



## DETERMINANTS OF E-LEARNING RESOURCES ADOPTION AMONG BUSINESS EDUCATION STUDENTS IN TERTIARY INSTITUTIONS IN NASARAWA STATE, NIGERIA

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### Abstract

*The study examined the factors that influence E-learning resources adoption among business education students in tertiary institutions in Nasarawa state, Nigeria. Five null hypotheses were proposed to guide the study. A Correlational survey research design was adopted for the study. The population of the study was 228 final year Business education students and the entire population was used for the study. Structured 4-point rating questionnaire was used for data collection. The instrument was validated by three experts and pilot tested, a Cronbach alpha reliability coefficient of 0.84. was obtained. The data was collected by the authors with the help of three research assistants, which lasted for the period of four weeks. The statistical package employed for data analysis was the Statistical Package of Social Science (SPSS) v. 25.0 and the statistical tool employed to test the hypotheses at a 0.05 level of significance was the Simple Linear Regression (SLR). The result indicated that awareness, ease of use, usefulness, behavioural attitude and institutions factors were determinants of E-learning resources adoption students of E-learning in tertiary institutions in Nasarawa state. It was concluded that improving adoption of E-learning facilities for academic activates is subject to effort been made by various institutions to improve students' awareness, ease of use, usefulness attitude and institutional factors that might affect technological adoption. The study recommended among others that managers and administrators of tertiary institutions and Heads of Department of Business Education programmes should endeavour to create awareness programme that would educate newly admitted students on availability and important of E-learning resources in their institutions.*

**Keywords:** *E-learning Resources, Resources Adoption, business education students, Tertiary Institutions.*

### Introduction

E-learning environments is the part and parcel of Information Communication Technology (ICT) which engaged new forms of learning integration with an essential feature in the teaching and learning process, principally for open and distance learning in many educational and training institutions all over the world. E-learning as a consolidated learning technology with an essential feature in education such as registration, assignments, test, exams, and course registration among others (Eze, Chinedu-Eze & Bello, 2018). To Mpungose (2020), E-learning is education that takes place over the Internet which is alternatively called online learning, and it is an umbrella term for any learning that takes place across distance and not in face-to-face resources. Thus, E-learning can be defined as the use of educational technologies to enable access to learning and teaching material online, digitally or virtually. Mpungose stressed that components of E-learning include online learning but it includes computer-based learning, web-based learning, virtual classrooms, digital collaboration among others.



The importance of E-learning for effective teaching and learning delivery has been documented by numerous scholars. For example, Ezeet al.,(2018) reported that the use of technology has made teaching and learning more of students-centered. Ezeet al.(2018) further stated that, E-learning resources facilitates teaching and learning and enhance students understanding of the content. Bupo and Ndinechi (2015) reported that E-learning resources aimed at: (i) providing access to information with the latest technologies to support professionalism in business education; (ii) enhancing the development of standard through effective teaching and learning, and (iii) motivating of students to engage in personal research for indebt knowledge in business education, ICT and general education. Similarly, Kumar (2021) pinned that E-learning resources are inevitable because it helps to keep abreast of contextual changes of providing learners with timely needed information, knowledge and skills The author stressed that the use of E-learning resources in a classroom motivate students, enhance learning process, promote creativity and learning outcome among students' E-learning facilitates instruction to a large number of students participating in online lecturers (Nwagwu &Azil, 2016). These explained why Kumar (2017) reported that E-learning is the most effective way of teaching and learning as it helps students to make personal enquiry, interact with the global educational world, access needed materials and share ideas between and among themselves.

Nigeria started implementing its E-learning policy in April 2001 with the formation of the National Information Technology Development Agency (NITDA, 2017). Despite that the implementation of E-learning started with the tertiary institutions in Nigeria, its adoption and utilization for Teaching and learning activities is discouraging (Osuafor&Emeji, 2015). Nwagwu and Azil(2016) reported that the use of technologies among lecturers and students for teaching and learning is highly demoralizing. Pellegrini, Mirella, Vladimir Uskov and Casalino, (2020) also reported that technological adoption for learning among students such as on the use of Zoom, Seesaw, Edu creation, Edmodo among others is too slow in Africa. Specifically, Onyema (2019) reported that the use of technology for teaching and learning activities among business education lecturers and students is still discouraging. Also Chung, Subramaniam and Dass (2020) reported that business education students were not familiar with the E-learning resources for instructional activities. A preliminary interaction with business education students in the study area shows that most of them do use technological innovations mainly for social interactions. These outcomes therefore indicated that the use of technological innovation and adoption for learning activities among business education students in Nasarawa state is still not popular.

Factors responsible for slow technological acceptance for academic activities have been documented by numerous studies. According to Garba and Alademerin (2014) most lecturers and students in tertiary institutions in Nigeria are not aware of the importance of ICT resources for teaching and learning in education. Similarly, Aung and Khaing (2015) reported that ICT awareness, skills deficiency and its usefulness were among the challenges of E-learning resources usage in higher institutions in developing countries including Nigeria. Kisanga and Ireson (2015) also reported that inadequate ICT skills are some of the obstacles that hinder the adoption of E-learning resources. Tarus, Gichoya and Muumbo (2015) identified some problems concerning the use of E-learning resources, which include lack of operating skills. Similarly, Kabu, Ahmad, Wong and Mas (2019) reported that E-learning readiness in areas of abilities, attitudes, learning contexts and outcomes are serious problems affecting its adoption. Ezeet al., (2018) reported that self-efficacy is among the main challenges that hinder the use of E-learning resources among students and lecturers. According to Adedoyin and Soykan (2020), the major barriers on the use of E-learning are digital skill. Allam, Hassan, Mohideen, Ramlan and Kamal (2020) argued that students and lecturers that lack technological self-efficacy find it difficult to use E-learning for teaching and learning. Ilıc (2022) further argued that larger number of academics' ophthalmologists and students in business education lack the requisite skills for E-learning adoption.

Adamu and Abdu (2014) stated that the slow pace of adoption of E-learning resources for academic activities have had, and still having negative effect on business education students. they further opined that the increase in technological revolution in education have sparked up the need to investigates the determinants of E-learning adoption for teaching and learning. The authors maintained that the greatest challenges in this in this new era are how business students can adopt the unprecedented technology innovations that are currently taking place in educational sector. The resultant effect can be traceable to why Olutola, Olatoye and Olatoye (2018) suggest that there is need to examine determinants of adoption of



technological innovation among business education students and lecturers. Similarly, Paver, Walker and Hung (2014) reported that there is needed to investigate the determinants of ICT usage among students and lecturers in Nigerian tertiary institutions. It is in the light of that the determined factors that influence E-learning resources adoption among business education students in tertiary institutions in Nasarawa State, Nigeria

### **Purpose of the Study**

The study aims at examining the factors that determine E-learning resources adoption among business education students in tertiary institutions in Nasarawa state, Nigeria. The study specifically assessed the influence of:

1. awareness on adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.
2. ease of use adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.
3. usefulness adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.
4. behavioural attitude adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.
5. institutional attributes adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.

### **Research Hypotheses**

The following research null hypotheses were formulated and test at a 0.05 level of significance.

1. Awareness do not significantly determine the adoption of E-learning resources among business education students in tertiary institutions in Nasarawa State.
2. Ease of use do not significantly determine the adoption of E-learning resources among business education students in tertiary institutions in Nasarawa State.
3. Usefulness do not significantly determine the adoption of E-learning resources among business education students in tertiary institutions in Nasarawa State.
4. Behavioural attitude do not significantly determine the adoption of E-learning resources among business education students in tertiary institutions in Nasarawa State.
5. Institutional do not significantly determine the adoption of E-learning resources among business education students in tertiary institutions in Nasarawa State.

### **Methodology**

#### **Research Design**

A Correlational survey research design was used for study. This research design is a method in quantitative research in which researchers administer a survey instrument to a sample or to the entire population to describe the attitudes, opinions, behaviors, or attributes of the population (Creswell, 2012). The choice of the design was based on the suggestion of Adamu and Kabir (2019) that when a study involves collection of data from individual or groups of individual through the use of questionnaire at one point in time to explain the relationship that existing between one variable(s) and the other, the appropriate design adopted is Correlational survey design.

#### **Sample and Sampling Procedure**

The population of the study was 228 final year Business education students in four tertiary institutions in Nasarawa state, Nigeria. This is because, at this level, it is expected that the students have acquire knowledge, skills and exposure for adoption of E-learning resources The population of 228 was consider to be manageable; hence Total Population Sample (TPS) was used for the study. This is line with the suggestion of Gleen (2009) who recommend TPS for a population  $\leq 1000$  at precious size of 0.05.

### Data Collection Instruments

The instrument for data collection was a structured, Titled: ‘Students Adoption of E-learning Resources (SAER)’.The instrument was adopted from previous studies as suggested by Adamu and Kabir(2019) who opined that researchers can adopt or adapt an instrument if studies are found to be similar or closely related. Based on this suggestion, the instrument was adapted from previous studies and validated by three experts from Business Education programme. The instrument was adapted from the works of Adrian (2016) and Franklin and Nancwat (2022) who carried out study in similar area.

The instrument for data collection was 4-point rating scale namely: -Very High (VH), 4 points; Moderately High (MH), 3 points; Moderately Low (ML), 2 points and Very Low (VL),1 point. Formplus (2021) argued that 4-point scale questionnaire is suitable for measuring the opinions of respondents particularly on their beliefs, attitudes, opinions, views or other subjective measures. The author maintained that 4-point scale is suitable (i) when a specific opinion is required; (ii) to collect opinions for recently used products/services; and (iii) for recording opinions on respondents, and (iv) for providing an exception to the rule. The sample of the instrument is shown at the final page of this manuscript.

To establish the reliability of the instrument, twenty (24) copies of questionnaire were distributed to business education students in tertiary institutions in Markudi, Benue State who were not part of the subjects. Iroegbu (2013) recommended that for a sample of up to 100 and above, 10% subjects are sufficient for a pilot study. The data collected were subjected to Cronbach alpha reliability test and a reliability coefficient of 0.84 was obtained. The instrument was found to be valid based on suggestion of Hair et al (2010) who opined that the minimum reliability coefficient of survey instrument should not be less than 0.70, hence the instrument was considered suitable for the study.

The researchers personally administered the instrument to the students using direct contact approach. In this approach, copies of the questionnaire were issued to each student personally in their respective institutions. Anas, Adamu and Bala (2020) opined that, direct contact approach has the advantage of retrieving higher percentage of completed copies of the questionnaire. Based on the outline advantages, the direct contact approach was considered appropriate for this study. The approach enabled the authors of this the present study to thoroughly explain the purpose, importance and confidentiality of all information to the respondents. The exercise lasted for four weeks.

The data collected from the respondents were entered into Statistical Package of Social Science (SPSS) version 25.0 The package was used to run inferential statistics of Simple Linear Regression (SLR) which was used in testing all the research hypotheses at a 0.05 level of significance. The choice of SLR was based on the submission of Tabachnick and Fidell (2007) who opined that, linear regression analysis is an appropriate statistical technique for testing the influence of independent variable on a dependent variable.

### Results

The regression analyses on the test of null hypotheses were presented in Tables 1 to 6.

**Research Hypothesis 1:** Awareness does not significantly determine the adoption of E-learning resources among business education students in tertiary institutions in Nasarawa State.

**Table 1: Regression analysis on awareness as determinant of E-learning adoption among business education students in tertiary institutions in Nasarawa state, Nigeria**

Standardized Coefficients Beta	t	R	R Square	Adj. R Square	p-value	Remark
.769	16.819	.769 <sup>a</sup>	.591	.589	.000	Rejected

The regression analysis documented in Table 1 present the standardized Coefficient Beta value of .769 with t=16.819. The R-value stood at .769 with R Square of .591. The R Square obtained indicated that the awareness of E-learning resources has 59.1% influences on its adoption. The  $p=.000$  was found to be less than the 0.05 level of significance. The result therefore suggests that

awareness is a strong determinant of E-learning resources adoption among business education students in tertiary institutions in Nasarawa State, Nigeria. The hypothesis was therefore rejected.

**Research Hypothesis 2:** Ease of use do not significantly determine the adoption of adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.

**Table 2: Regression analysis ease of use as determinant of E-learning adoption among business education students in tertiary institutions in Nasarawa state, Nigeria**

Standardized Coefficients Beta	T	R	R Square	Adj. R Square	<i>p-value</i>	Remark
.655	12.132	.655 <sup>a</sup>	.429	.426	.000	Rejected

The finding of test of hypothesis two documented in Table 2 revealed the Standardized Coefficients Beta of .655 with t-value of 12.132. The R=.655 with R Square of .429. The obtained R Square suggested that the influence of ease of use on E-learning adoption was 42.9%. This is also seen in the *p-value* which was found to be less than the alpha value (.000<0.05). The result indicated that ease of use significantly influence the E-learning adoption among business education students in tertiary institutions in Nasarawa State, Nigeria. The hypothesis was therefore not retained.

**Research Hypothesis 3:** Usefulness do not significantly determine the adoption of adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.

**Table 3: Regression analysis on usefulness as determinant of E-learning adoption among business education students in tertiary institutions in Nasarawa state, Nigeria**

Standardized Coefficients Beta	T	R	R Square	Adj. R Square	<i>p-value</i>	Remark
.756	16.157	.756 <sup>a</sup>	.571	.569	.000	Rejected

The output of test of null hypothesis three documented in Table 3 disclosed the standardized coefficient value of .756 with t=16.157. The R-value was .756 with R Square of .571, the R-Square of =.571 shows that the usefulness has 57.1% influence on the adoption of E-learning resources. The p-value of .000 further indicated that usefulness is a significant predictor on E-learning resources adoption among business education students in tertiary institutions in Nasarawa State, Nigeria. The null hypothesis was therefore not accepted.

**Research Hypothesis 4:** Behavioural attitude do not significantly determine the adoption of adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.

**Table 4: Regression analysis on Behavioural attitude as predictor of E-learning adoption among business education students in tertiary institutions in Nasarawa state, Nigeria**

Standardized Coefficients Beta	T	R	R Square	Adj. R Square	<i>p-value</i>	Remark
.450	7.048	.450 <sup>a</sup>	.202	.198	.000	Rejected

Source: Fieldwork, 2023

The test of null hypothesis four presented in Table 4 has .450 Standardized Coefficients Beta value with t=7.048 and R-value of .450. The R Square value obtained was .202 which indicated that the behavioural attitude had 20.2% predict the adoption of E-learning resources among business education students in Nasarawa state. The p-value obtained was .000 which further



indicated behavioural attitude significantly predict the E-learning adoption among business education students in Tertiary institutions in Nasarawa State, Nigeria. The hypothesis was therefore not retained.

**Research Hypothesis 5:** Institutional attributes do not significantly determine the adoption of E-learning facilities among business education students in tertiary institutions in Nasarawa State.

**Table 5: Regression analysis on institutional attributes as predictor of E-learning adoption among business education students in tertiary institutions in Nasarawa state, Nigeria**

Standardized Coefficients Beta	T	R	R Square	Adj. R Square	<i>p-value</i>	Remark
.665	12.454	.665 <sup>a</sup>	.442	.439	.000	Rejected

The outcome of the test of null hypothesis five in Table 5 revealed .665 for Standardized Coefficients Beta value with  $t=12.454$ . The R-value was .665 with R-Square of .422. The R Square suggested that the influence of institutional attributes on E-learning resources adoption was 42.2%. The *p-value* obtained was less than the alpha value ( $.000 < 0.05$ ), the outcome indicated that institutional attributes significantly determine the adoption of E-learning resources adoption among business education students in tertiary institutions in Nasarawa State, Nigeria. The null hypothesis was therefore rejected.

### Discussion of the Findings

The results of research hypothesis one indicated that business education student awareness of availability of E-learning facilities has significantly influences its adoption. The result of the study agrees with that of Hamutoglu, Unveren-Bilgic, Salar and Sahin (2021) which reported that E-learning experience on awareness readiness, attitude, and self-control/self-management influence its adoption for academic activities. Sola, Oluwatoyin, Adeyose and Oyedeji (2021) determined the utilization of E-learning by agricultural students of public higher institutions in the Southwest of Nigeria. the findings indicate that the level of usage of E-learning is explained by awareness, knowledge and different constraints are predictors of E-learning usage.

The finding of null hypothesis two indicated that ease of use significantly influences the adoption of E-learning among business education students in tertiary institutions in Nasarawa State, Nigeria. The finding was found to be in line with that of Sasota, Cristobal, Sario, Biyo and Magadia (2021) who maintained that high utilization of technology is likely among those with positive Attitude on it, operational competency and provided with Access to ICT facilities. In the same vein, the study conducted by Philip, Wole, Jonathan and Lakan (2022) reported that performance expectancy and effort expectancy (EE) positively influence the use of ICT for learning among the students. Another research conducted by Yalley (2022) also reported that resource commitment, student resource commitment, task socialization, self-efficacy, motivation, and effective communication as the determinants of student readiness for E-learning adoption.

The result of null hypothesis three indicated that the influence of usefulness of E-learning facilities significantly influences is adoption among business education students in tertiary institutions in Nasarawa State, Nigeria. The finding was similar with that of Yakubu, Dasuki, Abubakar and Muhammadou (2020) which revealed that social influence, facilitating conditions, system quality, perceived ease of use, and perceived usefulness are important predictors for students' behavioral intention to use LMS. As well the study of Eze, Chinedu-Eze, Okike and Bello (2018) shows that technology-related factors (ease of use, speed accessibility and service delivery), organization-related factors (training support and diversity), environment-related factors (attitudes of



the users) and impact-related factors (learning experience, skill development, academic performance, and degree of engagement) influence the students' adoption of E-learning facilities. A research conducted on determining African Students' E-learning readiness to improve their E-learning experience by Boniswa and Swart (2020) also reported that self-efficacy has influence on the use of E-learning resources.

Research hypothesis four indicated that the influence of behavioral attitude on E-learning adoption among business education students in Tertiary institutions in Nasarawa State, Nigeria was significant. The finding confirmed that of Ibrahim, Ba'aba, Ismail and Dawud (2021) who opined that students' behavioural intention toward electronic examination system among University of Maiduguri, Borno State, Nigeria. the study shows that students' behavioural intention is one of the determinants on the use of E-learning resources among students. Izuchi and Opara (2021) investigated factors influencing E-learning in Tertiary Institutions in Rivers State, Nigeria. The outcome also shows that facilities, lecturer's competencies and attitude of students' influence E-learning adoption among tertiary institutions students in Rivers State.

The findings of research hypothesis five indicated that the influence of institutional attributes on business education students adopting of E-learning facilities in tertiary institutions in Nasarawa State, Nigeria was significant. The finding was found to be in line with of Ayasrah (2020) which reported that there is a positive and significant relationship between trust, hedonic motivation, students' expectation and intention to use on its adoption. Karasneh, Al-Azzam, Muflih, Hawamdeh, Muflih and Khader (2021) on attitudes and practices of educators towards E-learning also reported that institutional support for online learning also appears to have increased in enhancing E-learning. In a related study conducted by Chandwani, Singh and Singh (2021) on attitude of faculty towards online teaching and learning in relation to certain variables.

## Conclusion

The study examined the determinants of E-learning facilities adoption among business education students in tertiary institutions in Nasarawa State. The outcome of the study shows that the five variables (awareness, ease of use, usefulness, behavioural attitude and institutional factors) were strong determinants of students' adoption of E-learning resources. It therefore concluded that improving business education students' adoption of E-learning facilities for academic activates is subject to effort been made by various institutions to improve the existing situation institutional and students related factors that determine the use of the facilities.

## Implications of the Study

The implications of the study were as follows:

- i. The implication of the study to business education students is that they should try and develop their ICT skills, positive attitude and know the important of E-learning on their academic activities. This will help to promote their behavioural attitude towards E-learning adoption
- ii. Management of tertiary institutions in Nasarawa should develop a policy that will encourage students on the use of E-learning facilities. In addition, the institutions should create enabling environment by make internet connectivity and accessibility in the institutions which will encourage E-learning adoption.
- iii. Educational stakeholders should formulate E-learning policy that will provide a systematic guideline on how E-learning will be integrated into the curriculum of tertiary institutions that will promote its usage among students.



- iv. Government (Federal and State) should initiate a policy and increase their funding of tertiary institutions in area of ICT facilities.
- v. Non-Governmental Organization should support students and institutions by funding and providing E-learning facilities

### Recommendations

The following recommendations were put forward:

- i. Managers and administrators of tertiary institutions offering business education and Heads of Department in Nasarawa state should create awareness programme that will educate newly admitted students on availability and important of E-learning resources in their institutions.
- ii. To enable business education students to develop self-efficacy for ease of use of E-learning facilities, they should register with ICT centres to upgrade their skills for ease of use of E-learning facilities.
- iii. Head of business education programme should initiate a policy of providing newly admitted students on the usefulness of E-learning facilities on students' academic activities.
- iv. Students should develop positive behavioural attitude on the use of E-learning facilities by constant practicing which will enhance their skills and understanding of the facilities.
- v. Management of tertiary institutions in Nasarawa state should create enabling environment by providing E-learning facilities and develop policy that will encourage its usage for academic activities among students.

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**Sample of the instrument used for Data collection**

	<b>Awareness of ICT</b>	VH	MH	ML	VL
1.	The extent to which I am aware of the importance of E-learning resources for learning is				
2.	The extent to which the I am aware of the use of E-learning resources makes me interferes with my ability to concentrate in the class is				
	<b>Ease of use of ICT</b>				
3.	The extent to which I belief that E-learning resources are too cumbersome for me to use is				
4.	The extent to which I feel I have skills on the use with E-learning resources for learning is				
	<b>Perceived usefulness of ICT</b>				
5.	The extent I am aware that E-learning provides access to open learning environment for criticizing and ridiculing students' contributions is				
6.	The extent I am aware that E-learning resources helps to get better results in my learning is				
	<b>Behavioural Attitude towards ICT</b>				
7.	The extent to which I have positive feeling toward E-learning usage for learning is				
8.	The extent to which I do use E-learning system to disseminate class information and assignments to students is				
	<b>Institutional Attributes towards ICT</b>				
9.	The extent to which quality of the electronic technology infrastructure of this University is adequate for E-learningprogramme adoption in my institution is				
10.	The extent to which my institution provide E-learning resources for its adoption for learning is				
	<b>Usage of ICT</b>				
11.	The extent to which E-learning resources enables me to provide faster feedback to distance learners than face to face learning and teaching is				
12.	The extent to which E-learning resources improves distance learners 'performance better than face learning and teaching is				