



## UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY FACILITIES IN TEACHING BUSINESS EDUCATION IN UNIVERSITIES IN SOUTH EAST NIGERIA

**Nwosu Christian Do-good**

[Christiannwosu05@gmail.com](mailto:Christiannwosu05@gmail.com)

08033906588

Department of Office Technology and Management  
School of Business & Management Technology  
Federal Polytechnic Nekede  
Imo state, Nigeria

&

**Dr. Angela Chekwube Ekoh-Nweke**

[ekohangela@yahoo.com](mailto:ekohangela@yahoo.com)

08064648087

Department of Educational Management  
(Business Education Programme)  
College of Education  
Michael Okpara University of Agriculture, Umudike  
Abia State, Nigeria

### Abstract

*This study investigated the extent of utilization of Information and Communication Technology facilities in teaching Business Education in Universities in South East Nigeria. The study adopted descriptive survey research design. A sample of 75 business educators which comprised 49 and 26 Business educators drawn from federal and state universities in South East states in Nigeria. All the population was used for the study. The instrument for data collection was a 64-item researcher developed questionnaire titled: Utilization of Information and Communication Technology Facilities in Teaching Business Education Questionnaire (UICFITBEQ). The instrument had two clusters with 4-point response scales. The face validation of the instrument was carried out by three experts. Two from College of Education, Michael Okpara University of Agriculture, Umudike, Abia state, and one from Office Technology and Management, Federal Polytechnic, Nekede, Owerri. The stability aspects of the reliability of the instrument were determined using Pearson product moment correlation coefficient statistic which yielded an overall index of 0.87. The data was collected by the researcher with the help of three research assistants. Out of 75 copies of the instruments administered, 72 copies representing 96% were returned and used for data analysis. Mean was used to answer the two research questions raised for the study and standard deviations as used to determine the closeness or homogeneity of the responses while t-test statistic was used to test the two null hypotheses that guided the study at 0.05 level of significant. The results showed among others that ICT facilities such as computer facilities and internet facilities were utilized to a low extent in teaching Business education in universities. Based on the results, the study recommended among others that Business educators should be encouraged to improve their extent of ICT facilities utilization in teaching in universities in South East Nigeria.*

**Keywords:** Information and Communication technology, Computer, Internet, Business Education

### Introduction

The global interest for advancement of education in both developed and developing countries of the world has been challenged by Information and Communication Technology (ICT). The unique nature of ICT has made it significant in the contribution to development of students' knowledge as well as acquisition of skills in science and allied subjects. According to Shettima, in Oyagiri and Ekoh (2013), there is an urgent need for institutions of learning to embrace technology to avoid being eliminated from the global village of internet and intranet. It is therefore important to take full advantage of the full range of facilities which the modern technology has provided in the academic trainings of our students in our universities and other tertiary institutions, especially in the area of Business Education. The authors asserted that, ICT is any equipment or inter connected system of equipment that is used in the automatic acquisition, storage,



manipulation, management, control, display, switching and transmission of information. In this context therefore, ICT are then tools that comprise electronic device which are utilized for information and communication needs of institutions, organizations, students and individuals. Such electronic devices include computer (hardware and software), networking, telephone, video, multimedia, internet, and many others.

According to Igbinedion and Edeh, (2014), rapid changes in Information and Communication technology have necessitated the need for Business Education programme to embrace e-learning in this new technological age in order to enable the graduates of the programme to fit into the modern office after graduation. Technology as defined by Okolo (2016) can be referred to as the current state of humanity's knowledge of how to combine resources to produce desired products as well as to satisfy human wants which includes teaching methods, skills, processes, technologies, tools and raw materials. Kompridis in Amesi and Akpomi (2013) opined that the term technology can either be applied generally or to specific areas, for example, information technology, construction technology and medical technology. Technology is equally defined by Nwogu in Ogbede (2016) as the application of the scientific method to solving problem in our daily life; although, in the area of Business Education, technology can be seen as the application of scientific method of solving problems regarding impartation of skills to students or learners to enable them meet the challenging needs and demands of the society. Up-to-date technology offers many methods of enhancing classroom teaching and learning (Ghavifekr et al., 2014).

Oyagiri et al (2013), described computer facilities as the tools made available or accessible in operating computers in a given location. Computer facilities are necessary for the storage, retrieval and dissemination of information in the management of Business Education. These facilities may also be referred to as a location, something like a computer lab where the tools and technologies necessary for operation of a computer are located. A computer lab is a space which provides computer services to a defined community. Computer facilities are typically provided by libraries to the public, by academic institutions to students who attend the institution, or by other institutions to the public or to people affiliated with the institution. While computer facilities are generally multipurpose, some labs may contain computers with hardware or software optimized for certain tasks or processes, depending on the needs of the institution operating the lab. These specialized purposes may include video editing, stock trading, computer-aided design, and programming. Computer facilities are typically equipped with internet access, while scanners and printers may augment the lab setup.

Computer facilities refer to the tools made available or accessible in operating computers in a given location. Computer facilities are necessary for the storage, retrieval and dissemination of information in the management of Business Education. Computer facilities may also be referred to as a location, such as a computer lab where the tools and technologies necessary for operation are located. According to Adelakin, et al in Ugwuogo et al, (2019), computer facilities are the equipment, gadgets and materials that make up the ICT superstructure, such as radio set, video and audio cassettes, audio tape player/recorder, video player, computer, facsimile (fax) machine, global system for mobile communication (GSM), photocopier, reprographic machines, projector, television and public address system.

Computer Aided Instruction (CAI) is an example of computer facility used in teaching. Computer Aided Instruction (CAI) is a self-learning technique, usually offline/online, involving integration of the student with programmed instructional materials. It is an interactive instruction technique where a computer is used to present the instructional material and monitor the learning that takes place. Opportunities provided by CAI in the classroom are in the area of drill and practice, tutorials, simulations, demonstrations, designing, data collection and retrieval, analysis of games, which are essential competences for technical teachers (Oyagiri et al, 2013). As technology improves, educational capability increases correspondingly. The emergence of inexpensive computer technology and mass storage media, including optical video disc, compact disc, has given instructional technologist (teachers) better tool with which to work. Computer compact disc and flash memory are used to store large amount of information (data), such as encyclopedias or motion pictures. According to Falana, (2015), a teacher who is interested in particular topic-say semi-conductor devices, can first scan an electronic encyclopedia, and then view at the touch of a button. All these can be achieved through the use of Computer Aided Instructions.

The internet is a worldwide communication network linking thousands of computers to a network, through a mixture of private and public phone lines and microwave links. Its component networks are run by government agencies, universities and commercial organizations working together and loosely controlled by the internet society. The use of the internet has revolutionized access to information for the business world. The internet and its technology have profound effects in promoting the sharing of information especially in the academic world thereby making possible rapid transactions among business



and supporting global collaboration among individuals and organizations. The internet allows us to communicate in a variety of ways. Most importantly, we are not limited to verbal interactions with other people. In many cases, it is possible to gain access to information stored in their computers (Ekoh-Nweke, 2018).

Ritchy and Roser (2017) were of the opinion that most traditional communication media, including telephony, radio, television, paper mail and newspapers are reshaped, redefined, or even bypassed by the Internet, giving birth to new services such as email, Internet telephony, Internet television, online music, digital newspapers, and video streaming websites. Newspaper, book, and other print publishing are adapting to website technology, or are reshaped into blogging, web feeds and online news aggregators. Also, Steve (2014) claimed that the Internet has enabled and accelerated new forms of personal interactions through instant messaging, Internet forums, and social networking services. Online shopping has grown exponentially for major retailers, small businesses, and entrepreneurs, as it enables firms to extend their "brick and mortar" presence to serve a larger market or even sell goods and services entirely online. Business-to-business and financial services on the Internet affect supply chains across entire industries. In the opinion of Idris and Murtala (2013), internet facilities include teleconferencing facilities, file transfer protocol (FTP), online databases, WhatsApp, e-mail and web browser. The internet provides a capability so powerful and general that it can be used for almost any purpose that depends on information, and it is accessible by every individual who connects to one of its constituent networks (internet users graph, 2021). It supports human communication via social media, electronic mail (e-mail), "chat rooms," newsgroups, and audio and video transmission and allows people to work collaboratively at many different locations. It supports access to digital information by many applications, including the World Wide Web (www). The Internet has proved to be a spawning ground for a large and growing number of "e-businesses" (including subsidiaries of traditional "brick-and-mortar" companies) that carry out most of their sales and services over the internet.

Business Education is an area of education which deals with the study of the subject of related disciplines. It is a combination of two disciplines dealing mainly with the art of shorthand writing, typewriting, accounting, business mathematics, secretarial duties, commerce and office practice. This field of study offers every individual an opportunity to develop those abilities, skills and understanding of the vocational opportunity available (Olabisi, 2017). **Business Education in Nigeria** has its origin in private business schools or commercial schools some of which were recognized or "approved" by Government. By "approval" it meant that a school could present students for the West African Schools Certificate Examinations. The goals of Business Education include the production of manpower who possess the requisite knowledge, skill and aptitude for harnessing other resources and bringing them into a co-operative relationship that yields the goods and services demanded by the society for the satisfaction of their wants and needs (Nwokolo et al, 2014). Business Education is a course offered in universities in Nigeria for skill acquisition. It is offered both in the federal, state and private universities. Business Education is an aspect of Vocational and Technical Education. It is a specialized programme of instruction designed to provide individuals with knowledge, skill, and attitude for occupational work and advancement which when utilized to a reasonable extent yields effective teaching and learning in Business Education.

### **Statement of the Problem**

The integration of ICT in Nigerian society systems and education at large is a major step in promoting innovation. At present we live in a global village where the latest and most complex technology is the area of information and communication technology. The growth in technology and its application in education has brought great transformation in the world. The use of ICT gadgets has made teaching and learning less burdensome, effective and result-oriented by providing cyberspace for learning and avenue for sharing ideas and information (Oyewumi, 2013). The level of development in any society is usually determined by the quality and quantity of knowledge in the various spheres of human activity available to them and acquired by the citizens. Knowledge is acquired and sustained through sufficient information and communication system based on the technology level attained. People in any country who fail to use and master new technologies would definitely fall behind. Unfortunately, most universities appear not to have taken full advantage of these opportunities in the teaching-learning process of Business Education which has resulted to ineffective teaching and learning (Ritchy & Roser 2017). This could be the reason why Business Education graduates are not adequately equipped with appropriate skills that will enable them function and compete globally, hence the need for this study to determine the extent of utilization of ICT facilities in teaching Business Education in universities in South East Nigeria.



**Purpose of the Study**

The purpose of this study was to determine the extent of Utilization of Information and Communication Technology (ICT) Facilities in teaching Business Education in universities in South East Nigeria. Specifically, the study sought to determine the;

1. extent of utilization of computer facilities in teaching Business Education in universities.
2. extent of utilization of internet facilities in teaching Business Education in universities.

**Research Questions**

The following research questions guided the study.

1. What is the extent of utilization of computer facilities in teaching Business Education in universities in South East Nigeria?
2. What is the extent of utilization of internet facilities in teaching Business Education in universities in South East Nigeria?

**Hypotheses**

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

- Ho<sub>1</sub>. There is no significant difference in the mean ratings of business educators in Federal and State universities on the extent of utilization of computer facilities in teaching Business Education in universities.
- Ho<sub>2</sub>. A significant difference does not exist in the mean ratings of business educators in Federal and State universities on the extent of utilization of internet facilities in teaching Business Education in universities.

**Methodology**

The study adopted a descriptive survey research design since it was meant to collect and analyze data from a few people or entire group which involves exploring their opinions by the use of questionnaire. The study was carried out in universities offering Business Education in South East. The population for the study consists of 75 Business Educators in both federal and state universities in South East offering Business Education. The researchers sampled the entire population and therefore the entire population were studied. The instrument for data collection of this study was a structured questionnaire developed by the researcher titled: Utilization of Information and Communication Technology Facilities in teaching Business Education questionnaire (UICTFITBEQ). The Instrument consists of 23 item structured questions arranged in two clusters which hinged on the two research questions; computer facilities utilization and internet facilities utilization. All the clusters were based on a four-point scale of Very high extent (VHE), High extent (HE), Low extent (LE) and very low extent (VLE) which the respondents were expected to select their options on the items statement. The data collected was analyzed using the mean for answering the research questions and standard deviations used to determine the homogeneity of the responses with a decision rule of 2.50 for the research question, while the t-test was used to test the null hypothesis at 0.05 level of significance. The null hypothesis was accepted for the items whose t-calculated value was less than the t-table value at 0.05 level of significance while the hypothesis was rejected for any item whose t-calculated value was greater than the t-table value at 0.05 level of significance.

**Results**

The results of the analyses were presented in the Tables and as follow:

**Research Question 1**

What is the extent of utilization of computer facilities in teaching Business education in Universities in South East Nigeria?

**Table1: Mean Analysis of Responses of Business educators in Federal and State universities on the extent of utilization of Computer facilities in teaching Business Education in universities in South East Nigeria**

S/N	Computer Facilities	Federal (N=47)			State (N=25)		Remark
		X <sub>1</sub>	SD <sub>1</sub>	RMK	X <sub>2</sub>	SD <sub>2</sub>	
1.	Functional computer laboratories	2.37	0.73	LE	2.34	0.71	LE
2.	Computer network	2.06	0.66	LE	2.02	0.63	LE
3.	Scanner	2.15	0.73	LE	2.11	0.65	LE
4.	Photocopiers	2.78	0.81	HE	2.72	0.75	HE
5.	Modem,	2.55	0.84	HE	2.59	0.83	HE
6.	Diskette	2.57	0.78	HE	2.60	0.88	HE
7.	Flash drives	2.53	0.89	HE	2.56	0.79	HE



8	Computer systems	3.16	0.80	HE	3.04	0.77	HE
9	Projectors	2.37	0.61	LE	2.33	0.73	LE
10	Uninterrupted Power Supply (UPS)	2.44	0.60	LE	2.41	0.70	LE
11	Printers	2.39	0.65	LE	2.33	0.69	LE
12	Monitors	2.51	0.55	HE	2.50	0.75	HE
	<b>Cluster Mean</b>	<b>2.49</b>	<b>0.72</b>	<b>HE</b>	<b>2.46</b>	<b>0.74</b>	<b>HE</b>

VHE= Very High Extent, H.E= High Extent, LE=Low Extent, VLE=Very Low Extent.

The results in Table1 show the mean ratings of Business educators in the federal and state universities on the extent of utilization of computer facilities for teaching in Universities in South east Nigeria. The results revealed that the mean ratings of Business educators in the federal and state universities on items1, 2, 3, 9, 10 and 11 ranged between 2.02 and 2.22 which fall within the real limit of numbers range of 1.50-2.49 which indicated low extent mean responses. Items 4, 5, 6, 7, 8, and 12 recorded mean responses for both Business educators in the federal and state universities ranging from 2.50 and 3.16 which fall within the real limit of numbers range of 2.50-3.49 indicating high extent responses. The cluster mean responses of 2.49 and 2.46 for Business educators in the federal and state universities respectively which equally fall within the real limit of numbers range of 1.50-2.49 indicated that the two sets of respondents agreed that the extent of utilization of computer facilities by Business educators for teaching in Universities in South east Nigeria was to a low extent. The cluster standard deviation of 0.72 and 0.74 for both Business educators in the federal and state universities respectively showed that their responses were not far from the mean and from each other.

**Hypothesis 1**

There is no significant difference between the mean ratings of Business educators in Federal and State Universities on the extent of utilization of Computer facilities in teaching Business Education in universities South East Nigeria.

**Table 2: t-test Analysis of mean ratings of Business educators in Federal and State universities on the extent of Utilization of Computer facilities in teaching Business education for in universities**

Universities	N	X	Sd	df	t-cal.	t-crit.	Remark
<b>Federal</b>	47	2.49	0.72	70	0.16	1.96	NS
<b>State</b>	25	2.46	0.74				

The results in Table 2 reveal a t-calculated value of 0.165 and the t-critical value of 1.96 at degree of (df) 70. Since the t-calculated value of 0.165 is less than t-critical value of 1.96, the hypothesis of no significant difference was not rejected. Therefore, there is no significant difference between the mean responses of Business educators in Federal and State Universities on the extent of utilization of Computer facilities by business educators for teaching in universities.

**Research Question 2**

What is the extent of utilization of internet facilities in teaching Business Education in universities in South East Nigeria?

**Table 3: Mean Analysis of Responses of Business educators in Federal and State universities on the extent of utilization of Internet facilities in teaching Business Education in universities in South East Nigeria**

S/N	Internet facilities	Federal (N=47)			State (N=25)		
		X	SD	Remark	X	SD	Remark
13	Teleconferencing	1.14	0.76	VLE	1.28	0.65	VLE
14	File Transfer Protocol	1.09	0.67	VLE	1.17	0.72	VLE
15	Video conferencing	1.42	0.89	VLE	1.40	0.82	VLE
16	Online databases	1.89	0.83	LE	1.38	0.65	LE
17	Modem	2.67	0.65	HE	2.80	0.73	HE
18	WhatsApp	2.57	0.89	HE	2.63	0.67	HE
19	E-mail	2.56	0.77	HE	2.52	0.72	HE



20	World Wide web	2.43	0.58	LE	2.38	0.64	LE
21	CD-ROM	2.54	0.79	HE	2.50	0.66	HE
22	Web Browser	2.51	0.88	HE	2.55	0.76	HE
23	Internet Relay chat	2.37	0.45	LE	2.31	0.53	LE
	<b>Cluster mean</b>	<b>2.04</b>	<b>0.74</b>	<b>LE</b>	<b>1.99</b>	<b>0.69</b>	<b>LE</b>

VHE= Very High Extent, H.E= High Extent, LE=Low Extent, VLE=Very Low Extent.

The results in Table 3 show that the mean ratings of Business educators in the federal and state universities on the extent of utilization of internet facilities for teaching in Universities in South east Nigeria. The results revealed that the mean ratings of Business educators in the federal and state universities on items 13, 14, and 15 ranged between 1.09 and 1.42 which fall within the real limit of numbers range of 0.01-1.49 which indicated very low extent mean responses. Items 16, 20 and 23 recorded mean responses for both Business educators in the federal and state universities ranging from 1.89 and 2.37 which fall within the real limit of numbers range of 1.50-2.49 indicating low extent responses. Also, items 17, 18, 19, 21 and 22 recorded mean responses for both Business educators in the federal and state universities ranging from 2.51 – 2.57 which fall within the real limit of numbers range of 2.50-3.49 indicating high extent responses. The cluster mean responses of 2.04 and 1.99 for Business educators in the federal and state universities respectively which equally fall within the real limit of numbers range of 1.50-2.49 indicated that the two sets of respondents agreed that the extent of utilization of internet facilities by Business educators for teaching in Universities in South east Nigeria was to a low extent. The cluster standard deviation of 0.74 and 0.69 for both Business educators in the federal and state universities respectively showed that their responses were not far from the mean and from each other.

**Hypothesis 2**

There is no significant difference between the mean ratings of Business educators in Federal and State Universities on the extent of utilization of Internet facilities in teaching Business Education in universities South East Nigeria.

**Table 4: t-test Analysis of mean ratings of Business educators in Federal and State Universities on the extent of utilization of Internet facilities in teaching Business Education in universities in South East Nigeria**

Universities	N	X	Sd	Df	t-cal.	t-crit.	Remark
Federal	47	2.04	0.74	70	0.28	1.96	NS
State	25	1.99	0.69				

The results in Table 4 reveal a t-calculated value of 0.284 and the t-critical value of 1.96 at degree of (df) of 70. Since the t-calculated value of 0.284 is less than t-critical value of 1.96, the hypothesis of no significant difference was not rejected. Therefore, there is no significant difference between the mean responses of Business educators in Federal and State Universities on the extent of utilization of internet facilities by business educators for teaching in universities.

**Discussion of Findings**

The findings were discussed based on the major findings of the study.

It was found from the study that the extent of utilization of computer facilities by Business educators for teaching in Universities in South east Nigeria was to a low extent. The study specifically showed that Business educators in Federal and State Universities agreed computer facilities such as functional computer laboratories, computer network, scanner, projectors, uninterrupted power system and printers were utilized to a low extent while other facilities such as photocopiers, modem, diskettes, flash drive and monitors were used to a high extent. The results further showed that there was no significant difference between the mean responses of Business educators in Federal and State Universities on the extent of utilization of Computer facilities by business educators for teaching in universities. This however implies that those computer facilities even when available are utilized to a low extent by business educators for teaching in universities. The results agreed with Barker (2017) who carried out a survey study on computer facilities, teachers’ computer literacy and utilization in chemistry teaching which showed among others that teachers’ utilization of computer facilities in teaching was very poor. The result equally supported the earlier results from some previous studies by Okwor (2017), Agbalogun (2013) and Amusa



and Atinmo (2016) that reported low utilization of computer and ICT facilities in teaching. Enakrire and Ochalla (2017) who also held believe on the result blamed the poor utilization of computer facilities in teaching to that of lack of institutional supports. It's not surprising since some schools leave their available facilities in their respective cartons due to lack of functional laboratories to display them or lack of teachers' competence and skills to use them.

The results from the study further revealed that the extent of utilization of internet facilities by Business educators for teaching in Universities in South east Nigeria was to a low extent. It went on to show specifically that Business educators in Federal and State Universities agreed teleconferencing, videoconferencing, file transfer portal were utilized to a very low extent, online data base, world wide web and internet relay chat were utilized to a low extent while modem, whatsapp, email, CD-ROM and web browser were utilized to a high extent. The result also showed that there was no significant difference between the mean responses of Business educators in Federal and State Universities on the extent of utilization of internet facilities by business educators for teaching in universities. The result was in line with the findings of Franklina (2018) who carried out a study on internet use and its effect on students which showed among others that only 14.3% which represent a very few students that have access to the internet facilities in their respective schools. The result equally agreed with a similar study by Onyia in Lawrence (2015) which showed that students did not have access and therefore did not use internet facilities in learning. The poor use of internet facilities in teaching and learning according to Idiris and Murtala (2013) could be blamed to high cost of obtaining it along with other support facilities. It's very glaring that many lecturers in Nigeria universities are poorly paid and as a result of that find it difficult to access and use internet facilities from such meager salary.

### **Conclusion**

This study investigated the extent utilization of Information and Communication Technology facilities for teaching by Business Educators in Universities in South east Nigeria. Based on the findings, it was concluded that the extent of utilization of computer facilities and internet facilities in teaching Business Education in universities in South East Nigeria was to a low extent as most Business education lecturers do not use the computer facilities for teaching and as well do not have access to the internet facilities.

### **Recommendations**

Based on the findings and conclusions of the study, the following recommendations were made:

1. Business Education lecturers should be encouraged to improve their extent of utilization of ICT facilities for teaching business education courses in universities in South East Nigeria.
2. Business educators should develop interest in acquiring ICT skills through trainings and utilization of the skills in carrying out their teaching of Business Education courses through the use of internet facilities.
3. Association of Business educators in Nigeria universities should organize regular workshops for their members on the effective use of ICT facilities in teaching.

### **References**

- Agbalogun, A. O. (2013). Interactive digital technologies' use in Southwest Nigerian Universities. *Educational Technology Research and Development*, 61(2), 333-357. <https://doi.org/10.1007/s11423-012-9282-1>.
- Amesi, J. & Akpomi, M. E. (2013). Application of new technologies and mentoring strategies in Business Education in Rivers State. *International Journal of Accounting Research* 1(5), 11-20.
- Barker, E. (2017). *Barking up the wrong tree*. Harper Collins. 235–6. ISBN 9780062416049.
- Ekoh, A. C. (2016). Traditional pedagogy in Business Education: A Challenge to business educators. *Journal of Business Education*, 3(2), 126-136.
- Ekoh–Nweke, A. C. (2018). Strategies for improving teaching and learning of ICT in Colleges of education in Enugu State. *Journal of African Education*, 5(2), 1-12.
- Enakrire, R. T., & Ocholla, D. N. (2017). Information and communication technologies for knowledge management in academic libraries in Nigeria and South Africa. *SA Journal of Information Management*, 19(1), 1-9. <https://doi.org/10.4102/sajim.v19i1.750>
- Falana, F. T. (2015.). Prospects and challenges of E-Learning in Nigerian University Education Using National Open University of Nigeria Akure Study Center. Akoko: Department Of Science And Technical Education (computer education unit) Adekunle Ajasin University Akungba Akoko.



- Ghavifekr, S., & Wan Athirah, W. R. (2015). Teaching and learning with technology. Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science*, 1(2), 175-191.
- Idris, S. & Murtala, A. (2013). The use of internet facilities in Teaching and Research by academic staff of School of Management and Information Technology, Modibo Adamawa University of Technology, Yola. *The Information Manager* 13 (1&2), 59 – 68.
- Igbinedion, V. I., & Edeh, T. (2014). Assessment of internet usage in teaching among business studies teachers in private secondary schools in Delta Central Senatorial District, Nigeria. *Journal of Educational Review*, 7 (3), 369-375.
- Lawrence, J. E (2015). Examining the factors that influence ICT adoption in SMEs: a research preliminary findings,” *International Journal of Technology Diffusion (IJTD)*, 6 (4), 40–57.
- Nwokolo, A. A. & Anyachebelu, E. F. (2014). Availability and use of information and communication technology resources for counseling university students in South East States of Nigeria. *International Journal of Humanities and Social Sciences*, 2(7), 220–225.
- Ogbede, P. O. (2016). *New Technologies in Business Education: Challenges and the Way Forward*. *Nigerian Journal of Business Education*, 3 (2), 104- 111.
- Okolo, J. (2016). ICT and knowledge integration for social development in Nigeria. *British Journal of Education*, 3 (10), 13-21.
- Olabisi, R.M. (2017). Enhancing learning in schools through improvisation of equipment and instructional materials. *Pankshin Journal of Education*, 2 (3), 55 – 60.
- Olelewe, C. J., & Okwor, A. N. (2017). Lecturers’ perception of interactive whiteboard for instructional delivery in tertiary institutions in Enugu State, Nigeria. *Journal of Computers in Education*, 4(2), 171-196. <https://doi.org/10.1007/s40692-017-0077-6>.
- Oyagiri, O. J. & Ekoh, A.C. (2013). Information and communication technology (ICT) skills required of office technology and management lecturers in Nigerian polytechnics. *Vocational Business Education*, 2(1), 43-51.
- Oyewumi, O. O. (2013). Effective utilization of school libraries in some selected secondary schools in Ogbomoso North Local Government, Oyo State. *Language and Librarianship Journal*, 2(1), 66-75.
- Ritchy, G., & Roser, B. O. (2017). Information communication technologies (ICT) as an enhancing tool in quality education for transformation of individual and the nation. *International Journal of Academic Research in Business and Social Sciences*, 3(4), 21-32. <http://hrmars.com/admin/pics/1714.pdf>.
- Steve D. (2014). “There are now 3 billion Internet users, mostly in rich countries”. <https://cnn.com>.
- Ugwuogo, C. C. & Udu, S. C. (2019). Assessment of electronic resource-based learning in Business Education in tertiary institutions in Anambra State, Nigeria. *International Journal of Education and Research*. 7 (2), 48-57.