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Original Research Article

Factors Influencing E-Learning in Tertiary Institutions in Rivers State

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Abstract

The study investigated factors influencing E-learning in Tertiary Institutions in Rivers State, Nigeria. Three research questions guided the study. The study adopted a descriptive survey research design. A sample of 376 undergraduate students was drawn from the population of 3,660 students in the Faculty of Education of three tertiary institutions in Rivers State through proportionate stratified random sampling technique. An instrument titled E-learning Factors Influence Questionnaire (EFIQ) which was developed by the researchers was used for data collection. It contained 23 items which are in three sections of A-facilities, B-lecturer's competencies, C-students attitude. The EFIQ was validated by experts in Educational Technology and Measurement and Evaluation based on face and construct validities. The reliability of the instrument EFIQ was established through Cronbach Alpha technique and the reliability coefficient obtained was 0.82. Data collected was analyzed using mean and standard deviation, and a criterion mean $(\bar{x})$ of 2.50 was used for judgement. The result revealed that facilities, lecturer's competencies and attitude of students influence E-learning in tertiary institutions in Rivers State. Based on these results, recommendations were made including that students should endeavour to have positive attitude towards e-learning and the tertiary institutions should provide enough e-learning facilities which will aid the students in learning.

Keywords: Attitude, Facilities, Competencies and E-learning.

INTRODUCTION

E-learning means Electronic learning. E-learning is a new paradigm of modern education. It is a method of delivering teaching and learning through electronic means which uses world-wide-web. E-learning is a sine-qua-non in the present world which is now a global village. One cannot afford to remain in the analogue era which seems archaic instead of going digital. Olabode, Fasoranbaku and Oluwadare [1] observed that as new crops of dynamic teachers enter the profession, e-learning is becoming an accepted and effective form of professional development. The evolution of computer came up to replace the traditional method of teaching which involves making use of the classroom, the teacher and the students.

E-learning is a computer based educational tool or system that enables one to learn anywhere and at any time. It is part of Information and Communication Technology (ICT). Ofondu cited in Opara and Acholonu [2] defined ICT as electronic or computerized devices assisted by human and other interactive materials that can be used for a wide range of teaching and learning as well as for personal use. It is mostly delivered through the internet, although in the past it was delivered using a blend of computer-based methods like CD-ROM [3]. Higher Education Funding Council of England cited in Ellis, Ginns and Piggot [4] defined e-learning as information and communication technologies used to support students and improve their learning. Also the European Commission [5] describes e-learning as the use of new multi-media technologies and the internet to increase learning quality by easing access to facilities and services as well as distant exchanges and collaboration.

Henry cited in Valentine and Nelly [6] observed that agenda of schools and educational institutions have recognized e-learning as having the prospect to transform people, knowledge, skills and performance. Although e-learning has its setbacks such as skills being harder to pick and isolation, the benefits outweigh the setbacks. E-learning has no boundaries or restrictions. It facilitates learning without having to organize, when and where everyone who is interested in a course can be present [3].

With e-learning the professor has the ability to host a guest lecture without having to spend much money. It can be done virtually, with cameras for both the lecturer and the students and with the use of microphones to facilities the same level of interaction that would be possible if the lecturer were physically present in the classroom. The added benefit comes in when we are able to replay the lecture and gain even more of it among others. According to Hoffman [7] the modalities with which we can learn have exploded in this digital age with notable improvements and opportunities in the past five years alone.

Tertiary education on the other hand is the education given in universities, colleges of education, polytechnics and monotechnics. Some goals of tertiary education in Nigeria as outlined by in the National Policy on Education (FGN, 2004) are to [8]:

- Contribute to national development through high level manpower training.
- Develop the intellectual capability of individuals to understand and appreciate their local and external environments.
- Acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society.

E-learning is apt at this era to address these goals of tertiary education. Wisdom demands that e-learning be properly implemented in universities and other tertiary institutions. E-learning will enhance the chances of students getting employed immediately after graduation because it is part of capacity building. It is important that the students acquire e-learning skills in other to be relevant in global competitive university education, self-reliant and contribute to national development.

Inadequate facilities seem to be a contributory factor influencing e-learning. Furniture may not be enough for students' use in an overcrowded laboratory. Omoniyi [9] opined that there are growing evidences that no private, state or federal university will genuinely claim to enjoy basic facilities and resources. The findings of Khan, Yusoff and Azam [10] from their study on the development of job stress among university teachers in Pakistan indicated that among the correlates of job stress, insufficient facilities are the highest stressors to the university lecturers. It has been observed in some universities that adequate online learning materials such as computer, video and audio delivery over the internet are in short supply. Even if these facilities are available there is poor internet connectivity to some of the equipment.

Lecturers' competencies may influence e-learning positively or negatively as the case may be. Some lecturers may not have the pre-requisite skills for handling e-learning activities such as delivering effective learner experience and using scaffold to support learners. On the aspect of microlearning, some lecturers may find it difficult to deliver specific learner content in small short bursts, YouTube, Google or Facebook videos or some of the quick, easy-to-digest and low-time-commitment animations we see all the time in social media [7].

Lecturers in institutions of higher learning should endeavor to motivate learners to be creative since creativity is the hallmark of the human race as Olakitan [11] put it. Izuchi and Onukwufor [12] opined that ability to arouse students' curiosity for learning could enhance teachers' competencies. Anekwe and Ofoefuna [13] were of the view that one of the hindrances to lecturers use of information and communication technologies best practices is lack of knowledge and skills.

Some students on their part may not be eager to embrace learning in their various course content areas. They may show more interest in other social media platforms with their attendant negative influence. Lazy students may not be taking their e-learning classes serious. They can dodge e-learning classes, assignments and computer based tests. Some students have negative attitude to e-learning as a result of variation in the way they approach learning as postulated by Ellis, Ginns and Piggot [4].

On the other hand, students may loose interest in e-learning or become demoralized as a result of lack of money to buy data, poor internet connectivity, poor power supply and inaccessibility to smart phones or computer. This was supported by Hoffman [7] who stated that one impediment such as intermittent power supply or lack of connectivity can disrupt the learning process and have negative impact on the learner's overall engagement with learning and development (L&D) programmes.

Much have been written or talked about e-learning such as some key aspects of e-learning in higher education, adoption of e-learning technology in Nigerian tertiary institution and role of e-learning in higher education among others. The existing literature notwithstanding, it is important to add and highlight new findings on the factors influencing e-learning in tertiary institutions in Rivers State. In the light of this the researchers are concerned with finding out if lack of facilities, lecturers' competencies and students' attitude influence e-learning in tertiary institutions.

The aim of this study was to identify the factors influencing e-learning in tertiary institutions in Rivers State. In specific terms, the study achieved the following objectives:

1. Determine the extent facilities influence e-learning in tertiary institutions
2. Ascertain the extent lecturers' competencies influence e-learning in tertiary institutions

3. Find out the extent students' attitude influence e-learning in tertiary institutions.

Three research questions were posed to guide the study.

1. To what extent does facilities influence e-learning in tertiary institutions?
2. To what extent does lecturers' competencies influence e-learning in tertiary institutions?
3. To what extent does students' attitude influence e-learning in tertiary institutions?

METHODS

The design of the study is a descriptive survey. This design was used in this study to collect data from students on the factors that influence E-learning. Three research questions guided the study. The population of the study included all undergraduate students in the Faculty of Education of three tertiary institutions in Rivers State. They are: Faculty of Education, University of Port Harcourt, Ignatius Ajuru University of Education and Rivers State University. As at the time of the study, there are three thousand, six hundred and sixty (3,660) undergraduate students in three departments of each of the university (source: Statistical Departments of the three institutions). A sample of 376 undergraduate students were drawn from the population through proportionate stratified random sampling technique based on the three institutions. The instrument for data collection was titled E-learning Factors Influence Questionnaire (EFIQ) which was developed by the researchers. The instrument was a 23 item structured questionnaire in three sections of A – facilities, B – lecturers' competencies and C – students' attitude which was developed in a modified four point Likert grid with the following response options of strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). These response options were weighted 4, 3, 2 and 1 respectively for positive items and 1, 2, 3 and 4 respectively for negative items. Because EFIQ is a four point scale, a mean of 2.50 was chosen as a criterion for decision making. The instrument was validated by experts in Educational Technology and Measurement and Evaluation based on face and content validities. The reliability of the instrument EFIQ was established through Cronbach Alpha technique and the reliability coefficient obtained was 0.82. Mean and standard deviation were used to answer research questions. The use of mean to answer research questions and agree or disagree a statement has been widely employed by many researchers including Olaitan, Eboigbe, Odidimma and Ogbonnaya cited in Nwankwo [14].

RESULT

The results of the data analysis were presented in the tables below. Data analysis was done in relation to the research questions.

Table-1: Mean ($\bar{x}$) and standard deviation (SD) ratings of facilities as factor that influence E-learning

S/N	Items	$\bar{x}$	SD	Criterion $\bar{x}$	Decision
1.	Some E-learning materials such as computer, video, audio delivery over the internet are in short supply in some schools.	3.25	0.93	2.50	Agree
2.	Furniture are enough for students' use in e-learning classes	2.02	0.73	2.50	Disagree
3.	Some facilities for e-learning such as powerpoint project are at times faulty	3.00	0.94	2.50	Agree
4.	At times e-learning laboratories are overcrowded in schools with large number of students	3.18	0.82	2.50	Agree
5.	Some schools do not have good stand-by generators in case there is power outrage in the process of e-learning	3.15	0.93	2.50	Agree
6.	There are enough e-learning facilities in many schools	1.98	0.97	2.50	Disagree
	Grand Mean	**2.76**			

Table-1 revealed that the respondents agreed or accepted items 1, 3, 4 and 5 measuring facilities as factors influencing e-learning as the individual mean scores of 3.25, 3.00, 3.18, 3.5 respectively were more than the criterion mean of 2.50. Whereas items 2 and 6 were disagreed or rejected by the respondents, as the individual mean scores of 2.02 and 1.98 respectively were less than the criterion mean of 2.50. The grand mean of 2.76 was also more than the criterion mean of 2.50. Therefore, this implies that facilities influence e-learning in Tertiary Institutions in Rivers State.

Table-2: Mean ($\bar{x}$) and standard deviation (SD) ratings of lecturers' competencies as factor that influence e-learning

S/N	Items	$\bar{x}$	SD	Criterion $\bar{x}$	Decision
1.	Some lecturers interact with their students online	2.66	0.96	2.50	Agree
2.	They encourage students to surf the internet	2.58	1.06	2.50	Agree
3.	Some lecturers cannot design website for their courses	3.12	1.02	2.50	Agree
4.	Some lecturers cannot integrate online facilitation into their classroom practices	2.62	1.01	2.50	Agree
5.	Some lecturers do not use the techniques of e-learning	2.77	1.03	2.50	Agree
6.	Some lecturers design website for their courses	1.99	1.01	2.50	Disagree
7.	Some lecturers interact with the students during e-learning classes	2.21	0.82	2.50	Disagree
	Grand Mean	**2.56**			

The data presented in Table-2 showed that items 1 to 5 measuring the extent lecturers' competencies influence e-learning in Tertiary Institutions in Rivers State, were agree or accepted by the respondents as the individual means scores of 2.66, 2.58, 3.12, 2.62 and 2.77 respectively were more than the criterion mean of 2.50. Whereas items 6 and 7 were disagreed or rejected by the respondents as the individual mean scores of 1.99 and 2.21 respectively were less than the criterion mean of 2.50. The grand mean of 2.56 was also more than the criterion mean of 2.50. Therefore, this means that lecturers' competencies influence e-learning in Tertiary Institution in Rivers State.

Table-3: Mean ($\bar{x}$) and standard deviation (SD) ratings of students' attitude as factor that influence e-learning

S/N	Items	$\bar{x}$	SD	Criterion $\bar{x}$	Decision
1.	Most students are interested in creating new ideas	3.56	0.70	2.50	Agree
2.	E-learning is too tasking for some students thereby making them loose interest	2.66	0.96	2.50	Agree
3.	Some students do not take e-learning classes serious	2.60	1.02	2.50	Agree
4.	Some students do not attend e-learning classes	3.27	0.95	2.50	Agree
5.	Many students are not attentive in e-learning classes	2.88	0.90	2.50	Agree
6.	Some students do not have phones/computer with which to access the internet, hence they are demoralized	2.60	0.87	2.50	Agree
7.	Some students do not like e-learning	2.51	0.87	2.50	Agree
8.	Some students are not willing to use e-learning system because of foreseen reasons	3.03	1.02	2.50	Agree
9.	Some students like attending e-learning classes	3.46	0.70	2.50	Agree
10.	E-learning classes are very interesting	2.76	0.61	2.50	Agree
	Grand Mean	**2.93**			

Table-3 revealed that the respondents agreed or accepted all the items measuring the extent students' attitude influence e-learning, as the individual mean scores were more than the criterion mean of 2.50. The grand mean score of 2.93 was also more than the criterion mean of 2.50. Therefore, this means that students' attitude influence e-learning in Tertiary Institutions in Rivers State.

DISCUSSION

The result of the study in Table-1 revealed that facilities influence e-learning in Tertiary Institutions in Rivers State. This was indicated through the grand mean of 2.76 which was greater than the criterion mean of 2.50. This is in line with the findings of Khan, Yusoff and Azam [10] on the development of job stress among university teachers in Pakistan which indicated that among the correlates of job stress, insufficient facilities are the highest stressors to the university lecturers. Also in support of the findings, Ucheoma and Opara [15] found out that there are many impediments that militate against the application of ICT in teaching and learning which include lack of adequate computers to accommodate all students in their e-learning.

Table-2 showed that lecturers' competencies influence e-learning in Tertiary Institutions in Rivers State. This was indicated through the grand mean of 2.56 which was greater than the criterion mean of 2.50. This is in agreement with Anekwe and Ofoefunna [13] who were of the view that one of the hindrances to lecturers use of information and communication technologies best practices is lack of knowledge and skills.

Table-3 revealed that students' attitude influence e-learning in Tertiary Institutions in Rivers State. This was indicated through the grand mean of 2.93 which was greater than the criterion mean of 2.50. All the above statements were accepted or agreed as students' attitude that influence e-learning. This is in

line with Ellis, Ginns and Piggot [4] who postulated that some students have negative attitude to e-learning as a result of variation in the way they approach learning.

CONCLUSION

E-learning is a very important tool for advancement of knowledge in Tertiary Institutions. As a new paradigm of information and communication technologies, it can be used for a wide range of teaching and learning in Tertiary Institution. Going by the findings it was observed that facilities, lecturers' competencies and students' attitude influence e-learning in Tertiary Institutions in Rivers State.

RECOMMENDATIONS

Based on the findings of the study the researchers made the following recommendations.

1. Adequate e-learning facilities should be made available for all tertiary institutions.
2. Lecturers should be provided with intensive e-learning trainings to equip them more with knowledge of e-learning.
3. Students should endeavor to exhibit positive attitude towards e-learning.

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