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Institutional and Government Related Factors Constrain on e-Learning Adoption by Business Education Lecturers in Colleges of Education in North Central Nigeria

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Abstract

This study was necessitated by the need to increase e-learning adoption for instructional delivery in business education for global competitive advantage of the products. Several factors have been identified as inhibiting e-learning adoption in Nigerian institutions but this study determined the extent institutional and government-related factors constrain the adoption of e-learning for instructional delivery by business education lecturers in North central Nigeria covering seven states. Two research questions and two null hypothesis tested at 0.05 level of significance guided the study. The entire population of 161 business education lecturers was studied without sampling because the size was manageable. Instrument for data collection was a 33-item 5-point rating scale questionnaire validated by experts. Test re-test method was used to determine the reliability of the instrument and Pearson Product Moment Correlation yielded a reliability coefficient of 0.86. Data in respect of the research questions were analyzed with mean and standard deviation while the hypotheses were tested using z-test and ANOVA. Findings showed that different institutional and government-related factors constrain the adoption of e-learning by the business education lecturers to a high extent. Institution ownership and experience did not significantly influence the respondents' opinions on the subject matter. Based on the findings, the researchers conclude that institutional and government-related factors were major factors responsible for low e-learning adoption by business education lecturers in the zone. It was recommended among others that management of colleges of education in the zone should ensure adequate provision of e-learning infrastructure and resources for instructional delivery by business education lecturers and students and that government should introduce a workable e-learning policy and liaise with other stakeholders in the education sector to make internet connectivity and other e-learning resources easily accessible.

Keywords: e-*learning, Business education, Institutional factors, Government related factors*

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Background to the Study

The value of Information and Communication Technology (ICT) in improving the efficiency and effectiveness of teaching and learning in business education is not in doubt as it has brought changes in pedagogical delivery system. Akudolu (2006) asserted that the advent of ICT has given rise to the formulation of new educational objectives which require innovation and modification in the content, method and evaluation strategies. ICT is gradually being adopted at all levels of education in the country today as a veritable means of imparting knowledge and technological skills to students. It is regarded as an effective tool for educational services delivery.

Due to the relevance of ICT to business education, it has become very vital that its different resources including e-learning be widely adopted for teaching and learning in the field. In regards to this, UNESCO (2011) asserted that more than any other technology, ICT provides teachers and students access to vast stores of knowledge beyond the school. Ugwuoke (2011) also acknowledged that the huge growth of computers, internet and other electronic devices provide global opportunities for education, especially for learning outside the premises of the school. The wide application of ICT resources such as e-learning for instructional delivery in tertiary institutions in developed countries of the world has tremendously transformed education but Nigeria is slow in catching up with the pace.

Objectives of the Study

The main purpose of the study was to determine the extent institutional and government related factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria. Specifically, the study assessed the extent to which

1. Institutional factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria;
2. Government-related factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria.

Review of Literature

Literature for this study was reviewed under concept of e-learning and modes of e-learning.

e-learning

As a subsystem of ICT, e-learning is the electronic process which enhances the delivery and administration of learning opportunities via computer, networked and web-based technology to help individual performance and development. The basic principle of e-learning is connectivity, that is, the process by which computers are networked to connect people to share information and knowledge for personal, academic or professional growth and development. Okure (2008) posited that this involves e-learning landscape or architecture, which refers to the hardware, software and connectivity components required to facilitate learning. E-learning may include delivery of course materials, tuition or assessment by means of asynchronous (one-way) learning where interaction occurs intermittently with a time delay and at the learner's own pace; and synchronous learning, or real-time online learning where learning takes place at the same time and pace among several learners. E-learning or internet-based learning has been proved to exhibit numerous advantages over traditional methods of learning. It is less expensive and faster to deliver, promotes self-efficacy, provides good accessibility anywhere and

anytime and gives students more control over their learning processes (Smith & Rupp, 2004).

With the advent of globalization and information revolution, education is expected to create intellectual capacity on which knowledge production and utilization depend. It is also expected to play a key role in promoting life-long learning practices that are necessary for updating people's knowledge and skills. To achieve this, tertiary institution lecturers need to change their methods of operation and delivery by widely adopting e-learning technologies. This necessitates that business education lecturers in colleges of education and other tertiary levels of education should be equipped with requisite e-learning skills and knowledge through ample provision of e-learning resources for easy access by the government and institution management to enable them adequately shape their students as future leaders of the nation.

As a product of the internet, e-learning is variously defined according to roles of different individuals. Hambrecht (2000) defined it as a generic term covering a wide set of ICT-based applications and processes, including computer-based learning, web-based learning, virtual classrooms, digital collaborations and networking. E-learning comprises all forms of electronically supported learning and teaching and is to the brick wall classroom learning what mobile phone is to fixed analog. The brick wall classroom is situated at a place where students and teachers meet and interact face-to-face while e-learning takes place anywhere and anytime without face-to-face interaction. It involves the use of network technologies to create, foster, deliver and facilitate learning. Ugwuoke (2011) opined that e-learning encompasses face-to-face, distance, mixed and blended delivery models that utilize different electronic devices such as e-mail, cell phone, interactive CDs, internet, computers, radio, optical fiber technologies and YouTube.

Modes of e-learning

E-learning is commonly associated with higher education and corporate training. Anowor (2011) observed that e-learning encompasses learning at all levels both formal and non-formal education that uses ICT and instructional media in form of hardware and software technologies in the development and transformation of skills and concept-based knowledge. He posited that e-learning is the use of ICT resources which include computer networks and communication and mobile technologies to enhance and extend learning. These technologies help to deliver and make education and information accessible to whoever needs it any time any where.

In the views of Offiah and Esiara (2011), e-learning is essentially the computer and networks that enable the transfer of skills and knowledge. The authors asserted that the use of electronic applications and processes to learn include web based learning, computer based learning, virtual classrooms and digital collaborations where content is delivered via the internet/extranet, audio or video tapes, satellite, TV and CD-Rom. They further emphasized that online teaching and learning method needs the use of browsers such as internet explorer or net cape navigator while e-learning facilities can be in the form of audio, visual and audio/visual methods for creating, delivering and facilitating learning experiences at any needed place and time. E-learning may start with audiovisual tools used in the classrooms and go as far as interactive internet-based collaboration of students and teachers with the potential to revolutionize the method of teaching in higher education. Otuka (2010) affirmed that e-learning includes all forms of electronically

supported learning and teaching which are procedural in character and aim to effect the construction of knowledge with reference to individual experience, practice and knowledge of the learner.

Statement of the Problem

The rapid growth and wide application of ICTs has tremendously transformed the workplace and business environment of the 21st century. Consequently, different ICT resources such as e-learning are being utilized in education to adequately equip the graduates for productive living in the information age. Undoubtedly, the adoption of e-learning in higher education will enhance teaching and learning effectiveness in different fields of study particularly business education. The problem of this study is that the pace of e-learning adoption by business education lecturers in colleges of education in North Central zone is very slow. This is confirmed by personal observation of the researchers and interactions with business education lecturers in the zone. This backward trend obviously will have negative impacts on products of the programme.

Factors identified as constraining e-learning adoption by Nigerian tertiary institution lecturers include personnel, student, societal, institutional, government related among others. Obviously all or some of these may be contributing to the slow adoption of e-learning for instructional delivery by business education lecturers in North Central Nigeria but the extent of their contributions is not clear. Hence this study is deemed imperative as it will guide relevant stakeholders in taking objective steps towards addressing the problem.

Research Questions

The study was guided by the following research questions:

1. To what extent do institutional factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria?
2. To what extent do government-related factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria?

Hypotheses

The following null hypotheses were tested at 0.05 significant level.

1. Respondents do not differ significantly in their mean ratings on the extent institutional factors constrain their adoption of e-learning based on institution ownership (Federal/State).
2. There is no significant difference in the mean ratings of respondents on the extent government-related factors constrain their adoption of e-learning based on experience (0-5 years/6-10 years/above 10 years)

Method

This study adopted the survey design as recommended by Uzoagulu (2011) for studies that use questionnaire to survey the opinions of a given population or its representative sample on existing phenomena. The area was North Central zone of Nigeria covering Kogi, Plateau, Kwara, FCT, Niger, Benue and Nasarawa states. These states have thirteen (13) colleges of education offering business education programme. Northern Nigeria is generally categorized as educationally disadvantaged but north central zone is an exception as the people's passion for education is clear by the number of tertiary institutions in the area which informed its choice for the study. The population of the

study consists all 161 business education lecturers in the 13 colleges of education in the zone. The entire population was studied without sampling because the size was manageable.

Instrument used for data collection was a 33-item questionnaire with 5-point rating scale of Very High Extent, High Extent, Moderate Extent, Low Extent and Very Low Extent which was validated by three experts in business education and educational measurement and evaluation. The reliability of the instrument was established using test-retest method whereby it was administered twice to 10 business education lecturers in South East Nigeria within two weeks interval and the data were correlated using Pearson Product Moment Correlation Coefficient to establish the stable characteristics of the items. The coefficient of reliability was 0.81 which indicated that the instrument was reliable. The instrument was administered personally by the researchers to the population in two schools with the help of 11 research assistants (one each from the institutions) who administered in 11 schools. Copies of the instrument were administered on the first visit to the heads of department who helped to distribute to lecturers and retrieve completed copies while the researchers and their assistants monitored the exercise with phone calls and returned to retrieve when confirmation was received. The exercise lasted for two weeks and the process led to a very high response rate as all the copies were duly completed, retrieved and used for analysis.

The data collected were analyzed with the arithmetic mean and standard deviation to answer the research questions and determine the closeness of the respondents' means. Z-test and analysis of variance (ANOVA) were used to test null hypothesis 1 and 2 respectively at 0.05 level of significance. Item mean and grand mean were used to take decision on the research questions based on real number limits and a hypothesis was rejected where the z-calculated or calculated f-ratio was greater than or equal to the critical value otherwise the hypothesis was upheld.

Results

Table 1: Respondents' Mean Ratings and Standard Deviation on the Extent Institutional Factors Constrain E-Learning Adoption by Business Education Lecturers in Colleges of Education in North Central Nigeria N = 161

S/N	Institutional Factors	X	SD	Remarks
1	High cost of internet equipment (infrastructure)	3.96	.87	High Extent
2	High cost of e-learning-related software	3.80	.83	High Extent
3	Lack of installation of a campus-wide wireless internet access	3.73	.98	High Extent
4	Non-availability of an ICT centre	3.88	1.17	High Extent
5	Insufficient funds for the development of e-learning infrastructure	3.99	1.00	High Extent
6	Lack of acquisition of access to globally renowned websites	3.48	1.02	Moderate Extent
7	Fear of failure in internet/e-learning services	2.74	.98	Moderate Extent
8	High cost of internet connectivity (fees)	3.06	1.07	Moderate Extent
9	Lack of managerial experience in e-learning	3.72	.84	High Extent
10	Lack of creation of institutional websites and e-mail addresses	3.43	1.04	Moderate Extent
11	Lack of staff sponsorship to attend software and internet training short courses	4.38	.83	High Extent
12	Lack of management vision for e-learning	3.72	.92	High Extent
13	Lack of technological experts to handle the computer systems	3.92	.97	High Extent
14	Poor institutional power supply	4.09	.86	High Extent
15	Low management commitment for e-learning	3.95	.79	High Extent
16	Shortage of qualified staff with capacity in e-learning application	4.28	.91	High Extent
17	Poor management and maintenance of available resources for e-learning	3.92	.77	High Extent
18	Shortage of e-learning hardware and software	3.81	.79	High Extent
19	Poor internet connectivity	3.33	.94	Moderate Extent
20	Inadequate funding of programmes and e-learning related activities	4.09	.83	High Extent
21	Inadequate facilities and infrastructure for e-learning application	4.06	.73	High Extent
22	Lack of adequate incentives and motivation of staff	4.02	.78	High Extent
23	Lack of administrative support/initiative at departmental level	3.80	.85	High Extent
	Grand Mean	**3.79**		**High Extent**

Table 1 shows that 18 out of the 23 institutional factors listed constrain e-learning adoption by the business education lecturers to a high extent. With the grand mean of 3.79, it is concluded that institutional factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria to a high extent. The standard deviation values are within the same range showing that the respondents were homogenous in their opinions.

Table 2: Respondents' Mean Ratings and Standard Deviation on the Extent Government-Related Factors Constrain e-Learning Adoption by Business Education Lecturers in Colleges of Education in North Central Nigeria N = 161

S/N	Government-related Factors	X	SD	Remarks
1.	Inadequate funding of education	4.47	.77	High Extent
2.	Inadequate provision of funds for relevant facilities	4.28	.73	High Extent
3.	Lack of strong government policies on e-learning adoption by lecturers	4.04	.84	High Extent
4.	Inadequate provision for technical training of lecturers	4.27	.70	High Extent
5.	Lack of vision for e-learning adoption in schools	3.83	.80	High Extent
6.	Inadequate technical support from government	4.01	.79	High Extent
7.	Lack of legal and regulatory framework for e-learning	3.33	.95	Moderate Extent
8.	Lack of political will to drive e-learning adoption	3.66	.96	High Extent
9.	Lack of support to local ICT firms	3.51	.95	High Extent
10.	Failure to recruit ICT experts for schools	4.03	.84	High Extent
11.	Failure to regulate the activities of internet service providers	2.86	1.49	Moderate Extent
	Grand Mean	**3.66**		**High Extent**

Data in Table 2 show nine out of the 11government related factors listed constrain e-learning adoption by the respondents to a high extent with mean ratings of over 3.00. The grand mean of 3.66 leads to the conclusion that government related factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria to a high extent. The standard deviation values are within the same range and show that the respondents were homogeneous in their opinions.

Table 3: z-Test Result of the Difference Between the Mean Ratings of Respondents in Federal and State Colleges of Education on The Extent Institutional Factors Constrain their e-Learning Adoption.

Institution Ownership	N	X	SD	z-cal	α	df	z-crit	Remarks
Federal	63	3.73	.41	0.7				
State	98	3.82	.40	-1.29	0.5	159	1.960	Not Significant

Table 3 shows that the calculated z-value of -1.29 is less than the z-critical value of 1.960 at 159 degree of freedom. This means that institution ownership did not significantly influence the respondents' opinions on the extent institutional factors constrain their adoption of e-learning for instructional delivery. Therefore, the null hypothesis was not rejected.

Table 4: Analysis Of Variance (ANOVA) Test of Effect of Experience on the Mean Ratings of Respondents on Government-Related Factors Constraining e-Learning Adoption

Sources of variance	SS	Df	MS	F-cal.	F-crit.	Level of significance	Decision
Between group	.034	2	.017	.083	3.06	0.05	Not Significant
Within group	32.664	158	.207				
Total	32.696	160					

Table 4 shows that the calculated f-value of 0.083 is less than the critical f-value of 3.06.. This means that experience did not significantly influence the respondents opinions on the extent government-related factors constrain their adoption of e-learning. Therefore the null hypothesis was not rejected.

Discussion

Institutional Factors and e-learning Adoption

Findings of the study reveal that institutional factors such insufficient funds for development of e-learning infrastructure and low management commitment for e-learning constrain its adoption by lecturers to a high extent. This is in line with the observations of Kasse and Balunywa (2013) that underdeveloped countries lack the technical competence required to setup, run and maintain e-learning centres and that even where the technologies are available, there is low commitment by management resulting in their being underutilized and their potential not fully exploited.

Finally, the finding agrees with Becta (2004), Gautreau (2011), Inije, Utoware and Kren-Ikidi (2013) and Ilechukwu (2013) who posited that institutional factors such as reward and encouragement system, recognition of accomplishments, inadequate provision of e-learning facilities and lack of technical support resulting in higher risk of breakdowns are major constraints to e-learning adoption by lecturers. The finding further revealed that the institution ownership did not significantly influence the respondents' opinions on the extent institutional factors constrain their e-learning adoption. This finding agrees Okiki (2011) who affirmed that government policy on integration of e-learning in Nigeria cuts across all tertiary institutions irrespective of the ownership.

Government-Related Factors and e-learning Adoption

The results also revealed that government-related factors constrain e-learning adoption by business education lecturers in colleges of education in North Central Nigeria to a high extent. This finding agrees with Ezeugbor and Nwachukwu (2011) that government

investment in ICT growth is completely low as revealed by the ratio of students per computer in tertiary institutions. It also agrees with Gronlud and Islam (2010) who observed that developing countries face obstacles in ICT infrastructure, resources, and information access unlike the developed countries of the world. Furthermore, the finding agrees with Psycharis (2005), Evarest and Laura (2011) and Obikeze and Onyechi (2011) who posited that government should show more political will towards the supply of adequate technological infrastructure in order to solve the infrastructural problems negatively affecting e-learning adoption in Nigerian tertiary institutions The result further revealed that years of teaching experience did not significantly influence the respondents' opinions on the extent government-related factors constrain their e-learning adoption for instructional delivery. This finding agrees with Granger, Morbey, Lotherington, Owston and Wideman (2002) who reported that there is no relationship between teachers' teaching experience and experience in the use of e-learning.

Conclusion

This study was undertaken to determine the extent institutional and government related factors constrain e-learning adoption for instructional delivery by business education lecturers in colleges of education in North Central zone of Nigeria. Based on the findings of the study, the researchers conclude that management of Nigerian tertiary institutions and the government have much to do to increase the adoption of e-learning by lecturers in different fields of study.

Recommendations

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

1. Management of colleges of education in the zone should ensure adequate provision of e-learning infrastructure and resources for use by business education lecturers and students.
2. Ministry of education in collaboration with National Commission for Colleges of Education (NCCE) should collaborate with private sector and other agencies involved in developing and promoting e-learning technologies to adequately provide technological infrastructure to encourage wide adoption of e-learning in tertiary institutions.
3. Federal and state governments should provide adequate budgetary allocation to support teachers and students in acquiring personal computers and other e-learning facilities.
4. Government should introduce a workable e-learning policy and liaise with other stakeholders in the education sector to make internet connectivity and other e-learning resources easily accessible

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