ADEQUACY AND UTILIZATION OF E-LEARNING INSTRUCTIONAL FACILITIES IN TERTIARY INSTITUTIONS IN NIGER STATE, NIGERIA.

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Abstract

The study was carried out to determine the Adequacy and Utilization of e-Learning Instructional Facilities in Tertiary Institutions in Niger State, Nigeria. Three research questions guided the study while two null hypotheses were formulated and tested at 0.05 level of significance. The study adopted mixed research design. The population of the study consisted of all the state and federal government own tertiary institutions in Niger State. Multistage Cluster Sampling technique was employed and a total of 418 respondents were used for the study. The instrument for data collection was a structured questionnaire and interview. Mean statistics and standard deviation were employed to analyze data for answering the research questions while z-test was used to test the null hypotheses. The findings of the study revealed among others that; e-learning instructional facilities are not adequate. The level of utilization of the e-learning facilities is low. It was recommended among others that, the bodies regulating the tertiary institutions in Nigeria should make available the updated e-learning facilities. Workshops and seminars should be organized for lecturers on the uses of e-learning facilities.

Key Points: e-learning instructional facilities, adequacy, utilization and tertiary institution.

Introduction

Due to the rapid advancement of technology and the introduction of digitalization, the world is changing at a rate that is unfathomable to the human race. The COVID-19 pandemic has also prompted a change in how teaching and learning are conducted within the educational system. In particular, the education sector has seen a significant transformation. The rapid advancement of technology and the globalization of all educational sectors have led to the emergence of a new educational system, which has necessitated the adoption of innovative teaching and learning techniques at tertiary institutions around the globe. This is evident in the definition of education by Moses et. al (2018) who define education as a dynamic and tends to follow the pattern of development in the world and industrial revolution taking place in the global arena. Owing to the adoption of new technology, the global educational framework has been expanded to include all levels of education and stakeholders to be actively involve so that the kind of education given at all level will be of benefits to both the student, parents, the society and the world at large. Teachers and students are required to master communication

utilizing the appropriate and necessary facilities at the right time and for the right purpose in order to remain relevant in a world that is rapidly changing and in which technology is transforming every sector.

Teaching and learning in this 21st century should not be confined to the conventional physical classroom but should instead take place in a virtual environment where both teachers and students can actively participate, regardless of their location. The United Nations Conference on Trade and Development [UNCTAD] (2021) noted that new and emerging technologies like artificial intelligence (AI), robotics, the internet of things, autonomous vehicles, 3D printing, nanotechnology, biotechnology, materials science, energy storage, quantum computing, and others are redefining education, industries, and all human sectors of the economy. As a result, it is essential to change how teaching and learning are conducted at our tertiary institutions. A dramatic and coordinated strategy is required for larger reforms in the education system.

More precise visualization is required in the teaching of engineering and technologically oriented disciplines so that it can be more relevant and real to the students. The latest technology, such as augmentation/virtual reality, is required to disseminate information via video, images, motion, and graphic designs. The use of augmented reality (AR) in the classroom has been recognized as a cutting-edge technology that allows students to interact with both the actual world and the virtual one (Hsiao & Chen, 2011).

The kind of education required in Nigeria is one that can enable people to transition from learning to employment and become useful members of society, which in turn boosts the nation's economic standing. This is only achievable if all parties involved in education participate voluntarily and cooperatively in the procedures and results. The major way that could assist in connecting the students and allowed them to meet up with the world is the teaching methods applied in the classroom. The teacher-centered method and the student-centered method were found to be the only two methods of teaching and learning. The teacher-centered method is a conventional approach to teaching and learning in which the teacher is the only active participant in the classroom and the students are passive participants. Teacher centred methods is an approach where activities in the classroom are centred on the teacher and involves rote memorization and coverage of the context on the part of the students (Khalid & Azeem, 2012). Students centred method of teaching involve both the teacher and students to be active members in the classroom. It is a technique of instruction that enables students to conduct independent research using all of the resources at their disposal. It entails the use of numerous pieces of technology, including computers, mobile phones, projectors, iPhones, iPads, and the internet (Yisa & Lewu, 2021). One style of teaching and learning that makes use of the aforementioned tools or technology is referred to as e-learning.

One of the most significant educational breakthroughs is e-learning, which is supported by an expanding range of technology-enabled platforms and provides prospective students with a different and creative learning environment from traditional learning (Trelease, 2016 and Bates & Poole, 2003). Since the arrival of technology in education, the introduction or inclusion

of e-learning has changed. Technology can be used in a variety of ways to give training, including face-to-face interaction, online learning, and hybrid instruction (which combines in-person and online learning). E-learning facilities utilization involves using resources like PowerPoint slides, a website or learning management system, computer programmes that require students to use electronic devices either in class and distant learning situation to construct knowledge (Bates & Poole, 2003, and Trelease, 2016). These methods are currently combined in the majority of e-Learning scenarios, including blogs, collaborative software, portfolios, and virtual classrooms.

E-learning benefits both the teacher and the students more when it is executed well and when the materials are accessible, adequate, and used. Interactivity, personalization, feedback, and tracking are just a few of these benefits. The constructivism theory, which allows students to generate their own learning and develop their experience through searching, self-paced learning, and other methods, is supported by e-learning. It made it possible for teachers and students to communicate clearly. The relationship between the teacher, students, and subject matter will go smoothly. The students' motivation to learn more will rise as a result of adequate and effective utilization of e-learning. Regardless of the methodologies or teaching methods used, the teachers' main concern seems to be the success of the students at all levels. E-learning, according to Clark and Mayer (2008), should include the following features: relevant materials to the learning purpose, utilizes teaching techniques like practice and examples to aid in learning, uses media components, such as words and images, to convey the message and techniques, either instructor-led (synchronous e-learning) or made for independent, self-paced study (asynchronous e-learning), creates new information and abilities connected to better organizational performance or personal learning objectives. E-learning is referred to the fusion of learning and the internet (Ajadi, et al, 2008).

E-learning facilities in education refer to the contemporary telecommunications tools and internet communication technology resources such as the computer, scanner, printer, internet, intranet, e-mail, video phone system, teleconferencing devices, Wireless Application Protocols (WAP), radio and microwaves, television and satellites, multimedia computer, and multimedia projector in teaching and learning as well as in the implementation of curricula. The usefulness of e-learning resources in tertiary institutions depends on how adequate and well they can be used for both teaching and learning (Okoli, & Osuafor 2019). E-learning allows for teaching-learning through animation or video, which is often not possible through any other method. Knowledge and skills can be acquired by students in ways that are far more suited to their specific learning preferences. Thanks to recent technological advancement which has given teachers the opportunity to stream audio over the internet and then, students can download podcasts from the internet.

Based on the types of technology utilized or the timing of interaction, there are various classes of e-learning. According to Algahtani (2011), E-learning can be broken down into two categories: computer-based e-learning and internet-based e-learning. Computer-based e-learning is a form of learning that uses computers. It is not necessary to access the information

through the internet. Computer Managed Learning and Computer Aided Teaching are two examples of computer-based e-learning (Algahtani, 2011). With no requirement for a teacher to be physically present, it allowed students to learn at their own pace. According to Almosa (2002), internet-based e-learning is a step up from computer-based learning and makes content available online with links to relevant knowledge sources, such as e-mail services and references, that can be used by students whenever they want and wherever they are, regardless of the presence or absence of teachers or instructors.

E-learning is not a brand-new approach to teaching and learning, particularly in developed nations where a quality education is valued. This is evident during the global COVID-19 epidemic in 2020 when there was a complete lockdown, developed nations utilized technology in their educational systems. Currently, several higher institutions in Nigeria are adopting e-learning resources, however it is unclear how adequate these resources are and whether teachers are actually using them to teach the students. Tertiary education, as defined by the National Education Policy of the Federal Republic of Nigeria [FRN] (2014), is education that is provided after post basic education in establishments like universities and inter-university centers like Nigeria French Language Village, etc., establishments like Innovation Enterprise Institutions (IEIs), and colleges of education, monotechnics, polytechnics, and special establishments like colleges of agriculture, schools of health, and tech (NTI). It was further emphasized that the purpose of tertiary education is to support and encourage scholarship, entrepreneurship, and community service; reduce skill shortages by producing skilled labour relevant to the needs of the labour markets; and contribute to national development through high level manpower training. According to the FRN (2014), quality teaching and learning, research and development, higher standards for facilities, services, and resources, as well as the provision of a more practically based curriculum pertinent to labour market needs, are all necessary for tertiary institutions to achieve the above goal. A tertiary institution can only effectively aid in a country's growth if the teaching and learning are based on the most recent trends and needs. Digitalization and paperless education are also demanding in the field of education. Which indicates that electronic devices should be used in both teaching and learning. So, adopting e-learning instructional tools for teaching and learning is required in tertiary institutions for both the teacher and the students. The purpose of tertiary education is to impart and help students develop the skills, attitudes, knowledge, and values that will benefit them, their families, the community, and the country as a whole.

Teachers need to actively use the technologies that are relevant to 21st century capabilities since they are a key change agent in the 21st century educational system. Every aspect of the e-learning infrastructure must be mastered by them. Teachers must incorporate e-learning into the educational system to guarantee that tertiary institutions give students the skills, information, and competencies they need to be relevant to themselves and to the society. It is crucial that higher education faculty members use the available e-learning resources. A teacher must employ a variety of strategies to

meet the students' interest and focus in order to impart knowledge effectively.

Problem Statement

There is a common belief that a country can only advance to the level of its education. As a result, the degree of education in a country has a significant impact on its growth and development as well as that of its society. Education is the process that enable people to acquire the necessary competencies, knowledge, skills and attitudes that makes them to be useful to themselves, the society, country and the world at large. Every country's population will benefit from receiving quality education, which will contribute to the change that is desired.

Many teaching and learning techniques have evolved as a result of the speed at which technology is developing as well as the introduction of computerization and digitalization, and these techniques have the potential to affect how students learn in our educational system. These techniques include: electronic learning (e-learning), video conferencing, teleconferencing, blended learning, cooperative learning, and many others. A computer, tablet, smart phone, television, DVD player, radio, projector, and the internet are among the technology used in e-learning.

The education sector will only experience rapid growth if all stakeholders are able to work together and keep pace with technological advancement and ensuring that they are adequate and used by both teachers and students. The e-learning instructional facilities may be available but not adequate in terms of quantity, quality, or modernness. In some higher institutions of learning, these e-learning facilities may be available; but the question is: how much are they being utilized? In light to the foregoing, the study sought to ascertain the levels of adequacy and utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria.

Research Questions

The following research questions guided the study.

1. How adequate are the e-learning instructional facilities in tertiary institutions in Niger State, Nigeria?
2. What is the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria?
3. What are the strategies to improve the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria?

Hypotheses

The following null hypotheses were formulated and was tested at 0.05 levels of significance:

1. There is no significant difference between the mean response of the lecturers and students on the adequacy of the e-learning instructional facilities in tertiary institutions in Niger State, Nigeria.
2. There is no significant difference between the mean response of the lecturers and students on the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria

Methodology

Mixed research design was considered suitable for this study to collect data from the targeted population. Questionnaires and interview were used to collect data from lecturers and students in tertiaries institutions in Niger State, Nigeria. The study was carried out in the tertiary institutions in Niger State. The population of the study consisted of the

lecturers and students of the selected state and federal government owned tertiary institutions in Niger State.

The sample size of the study was 418 consisting of 118 lecturers and 300 students. They were selected from the seven (7) tertiaries institutions in Niger State through a Multistage Cluster Sampling technique. Here, three tertiary institutions were selected by balloting out of seven (7) tertiary institutions in Niger State. The tertiary institutions were: Federal University of Technology, Minna; Federal Polytechnic, Bida, Niger State; and Niger State College of Education, Minna, Niger State. The first stage stratified sampling technique was used to group the tertiary institutions into three: University, Polytechnic and College of Education. Simple random sampling technique was used in second stage to select the three tertiary institutions. Purposive sample techniques were the used to select departments that offers technical and vocational related courses in those institutions.

Three types of questionnaires were used. The first questionnaire consisted of 14 items which focused on the adequacy of e-learning instructional facilities in tertiary institutions. The second question consisting of 14 items which focused on the level of utilization of e-learning instructional facilities in tertiary institutions, while the third questionnaire consisted of 10 items seeking the answers to the strategies to improve the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria. The questionnaires were closed-ended and was developed by the researchers' using data obtained through the review of related literature. Structured interviews schedule was conducted among selected lecturers and students in the sampled tertiary institutions in Niger State, Nigeria on the adequacy and utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria. In these interviews, the researchers attempted to achieve a holistic understanding of the interviewees' point of view or situation.

All the questionnaires administered were returned representing 100% return rate. The data collected for the study was organized and analyzed on the basis of the research questions. Quantitative data collected for this study was analyzed using mean, standard deviation using statistical package for the social sciences (SPSS version 27) computer programme. Data obtained through interview were analyzed using thematic analysis. Decisions on the research questions were based on the resulting mean score interpreted relative to the concept of lower and upper limits of real numbers: Highly Adequate, Highly Utilized and Highly Agree is 3.50 – 4.00; Adequate, Utilized and Agree is 2.50 – 3.49; Slightly Adequate, Slightly Utilized and Slightly Agree is 1.50 – 2.49; Not Adequate, Not Utilized and Not Agree is 1.00 – 1.49
as shown in Table 1. The standard deviation was used to decide on the closeness or otherwise of the respondents to the mean in their responses. Any item with standard deviation of less than 1.96 indicated that the respondents were not too far from the mean or from one another in their responses and any item having standard deviation equal or above stated value signified that respondent were too far from the mean.

Results

Research Question 1: How adequate are the e-learning instructional facilities in tertiary institutions in Niger State, Nigeria?

Table 2: Responses of Respondents on the Adequacy of E-learning Instructional Facilities in Tertiary Institutions in Niger State, Nigeria.

S/N	ITEM	Mean	SD	Decision
1	Projector	1.36	.78	NA
2	Electromagnetic Board	3.47	.92	A
3	e-studio	1.32	1.04	NA
4	E-Library	3.12	.93	A
5	Augmented/Virtual Reality applications	0.70	.89	NA
6	Flash drives/External Hard drives	3.56	.87	HA
7	Personal Computer (PC) Sysfem	3.64	.60	HA
8	DVD player	2.36	1.25	A
9	CD players	1.84	1.29	SA
10	Radio	2.27	1.20	SA
11	Television	1.76	1.17	SA
12	Camera	2.61	1.25	A
13	Tablet	1.61	1.15	SA
14	Internet connectivity in the School	1.26	1.08	NA

Key: SD= Standard Deviation, HA=Highly Adequate, A=Adequate, SA=Slightly Adequate and NA= Not Adequate.

Table 2 shows the analysis of responses of respondents on the adequacy of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria. The results revealed that items 6 and 7 have their mean values within the ranges of highly adequate (3.56 – 3.64) while four items; 2, 4, 8 and 12 have their mean values within the ranges of adequate (2.61 - 3.47). Items 9, 10, 11 and 13 with the mean ranging from (1.61-2.27) indicated that the items are slightly adequate. Also, items 1, 3, 5 and 14 have their mean values within the ranges of not adequate (0.70 – 1.37). The table also shows the standard deviations (SD) of all items are within the ranges of 0.60 to 1.29 and are positive and less than the normal deviate of 1.96, thereby indicating that respondents were not too far from the mean and from one another in their responses.

Research Question 2: What are the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria?

Table 3: Responses of the Respondents on the Level of Utilization of E-learning Instructional Facilities in Tertiary Institutions in Niger State, Nigeria.

S/N	Item	Mean	SD	Decision
1	Uses of Projector for lectures	1.18	.98	NU
2	Uses of Augmentation/Virtual Reality for lectures	1.43	.80	NU
3	Uses of Podcard	1.25	1.15	NU
4	Uses of Google meet for lectures	1.37	.93	NU
5	Uses of PowerPoint for lectures	1.70	.89	SU
6	Uses of Zoom for lectures	0.79	.82	NU
7	Uses of AUTOCAD for technical/building/ engineering drawings	1.44	1.21	NU
8	Uses of conference meeting for lectures	2.36	1.25	SU
9	Online collaboration teleconferencing is employed by lecturers	2.35	1.11	SU
10	Uses of e-books when sourcing for academic information	3.44	1.18	U
11	Uses recorded video or audio for instruction	1.76	1.17	SU
12	Lecturers personally have webpages, Wikis or Blogs that they used for lecture purposes	1.23	.96	NU
13	Lecturers have individual email Accounts	2.53	1.26	U
14	Lecturers use e-learning facilities to enhance teaching and learning	1.18	1.09	NU

Key: SD= Standard Deviation, HU=Highly Utilized, U=Utilized, SU=Slightly Utilized and NU= Not Utilized.

Table 3 shows the analysis of responses of the respondents on the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria. The results revealed that items 10 and 13 have their mean values within the ranges of utilized (2.53 – 3.44) while four items; 5, 8, 9 and 11 have their mean values within the ranges of slightly utilized (1.70 – 2.36). Items 1, 2, 3, 4, 6, 7, 12 and 14 with the mean ranging from (1.18-1.44) indicated that the items are not utilized. The table also shows the standard deviations (SD) of all items are within the ranges of 0.80 to 1.26 and are positive and less than the normal deviate of 1.96, thereby indicating that respondents were not too far from the mean and from one another in their responses.

Research Question 3: What are the strategies to improve the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria?

Table 4: Responses of the Teachers on the Strategies to Improve the Level of Utilization E-learning Instructional Facilities in Tertiary Institutions in Niger State, Nigeria.

S/N	ITEM	Mean	SD	Decision
1	Re-skilling of the lecturers on the e-learning instructional facilities	3.47	.87	A
2	Up-skilling of the lecturers on the e-learning instructional facilities	2.74	.67	A
3	Government should subsidize the sales of computer to lecturers	2.83	.81	A
4	Projectors should be installed in all lecture rooms	2.95	1.02	A
5	School management should make funds sufficient for the development of e-learning infrastructures	3.10	.86	A
6	School management should train people on how to repair e-learning facilities	3.17	.93	A
7	Electricity supply should be made available	3.28	1.04	A
8	Availability and adequate internet connectivity	2.98	1.00	A
9	Availability and adequate e-studio	2.35	1.26	SA
10	Lecturers should encourage the students on the uses of e-learning	2.70	1.07	A
	Total	**2.96**		**A**

Key: SD= Standard Deviation, SA=Strongly Agreed, A=Agreed, SD=Strongly Disagreed and NA= Disagreed

Table 4 shows the analysis of responses of the respondents on the strategies to improve the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria. The results revealed that items 1, 2, 3, 4, 5, 6, 7, 8 and 10 have their mean values within the ranges of Agreed (2.70 – 3.47) while item 9 has mean value of slightly agree (2.35). The table also shows the standard deviations (SD) of all items are within the ranges of 0.67 to 1.26 and are positive and less than the normal deviate of 1.96, thereby indicating that respondents were not too far from the mean and from one another in their responses.

Hypothesis 1

Table 5: Z - test for the Mean Responses of Respondents on the Adequacy of E-learning Instructional Facilities in Tertiary Institutions in Niger State, Nigeria.

Respondents	Mean	S.D	N	Df	Z-cal	z-crit	Remark
Lecturers	2.21	1.03	118	416	1.10	1.96	No sig.
Students	2.32	0.82	300				

Table 5 revealed that calculated Z does not exceed the Z-critical value; this signified that there is no significant difference between the means responses of lecturers and Students on adequacy of e-learning instructional facilities in tertiary institution in Niger State, Nigeria.

Hypothesis 2

Table 6: Z - test for the Mean Responses of Respondents on the Level of Utilizations of E-learning Instructional Facilities in Tertiary Institutions in Niger State, Nigeria.

Respondents	Mean	S. D	N	Df	Z-cal	z-crit	Remark
Lecturers	1.72	1.06	118	416	0.82	1.96	No sig.
Students	1.81	1.03	300				

Table 6 revealed that calculated Z does not exceed the Z-critical value; this signified that there is no significant difference between the means responses of Lecturers and Students on the level of utilization e-learning instructional facilities in tertiary institutions in Niger State, Nigeria.

Discussion of Findings

One criterion for the efficient use of the e-learning facilities at tertiary institutions in Niger State is the adequacy of the e-learning instructional facilities in those institutions. The Electromagnetic Board, E-Library, Flash drives/External Hard Drives, Personal Computer (PC) System, DVD player, CD player, Radio, Television, and Tablet were found to be adequate. This is consistent with the findings of the study by Eze et al. (2018), which showed that the e-learning facilities at M-Universities are appropriate and that they should be continuously updated and maintained. These e-learning instructional facilities are adequate. The e-library in tertiary institutions are made adequate in so that both the lecturers and students can have access to online materials and used it for teaching, learning and research.

It was revealed also that some e-learning instructional facilities are not adequate these include projector, e-studio, augmented/virtual reality applications and internet connectivity in the school. The e-learning instructional facilities may be available but not adequate in number, quality and updated. This agrees with the study of Diseph (2021) who opined that e-learning infrastructures are inadequately provided in tertiary institutions for effective teaching and learning. The study is in harmony with the study of Diseph (2021) who revealed that e-learning equipment such as interactive white boards, computers, projectors, TV sets, and printers are not adequately provided by the university.

Atsumbe, et al., (2012) also agreed with the findings of this study by revealing that e-learning infrastructures are not adequate in the university for teaching and learning and management's efforts towards the development of Information and Communication Technology (ICT) is mainly for administrative purposes. The finding agrees with the finding of Atsumbe et al (2012) who posit that the internet service is provided by the management of FUT Minna, however the services are not fast, reliable or adequate. Furthermore, they revealed that the university's website was not designed to promote teaching and learning but to divulge information about the university and enable students to register online. This e-learning instructional facilities are so important and are needed for delivery lecture in our tertiary institutions.

The result of interview conducted, also revealed that, lecturers and students agreed that some of these e-learning instructional facilities are available but not adequate. Some of their responses is that projector is available in seminar rooms, conference rooms and board rooms but are not find in lecture rooms. They agreed that e-studio, augmented/Virtual reality application and internet connectivity are not adequate in tertiary institutions in Niger State. Some e-learning instructional facilities are adequate such as electromagnetic board, e-library, and personal computer (PC) system.

It was revealed that some of the e-learning instructional facilities are not utilized which include uses of projector for lectures, uses of augmentation/virtual reality for lectures, uses of podcard, uses of google meet for lectures, uses of Zoom for lectures, uses of AUTOCAD for technical/building/engineering drawings, and others. The study agreed with the study of Eze et al (2018) who discovered that majority of lecturers in M-University indicated that e-learning facilities are not fully utilized. The research agrees with the study of Diseph (2021) who find out that lecturers are aware of the internet and can surf the web. But they cannot use it in facilitating the teaching and learning. In addition, it further revealed that lecturers versatile in the use of computer applications. However, this knowledge is not used for educational purposes. These e-learning facilities when adequately and effectively utilized will enhance teaching and learning.

The response from the interviewed lecturers revealed that the available projectors are not usually used for lecturing but are used mostly for seminar presentations or for some special occasions. It was also revealed through interview that augmentation/virtual reality not utilized. Based on the e-studio for teaching and learning technical/building/engineering drawing, it was revealed that lecturers somehow utilized AUTOCAD for lecture purposes.

It was also revealed that some of the e-learning facilities are utilized in tertiary institutions in Niger State they include uses of PowerPoint for lectures, uses of conference meeting for lectures, Online collaboration teleconferencing are employed by lecturers, uses of e-books when sourcing for academic information, uses recorded video or audio lectures to Students and Lecturers have individual email Accounts. The research agrees with the study of Diseph (2021) who find out that lecturers are aware of the internet and can surf the web. But they cannot use it in facilitating the teaching and learning. In addition, it further revealed that lecturers versatile in the use of computer applications. However, this knowledge is not used for educational purposes.

It was revealed that there are strategies that when put into practice will increases the level of utilization of e-learning instructional facilities in tertiary institutions. E-learning could be used to either inform that is for lecture or training purpose or could be used for performance. It is so important to utilize it both by the lecturer's and students at the school and class level which could in turn help the students to be familiarized with anything electronics which they will come in contact with at the real world of work.

The study of United Nations Conference on Trade and Development [UNCTAD] (2021) avow with the study by explaining that emerging and usages of these new technologies such as artificial intelligence (AI), robotics, the internet of things, autonomous vehicles, 3D printing, nanotechnology, biotechnology, materials science, energy storage, quantum computing and others are redefining education, industries and all the human sectors and economy sector of the world. It was revealed that, there should be re-skilling and up-skilling of lecturers on the uses of e-learning instructional facilities. This will help the lecturers to develop relevant skills and learn new skills on how to effectively select and use e-learning instructional facilities so that it will be relevant to the learning aims, goal and objectives, build new knowledge and skills which is relevant to the students and needed by the society.

Clark and Mayer (2008) attest to it that in using e-learning the following features should be put into consideration: content should be relevant to the learning objective, instructional methods such as: examples and practice should be used to help learning, media elements such as words and pictures should be used to deliver the content and methods also, it should be what will build new knowledge and skills linked to individual learning goals or to improved organizational performance. This is in line with the study of Yisa et al, (2022) who find out that collaborative learning in technical colleges, the availability of augmented reality (AR) and virtual reality (VR), the up-skilling and re-skilling of teachers, and increased ICT infrastructure in technical colleges are strategies to improve the facilities in technical colleges. Eze et al (2018) also affirmed that for M-University to achieve full utilization of e-learning facilities they need to ensure that the facilities are working; and the lecturers are trained on how to utilize e-learning facilities. This might be as a result of lack of technical know-how and attitudes of the staff.

The finding of the two hypotheses revealed that there is no significance difference between the response of the lecturers and that of the students on the adequacy and the level of utilization of e-learning instructional facilities in tertiary institutions in Niger State, Nigeria. This is an indication that there is a lot to do in terms of e-learning instructional facilities in tertiary institution. If we most move and meet up with the develop countries in terms of digitalization and paper free education policy. E-learning instructional facilities should be adequate and effectively utilized by both the lectures and the students for lecture purposes.

Conclusion

It is revealed that there is need for education sector to move and blend with the development of technology in order to meet up with the current trends. This is achievable only when teaching and learning in our tertiary institutions fully infused technology in to the education system. It is revealed that e-learning is the application of technology such as computer, projector, internet and other

electronics in conjunction with face-face learning to enhance teaching and learning. This study revealed that some of the e-learning instructional facilities are not adequate while some are adequate. It is also revealed that the e-learning instructional facilities are not utilized for teaching and learning in tertiary institutions in Niger State. Strategies for improving the level of utilization of e-learning instructional facilities were revealed.

Recommendations

Based on the above findings of this study, the following recommendations were made in order to reposition the e-learning instructional facilities in the tertiary institutions in Niger State:

1. The school management should provide the e-learning instructional facilities that is sufficient in number and updated.
2. The lecturers and students should utilize available e-learning instructional facilities.
3. Government should reduce tax on ICT related equipment so that it will be easily assess by schools.
4. School management should ensure that lecturers have Up-Skilling and Re-Skilling on the uses of e-learning instructional facilities. This is possible through sponsorship by government and school managements.

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