EXTENT OF AVAILABILITY AND UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY RESOURCES IN BUSINESS EDUCATION PROGRAMME OF COLLEGES OF EDUCATION IN DELTA STATE

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Abstract

The study examined the extent of availability and utilization of information and communication technology resources in business teacher education programme of colleges of education in Delta State, Nigeria. Two research questions guided the study and two null hypotheses were tested at 0.05 level of significance. The study adopted descriptive survey design. The entire population of 114 business education lecturers in all the four colleges of education in Delta State was used for the study without sampling. Data was collected for the study through direct observation by the researcher using NCCE benchmark and administration of a validated questionnaire on the respondents. The reliability of the questionnaire was established using Cronbach Alpha formula which yielded a reliability coefficient of 0.801. Frequency count and simple percentage were used to answer research question one and mean and standard deviation were used to answer research question two. t-test statistic was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that ICT resourcesas stipulated by the benchmark of NCCE for business education programmes were not available in colleges of education in Delta State. Business educators' rarely utilized ICT resources in business teacher education programmes in colleges of education in Delta State. The study further disclosed that business educators in colleges of education did not differ significantly in their mean ratings on the extent of utilization of ICT resources in business education programmes based on institutional ownership and location. The study concluded that the inadequacy and low level of utilization of ICT resources by business educators will negatively affected the technological competencies of business education students to succeed and curve a niche of their own in the digitalized business world. It was recommended among others that management of colleges of education should

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enter into partnership with ICT manufacturing organizations to assist in improving the supply of ICT resources in business education programme. This is to enhance business education students' academic performance and boost the quality assurance indices of the programme.

Keywords: Information communication technology Resources, business education, business educators, availability and utilization

Introduction

Education is an instrument for social, economic, cultural and political development. The development of any nation depends largely on the quality of education of her citizens. There are many educational programmes in Nigeria, and business education, is one of the programme options in Vocational and Technical Education that facilitates self-empowerment objectives of the nation (Oluwasina & Onokpaunu, 2018). Business education programme is an important part of general education which emphasizes skills and competency acquisition for use in offices and business related occupations (Okoli, 2010). Onojetah (2012) averred that business education which is offered in universities and colleges of education is concerned mainly with the development of relevant and saleable skills and knowledge that would enable an individual to function effectively in the world of work.

Business education programme as obtained in colleges of education, is designed to produce both high level manpower and middle level manpower. This is made possible because colleges of education when affiliated with universities have the capacity to award bachelor degree in education and Nigerian Certificate of Education. The objectives of business education in colleges of education as outlined by the National Commission for Colleges of Education (2012:18) include; to produce well qualified and competent NCE graduates in business subjects who will be able to teach business subjects in the secondary schools and other related educational institutions; to produce NCE business teachers who will be able to inculcate the vocational aspects of business education into the society; to produce NCE business teachers who will be involved in the much desired revolution of vocational development right from primary and secondary schools; to equip students with necessary competencies so as to qualify them for a post-NCE degree programme in business education and to equip graduates with the right skills that will enable them to engage in a life of work in the office as well as for self-employment.

In order to achieve the aforementioned objectives of business education in colleges of education, the availability and utilization of Information and Communication Technology (ICT) resources cannot be over-emphasized. Thus,

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Bupo (2011) averred that ICT helps to expand access to education, strengthened the relevance of education to increasingly digital workplace and raises educational quality by making teaching and learning processes more engaging to real life practices. Information and Communication Technology (ICT) resources refers to equipment or interconnected system or subsystem of equipment that is used in the management, movement, control, display, switching, interchange, transmission or reception of data (Eze & Okorafor, 2013). According to Yusuf in Oguzor (2011), Information and communication technology resource is defined as computer-based tools used by people to work in the information and communication processing aspects of an organization. Thus, it has become a pertinent tool for effective teaching and learning in tertiary institutions.

The National Commission for Colleges of Education (2012) recommended that information and communication technologies should be made compulsory for effective and efficient teaching and learning of business education programme in colleges of education. In agreement, Onokpaunu (2016) asserted that ICT resources improve business education lecturers' instructional productivity, reduces their clerical workload of record keeping and assists them in presenting information and instruction for students' usage. Therefore, to achieve the objectives of business education programme in colleges of education, ICT resources must be available and utilized for instructional delivery.

Availability refers to the quality of being able to be reached or used. It is the degree to which a system, subsystem or equipment is in a specific operatable and committable state at the start of a mission can be reached and used. In the context of this study, availability refers to the extent information and communication resources such as laptops, desktop computers, projectors, printers, scanning machine, internet facilities and so on are accessible for teaching and learning of business education programme in colleges of education (Egbri, 2012).

The availability of ICT resources in educational settings demands effective utilization. In the opinion ofEzenwafor, Onokpaunu and Nwadiuko (2017), utilization entails effective usage of assets, inputs and raw resources to achieve desirable outcomes. Ezenwafor, Onokpaunu and Nwadiuko further defined utilization as the process of putting facts, objects and ideas into specific practice. Utilization, according to Sabba (2009) is the extent to which a given group uses particular services in a specified period. Similarly, Azuka (2009) saw utilization as the act of using something. Hornby in Ugwuanyi (2013) explained utilization as to make use of available services at the individual's disposal. Therefore, utilization in the context of this study refers to the rate or how often ICT resources are put into use by business educators in colleges of education.

Business educators are specialized teachers who have undergone professional training in teacher education programme equipped with the

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pedagogical competence to teach business subjects in educational institutions. Osuala in Ebele, Onokpaunu and Ikonomwan (2018) asserted that a business educator is any person who plays a critical role in making business education viable and visible in the community; plays the critical role of agent of change in business education, delivers high quality instruction in business education and is able to identify problems facing teaching and learning in the field as well as speculate solutions to such problems. In order to ascertain the availability and utilization of information communication and technology resources in business education programme of colleges of education, variables such as institutional ownership and location of business educators are taken into consideration in this study.

In the context of this study, institutional ownership means colleges of education owned and controlled by the federal and state governments. In the same vein, location refers to the siting of colleges of education in Delta State. The researchers are of the view that ICT resources would be rare at the disposal of business educators in federal colleges of education than their colleagues in State colleges of education. However, this assertion needs to be supported by empirical evidence. Given the disparity of development between urban and rural areas, one may assume that ICT resources in colleges of education sited in urban areas would be readily available and utilized than their counterparts in rural areas. Similarly, this assertion needs to be supported by empirical evidence. As a result of this uncertainty, the researchers are motivated to determine the availability and extent of utilization of information communication and technology resources in business education programme of colleges of education in Delta State.

Statement of the Problem

Information communication and technology was introduced into business education programmes by the National Commission for Colleges of Education to enrich the programme in order to meet the needs of learners and the society. Despite this effort, Agboola in Okoro (2013) observed that many NCE business education graduates in different establishments still find it difficult to utilize various computer-based technologies in carrying out their office responsibilities. From close observation by the researchers, business education graduates do not seem to show adequate competency in information and communication applications in their places of work in Delta State. One argument push for this ugly situation is based on the status of availability and extent of utilization of ICT resources in business education programme which do not seem to be clearly known in colleges of education in Delta State. Therefore, against this backdrop, this study sought to determine the availability and extent of utilization of ICT resources in colleges of education in Delta State.

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Purpose of the Study

The purpose of this study was to determine the availability and extent of utilization of ICT resources in business education programmes in colleges of education in Delta State. Specifically, the study determined:

1. Information communication and technology resources that are available to business teacher education programmes in colleges of education in Delta State
2. The extent of utilization of information communication and technology resources by business educators in colleges of education in Delta State

Research Questions

This study was guided by the following research questions. What are the opinions of business educators with regards towhat;

1. ICT resources are available in business teacher education programmes in colleges of education in Delta State?
2. Extent do business educators utilize available ICT resources in business teacher education programmes in colleges of education in Delta State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

1. Business educators in federal and state colleges of education in Delta State do not differ significantly in their mean ratings on the extent of utilization of ICT resources
2. Business educators in colleges of education in Delta State do not differ significantly in their mean ratings on the extent of utilization of ICT resources as a result of their location (urban and rural areas)

Method

This study adopted descriptive survey design. The study was conducted in Delta State. The entire population of 114 lecturers in business education departments in colleges of education in Delta State was studied without sampling. The National Commission for Colleges of Education benchmark inventory for instructional resources in business education programme and a validated questionnaire were used for data collection. The National Commission for Colleges of Education benchmark inventory dealt with recommended quantity of ICT resources in business education, while the questionnaire measured the extent of utilization of ICT resources by business educators.

The NCCE Benchmark inventory was not subjected to reliability and validity procedures because the checklist (instrument) was already validated and

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standardized by NCCE. A pilot test was conducted to establish the reliability of the questionnaire by administering it to 20 business educators in Edo State which were not part of the study and Cronbach's alpha was used to measure the internal consistency which yielded an overall reliability co-efficient of 0.801. Data were collected for the study through direct observation by the researchers using NCCE benchmark and administration of validated questionnaire on the respondents. Frequency count and simple percentage were used to answer research question one and mean and standard deviation were used to answer research question two. T-test statistic was used to test the hypotheses at 0.05 level of significance. An hypothesis was accepted where the p-value is equal to or greater than the alpha level of 0.05 ($p > 0.05$), at a degree of freedom; otherwise, the null hypothesis was rejected. The analysis was carried out using SPSS version 23.0.

Results

Research Question 1: What ICT resources are available in business teacher education programmes in colleges of education in Delta State?

Table 1: ICT Resources Available in Business Teacher Education Programme

			Agbor	Warri	Mosogbar	Asaba
S/N	**ICT Resources**	**BM**	**A**	**A**	**A**	**A**
1	Electronic Typewriters	35	3	5	2	2
2	Photocopiers	1	1	1	1	1
3	Computers	30	45	38	33	53
4	Telephone	1	0	0	0	0
5	Fax Machine	1	0	0	0	0
6	Scanner	1	0	0	0	0
7	Slide projector	1	1	1	1	1
8	Colour TV	1	1	1	1	1
9	Video machine	1	0	0	0	0
10	Video CD/DVD	1	0	0	0	0
11	Digital camera	1	0	0	0	0
12	Computer printer	1	1	1	1	1
13	Compact Disc	1	1	1	1	1
14	Microfilm	1	0	0	0	0
15	Overhead projector	1	1	1	1	1

Note. BM = Benchmark, A = Available

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Data in Table 1 show that out of 15 items on ICT resources listed, seven are available for teaching in business education programmes in colleges of education in Delta State. The available ICT resources are photocopiers, computers, slide projector, colour television, computer printers, compact disc and overhead projectors. The Table further discloses that eight ICT resources listed are not available for teaching in business education programmes in colleges of education in Delta State. The remaining eight ICT resources not available are electronic typewriters, fax machine, scanners, video machine, telephone, video CD/DVD, digital camera and microfilm. On the whole, ICT resources as stipulated by the benchmarkof NCCE for business education programmes are not available in colleges of education in Delta State.

Research Question: To what extent do business educators utilize available ICT resources in business teacher education programmes in colleges of education in Delta State?

Table 2: Business educators' mean rating on their extent of utilization of ICT resources

S/N	ICT Utilization	Mean	SD	Remark
1	Electronic typewriters	2.23	0.64	Rarely Utilized
2	Photocopiers	2.10	0.87	Rarely Utilized
3	Computers	2.95	0.95	Moderately Utilized
4	Telephone	1.65	0.71	Rarely Utilized
5	Fax machine	1.00	0.66	Not Utilized
6	Scanners	1.48	0.62	Not Utilized
7	Slide projectors	1.42	0.59	Not Utilized
8	Colour television	3.36	0.88	Moderately Utilized
9	Video machine	1.26	0.43	Not Utilized
10	Video CD/DVD	2.18	0.79	Rarely Utilized
11	Digital camera	1.17	0.90	Not Utilized
12	Computer printers	3.34	0.64	Moderately Utilized
13	Compact Disc	3.48	0.56	Moderately Utilized
14	Microfilm	1.30	0.37	Not Utilized
15	Overhead projector	2.31	0.82	Rarely Utilized
	Grand Mean	**2.08**	**0.70**	**Rarely Utilized**

Data in Table 2 show that out of the 15 items on ICT resources listed, business educators moderately utilize four items (items 3, 8, 12 and 13) with mean ratings ranging from 2.95 to 3.48. Five items (items 1, 2, 4, 10 and 15) with mean

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ratings ranging from 1. 65 to 2.23 are rarely utilize by business educators and six items (item 5, 6, 7, 9, 11 and 14) with mean ratings ranging from 1.00 to 1.48 are not utilized by business educators. The cluster means score of 2.08 means that business educators' rarely utilized ICT resources in business teacher education programmes in colleges of education in Delta State. The standard deviations for all the items fall within the same range of 0.43 to 0.95. This shows that the respondents are not wide apart in their mean ratings.

Table 3:The t-test comparison of the mean ratings of business educators on the extent of utilization of ICT resources in Federal and State colleges of education N=108 (Federal =55; State = 53), df = 106.

S/N	Items Statement	X_1	SD_1	X_2	SD_2	t-cal	Sig.	Remarks
1	Electronic typewriters	1.58	.32	2.29	.46	1.24	.22	NS
2	Photocopiers	1.63	.50	1.97	.71	-.89	.38	NS
3	Computers	3.02	.27	3.36	.54	2.13	.01	S
4	Telephone	2.53	.34	3.01	.68	1.17	.25	NS
5	Fax machine	1.24	.68	1.15	.44	1.46	.15	NS
6	Scanners	0.98	.16	1.14	.32	-1.51	.42	NS
7	Slide projectors	1.09	.59	1.22	.29	1.26	.27	NS
8	Colour television	3.25	.43	3.41	.57	.71	.49	NS
9	Video machine	0.76	.30	0.97	.18	.98	.54	NS
10	Video CD/DVD	1.64	.51	2.43	.73	1.41	17	NS
11	Digital camera	1.01	.45	1.88	.69	2.71	.00	S
12	Computer printer	3.16	.21	3.29	.49	4.03	.02	S
13	Compact disc	2.79	.66	2.43	.50	1.41	.31	NS
14	Microfilm	1.56	.14	2.09	.25	.62	.19	NS
15	Overhead projectors	1.21	.32	1.75	.68	1.12	.08	NS

Key: $X_{1=}$ Mean of business educators in Federal colleges of education; X_2 = Mean of business educators in State colleges of education; $SD_{1=}$ Standard Deviation of business educators in Federal colleges of education; $SD_{2=}$ Standard Deviation of business educators in State colleges of education; **Sig.** = probability value (2 tailed); **t-cal=** calculated values; **S**= significant; **NS**= Not Significant.

Table 3 presents the summary of mean ratings of business educators on the extent of utilization of ICT resources in colleges of education in Delta State based on their institutional ownership. The Table reveals that three items with p-values ranging of .00, .00 and .02 are less than the significant value of 0.05 at 106 degree of freedom. This indicates that there is a significant difference in the mean ratings

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of business educators on theextent of utilization of some ICT resources in colleges of education in Delta State. Therefore, the hypothesis of no significant difference in the mean ratings of business educators with regard to items 3, 11 and 12 was rejected. On the other hand, hypothesis of no significant difference for items 1, 2, 4, 5, 6, 7, 8, 9, 10, 13, 14 and 15 was accepted since the Significant values of these items, ranging from .08 to .54 are greater than 0.05.

Therefore, the null hypothesis of no significant difference in the mean ratings of business educators based on their extent of utilization of some ICT resources in colleges of education in Delta State was accepted. On the whole, business educators in federal and State colleges of education do not differ significantly in their mean ratings on the extent of utilization of ICT resources in business education programmes.

Table 4: The **t-test comparison of the mean ratings of business educators on the extent of utilization of ICT resources based on their location N=108 (Urban =95; Rural = 13)**

S/N	Items Statement	X_1	SD_1	X_2	SD_2	t-cal	Sig.	Remarks
1	Electronic typewriters	2.13	. 34	2.29	.58	1.17	.15	NS
2	Photocopiers	2.44	.73	1.83	.49	1.48	.82	NS
3	Computers	3.29	.52	3.17	.21	.42	.68	NS
4	Telephone	2.38	.26	3.01	.54	-1.65	.34	NS
5	Fax machine	1.07	.73	1.24	.60	1.79	.20	NS
6	Scanners	1.34	.50	1.19	.36	.32	.55	NS
7	Slide projectors	0.93	.19	1.08	.28	1.46	.07	NS
8	Colour television	3.61	.48	2.94	.75	1.21	.12	NS
9	Video machine	1.11	.32	1.30	.14	.51	.19	NS
10	Video CD/DVD	2.65	.64	1.71	.31	-1.55	.88	NS
11	Digital camera	1.29	.21	1.18	.40	1.64	.47	NS
12	Computer printers	3.47	.57	3.69	.35	2.28	.01	S
13	Compact disc	2.88	.32	3.45	.57	-.89	.38	NS
14	Microfilm	1.62	.15	2.26	.26	2.68	.00	S
15	Overhead Projector	2.70	.87	3.09	.69	2.11	.01	S

Key: X_1=Mean of business educators in urban areas; X_2 =Mean of business educators in rural areas; SD_1=Standard Deviation of business educators in urban areas; SD_2=Standard Deviation of business educators in rural areas; **Sig.** = probability value (2 tailed); **t-cal=** calculated values; **S**= significant; **NS**= Not Significant; **df** = 106.

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Table 4 presents the summary of mean ratings of business educators on the extent of utilization of ICT resources in colleges of education in Delta State based on their location. The data reveal that three items with p-values ranging from .00, .01 and .01 are less than the significant value of 0.05 at 106 degree of freedom. This indicates that there is a significant difference in the mean ratings of business educators on their extent of utilization of some ICT resources in colleges of education in Delta State. Therefore, the hypothesis of no significant difference in the mean ratings of business educators regarding items 12, 14 and 15 is rejected.

On the other hand, hypothesis of no significant difference for items 1,2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 13 is accepted since the Significant values of these items, ranging from .07 to .88 are greater than 0.05. Therefore, the null hypothesis of no significant difference in the mean ratings of business educators based on their extent of utilization of some ICT resources in colleges of education in Delta State is accepted. On the whole, business educators in colleges of education do not differ significantly in their mean ratings on the extent of utilization of ICT resources in business education programmes based on their location.

Discussion

The findings of the study showed that ICT resources are not available in business teacher education programme of colleges of education in Delta State. This finding is in line with Baba and Akarahu (2012) who held that facsimile, telex, projectors required for administration of business education programme in tertiary institution were not available for instructional delivery. The findings that ICT resources stipulated by the benchmarkof NCCE for business education programmes were not available in colleges of education in Delta State was in agreement with the studies of Akuegwu, Ntukidem, Ntukidem and Jaja, (2011) and Ugbe (2018) who reported that ICT resources are not available in educational institutions in Nigeria.

In addition, the findings of the study revealed that business educators rarely utilized ICT resources in business teacher education programmes in colleges of education in Delta State. This finding is in accordance with the finding of Nweke (2013)who found that teachers did not use projectors, electronic media such as slide projectors and video conferencing during lectures. The under-utilization of these ICT resources may not be far from the non-availability of a number of ICT resources for training business education students as earlier revealed by the findings of the present study. The finding is in line with the studies of Onokpaunu (2013)and Nwaosa and Okolocha (2014) which reported that ICT learning resources arenot utilized for instructions in business education programmes

The test of the first hypothesis indicated that business educators in colleges of education in Delta State did not differ significantly in their mean ratings on the

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extent of utilization of ICT resources based on institutional ownership. This finding is in agreement with Okeke and Ihenacho (2017) which reported that institution type has no effect on the extent to which business educators utilize internet facilities for teaching business education courses in various institutions. Furthermore, the non-significant difference in the mean ratings of business education on the extent of utilization of ICT resources as a result of location tallies with the study of Onokpaunu (2013) who reported that business educators' level of utilization of web-based resources for instructional delivery is very low. This finding is in consonance with Okolocha and Nwadiani (2015) which stated that business educators' utilization of ICT resources for quality instructional delivery is significantly low irrespective of their location.

Conclusion

The introduction of ICT resources in the education system is aimed at improving educational delivery and preparing students for the numerous opportunities that come with the information age. The development of paperless offices and office automation procedures are responsible for the rapid integration of ICT resources in business education programmes in educational institutions.Based on the findings of the study, it was concluded that the inadequacy and low level of utilization of ICT resources by business educators will negatively affect the professional capacity of business education students to succeed and curve a niche of their own in the already digitalized business world.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Management of colleges of education should enter into partnership with ICT manufacturing organizations to assist in improving the supply of ICT resources in business education programme in order to enhance business education students' academic performance and boost the quality assurance indices of the programme.
2. Governments at the federal and state levels should prioritize the funding of education sector to meet up with the recommendations of UNESCO and ensure adequate procurement of ICT resources for effective educational activities in tertiary institutions in Delta State and Nigeria at large.
3. Management of colleges of education should ensure that relevant ICT resources are adequately provided for business education programme in colleges of education to facilitate effective utilization by business educators and students for quality teaching and learning. This is because no skill

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acquisition programme can be successful without the use of relevant equipment and resources

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