a high extent. Again the use e-learning hard ware namely computer, printer, multimedia projector

and e-whiteboard recorded a high extent. Also, the use of e-learning courseware namely CD – Rom, slides, video discs and courseware templates by the respondents recorded a high extent. The respondents recorded a low extent in the use of digital laboratory and e-books as high-tech reading materials. Further, the respondents indicated low extent in the use of e-learning packages namely: Computer Graphic Packages (CGP), computer spreadsheet packages (CSP) and Audio-Tutorial Package (ATP) among others.

Recommendations

Based on the findings of the study, it was recommended that:

1. The government should encourage the lecturers to continue to use e-learning facilities, e-learning hardware and e-learning courseware through the aware of honors to best users of e-learning resources among lecturers.
2. Digital laboratories should be well-equipped and the lecturers should be trained through short-term services, conferences, seminars and workshops on the use of digital equipment in the laboratories.
3. E-graphics board should be adequately mounted and the lecturers should be trained on the use of it for graphs, sketches and diagrams.
4. E-books which are high-tech reading materials should be adequately provided and the lectures should be exposed or trained on the techniques of using e-books.
5. The government should train the lecturers on the use e-learning packages. This is very important as there is need for the teacher to also develop teacher-made – instructional packages.

References

- Aburime, M.O. (2019). Impact of technology and culture on home economics and nutrition science education in developing countries. *Multicultural Education and Technology Journal*, 2(1), 4–16.
- American Society for Training and Development (ASTD). (2008). [Title of work or report missing]. Publisher.
- Brody, H. (2015). Video games that teach. *Journal of Technology Review*, 5(2), 27–35.
- Jegede, P. O., & Owolabi, A. J. (2018). *Computer education in Nigeria secondary schools: Gap between policy and practice*. <http://document/pdf/ict.com>
- Matogo, J. (2019). *Will e-learning make teachers redundant?*<http://balancingact.africa.com>
- Mayer, R. E. (2016). Elements of a science of e-learning. *Journal of Educational Computing Research*, 29(3), 297-313.
- Nwagbo, C., & Okoli, J. N. (2018). Status of Information and Communication Technology (ICT) training and support for science and technology teacher educators in some universities in South East States of Nigeria. In B. G. Nworgu (Ed.), *Education in the information age: Global challenges and enhancement strategies*. University Trust Pub.
- Nwana, S. E. (2012). Challenges in the application of e-learning by secondary school teachers in Anambra State, Nigeria. *African Journal of Teacher Education (AJOTE)*, 2(1), 14-22.
- Nwana, S. E. (2019). *Educational technology in digital age*. Kristophel Pub.
- Nwana, S. E., Ugwoegbu, I. T., & Oraegbunam, N. (2021). E-learning and curriculum implementation in computer age: Problems and prospects. *Unizik Orient Journal of Education*, 6(1 & 2), 97-103.