



UTILIZATION OF E-LEARNING TECHNOLOGIES FOR BUSINESS EDUCATION PROGRAMS IN HIGHER EDUCATION INSTITUTIONS OF NORTHWESTERN NIGERIA

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Abstract

This study aimed at investigating the e-learning technologies utilized for business education programs in higher education institutions of Northwestern Nigeria. Being a descriptive survey, the study was conducted among a sample of 346 participants, comprising 305 students and 41 teachers from business education departments in 5 higher education institutions within Kano State – Northwestern Nigeria. The instrument of data collection was a structured questionnaire adapted from previously validated studies. Data analysis was performed with SPSS v22 and results have shown that out of the twenty-seven e-learning tools listed in the study, 12 (44%) were utilized in the institutions studied, while 15 (56%) were not utilized. The most commonly utilized tools were laptops, emails, flash drives, e-journals, smart phones, desktop computers, e-books, compact discs, television sets, digital video discs players, telephones and video clips. Result of the test of hypothesis has also shown that there is no significant difference between the mean responses of teachers and students on the utilization of e-learning technologies for business education programs in higher education institutions that participated in the study. The study recommended that the management of higher education institutions in Nigeria should introduce platforms for e-learning systems such as learning management systems, open courseware and modules to give individuals from different distant locations opportunity to access learning contents ubiquitously. The study also recommended that train the trainer workshops should be conducted more regularly for academic staff, students, and non-teaching staff to motivate the use of e-learning technologies in Nigerian higher education institutions.

Keywords: *business education programs, e-learning technologies, higher education institutions, Nigeria, Information Communication Technologies*

Introduction

The use of e-learning technologies in teaching and learning is of great importance in the current era of technological revolution. By utilizing e-learning technologies the standard of teaching can be improved, students can be engaged more effectively and they can have access to wider range of information and educational contents. Using e-learning for teaching and learning makes the process more learner-centered, inquiry-based and collaborative (Babu & Sridevi, 2018).

Higher education institutions (HEIs) across the globe have continued to strive to adopt e-learning systems in their teaching and learning. However, based on extant literature, teaching and learning in Nigerian higher education institutions still happen in the typical traditional way, within the clustered walls of a classroom in a face-to-face environment with practically nothing new in terms of technological innovation (Kolakowski, Hackbarth, Ebrahim & Walker, 2020).

Studies have shown that although the authorities of most learning institutions in Nigeria have established centers for e-learning in obedience to government policies on integration of e-learning technologies in instructional delivery, the level of application of the e-learning technologies was still low, based on several challenges, such as lack of adequate equipment and infrastructures, unskilled manpower, and unsteady power supply (Asogwa, 2013; Ololube, 2014)

Information and Communication Technologies (ICTs)

Information Communication Technologies (ICTs) are indispensable for the development of quality teaching and learning in the education system. ICTs are fundamental to the preparation of students for the challenges in the current trend of technological innovations that dramatically reshape teaching and learning processes in higher education (Babu & Sridevi, 2018).

The term ICTs refers to all communication technologies including the internet, wireless networks, cell phones, computers, software, middleware, video-conferencing, social networking, and other media applications and services that enable users to access, retrieve, store, transmit, and manipulate information in a digital form. ICTs include all forms of computer and communications equipment and software used to create, design, store, transmit, interpret and manipulate

information in various formats. When ICTs are used in education or to foster learning, it is called e-learning (Babu, et al., 2018).

Use of Information and Communication Technologies (ICTs) in Nigeria

Nigeria started implementing its ICT policy in April, 2001 after the Federal Executive Council approved the policy by establishing the National Information Technology Development Agency (NITDA), as the implementing body (Agyeman, 2012). In 2003, Microsoft and the Nigerian government signed a three-year agreement intended to enable Nigeria to deploy ICTs in order to accelerate economic growth. This partnership was to help Nigeria build its software development industry as well as streamline the government's use of Microsoft software tools. It was also intended to stimulate the private sector and increase Nigeria's global competitiveness. The Nigerian National Policy on Information and Communication Technology (FRN, 2010) has within its purview the vision, mission, general objective and strategies for the implementation of the policy, and sectoral application for all sectors (health, agriculture, tourism, education amongst others) was also embedded (Yusuf, 2011). Accordingly, the policy in the areas of education, envisaged the development of ICT curricula for all levels of Nigerian education and the provision of facilities needed for the implementation of the policy in Nigerian HEIs. Overall, some of the objectives of Nigeria's ICT policy according to Yusuf (2011) are as follows:

- to ensure that ICT resources are readily available to promote efficient national development,
- to guarantee that the country benefits maximally, and contributes meaningfully, by providing global solutions to the challenges of the Information Age,
- to empower Nigerians to participate in software and ICT components in a competitive manner,
- to establish and develop ICT infrastructure and maximize its use nationwide,
- to empower the youth with ICT skills and prepare them for global competitiveness and
- to integrate ICT into the mainstream of education and training.

The application of ICTs in higher education institutions is more critical today than ever, since its growing power and capabilities are triggering a change in the learning environments of education (Kolakowski, Hackbarth, et al., 2020).

The use of ICTs offers powerful learning environments and can transform the learning and teaching process so that students can deal with knowledge in an active, self-directed and constructive way (Theron, 2015). At present, ICTs are considered as important means of promoting new methods of teaching and learning. (Abang 2015; Dansarki, 2020)

E-Learning Technologies

E-learning is defined by OECD (2020), as the use of ICTs to enhance and support learning in educational institutions. A wide range of systems is covered in e-learning, from students using e-mail and accessing work on-line while following a course on campus, to programmes offered entirely on-line. According to Al-Gahtani (2016), e-learning is the delivery of learning, training or educational programme through electronic means. The author argued that e-learning involves the use of a computer or electronic devices (for example, a mobile phone to provide training, educational or learning materials (Gorbunova & Mokeyeva, 2017). defined e-learning as the provision of electronic educational contents through the media, using the computer and its networks in such a way that allows active interaction with contents and features among peers simultaneously.

The introduction of e-learning facilities in educational systems is aimed at improving educational delivery and preparing students for roles in the current information age. By using e-learning, learners can control the process and work at their pace and convenience (Eke, 2011). Falana (2015) explained that e-learning is an aspect of flexible learning that comprises a wide range of computer applications and processes that use all available electronic media in delivering education and instruction. The author further stated that e-learning provides users with a personalized and flexible pattern of learning. A number of other terms are also used to describe this mode of teaching and learning. They include online learning, virtual learning, distributed learning, network and web based learning, distance learning, mobile learning (or m-learning) or remote learning and learning management systems. Basically, e-learning is the use of information and communication technologies (ICTs) to enhance and support learning/teaching and research (Eke, 2011) Falana (2015).

According to Eteng & Ntui, (2013), e-learning supports a shift from the traditional approach of teacher-directed method to new methods that supports the application of computers, thereby improving the quality, efficiency and effectiveness of teaching, learning, research and educational management. As a

sub-system of ICTs, e-learning enhances the delivery and administration of learning opportunities via computers, networks and web-based technologies to help individual performance and development (Eze and Chinedu, 2018). The basic principle of e-learning is connectivity which is the process by which computers are networked to share information among people in different distant locations (Sam, 2011). By utilizing e-learning technologies, teachers and learners can interact anytime from anywhere with different instructional materials (text, sound, pictures, video and so on) through the internet. In addition, learners can communicate with teachers and classmates both individually and as a group, discussing through message boards and video conferencing.

Overall, there are several e-learning tools that can be utilized for facilitating teaching and learning. But for the purpose of this study, some of the tools have been extracted to represent what are commonly obtainable in most higher education institutions of Northwestern Nigeria. They are as follows: e-books, smart phones, telephones, e-journals, desktop computers, digital video discs players, flash drives, video clips, television sets, compact discs, laptops, emails, YouTube, ubiquitous internet access, interactive whiteboards, learning management systems, multi-media projectors, google class, radio, computer simulations, kahoot, digital cameras, e-laboratories, skype, digital libraries, video-teleconferencing and blog spots, (Eze, Vera & Adenike, 2018; Khan, 2012; Mandara 2012 and Falana, 2015; Abang, 2022). This study is basically focused at investigating those tools are utilized by teachers in higher education institutions of Northwelters Nigeria, based on their self-reported opinions.

Theoretical Framework

The basic theories in this study are: Technology Acceptance Model (TAM) of Davis (1989), Diffusion of Innovation (DOI) Theory of Rogers (1983) and Technology Organization Environment (TOE) Framework of Tornatzky, Fleiser, & Chakrabarti (1990)

Technology Acceptance Model (TAM)

The technology acceptance model (TAM) was first propounded by Davis in 1989, based on the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) in psychology research. The theory proposes that perceived ease of use and perceived usefulness predict application and usage. It focuses on the individual users' acceptance. Technology acceptance is defined as an individual's

psychological state with regard to his or her voluntary or intended use of a particular technology. TAM proposes that perceived ease of use and perceived usefulness of technology are predictors of user attitude towards using the technology, subsequent behavioural intentions and actual usage. Perceived ease of use is also considered to influence perceived usefulness of technology. TAM has been designed to show how users come to accept and use a technology. The theoretical basis is built on the premise that when users are presented with a new technology, three major actors influence their decisions on how and when they will use it. The first determinant is its perceived usefulness; the second is the perceived ease of use, while the third determinant is user attitude towards usage. Davis perceived usefulness as the degree to which a user believes that using a particular system would enhance his or her job performance. On the other hand, perceived ease-of-use as the degree to which a user believes that using a particular technology would be free from effort. In other words, it is the degree to which consumers perceive a technology as better than its substitutes. Perceived usefulness and perceived ease of use are considered distinct factors influencing the user's attitude towards using the technology, though perceived ease of use is also hypothesized to influence perceived usefulness and attitude towards using the technology. Finally, such attitude towards using the technology determines the behavioral intention to use that technology. Therefore, TAM is used to study the acceptance of the e-learning technology. The theory will enable both the lecturers and students of Business education understand the usefulness of e-learning being a new technology introduced to them. It will sharpen their ease of using this new technology in their individual academic activities and at the same time allow them to form a better and new attitude towards the use of the new technology. Furthermore, the theory will help the lecturers and students of business education programme to better understand how their behavioral intention can influence the availability and utilization of e-learning technologies in the programme.

Diffusion of Innovation (DOI) Theory

The diffusion of innovation theory was propounded by Rogers in 1983 and it remains a popular theory in the investigation of the behaviour of users in adapting to new technological innovation. An innovation is "an idea, practice, or object that is perceived as new by an individual or another unit of adoption". Diffusion, on the other hand is "the process by which an innovation is

communicated through certain channels over time among the members of a social system". Therefore, the DOI theory argues that potential users make decisions to adopt or reject an innovation based on beliefs that they have concerning the innovation. The theory is a broad psychological and sociological theory used to describe the patterns of adoption, explain the mechanism and assist in predicting whether and how a new invention will be successful. DOI theory has five significant innovation characteristics: relative advantage, compatibility, complexity, trialability and observability. Relative advantage is defined as the degree to which an innovation is considered as being better than the idea it replaced. This construct is found to be one of the best predictors of the adoption of an innovation. Compatibility refers to the degree to which innovation is regarded as being consistent with the potential end-users' existing values, prior experiences, and needs. Complexity is the end-users' perceived level of difficulty in understanding innovations and their ease of use. Trialability refers to the degree to which innovations can be tested on a limited basis. Observability is the degree to which the results of innovations can be visible by other people. These characteristics are used to explain end-user adoption of innovations and the decision-making process. This theory is relevant to the present study because it will enable the lecturers and students understand how better this new innovation – e-learning will replace their old method of teaching and learning that was in use before. Furthermore, the complexity aspect of the theory will equip the lecturers and students to the level of difficulty in understanding and usage of the new innovation – e-learning. The acceptance and implementation of this technology will result into observable result in the usage of the new technology.

Technology Organization Environment (TOE) Framework

The technology organization environment framework was developed by Tornatzky, Fleiser, and Chakrabarti in 1990. The theory stipulates that an organization functions along three dimensions of Technology, Organization, and Environment (TOE), which influence the organization's ability to adopt or reject new technology. The technological dimension comprises both the internal and external technologies relevant to the Institution. The technology resources available internally in institutions are a reflection of the technology competence. It includes the factors of cost, reliability, compatibility, complexity, and performance expectancy. The organizational context comprises an institution's

innovativeness, top management support, organizational culture, size, and the quality of human and financial resources. The environmental context comprises factors of institutions' surroundings, consisting of stakeholders such as sponsors, the government, the community, and competitive pressure. These can influence how an institution interprets the need for innovation, its ability to acquire the resources for pursuing innovation, and its capability for actually deploying it. For instance, government regulations can force resources to be allocated for compliance. According to this theory, these factors may negatively or positively influence the decision to adopt technological innovation. The theory can also guide administrators of educational institutions on the specific aspects of their institutions that need improvement in order to achieve the technological adoption of e-learning. This theory is relevant to this present study in three dimensions – technologically, the dimension will enable both the lecturers and students understand both the internal and external relevance of the new technology – e-learning that is coming to be used. Organizational dimension on the other hand will help the institutions in general to understand the top management support needed for this new technology – e-learning to succeed in the institution while the environmental dimension of this theory will enable both the lecturers and students understand the role stakeholders, government and community will play in making sure that this new technology is being adopted for use in their academic programme.

The three theories have underpinned the focus of the study by their peculiarity at explaining individual behaviour (of which technology usage is one). The study has dwelt more on Technology Acceptance Model (TAM) because it is peculiar to technology acceptance behaviour and it offers a more peculiar framework that facilitates the visualization of multivariate constructs for interpreting why individuals accept or reject technology. Fundamentally, this study investigates e-learning usage with special focus on identifying the specific e-learning technologies utilized by the participants of the study. Invariably, the theoretical framework of the study supports the aim of the study in identifying which e-learning technologies teachers in higher education institutions of northwestern Nigeria utilize in the classroom.

Conceptual Framework

The conceptual framework of this study is consistent with past behavioural studies on use of technology/ICTs that stemmed out of the works of Technology Acceptance Model (TAM), Diffusion of Innovation (DOI) Theory and Technology

Organization Environment (TOE) Framework. By investigating the specific types of e-learning technologies utilized by teachers in higher education institutions of northwestern Nigeria, it is expected that an assessment of the utilizations of such technologies could be made with precision. Achieving such objective will provide strategic insight for inspiring and committing teachers to the adoption and usage of e-learning technologies in the classroom.

Business Education in Nigeria

Business education is one of the major branches of Technical and Vocational Education whereby various vocational skills in business are taught. Although earlier definitions of business education had bordered along the lines of skills acquisition for employee or employer roles, in aspects of marketing and distribution, economic literacy and personal business activities (Crank & Crank, 1977); other definitions had incorporated concepts such as data processing, automation and technology in the scope of their definitions for business education (Anao, 1986; Fafunwa, 1983; Ulinfun, 1986 & Williams, 1981).

Invariably, business education has no universal definition – and hence, it is not constrained within the clustered walls of skills acquisition for working in an enterprise; but rather, it incorporates all aspects of intellectual development and capacity building for business, educational as well as technological competence. (Isiyaku, Ahmad & Kadir, 2015)

However, in Nigeria, at the initial stage of business education it was primarily sustained through private and individual institutions rather than government and until late 1970s, 10 years after Nigeria's independence, business education was not given any priority in the Nigerian educational curricula (Ekpenyong & Nwabuisi, 2003). Hitherto, the credit of the re-emergence of business education and other technical and vocational teacher education programs in Nigeria, especially at the university level, goes to the founders of University of Nigeria, Nsukka (UNN), who recommended that the concept of the objectives of UNN should not only be classical but should also be vocational and Nigerian in nature, Government Of Eastern Nigeria (1955). Accordingly, technical and vocational teacher education was introduced in UNN during the 1965/66 session, in the areas of business education, home economics, industrial-technical education and agriculture and later in 1979, Ahmadu Bello University Zaria introduced such vocational teacher educational programs 15 years after its inception.

Unfortunately, at that time and until recently, other universities did not see the need for vocational teacher education in Nigeria (Ekpenyong & Nwabuisi, 2003).

Utilization of e-learning technologies in Nigerian Business Education

For an optimal teaching and learning experience in business education, business teachers must shift from the traditional forms of business education and implement ICTs in the way they design, teach, and assess their courses (Rienties & Townsend, 2012); Isiyaku, et al 2015). Whereas doing this requires a strong ICT baseline, business education faculties in Nigeria are lacking the necessary ICT infrastructure, to effectively implement ICT-compliant teaching. In this wise, obsolete equipment such as manual typewriters, ink duplicators and traditional blackboards are still being used in Nigerian business education classrooms with majority of teachers lacking the right attitude toward ICT competence and usage in the classroom (Asogwa & Eze, 2013 & Isiyaku, 2020).

Across the globe, business education has continued to evolve and expand, especially with the coming of ICTs into the educational scenario. Its scope now covers wider horizons that involve clusters of business and technological windows for faster growth and development. Literature has shown that one of the most immediately visible trends in technical and vocational education across the globe is the continuous adjustment of the scope of business education programs with the aim of tackling issues of global responsibility and sustainability - the most common response being the inclusion of new ICT modules within existing business education programs at suitable points in the periodic curriculum redesign cycle, to provide attention to ethics and sustainability (Tilbury & Ryan, 2011; Isiyaku, et al, 2015)

Eteng and Ntui, (2013), investigated the Nigerian students' access to e-learning technologies in Universities in South-South Nigeria. Results of the survey indicated that the number of graduating students in Nigerian higher institutions who have access to e-learning technologies was negligible. Onojah, Obielodan, Aderoju, Onojah & Adigun, (2021) analyzed business education students' utilization of e-Learning technologies in higher education institutions in Anambra State on a sample of 320 students. The study revealed that the owing to slow internet connection and poor electricity power supply the extent to which e-learning technologies are utilized among business education students is very low.

Mandara (2012) carried out a study to investigate the utilization of information and communication technologies (ICT) by teachers in the teaching of office education in Adamawa State higher education institutions. The study revealed that teachers who taught office education in business education were not making adequate and effective use of ICT tools and facilities in conducting their classroom activities.

Based on the foregoing, the following Research Question and Hypothesis have been proposed for the purpose of the study:

RQ1 What are the e-learning technologies utilized for business education programme in higher education institutions in Kano State?

H01 There is no significant difference between the mean responses of teachers and students on the utilization of e-learning technologies for business education programme in higher education institutions in Kano State.

Methodology

This study was a descriptive survey conducted among 346 subjects, comprising 305 students and 41 teachers from business education departments in 5 higher education institutions within Kano State – Nigeria, namely: North-West University – Kano; Federal College of Education - Kano; Federal College of Education (Technical) - Bichi; Saadatu Rimi College of Education - Kumbotso, and Kano State Polytechnic, Kano. The study area is characterized by business education graduates that are predominantly unemployed after graduation, while those who secure paid employments are often confronted with resentments from their employers owing to their lack of ICT skills.

Instrument of data collection was a structured questionnaire adapted from previously validated studies made up of two parts. Part one of the questionnaire sought for demographic information of the respondents while the Part two, comprising twenty-seven items sought for opinions of respondents regarding the e-learning technologies utilized in their institutions.

The study data was analyzed using mean and standard deviation in SPSS v22 to answer the research question while t-test was used to test the null hypotheses of no significant difference at probability level of 0.05. Any item with significant value equal to or above 0.05 was considered not significant while any item with significant value below 0.05 was considered significant and therefore, rejected. For the research question, any item with percentage of availability higher than the percentage of unavailability was considered available.

Results

To answer the research question of the study regarding the e-learning technologies utilized for business education programs in higher education institutions in Kano State, data collected for the purpose of the study was analysed, and results showed that out of the twenty-seven (27) e-learning technologies listed in the study, 12 (44%) were utilized in the institutions studied, while 15 (56%) were not utilized

Table 1 shows the frequency and percentage scores of opinions of respondents regarding the e-learning technologies utilized in higher education institutions in Kano State for business education programs as well as those that were not utilized.

As can be seen from Table I, the frequencies and percentage scores of opinions of respondents regarding the e-learning technologies utilized in HEIs in Kano State, were presented in the following hierarchy: Laptops - 301 (87%), Emails - 288 (83%), Flash Drives - 280 (81%), E-Journals - 270 (78%), Smart phones - 257 (74%), Desktop Computers - 240 (69%), E-books - 230 (66%), Compact Discs - 220 (64%), Television Sets - 207 (60%), Digital Video Discs Players - 204 (59%), Telephones - 200 (58%) and Video Clips - 190 (55%).

Consistently, the frequencies and percentage scores of opinions of respondents regarding the e-learning technologies not utilized in HEIs in Kano State were presented in the following hierarchy: Kahoot - 260 (75%), E-Laboratories - 253 (73%), Skype - 249 (72%), Digital Libraries - 247 (71%), Blog Spots - 243 (70%), Digital Cameras - 236 (68%), Learning Management Systems - 222 (64%), Video-Teleconferencing - 215 (62%), Google Class - 205 (59%), Computer Simulations - 202 (58%), Ubiquitous Internet Access - 196 (57%), Interactive Whiteboards - 193 (56%), Multi-Media Projectors - 189(55%), Radio - 188 (54%) and YouTube - 185 (53%).

Table 1: Frequency and percentage scores of responses on the utilization of e-learning technologies for business education programs in higher education institutions in Kano State

S/N	Item Statement	U		NU		Remark
		f	%	f	%	
1	Laptops	301	87	45	13	U
2	Emails	288	83	58	17	U
3	Flash Drives	280	81	66	29	U

4	E-Journals	270	78	76	22	U
5	Smart phones	257	74	89	26	U
6	Desktop Computers	240	69	106	31	U
7	E-books	230	66	116	34	U
8	Compact Discs	220	64	126	36	U
9	Television Sets	207	60	139	40	U
10	Digital Video Discs Players	204	59	142	41	U
11	Telephones	200	58	146	42	U
12	Video Clips	190	55	156	45	U
13	YouTube	161	47	185	53	NU
14	Radio	158	46	188	54	NU
15	Multi-Media Projectors	157	45	189	55	NU
16	Interactive Whiteboards	153	44	193	56	NU
17	Ubiquitous Internet Access	150	43	196	57	NU
18	Computer Simulations	144	42	202	58	NU
19	Google Class	141	41	205	59	NU
20	Video-Teleconferencing	131	38	215	62	NU
21	Learning Management Systems	124	36	222	64	NU
22	Digital Cameras	110	32	236	68	NU
23	Blog Spots	103	30	243	70	NU
24	Digital Libraries	99	29	247	71	NU
25	Skype	97	28	249	72	NU
26	E-Laboratories	93	27	253	73	NU
27	Kahoot	86	25	260	75	NU

Source: *Data collected from business education teachers in 5 HEIs of Kano State - Nigeria*

Invariably, the study shows that the e-learning technologies commonly utilized for business education programs in higher education institutions in Kano State were laptops, emails, flash drives, e-journals –smart phones, desktop computers, e-books, compact discs, television sets, digital video discs players, telephones and video clips.

Furthermore, as can be seen on Table 2, the result of the test of the hypothesis of the study has revealed that the calculated P-value of most of the e-learning technologies listed in the study ranged from 0.05 to 0.98 - greater than the level

of significance value of 0.05. Overall, this implies that the hypothesis of the study is accepted. Hence, there is no significant difference between the mean responses of teachers and students on the utilization of e-learning technologies for business education programs in higher education institutions in Kano State.

Table 2: T-test analysis of the mean scores of responses on the utilization of e-learning technologies for business education programs in HEIs in Kano State.

S/N	Item Statement	\bar{X}_1	SD1	\bar{X}_2	SD2	T-value	P-value	Remark	Decision
1	Laptops	1.46	0.51	1.52	0.5	-0.7	0.48	NS	Accept
2	Emails	1.51	0.51	1.61	0.49	-1.2	0.23	NS	Accept
3	Flash Drives	1.59	0.5	1.64	0.48	-0.63	0.53	NS	Accept
4	E-Journals	1.87	0.34	1.66	0.47	2.65	0.01	S	Reject
5	Smart phones	1.64	0.49	1.72	0.45	-1.07	0.29	NS	Accept
6	Desktop Computers	1.64	0.49	1.65	0.48	-0.13	0.9	NS	Accept
7	E-books	1.82	0.39	1.71	0.46	1.49	0.14	NS	Accept
8	Compact Discs	1.28	0.46	1.41	0.49	-1.58	0.11	NS	Accept
9	Television Sets	1.38	0.49	1.4	0.49	-0.15	0.88	NS	Accept
10	Digital Video Discs Players	1.33	0.48	1.34	0.47	-0.03	0.98	NS	Accept
11	Telephones	1.62	0.49	1.71	0.46	-1.17	0.24	NS	Accept
12	Video Clips	1.28	0.46	1.38	0.49	-1.21	0.23	NS	Accept
13	YouTube	1.59	0.5	1.58	0.49	0.08	0.94	NS	Accept
14	Radio	1.49	0.51	1.56	0.5	-0.82	0.41	NS	Accept
15	Multi-Media Projectors	1.28	0.46	1.57	0.5	-3.45	0	S	Reject
16	Interactive Whiteboards	1.31	0.47	1.49	0.5	-2.14	0.03	S	Reject
17	Ubiquitous Internet Access	1.49	0.51	1.52	0.5	-0.4	0.69	NS	Accept
18	Computer Simulations	1.36	0.49	1.46	0.5	-1.22	0.22	NS	Accept
19	Google Class	1.31	0.47	1.48	0.5	-1.99	0.05	NS	Accept
20	Video- Teleconferencing	1.15	0.37	1.27	0.45	-1.61	0.11	NS	Accept

21	Learning Management Systems	1.41	0.5	1.55	0.5	-1.62	0.11	NS	Accept
22	Digital Cameras	1.1	0.31	1.32	0.47	-2.78	0.01	S	Reject
23	Blog Spots	1.23	0.43	1.24	0.43	-0.19	0.85	NS	Accept
24	Digital Libraries	1.21	0.41	1.37	0.49	-2.09	0.04	S	Reject
25	Skype	1.21	0.41	1.31	0.46	-1.3	0.19	NS	Accept
26	E-Laboratories	1.69	0.47	1.74	0.44	-0.67	0.5	NS	Accept
27	Kahoot	1.41	0.5	1.53	0.5	-1.38	0.17	NS	Accept
	Grand Mean, Standard Deviation, and P-value	1.43	0.46	1.51	0.48	-2.15	0.35	NS	Accept

Key: \bar{X}_1 – Mean of Teachers’ Responses, \bar{X}_2 –Mean of Students’ Responses, SD1 – Standard Deviation of Teachers’ Responses, SD2 – Standard Deviation of Students’ Responses, S – Significant, NS –Not Significant.

Source: *Data collected from business education teachers and students in 5 HEIs of Kano State - Nigeria*

Discussion of Findings

Findings of the study have shown that only 44 percent of the e-learning technologies identified in the study were being utilized in the institutions studied. Invariably, majority of the e-learning technologies identified were not being utilized. Overall, teachers and students in higher education institutions in Kano State utilize e-learning technologies in business education programme to a low extent. Consistently, the study revealed that there is no significant difference between the mean responses of teachers and students on the utilization of e-learning technologies for business education programme in higher education institutions in Kano State.

Findings of the study are consistent with findings in Inije, Utoware, and Kren-Ikkidi (2013) conducted on a sample of 90 teachers to investigate the utilization of e-Learning technologies in the delivery of business education instructions in Colleges of Education in Delta State of Nigeria where it was revealed that e-learning technologies and applications were poorly utilized among the sample of the study.

Similarly, the findings of the study have great implications for teachers as they need to seek for further self-development for proper and greater utilization of

the e-learning technologies, development of research skills, collaboration skills among others to keep up to date with global trends in business education and not to be redundant or outdated.

Furthermore, the findings of the study have implication for the curriculum planners in business education as they will strive to design an update business education curriculum that will encourage and emphasize technology driven education in the 21st century in business education course contents which will improve lecturers and students' use of the e-learning technologies.

The findings of the study have implication for parents as they now know the challenges their children face during learning as it regards the availability and utilization of e-learning technologies and they can provide and encourage their children to utilize such.

Conclusion

This study was carried out to investigate the utilization of e-learning technologies in business education programme in higher education institutions in Kano State and based on the findings, the study concluded that though e-learning technologies are utilized to a low extent by teachers and students in business education programme in higher education institutions in Kano State. However, for business education teachers and students to enjoy the convenience and flexibility of access to contents of best quality it is fundamental for them to utilize e-learning technologies in their classrooms. Overall, findings of this study presupposes that Government of Kano State should plan for an effective capacity building programme for teachers and also equip the higher education institutions in Kano State with adequate e-learning technologies and facilities to support the utilization of e- e-learning technologies in education.

Recommendations

Based on the findings of the study, the following recommendations were made.

- i) The management of higher education institutions in Nigeria should introduce platforms for e-learning technologies such as learning management systems, open courseware and modules to give individuals from different distant locations opportunity to access learning contents ubiquitously
- ii) Train the trainer workshops should be conducted more regularly for academic staff and students to motivate the use of e-learning technologies in Nigerian higher education institutions.
- iii) The management of higher education institutions should employ specialist staff to support teachers and students in the course of using e-learning facilities and to carry out routine repairs.
- iv) Government should provide more funds to increase the supply of e-learning facilities as well alternative power supplies such as generators

and uninterrupted power supply (UPS) devices to tackle the problem of incessant power shortage in order to support the use of e-learning technologies in higher education institutions.

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