# STATUS OF TECHNOLOGIES IN BUSINESS EDUCATION DEPARTMENTS OF TERTIARY INSTITUTIONS IN EBONYI STATE FOR EFFECTIVE INTEGRATION OF ELECTRONIC LEARNING

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**ABSTRACT:** The study was conducted to assess status of technologies in business education departments of tertiary institutions in Ebonyi state for effective integration of electronic learning. Two purposes of study and corresponding research questions provided guide for the study. Two hypotheses were tested in the study. The population was 37 business education lecturers and 748 Business Education Students in three tertiary institutions that offer Business Education programmes. All the business education lecturers and 486 Business Education students were used. This gave a sample size of 523. The instrument for data collection was a questionnaire titled "Integrating e-learning into Business Education Programs (IEBEP)", which consists of 39 literature-based items meant to elicit information from the respondents. The reliability of the instrument was ensured by using Cronbach alpha reliability computation which yielded a coefficient index of 0.98. A total of 523 copies of the instrument were administered to the respondents but 522 were correctly filled and returned. Mean, standard deviation and t-test statistical techniques were used to analyze the data that emerged from the study and the hypotheses tested at 0.05 alpha level. Results from the data analyzed showed that most computer equipment needed for integration of e-learning are available in business education departments, most computer networks are lacking in business education department. It was recommended, among others, that government and the school management should upgrade computer resources in Business Education departments.

**KEYWORDS**: Electronic Learning, Status, Integration, Business Education

## INTRODUCTION

The world is rapidly tending to a global digital society through the use of internet facilities. At the heart of this revolution is the ease through which information, ideas, innovations and life styles spread to nooks and crannies of the world. It has revolutionalized the nature and manner of instructional preparation and delivery in education generally and Business education programmes are bound to be affected by this rapid change. The programme of business education which is the vehicle through which business education hopes to accomplish her objectives is susceptible to changes associated with the innovations in technologies especially those used in modern offices and schools. These noble objectives of business education could not be achieved without utilizing these technologies in the training of their learners through the integration of e-learning.

E-learning is an abbreviation for electronic learning. It is the use of computer terminals in preparing and delivering educational programmes using graphics, texts, video, audio and other electronic formats. E-learning is an aspect of information and communication technology (ICT) which connotes deriving knowledge through the use of computer aided resources and programmes such as e-mail, text messaging, online chats, web pages, audio and video

conferencing etc. E-learning is a tool for improving teaching and learning, it is also a good accessible tool for learning and research material (Naidoo, 2003). He further explained that it makes delivery of instruction very flexible and interactive.

Business education is a vocational programme that equips the recipients with knowledge, skills, attitudes, knowledge and understanding needed for effective participation and contribution as producers and/or consumers of business products. It therefore means that Business education prepares individuals who will adequately participate in business activities and also equip individuals with business knowledge and skills. Azih and Nwosu (2012) posited that business education at all levels is aimed at providing training which equips the recipients with business skills needed to function effectively in a working environment as well as contribute to inclusive societal development. One of the aims of business education is to produce graduates that are equipped with vocational skills and competency required in modern offices and schools, but the relevance of business education classrooms and laboratories in this regard are questionable. But this aim could be achieved when business education classroom and laboratories are modified to suit modern offices and schools technological needs. In support of the above, Amoor (2008) observed that graduates of business education have problems in using technologies in a work environment due to their inadequate exposure to information system, modern office technologies and other rudiments of managing modern offices. He stressed that lack of these office technologies affects the nature of programme offered to learners.

Business education laboratories in most tertiary institutions lack basic e-learning facilities. Therefore, there is need for infrastructural improvement for effective teaching and learning of courses especially those related to office administration. Achilike (2012) noted that laboratories of business education should be improved to equip graduates of the programme with relevant information processing skills expected of business education graduates. These skills include: telecommuting, e-cottage, storing and forwarding of voice system, teleconferencing, computer output microfilm, facsimile to mention but a few. These skills will help them in packaging messages, disseminating message and receiving messages in modern offices. In light of the above, Business Education programmes should implement some innovations to equip learners with modern learning techniques which could familiarize them with modern office technologies. This change calls for adoption and maintenance of positive attitudes towards e-learning by everyone involved in the planning and implementation of business education programmes.

E-leaning can be effectively integrated into any programme through the adoption of computer equipped classroom used for teaching and learning. Integrating e-learning into business education programmes will no doubt enhance curriculum planning, development and implementation through the development and use of multimedia courseware and other computer equipment relevant to teaching-learning situations. Computer equipments needed in integration of e-learning into Business Education programmes include but not limited to resources such as flash memories, optical discs, interactive electronic boards, video books, personal computers, multimedia projectors, etc. On the other hand, Multimedia resources used in e-learning include Learning Activity Package (LAP), diskettes, power point slides etc. These course wares may be developed by the teacher or exist as ready- made instructional software.

In business education, utilization of computer resources in teaching and learning of any programme will promote active learning as it helps in developing appropriate level of capability in learners by making it possible for instructions to be learner centered. E-learning is learner centered as it helps the learner in learning new knowledge directly as well as acquiring new computer skills. According to Azih and Nwosu (2012) computer resources available in Business

Education laboratories could be used in records keeping, typing of question papers, accessing materials from the internet etc. with the use of computer resources in e-learning platform, both learners and lecturers can advance their knowledge by having access to variety of information thereby improving the quality of the educational programme.

Sequels to increase in the clamor for integration of e-learning into tertiary institution, Business Education laboratories are expected to be improved by installing high-speed interconnection among computers. Interconnecting computers with each other will assist in having a central link from where other computers can have access to any shared information. In line with the above, Onu and Ibe (2008) described computer networks as a communication system that enables computers in a common communication link to share message with each other. They identified computer networks to include local Area Networks, Wide Area Networks, Metropolitan Area Networks etc. with the help of these computer networks, computers can exchange files, share resource as well as communicate electronically among users.

#### **Statement of the Problem**

With the increasing clamor for integration of technology into Business education programmes, many institutions seem not to have necessary equipments needed. But it is worrisome as many business education departments are yet to enjoy the benefits of e-learning because of lack or inadequacy of electronic resources. This defect on the technological replication of modern office environment is a single major factor inhibiting the integration of e-learning in many educational programmes. Business education seems to be delaying to effectively integrating e-learning into their programmes because of the doubt on availability of the needed resources. This doubt is obvious as most business education classrooms and laboratories seem to be overcrowded with manual typewriters and other out-dated equipment which are not in tone with the modern technological prerequisites for e-learning integration. Even some institutions that have computer laboratories seems to be lacking most of other technologies needed in carrying out teaching and learning using electronic media. In most cases, learners are exposed to notional pictures of technologies they will use in modern offices without any practical skills. All these negate the basic principle of business education which holds that business education laboratories and classrooms should be a replica of office environment and as well impedes integration of elearning. Consequently, with the introduction and upgrading of electronic platform in most modern offices without corresponding exposure of learner to such platforms, Business Education graduates seem to be unfit for the offices. Since Business Education also prepares her recipients for a teaching career, modern schools now make use of electronic media for record keeping and result preparation, Business Education graduates seem not to possess electronic record keeping skills which they could have learnt using technologies in their learning activities. This obviously calls for an assessment of the status of technologies in business education departments of tertiary institutions in Ebonyi State for effective integration of electronic learning in Business Education programmes.

## **Purpose of the Study**

The main purpose of this study was to assess the status of technologies in business education departments of tertiary institutions in Ebonyi State for effective integration of electronic learning in Business Education programmes. Specifically, the study sought to:

1. Investigate the extent of availability of computer equipment in Business Education Departments in tertiary institutions in Ebonyi State.

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- 2. Investigate the availability of computer networks in Business Education Departments of tertiary institutions in Ebonyi State.

## **Research questions**

The following research questions guided the study

- 1. To what extent are computer equipment available in Business Education Departments in tertiary institutions in Ebonyi State
- 2. To what extent are computer networks available in business education Departments in tertiary institutions in Ebonyi State

# **Hypotheses**

The following null hypotheses were formulated for the study and were tested at 0.05 level of significance.

- 1. There is no statistical significant difference in the perception of lecturers in teacher education institutions in Ebonyi State on the availability of computer equipments in Business Education Departments in tertiary institutions in Ebonyi State based on their type of institution.
- 2. There is no statistical significant difference between the mean rating of lecturers and students on the availability of computer networks in Business Education Department in tertiary institutions in Ebonyi State

# **METHODOLOGY**

The study used a descriptive survey design. The population of the study comprise of 748 students and 37 business educators from the three tertiary institutions. The institutions are Ebonyi state university, Abakaliki, College of Education Ikwo and Federal Polytechnic, Uwana. All the lecturers were used while a sample of 486 students was uses giving a total of 523 respondents. Two purposes of study, research questions and hypotheses guided the study. A structured questionnaire divided into two parts was used for data collection. Part A was on personal data of the respondents while part B contained a total of 39 items used in answering the two research questions. A total of 523 copies of the questionnaire were distributed but 522 copies were correctly filled and returned. The mean and standard deviation were used to answer the research questions while the t-test was used to test the hypothesis at 0.05 level of significance.

#### **RESULTS**

The findings of the study are presented below:

**Research Question 1:** To what extent are computer equipment available in Business Education departments in tertiary institutions in Ebonyi State?

Summary of the result obtained to answer the research question is shown in table 1.

Table 1: Mean Responses on Extent of Availability of Computer Resource Equipment in Business Education Departments in Tertiary Institutions in Ebonyi State

S/N	Computer equipment available	VHE	HE	LE	VLE	$\overline{x}$	S.D	Decision
	in your department are:					<i></i>		
1	Offline or ordinary computers	196	306	18	2	3.33	0.56	HE
2	Floppy diskette	198	317	6	1	3.37	0.52	HE
3	Scanners	204	297	17	4	3.34	0.58	HE
4	Printers	323	197	-	-	3.60	0.49	VHE
5	Hard Disk Drive	396	124	2	-	3.76	0.44	VHE
6	Central processing units	402	120	-	-	3.77	0.42	VHE
7	Multimedia Television	157	186	97	82	2.79	1.04	HE
8	Video player	162	181	106	73	2.83	1.02	HE
9	Multimedia projectors	55	71	200	196	1.97	0.97	LE
10	White board	306	216	-	-	3.59	0.49	VHE
11	Uninterruptible power supply	96	92	220	114	2.33	1.01	HE
12	Audio cassette	107	398	15	2	3.17	0.47	LE
13	Educational DVD	8	51	370	93	1.95	0.58	LE
14	CD-Rom	340	182	-	-	3.65	0.48	VHE
15	Fax machine	58	73	300	91	2.19	0.85	LE
16	ICT Laboratory	191	307	17	7	3.31	0.59	HE
17	Video conferencing facilities	47	52	201	222	1.85	0.93	LE
18	Digital camera	98	163	161	100	2.49	1.00	LE
19	Laminating machine	114	308	62	38	2.96	0.79	HE
20	Scorebatt software	53	76	300	93	2.17	0.84	LE
21	Photocopying machine	308	214	-	-	3.59	0.49	VHE
22	Educational video cassette	129	132	130	131	2.49	1.12	LE
23	Telephone/ wireless facility	107	221	153	41	2.76	0.87	HE
24	Digital library	11	24	391	96	1.90	0.55	LE
25	Online or internet connected	102	295	79	46	2.87	0.83	HE
	computer							
26	Ready made courseware	287	192	24	19	3.43	0.75	HE
27	Bulletin board service	302	199	13	8	3.52	0.63	VHE
28	Removable disks	311	187	21	3	3.54	0.60	VHE
	Grand Mean					2.80	0.64	HE

Table 1 shows the mean and standard deviation rating of computer resource equipment available for e-learning in Business Education Department. Eight items had mean rating of 3.5 and above. This shows that they are at a very High Extent, available in Business Education programmes. Ten Items were rated within the range of 2.50-3.49 indicating that they are at a High extent, available in Business Education programmes. While nine items were within the range of 1.50-2.49 indicating that they are at a low extent, available in business education programmes. Similarly, the grand mean is 2.80 which is within the range of 2.50-3.49 shows that computer resources are at a High extent available in Business Education programmes.

## **Research Question 2**

To what extent are computer networks available in Business Education Department in tertiary institutions in Ebonyi State?

This research question was answered from data obtained from section B of the research instrument on extent of availability of computer networks for e-learning. Summary of the result is shown in table 2 below:

Table 2: Mean Responses on the Extent of Availability of Computer Networks in Business Education Departments in Tertiary Institutions in Ebonyi State.

S/N	Extent of availability of	VHE	HE	LE	VLE	X	S.D	Decision
	computer networks							
1	Computers in my departmental							
	laboratory are connected to the							
	external cyber server	91	182	101	148	2.41	1.08	LE
2	Computers in my department							
	laboratory are connected to							
	separate telephone	70	88	125	239	1.98	1.08	LE
3	Computers in my department							
	laboratory are all connected to a							
	satellite	102	154	125	141	2.42	1.08	LE
4	There is presence of virtual							
	library in my school.	79	93	240	113	2.25	1.08	LE
5	My departmental laboratory has a							
	bulletin board services	20	262	75	165	2.26	0.82	LE
6	Printers in my school can be							
	shared by all the computers	79	152	272	19	2.56	0.80	HE
7	Scanners in my school laboratory							
	can be shared by all the	83	137	285	17	2.55	0.77	HE
	computers							
8	The computers in my school							
	laboratory can share disk storage	184	269	39	30	3.16	0.79	HE
	devices							
9	Computers in my school are							
4.0	connected to wireless radio	31	58	282	151	1.94	0.80	LE
10	I can use personal computers to							
	access internet within the school	40-	• 40				0.0-	
	premises after subscription	185	249	66	22	3.14	0.85	HE
11	Course wares can be shared							
	among computers in my	1.5.	22.5	0.1		2.07	0.05	III
	departmental laboratory	156	235	81	57	2.95	0.95	HE
	Grand Mean					2.50	0.81	HE

Table 2 above shows the mean and standard deviation rating of computer networks available in Business Education Department. Five items had mean rating within the range of 2.50-3.49 showing that computer networks are available to a High Extent. In the same vein, six items were rated within the range of 1.50 - 2.49 showing that they are available at a Low Extent. The grand mean of 2.50 indicates that computer networks are to a High Extent, available in Business Education Departments.

 $H_{01}$ : There is no statistical significant difference on the responses of Business Teacher Education lecturers on the availability of computer equipment in business education departments based on their institutions.

Table 3 below is the t-test analysis of mean response of Business Teacher Education lecturers on the availability of computer equipment in Business education departments. The response of Business Education lecturers from teacher training institutions in the area of the study were analyzed using t-test statistical tool. Summary of the analysis is presented below:

Table 3: T-test Comparison of Mean Responses between Business Teacher Education Lecturers on the Availability of Computer Equipment in Business Education Department

S/N	Computer Resource	Institution	Mean	SD	DF	t-cal	t-crit	Decision
1	Offline or ordinary	IKWO	3.33	0.65				
	computers	EBSU	3.44	0.73	19	0.14	2.09	Accept
2	Floppy diskette	IKWO	35	0.80				-
		EBSU	3.33	0.71	19	0.22	2.09	Accept
3	Scanners	IKWO	3.17	1.03				
		EBSU	2.89	1.05	19	0.25	2.09	Accept
4.	Printers	IKWO	3.67	0.65				
		EBSU	3.67	0.50	19	0.32	2.09	Accept
5	Hard disk drive	IKWO	3.33	0.39				
		EBSU	3.89	0.71	19	0.13	2.09	Accept
6	Central processing	IKWO	3.50	0.52				
	units	EBSU	3.56	0.52	19	0.23	2.09	Accept
7	Multimedia television	IKWO	2.17	0.94				
		EBSU	2.22	0.97	19	0.13	2.09	Accept
8	Video player	IKWO	3.00	0.95				
		EBSU	3.00	1.00	19	0.10	2.09	Accept
9	Multimedia projectors	IKWO	2.17	0.58				
		EBSU	2.22	1.03	19	0.01	2.09	Accept
10	Whiteboard	IKWO	3.67	0.49				
		EBSU	3.89	0.7	19	0.81	2.09	Accept
11	Uninterruptible power	IKWO	2.08	0.18				
	supply	EBSU	1.56	0.73	19	1.48	2.09	Accept
12	Ready=made	IKWO	3.00	0.60				
	courseware	EBSU	2.89	1.05	19	0.28	2.09	Accept
13	<b>Educational DVD</b>	IKWO	2.83	1.03				
		EBSU	2.78	1.09	19	0.12	2.09	Accept
14	CD Rom	IKWO	3.50	1.18				
		EBSU	4.00	0.61	19	1.26	2.09	Accept
15	Fax machine	IKWO	1.33	0.49				
		EBSU	1.56	0.35	19	1.21	2.09	Accept
16	ICT laboratory	IKWO	3.42	0.79				
		EBSU	3.67	0.50	19	0.88	2.09	Accept
17	Video conferencing	IKWO	2.08	1.08				
	facilities	EBSU	1.78	1.01	19	0.66	2.09	Accept
18	Digital camera	IKWO	1.75	0.75				
		EBSU	2.11	0.78	19	0.44	2.09	Accept

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19	Laminating machine	IKWO	3.5	0.52				
	_	<b>EBSU</b>	3.44	0.73	19	0.20	2.09	Accept
20	Scorebatt software	IKWO	1.67	0.49				_
		<b>EBSU</b>	1.44	0.53	19	0.99	2.09	Accept
21	Photocopying	IKWO	3.42	1.77				_
	machines	<b>EBSU</b>	3.67	0.50	19	0.48	2.09	Accept
22	Educational video	IKWO	2.33	1.07				
		<b>EBSU</b>	2.89	0.99	19	1.23	2.09	Accept
23	Audio cassettes	IKWO	3.25	0.75				
		<b>EBSU</b>	3.67	0.71	19	1.30	2.09	Accept
24	Telephone/wireless	IKWO	2.33	1.15				
	facility	<b>EBSU</b>	1.33	0.50	19	2.68	2.09	Reject
25	Online or internet	IKWO	3.25	1.01				
	connected computers	<b>EBSU</b>	1.67	0.71	19	4.11	2.09	Reject
26	Digital libraries	IKWO	1.58	1.94				
		<b>EBSU</b>	1.33	0.50	19	0.43	2.09	Accept
27	Bulletin board service	IKWO	2.92	0.83				
		<b>EBSU</b>	2.67	0.87	19	0.66	2.09	Accept
28	Removable disks	IKWO	3.25	0.87				
		<b>EBSU</b>	3.11	1.05	19	0.32	2.09	Accept`
	Grand T-test					0.74	2.09	Accept`

 $H_{02}$ : There is no statistical significant difference between the mean rating of lecturers and students on the availability of computer networks in Business Education Departments in tertiary institutions in Ebonyi State.

Table 4 below shows the mean rating of lecturers and students on the availability of computer networks in Business Education Departments. This hypothesis was analyzed using responses from 11 items contained in Section B of the questionnaire. Summary of the t-test analysis of the hypothesis is shown below:

Table 4: T-test Comparison of Mean Responses of Lectures and Students on the Availability of Computer Networks in Business Education Departments

S/N		Status	Mean	SD	Df	t-cal	t-crit	Decision
1	Computers in my department laboratory are connected to the external cyber server	Students lecturers	2.50 2.25	1.74 0.73	520	1.17	1.96	Accept
2	Computers in my department laboratory are connected to separate telephones	Students Lecturers	1.97 2.08	1.09 0.91	520	0.69	1.96	Accept
3	Computers in my department laboratory are all connected to a satellite	Students Lecturers	2.43 2.31	1.10 0.89	520	0.80	1.96	Accept

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4.	There is presence of virtual library in my school.	Students Lecturers	2.25 2.42	0.96 1.02	520	0.94	1.96	Accept	
5	My department laboratory has a bulletin board services	Students Lecturers	2.29 2.00	0.94 1.04	520	1.62	1.96	Accept	
6	Printers in my school can be shared by all the computers	Students Lecturers	2.53 2.94	0.77 0.98	520	2.45	1.96	Reject	
7	Scanners in my school laboratory can be shared by all the computers.	Students Lecturers	2.53 2.86	0.76 1.15	520	1.70	1.96	Accept	
8	The computers in my school laboratory can share disk storage devices	Students Lecturers	3.19 2.92	0.78 1.00	520	1.59	1.96	Accept	
9	Computers in my school are connected to wireless radio	Students Lecturers	1.93 2.14	0.78 0.93	520	1.32	1.96	Accept	
10	I can use personal computers to access internet within the school premises after subscription	Students Lecturers	3.18 2.69	0.96 0.95	520	0.98	1.96	Accept	
11	Course wares can be shared among computers in my departmental laboratory	Students Lecturers	2.98 2.64	0.91 0.91	520	1.12	1.96	Accept	
	Grand t-cal					0.76	1.96	Accept	

Table 4 shows the mean rating of lecturers and students on the availability of computer networks in Business Education Department. Detailed analysis showed that the mean response of lecturers and students did not differ significantly. This is evident as the calculated t-value of most of the items were less than their critical t-value. Except item 6 whose calculated t-value of 2.45 was greater than the critical t-value of 1.96, other items showed no significant difference. The grand calculated t-value is 0.76 and the critical t – value is 1.96. The null hypothesis is therefore accepted because the calculated t – value is less than the critical t – value. This means that mean responses of lecturers and students do not differ significantly on the availability of computer networks in business education departments.

## **DISCUSSIONS**

The finding from the result of the analysis of research question 1 as shown in table 1 revealed that the respondents agreed that computer resource equipment are to a High Extent, available in Business Education Departments. Eleven out of twenty eight items were rated as being available in Business Education Department in the area of the study to a High Extent. This finding is in line with that of Ugwuogo (2012) that most of the facilities needed for e-teaching and e-learning

in Business Education is available. This study is also consistent with the finding of Nwanewezi and Isifeh (2008) who discovered that some ICT facilities are available in tertiary institutions in Niger state. Low availability of some of the technologies surprises the researchers because they are very common and affordable just as Ajagun (2003) expressed that these items are fundamental to the use of ICT in education.

However, having most of the equipment as available contradicts the view of Onyeachu (2009) who observed that the level of computer equipment in Nigeria is low. Hypothesis 1 in table 3 shows the findings on response of lecturers from Business Teacher Education institutions on the availability of computer equipment in Business Education Department. The calculated t-value is 0.74 and the critical t-value is 2.09. The hypothesis was accepted because the calculated t-value is less than critical t-value. This is because Business Teacher Educators from the two teacher education institutions in Ebonyi State do not differ significantly in their mean rating on availability of computer equipment in Business Education Departments.

Analysis of research question 2 as shown in table 2 shows that the respondents rated 5 items out of 11 items as available. The finding indicates that computer networks are to a high extent available with a grand mean of 2.50. This finding is in consonance with the finding of Akuegwu, Ntukidem, Ntukidem and Jaja (2011) who discovered that though some computer networking is very low for quality instructional delivery in the classrooms, availability of internet connected desktop computers are not significantly low. This according to them means that computer networks are available in the universities in such a way that lecturers can utilize them to enhance the quality of their instructional service delivery. Also, Chigbu and Dim (2012) affirms the availability of computer networks especially the internet in university of Nigeria Nsukka. They explained that both public and private organizations constitute the internet providers.

#### **CONCLUSION**

Based on the finding of this study, the following conclusions were drawn.

Most of the computer resources needed for effective integration of e-learning in Business Education are to a high extent available in business education departments. Some of the computer equipments that are not available are very essential for effective e-learning programme. The unavailability of some network enabling facilities are worrisome therefore urgent attention in this area is required for e-learning to be effectively integrated into business education.

## RECOMMENDATIONS

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

Government and institutions should upgrade computer resources in business education laboratories. With the constant changes in business offices, business education laboratories should be upgraded with modern computer facilities like projectors, educational video device, scorebatt software etc

The network connectivity in Business Education programmes should be improved for wider connectivity of the available computer resources. Some of the devices used in network

connectivity of computers like satellite, wireless radio, cyber server etc should be installed in Business Education laboratories.

Power supply in business education departments should be improved by providing alternative power supply. Computer equipment in Business Education laboratories cannot be effectively utilized without constant electric power supply facilities.

Government and institutions should establish electronic libraries in all Business Education Departments. This will offer lecturers and students the opportunity of using computer resources in carrying out researches and assignment.

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