CONTRIBUTIONS OF E-LEARNING TECHNOLOGY RESOURCES IN BUSINESS EDUCATION INSTRUCTIONAL DELIVERY IN NIGERIA UNIVERSITIES

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Abstract
The study sought to determine the contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities. Two research questions and two null hypotheses guided the study using a descriptive survey research design. The population for the study comprised 81 lecturers who teach business education in the Federal and State Universities in Enugu and Anambra States. A 25 item structured questionnaire was used for data collection using a four-point rating scale. Three experts from the Department of Business Education and two experts from the Department of Computer and Robotics Education, University of Nigeria, Nsukka subjected the questionnaire to face validation. A reliability coefficient of 0.95 was obtained from Cronbach Alpha Reliability formula. 60 copies of the questionnaire were administered while 57 copies were collected and analyzed using mean and standard deviation to answer the research questions. The null hypotheses were tested using t-test statistic at 0.05 level of probability. It was found that e-learning technology resources did not contribute to large extent in business education instructional delivery in the universities, because of lack of qualified staff in the area of e-learning application, as well as lack of ICT and e-learning facilities and infrastructure in the universities. It was recommended that lecturers should be trained and retrained for them to be abreast with the developments in e-learning technology.

Keywords: E-learning, E-business Education, Business Education, Information Technology, and Technology Resources

Introduction

The positive impact of technology on education is not in doubt. Technology has recorded great impact on education and training world-wide by transforming the teaching and learning methodologies. Information and Communication Technology (ICT) and other aspects of technology have reasonably affected the entire education process, especially the methodologies applied by teachers and learners to gain access to knowledge in the 21st century. Nimesh (2015), described ICT as an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage and audiovisual systems, that make it possible for users to access, store, transmit, and manipulate information. ICT avails learners access to wide stores of knowledge beyond the school with multi-media tools, hence, creating open learning environments, with real potentials. This is evident in the way ICT changes learners, learning and teaching anytime, anywhere with and by computers, the internet and telecommunications. The application of ICT in teaching and learning process has brought about a new system of learning globally known as electronic learning (e-learning). This new method of learning is accessed and delivered electronically with multimedia products. Teaching and learning has now experienced a dramatic shift from teacher centered to learner-centered learning with the development of e-learning technology.

E-learning is a learning system based on formalized teaching but with the aid of electronic resources. E-learning encompasses all teaching and learning delivered to students through electronic media, namely the internet, intranet, satellite broadcasts, audio/video, interactive TV and CD-Roms (Maroua, 2023). E-learning is described by Aysem (2022), as a web-based educational system on the platform with the internet, intranet, or computer access. According to him, an e-learning activity enables students to have access to the course contents at will and interact with their co-learners or teachers through communication tools such as e-mail and forums. With e-learning, the learners have the opportunity to decide when to learn, how to learn, what to learn and at what speed to learn. According to Gordon & Gabriel (2021) e-learning brings about stronger cognitive tools and provides an interactive learning environment that enables the learners to receive results almost immediately. They are of the view that e-learning takes care of individual interests and

performances and lowers the cost of education. This, according to them is because e-learning system overcomes both human and material requirements. E-learning cuts across all the teaching and learning delivery, accessed, supported and improved via digital technologies and media application. E-learning encompasses face-to-face, distance, mixed and blended delivery prototypes that employ electronic means (Tagreed et al., 2016).

E-learning aims to create flexible and dynamic learning environments, capable of shouldering a wide variety of personal needs and learning methods, via the application of media, personnel and actual experience, as well as changing the role of the teacher and education administrators. According to Hemisha et al., (2022) e-learning encourages students to cultivate problem solving skills by trying things out themselves. It also enables them to participate in simulations and experiential tests, which results in their benefiting more from learning now than in the past. E-learning avails students with windows of interaction as opposed to the one-way channel of communication that obtains in the conventional classroom education. Students direct their own learning in an e-learning environment and jointly find solution to problems in chat rooms because the various fora in the e-learning environment make available for students the discussion platform (Breslow & Mousoutzanis, 2013). According to them virtual communities can then develop in this way and become veritable instrument through which Universities encourage learners, uphold their interests and support them to be innovative and interact in creativity.

Universities and other educational institutions are getting much more interested in incorporating e-learning in their programmes for purpose of improvement and introduction of flexibility in their process of teaching and learning. There is hardly any university round the globe nowadays that does not make use of e-learning resources to compliment teacher-led classroom teaching (Rosenkranz & Feddersen, 2017). Similarly, Eze etc al., (2018) asserted that Nigerian Universities have keyed into e-learning resources as an essential complementary delivery methods for education. They further reiterated that teachers and students are rapidly engaging themselves in e-learning. They further stated that as a society, education and places of work are tremendously transformed into e-learning compliance consequent upon globalization and ICT. According to them e-learning enables learners to conform to changes, to take responsibility for their learning and to think critically to come up with solution to problems as people working with a team spirit. Hence, the use of e-learning, in real sense, enhances the learning experience of students by cushioning time and space restrictions and making available more access to information online.

The use of e-learning resources in Nigerian Universities and beyond for tutoring, managing courses, offering simulations, enriching available course, programming as well as problem solving gives rise to greater popularity of e-learning. The suitability of e-learning for simulation and experiential learning via the internet and computer applications serves as a catalyst that advances e-learning (Enaam, 2019). The worldwide web is agog with free experiential exercises, ready for effective application in business education, namely: e-book, e-examination, e-drills, e-counselling, e-sound book, and others, added to many other ICT resources and programmes that enhance online and offline learning. Tagreed et al. (2016) stated that e-learning resources are available in business education. They however stated that the inability of the teacher to creatively access and apply them in instructional delivery limits their application of the e-learning resources. In view of Suyato et al. (2024) business education remains the most cited field of study making significant use of some form of e-learning, especially in the mixed mode and completely online categories in universities. Suyato et al. further explained that in the mixed mode courses, the e-learning element starts to replace classroom period with online interactions, assessment; or project/collaborative study replacing face-to-face teaching and learning. However, they reiterated, good percentage class attendance remains an aspect of the mix. According to them, when courses are completely online based, students can join courses offered by any university in a particular location from a different distant location. The high demand and supply of e-learning products and channels highly influences the fast growth in e-learning. E-learning is in high demand among teachers and students owing to its flexibility of access, ease of distance as barriers, cost-effectiveness, the benefit of just-in-time training, opportunity for individual differences and alternative pedagogies such as simulation, experiential, interactivity and self-paced learning (Liu & Yu, 2023). They further asserted that the development of internet and computers as household items, improved bandwidth, enhanced delivery platforms, better interactivity as well as media rich cooptimizationntent and of technology which enhances compatibility, coupled with advancement in B-to-B and B-to-C applications which influences the high availability of e-learning products and resources.

Contextually e-learning is a learning environment which applies Information and

Communication Technologies (Its) as a platform for teaching and learning activities. This is to say that e-learning is a pedagogy strengthened by digital technology. The author further explains that e-learning is a recent education concept. Hence, by using the internet technology, it delivers the digital content, offers a learner-oriented environment for the teachers and students of business education. Suffice to say that the e-learning enhances the construction of life-long learning opinions and learning society among teachers and students of business education.

Business education is an aspect of education that involves teaching the skills and operations of the business industry. This field of study occurs at multiple levels, including secondary and higher education institutes (Amoroso & Burke, 2018). Business education is also a concept that encompasses a number of methods used to teach students the fundamentals of business practices. These methods range from formal educational degree programmes, for example the Master of Business Administration (MBA), to school-to-work opportunity systems or cooperative education. Business education has its major objective to equip students with the basic theories of management and production. It is also designed to teach the processes of decision making; the philosophy, theory, and psychology of management; practical applications; and business start-up and operational procedures (Gordon & Gabriel, 2021). Business education, for the purpose of this work, is a bidimensional programme of instruction: office education, a vocational educational programme for office careers through initial, refresher, and upgrading education, which qualifies one to be employed and advance in the office occupations; and general business education, a programme designed to equip students with information and competences to manage e-learning technology resources, which are needed by all in managing efficiently personal business affairs and in using the services of the business world.

The access and use of ICT/e-learning resources in the teaching and learning of business education is known as e-business education. E-business education is the use of online and internet technologies in teaching business education. E-business education according to Sascha el al., (2022) involves carrying out conventional business education functions, business education research, business education and training via the various computer and internet-based business education tools. Examples of such ICT-based business education tools are digital tool kits, electronic spreadsheet, internet and web-based software packages. Sascha et al. asserted that the teacher is professionally bound to apply these resources to orient the students towards embracing prevailing e-learning and e-business education principles and procedures.

Students find it difficult to gain the more specialized discipline and knowledge in the area of business education. Many business education topics such as e-marketing, book-keeping, office technology etc. use worked examples to help students to integrate theory with practice (Tagreed et al., 2016) They further stated that students often struggle with these topics as they rarely comprehend the examples given. Limited resources and time in universities for which reasons lecturers are often constrained to illustrate many vital topics, not more than once per semester worsen the students' inability to comprehend the topics to psychomotor level. This constraint persists despite the fact that many students require more practice to understand how these theoretical aspects of these topics can be put into practice. Students gain from watching how various problems are solved through a step-by-step approach. ICT is found useful in providing the student-centred learning of business education via e-learning, saving institutions enormous investment in a lot of teaching resources (Oduma et al., 2019). According to them students' learning in business education was reasonably improved via the application of e-learning resources. Oduma etc al. however, further stated that many institutions are slow in imbibing the use of e-learning.

Statement of the Problem

The rate of development and contributions of e-learning for educational purposes, which includes in the teaching and learning of business education in developing countries like Nigeria is still abysmally low (Gordon & Gabriel, 2021). This condition prevails despite the fact that use of e-learning technology resources in business education instructional delivery is one of the basic prerequisites for business educators to learn and teach students, in line with the ICT driven education of the 21st century (Agbo, 2018).

Many business educators lack the manipulative skills in applying e-learning technology resources, such as the ability to save data in the flash drive, floppy disk or CD for record keeping (Bassey et al., 2023). Bassey et.al. further stated that business educators are not yet at home with application of e-learning technology resources in instructional delivery owing to the fact that: e-learning based instruction delivery are scarce; application of e-learning in instruction delivery results in waste of valuable time; and adoption of e-learning in information delivery could misguide the lecturers due to inappropriate information. Bassey et al. further informed that contributions of e-

learning technology resources in business education instruction delivery might remain insufficient inasmuch as there are scarcely e-learning based in-service training programme to enhance business education instruction delivery.

Notwithstanding that Universities in Nigeria, should experience significant contributions of e-learning resources for purposes of teaching and learning, it is doubtful whether e-learning resources contribute adequately to teachers' content delivery in business education subjects. In view of the fact that the key to success of any technology in education is the contributions it makes in teaching and learning, there is the need to determine the contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities.

Purpose of the Study

The general purpose of this study is to determine contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities. Specifically, the study sought to:

1. Identify the extent to which e-learning technology resources contribute in business education instructional delivery in Nigeria Universities.
2. Identify the constraints to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities.

Research Questions

The following research questions guided the study:

1. To what extent do e-learning technology resources contribute in business education instructional delivery in Nigeria Universities?
2. What are the constraints to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities?

Null Hypotheses

Ho_1: There is no significant difference in the mean responses of business education lecturers in Federal and State Universities on the extent to which e-learning technology resources contribute in business education instructional delivery in Nigeria Universities.

Ho_2: There is no significant difference in the mean responses of business education lecturers in Federal and State Universities on the constraints to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities.

Methodology

The study adopted descriptive survey research design in line with Osuala in Agbo, Ugwoke, Iheagwam and Agu (2019) because it is suitable for public opinion on prevailing phenomena, with the aim to determine the present conditions or practices, and make better plan for improvement. The study was carried out in Federal and State Universities offering Business Education in Enugu and Anambra States, Nigeria. No attempt was made to carry out the study in any other Universities in other states of Nigeria. Hence, the area of the study was Enugu and Anambra States. The population for the study comprised 81 business education lecturers who teach business education courses in the Universities. The entire population was studied because it was manageable. Hence, there was no sampling.

A 25-item questionnaire structured on a four point rating scale was used for the study to elicit information from the respondents on the contributions of e-learning technology resources in business education instructional delivery. The questionnaire has sections A and B. Section A dealt with the extent to which e-learning technology resources contribute in business education instructional delivery with response categories: "Very High Extent", "High Extent", "Low Extent", "Very Low Extent". Section B of the questionnaire dealt with the constraints to adequate contributions of e-learning technology resources in business education instructional delivery. The response options were "Strongly Agree", "Agree", "Disagree" and "Strongly Disagree". The questionnaire was developed after review of available literature on prospects of development in e-learning. The instrument was face-validated by three lecturers in the Department of Business Education and two lecturers in the Department of Computer and Robotics Education, University of Nigeria, Nsukka. The reliability of the instrument was established using Cronbach Alpha Reliability technique. The result of the reliability coefficient was 0.95. Copies of the questionnaire were distributed by the researcher together with three research assistants. The collection of the copies of the questionnaire was on the spot to avoid loss on transit. Out of 81 copies of the questionnaire administered, 79 were retrieved, representing 98 percent rate of return.

The data collected were analyzed using the mean and standard deviation for answering the research questions, while t-test statistic was used to test the hypotheses at 0.05 level of significance. The following discussions guided the interpretation of the results of analysis made:

a) Any item with a mean value of 2.50 and above indicated that the respondents agreed that e-learning technology resources contribute to large extent in business education instructional delivery in Nigeria Universities; and that the respondents agreed that the item was a constraint to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities respectively. Conversely, any item with a mean value of less than 2.50 indicated that the respondents disagreed with the aforementioned condition respectively, hence, indicating little extent or disagreed respectively.

b) The hypothesis of no significant difference (Ho) was upheld for any item whose p-value was greater than 0.05 level of significance while hypothesis of no significant difference was rejected for items whose p-value was less than 0.05 level of significance.

Results

The results of the study were obtained from the research questions answered and the hypotheses tested. The results from research questions and hypotheses are presented in Tables 1 and 2. The data for answering the first research question and testing the first null hypothesis are presented in Table 1.

Table 1: Mean Ratings, Standard Deviations and t-test Analysis of Respondents on the Extent E-learning Technology Resources Contribute in Business Education Instructional Delivery in Nigeria Universities

N = 79

S/N	Item Statement	$\overline{X}$	SD	Rem. RQ	P-Value	Remark s
1.	Electronic database enables search to be fast and easy.	1.62	0.93	LE	.72	NS
2.	Electronic presentation (power point) enhances display of information.	1.84	0.94	LE	.86	NS
3.	Interactive TV and cable satellite broadcasts add data service to traditional television.	1.26	0.85	LE	.77	NS
4.	Audio/video CD and DVD players backup important files.	1.82	0.86	LE	.75	NS
5.	Word and data processing permits adding of content and charts to document.	1.92	1.05	LE	.63	NS
6.	Video/teleconferencing increases efficiency and productivity.	1.72	0.67	LE	.23	NS
7.	CD/DVD/ROM enhances offline access.	2.30	0.87	LE	.75	NS
8.	Word and data processing enables one type, edit, save, and print documents.	2.48	1.05	LE	.53	NS
9.	Internet and web browsing enhances learning and communication.	2.09	0.72	LE	.65	NS
10.	Personal computers, laptops ensures accuracy and precision.	2.47	0.22	LE	.48	NS
11.	Electronic spread sheet makes large amount of data easier to process.	2.38	0.72	LE	.67	NS
12.	Index page quickens retrieval of data.	1.21	0.63	LE	.33	NS
13.	E-library enhances resource preservation.	1.78	0.65	LE	.73	NS
14.	E-workshop provides flexible learning mode s	1.83	0.55	LE	.37	NS
	Cluster mean	**1.91**	**0.71**	**LE**		**NS**

Key: LE = Little Extent; $\overline{X}$ = Mean; SD = Standard Deviation; N = No of Respondents; NS = Not Significant

Data in Table 1 show that the mean ratings of the respondents on the 14 items in the Table ranged from 1.21 to 2.48, which are within the boundary limit of 3.50 – 4.00 on 4-point rating scale. This indicates that business education lecturers agreed that e-learning technology resources contribute in business education instructional delivery to little extent. The result from Table 1, therefore indicated that the two groups of respondents (Lecturers from Federal and State Universities) were of the opinion that none of the e-learning technology resources listed contributes to large extent in business education instructional delivery. The standard deviation of responses ranged from .22 to 1.05 which implied that all the respondents (Lecturers from

Federal and State Universities) were close in their opinions that e-learning technology resources do not contribute to large extent in business education instructional delivery in the universities.

The data in Table 1 on the hypothesis one show that the p-value of the entire 14 items ranged between .23 to .86 which are in each case greater than 0.05 level of significance. This indicates that there was no significant difference in the responses of business education lecturers in Federal and State Universities on the extent to which e-learning technology resources contribute in business education instructional delivery in Nigeria Universities.

The data for answering research question two and testing the null hypothesis two are presented in Table 2.

Table 2: Mean Ratings, Standard Deviations and t-test Analysis of Respondents on the Constraints to Adequate Contributions of E-learning Technology Resources in Business Education Instructional Delivery in Nigeria Universities.

N = 79

S/N	Item Statement	$\overline{X}$	SD	Rem RQ	P-Value	Remark
1.	There is lack of strong government commitment on implementation of policies on e-learning instructional delivery.	3.46	.74	A	.52	NS
2.	Qualified staff in e-learning application is in short supply.	2.51	.64	A	.44	NS
3.	Funding of programmes and e-learning related activities is inadequate.	3,42	.96	A	.67	NS
4.	There is inadequate facilities and infrastructure for e-learning application.	3.05	.56	A	.86	NS
5.	Management and maintenance of available resources for e-learning is poor.	3.12	.87	A	.33	NS
6.	Staff is poorly motivated through inadequate incentives.	2.92	.81	A	.74	NS
7.	There is incessant power failure.	3.11	.32	A	.45	NS
8.	Network failure and disruptions often occur.	2.57	.96	A	.97	NS
9.	Inadequate time is being allotted to e-learning related trainings and practice.	2.88	.54	A	.86	NS
10.	There is poor perception on the use of e-learning resources for instructional delivery.	3.16	.80	A	.64	NS
11.	There is high cost of acquisition of e-learning resources and facility.	3.43	.87	A	.72	NS
	Cluster Mean	**3.05**	**.73**			

Key: A = Agreed; $\overline{X}$ = Mean; SD = Standard Deviation; N = No of Respondents; NS = Not Significant

Data in Table 2 show that the mean ratings of the respondents on the 11 items in the Table ranged from 2.51 to 3.46 which are within the boundary limit of 3.50 0 4.00 on 4 – point rating scale. This indicates that business education lecturers agreed that each of the items is a constraint to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities.

The standard deviation of responses ranged from .32 to .96. This indicates that all the respondents (Lecturers from Federal and State Universities) were close in their opinions on the constraints to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities.

Data in Table 2 also reveal that the p-values of the 11 items ranged from .33 to .97 which are all greater than 0.05 level of significance. This indicates that there was no significant difference in the mean ratings of business education lecturers in Federal and State Universities on the constraints to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities.

Discussion of the Findings

The result of this study shows that there are many e-learning technology resources for application in business education instructional delivery in Nigeria

Universities. Nevertheless, the result indicated that all the e-learning technology resources studied contributed to little extent in business education instructional delivery in Nigeria Universities. This implies that none of the e-learning resources contributes to large extent in the business education instructional delivery in Nigeria Universities. The result is line with Agbo (2018) that the contributions of e-learning for educational purposes, including business education instructional delivery in Universities is still very little. The study also identified many constraints to adequate contributions of e-learning technology resources in business education instructional delivery in Nigeria Universities. This is in line with the study by Amoroso and Burk (2018) who stated that e-learning is applying electronic technologies to access educational curriculum outside of traditional classroom, with a view to improve instructional delivery in business education. This requires qualified staff in e-learning applications, who have the competence to outsource, so as to reduce the constraints to adequate contributions of e-learning technology resources in business education instructional delivery.

The respondents had uniform views that e-learning technology resources do not contribute to large extent in business education instructional delivery. The respondents (the business education lecturers in Federal and State Universities) in the area covered by the study revealed that the adequate contributions of e-learning technology resources in business education instructional delivery is limited by many constraints. The constraints, in the opinion of the two groups of respondents, emanate from the quality of the teachers and the availability of facilities, equipment and infrastructures for training of business education lecturers on the application of the e-learning technology resources in business education instructional delivery in Nigeria Universities.

Conclusion

A lot of e-learning technology resources are available for use by business education lecturers for the delivery of business education instructional contents. That notwithstanding, they do not contribute to large extent in Nigeria Universities because of lack of qualified staff in the area of e-learning application, as well as lack of ICT and e-learning facilities and infrastructure in the Universities. Most of the e-learning technology resources were found to contribute to little extent in business education instructional delivery in Nigeria Universities because of constraints to adequate contribution of the resources in instructional delivery by business education lecturers.

Recommendations

The following recommendations were made based on the findings and conclusion of the study:

1. The business education lecturers should be adequately encouraged and motivated through seminars, workshops, etc. to enable them master the use of e-learning technology resources for improved contributions of the resources in business education instructional delivery.
2. Government, through its appropriate ministry, should adequately fund e-learning programmes and activities.
3. The priority of administration and management in employment of business education lecturers should be those who are skilled in ICT and e-learning programmes and applications.
4. There should be policies in place by appropriate government ministry for the full integration and implementation of e-learning technology into business education.
5. Alternative power supply equipment and facilities should be installed to cushion the effects of the incessant public power supply failure, that is frequent nowadays in Nigeria.

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