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## **UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN THE TEACHING OF OFFICE EDUCATION FOR QUALITY ASSURANCE OF OFFICE EDUCATION GRADUATES IN ADAMAWA STATE TERTIARY INSTITUTIONS**

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### **INTRODUCTION**

Office education is one of the options in business education. It focuses in developing skills and knowledge on the students that major in it, on how to effectively function in the world of work after their graduation. However, office being a nervous system of any organization can never operate or carry its activities without human resources who have skills and knowledge of ICT. In other words ICT is pillar of every vibrant office, while the human resource becomes the controller and manipulator of the tools and facilities. Therefore bringing the skills and knowledge of these ICT tools and facilities into the class room is necessary for quality assurance office education graduates. The acronym for ICTs stands for Information and Communication Technologies. It is generally relates to those technologies that are used for accessing, gathering, manipulating, selection of employees and presenting or communicating information. It is a device set of technological tools and resources used to communicate, and to create, disseminate, store and manage information. What is most significant about ICT is the increasing convergence of computer – based, multi-media and communications technologies and rapid rate of change that characterizes both the technologies and their use.

ICT according to Odiari (1997), is a system designed to acquire, analyze, synthesize and distribute appropriate information required by managers, workers, and administrators to perform their duties. As the access to information continues to grow exponentially, office education remains more venues for the transmission of prescribed set of information from teachers to students over a fixed period of time. The education systems are increasingly obliged to use ICT, it provide knowledge for learners and exercising abilities and skill (Kwache 2007). Howell and Lundall (2000), stated that ICT broadly refers to all forms of technology used to create, store, process and use information in its various forms multi-media, presentation teleconferences and which enable, facilitate and support communication. They refers to the convergence of micro electronics, computers and telecommunication which make it possible for data, including text video and video to be transmitted anywhere in the world where digital signals can be received. They include networks such as fixed wireless and satellite, telecommunications, broadcasting networks and applications such as the internet, database management systems and multi-media tools. Information and Communication Technology (ICT), is a computer based tools used by people to work in the information and communication processing needs of an organization. It encompasses the computer hardware and software, the networking and several other devices (video, audio, photography, camera, etc) that convert information image, sound, motion and so on into common digital form. (Milken Exchange-ot Education Tech. 1999). Information Communication Technology (ICT) is

used in promoting globalization and internalization of knowledge, data and skills from which education can benefit substantially (Mohammed and Abba, 2008). According to Sadkar and Sadker (2003), students can have lessons presented with presentation software, simulate situations, build their own knowledge, improve their knowledge base, explore authentic issues, work with peers and experts across the globe, select the mode they prefer and work at their own pace. When ICT are use appropriately, different ICTs are said to help expand access to office education students, strengthen the importance of office education to the increasingly digital workplace, and raise office education quality, by helping in making teaching and learning into an engaging, active process connected to real practical life.

ICT has tremendously affected positively development in all facets of human endeavors. Using ICT is blocking the communication gap between persons, nations and continents in different parts of the world. The utilization of ICT in facilitating knowledge acquisition and dissemination within and between various disciplines had been such that human input is reduced to the barest minimum with a supersonic speed. However, utilization of ICT in teaching and learning of office education an integral of business education is not automatic, but involve technology, and inputting enough initial capital for procurement of the facilities, teacher's competencies, technical support, accessibility resistance to change negative attitude etc. Moreover, evidence in the performance of office education graduate from tertiary institution in Adamawa state in the present day indicates that tertiary institutions offering Business Education (office option), is not providing the necessary skills expected from office education students, thereby prompting the students to engage in extra ICT training after their graduation. The poor performance of Business education (office option), could be attributed to the teachers not utilizing the application of Information and Communication Technologies or unavailability of ICT tools in the schools for teaching and learning of office education courses. It is on this background that the study investigated the extent of utilization and application of ICTs in teaching and learning of office education courses in order to ensure the quality of office education graduates in Adamawa state of Nigeria.

### **The Purpose of the Study**

The major purpose of this study was to determine the extent of utilization and application of ICTs in teachings of office education for quality assurance of graduates in Adamawa states tertiary institutions. The specific objectives of the study are

1. Identify those ICT tools/facilities that can be apply in the teaching and learning of office education courses to ensure the quality of its graduates in Adamawa state Tertiary Institutions
2. Find out the extent of utilization of these tools/facilities for teaching and learning of office education courses to ensure quality of office education graduates in Adamawa State Tertiary Institutions.
3. Find out the problems which prevent the effective application and utilization of ICT tools in the teaching and learning of office education courses to ensure the quality of office education graduates in Adamawa State.

4. Identify the strategies for the effective utilization and application to ICT in teaching and learning of office education courses to ensure the quality of office education graduates in Adamawa State Tertiary Institutions

### **Research Questions**

The study sought to provide answers to the following questions

1. What are those ICTs tools or facilities that can be applied in the teaching and learning of office education courses to ensure the quality of its graduates in Adamawa state tertiary Institutions?
2. To what extent are ICTs tools or facilities utilized in the teaching and learning of office education courses to ensure quality of office education graduates in Adamawa State tertiary institution.?
3. What are the problems hindering the effective utilization and application of ICTs in the teaching and learning of office education courses to ensure the quality office education graduates in Adamawa State tertiary institution?
4. What are strategies for effective utilization and application of ICTs in teaching and learning of office education courses to ensure quality of office education graduates in Adamawa State tertiary institutions?

### **Research Design**

A survey design was adopted for the study. A survey research design according to Ezeji (2004), is one which involves the assessment of public opinion through the use of questionnaire or interview.

### **Area of the Study:**

The area of the study was Adamawa state. All the tertiary's Institutions that offers Business Education (office option).

### **Population of the Study:**

The population of the study was 15 respondents; comprising teachers of Business Education teacher programme, office option in the study area. The entire population was studied.

### **Instrument for Data Collections**

A structured questionnaire consisting of 20 items was used. The questionnaire items were generated from the information sourced from the review of related literature. The questionnaire consist of four sections, A to D. A sourced for data information in those ICTs tools or facilities that can be applied in the teaching and learning of office education courses. Section B: sourced for information on the extent of utilization of ICTs tools/facilities in teaching and learning of office education courses. Section C: focused on the problems that is preventing the effective application of ICT in the teaching and learning of office education courses. Section D: focused on the strategies for effective utilization and application of ICT in the teaching and learning of office education. The instrument was validated by three experts from the Business education programme, FUTY, and Federal Poly all in Yola, Adamawa state.

The instruments to answer research question 2 was structured to make use of Likert five point response scale: (VHU) Very highly utilized, (HU) highly utilized (U) utilized (MU) moderately utilized, (NU) not utilized. Research question 1, 3, and 4 make use of 5 – points Likert response scale of, strongly Agree (SA) Agree (A) I Do not know (ID), Disagree (DA) and strongly Disagree (SD).

### **Decision Rule**

The decision for answering research questions was based on real limit of numbers. The range for each numerical value of response categories was used to take decision on item. In this case, for research question 1 to 4, any item with mean value of 3.50 and above falls under agreed and not utilized, also items with mean value of 3.49 and below fall under disagreed.

### **Research Question I**

Table 1: Mean and standard Deviation Responses of office education teachers on the utilization of ICTs tools and facilities in teaching of office education courses to ensure quality graduates in Adamawa state tertiary institution.

S/N	Tools/Facilities than can be utilized	$\bar{X}$	SD	Rmrk
1	e – mail	4.62	0.58	Agree
2	electronic chalkboard	3.51	0.99	Agree
3	application software	3.89	0.01	Agree
4.	Video projectors	4.18	0.81	Agree
5.	Computers both Desktop and laptop	4.51	0.55	Agree
6.	World Wide Web (www)	4.80	0.40	Agree
7.	Fax machine	4.60	0.69	Agree
8.	Light pen	4.60	0.69	Agree
9	Electronic scanners	3.98	0.81	Agree
10	Computer lab	3.87	1.06	Agree
11	Stencil electronic machine	4.07	0.89	Agree
12.	Computer printer	4.80	0.40	Agree
13.	Telephone	4.51	0.55	Agree
14.	Video cassette Recorder	4.22	0.79	Agree
15.	Internet facilities	4.62	0.58	Agree
16.	Computer assistant instruction (CAI)	4.13	0.70	Agree
17	Generator	3.89	1.01	Agree
18	Data base management package	4.31	0.63	Agree
19.	Video and Audio conference equipment	4.60	0.58	Agree.
20	Over head projector	4.09	0.87	Agree

Result in table I above show that all the items have Mean values of well 3.50 which is our stipulated positive decision rule.

Table 2: Mean and standard Deviation, Responses office education teachers on the extent of utilization of ICT tools and facilities in teaching s of office education courses to ensure quality in Adamawa State Tertiary Institutions

S/N	Utilization of ICT tools/facilities in teaching And learning of office	$\bar{X}$	SD	Re
		Education		
1.	e- mail	4.71	0.51	NU
2.	Electronic chalkboard	4.71	0.51	NU
3.	Application software	4.60	0.61	NU
4.	Video projectors	4.02	0.71	NU
5.	Computers both (Desktop and laptop)	4.24	0.54	NU
6.	World Wide Web (Www)	4.16	0.16	NU
7.	Fax machine	4.44	0.94	NU
8.	Light pen	4.20	0.89	NU
9.	Electronic scanners	4.22	0.92	NU
10.	Computer lab	4.38	0.82	NU
11	Stencil electronic machine	4.18	0.91	NU
12.	Computer printer	4.36	0.61	NU
13	Telephone	3.87	1.01	NU
14.	Video cassette recorder	4.18	0.61	NU
15.	Internet facilities	4.22.	0.72	NU
16.	Computer assistant instruction (CAI)	4.16	0.16	NU
17.	Generator	4.29	0.66	NU
18.	Data base management package	4.33	0.71	NU
19.	Video and Audio conference equipment	4.60	0.58	NU
20	Over head projector	4.09	0.87	NU

Table II indicated that the 20 items were not utilized at all in the teaching and learning of office education courses.

Table 3: Mean and standard deviation responses of office education teachers on the problems which is preventing the utilization and application of ICT, in the teaching office education courses to ensure quality graduates in Adamawa State tertiary institutions.

S/N	problems hindering variables	$\bar{X}$	SD	remark
1.	Power failures	4.29	0.66	Agree
2.	Non availability of equipment	4.20	0.89	Agree
3.	Shortage of funding	4.27	0.83	Agree
4.	High cost of equipment/facilities	4.16	0.81	Agree
5.	Teachers incompetence in utilization of the facilities	4.60	0.71	Agree
6.	Attitude of the management towards adoption and application of ICT in teaching	4.40	0.58	Agree
7.	Shortage of mechanical personnel	4.60	0.50	Agree
8.	Negative societies attitude	3.98	0.80	Agree
9.	Non charant attitude of government	4.29	0.66	Agree

	including ICT into school curriculum			
10.	Poor incentive of Business Education	3.98	0.82	Agree
11.	Neglect of teacher welfare of Vocational education teachers	4.16	0.81	Agree
12.	Lack of training programme for vocational Teachers	4.22	0.92	Agree
13.	Poor teaching method	4.33	0.71	Agree.

The table III indicated that all the items in the table had mean range of 4.60 to 3.98. Therefore the 13 items were identified as problems preventing effective application of ICTs in the teaching of office education courses to ensure quality graduate.

Table 4: Mean and Standard Deviation; responses of teachers on the strategies for effective utilization and application of ICTs in teaching of office education to ensure quality graduate in Adamawa State Tertiary Institutions.

S/N	Strategies variables	X	SD	Rm
1.	Involvement of Government Agency to ICT into school curriculum	4.71	0.50	Agree
2.	Improvement in the teacher education for the production of high quality teachers	4.02	0.71	Agree
3.	Change negative attitude toward ICT Adoption and utilization	4.44	0.94	Agree
4.	Motivation of Teachers	4.16	0.72	Agree
5.	Provision of ICT tools, facilities And infrastructures	4.29	0.69	Agree
6.	Adequate funding and procurement Of ICT tools	4.36	0.61	Agree
7.	Alternative means for provision of power	4.38	0.82	Agree
8.	Being in partnership with vibrant private Sectors for assistant in terms of provision of ICT's tools	4.27	0.83	Agree
9.	Training mechanical personnel for Adequate repair of available ICT tools	4.33	0.71	Agree
10.	Adequate supervisions of teachers	4.60	0.50	Agree
11.	Enlightens societies on the benefit Of ICT tools	3.98	0.80	Agree
12.	Periodic training of teachers on Usage of instructional aids	4.18	0.91	Agree

Table IV, indicated that each of the 12 items on the strategies variables for effective application of ICTs into the teaching and learning of office education courses had a Mean range of 3.98-4.71. Therefore there were strategies required for effective utilization and application of ICTs into the teaching and learning of office education courses

## **DISCUSSIONS**

The findings of this study centered on the fact that global changes in process have affected our educational delivery systems to embrace advancement in technology by acquiring and utilization ICT resources in the area of teaching and learning process. There were some relevant ICT tools and facilities that can be used in teaching and learning of Business education (Office Option), such as electronic chalkboard, Application software, computers both laptop and desktop, fax machine, video cassette recorder, printer computer assisted instruction etc. this findings confirm one of the statement of theories of vocational education, that there is a minimum level of resources that should provided for a meaningful vocational and technical education (Ede and Olaitan 2010).

This study found that the respondents agreed that ICT tools/facilities identified were not utilized in teaching and learning of office education courses. According to Chinien 2003, who stated that there were some limitations in the schools that would want to adopt the application of ICT for teaching and these will actually affect the level of utilization of these tools and facilities. Such as high cost of equipment, shortage of power supply, poor internet connections, lack of skills on the part of the users. The findings reveals that respondents agreed that some problems will possible hindering the effective application of ICT into teaching of office education courses, such as non availability of equipment, shortage funds, high cost of facilities; this development is not surprising because many studies had in the past confirm inadequacy of teaching resources (Oyedele. 2002: Azuka 2003). The result therefore agrees with the findings of previous studies that business education programmes are not properly funded (Igboke 1996). The place of equipment, tools, facilities, laboratories etc in vocational education delivery had been reiterated by authorities and their bodies. The findings reveals that the respondents agreed that some strategies could be taken to ensure effective application of ICT to ensure quality in the teaching and learning of office education courses; such as persuading involvement of government agencies to include ICT into school curriculum, improvement in the teacher education programme, enlighten of societies on the benefit of ICT tools/facilities, provision of ICT tools, facilities, equipment, infrastructures, adequate funding etc. Findings agreed with the view of Oluwole (1982) that the provision of adequate resource such as equipment, textbooks for appropriate teaching and learning of vocational subjects in schools helps to encourage and motivate teachers and students towards studying of vocational subjects' courses.

## **CONCLUSION**

The findings of the study showed that the teachers of Business education (office option) in Adamawa state Tertiary institution of Nigeria are not making adequate and effectively use of ICTs tools and facilities in teaching and learning of office education, due to its unavailable, therefore resulting to poor quality of the graduates because of their ineffective operate and compete in global changing of technological advancement and world of work.

## **RECOMMENDATIONS**

The following steps when taken would address the problems identified in this study:

- (1) Government should inculcate ICT into school curriculum and as such provide more funds for acquisition of ICT, facilities while regulatory bodies should be responsible for funds released and institutional Administrators should be held accountable for ensuring that facilities, tools, and equipment acquired fully utilized in the teaching and learning process.
- (2) Business teacher educators should avail themselves for special training package programme on ICT utilization especially in teaching and learning of business Education (Office option)
- (3) The teachers of vocational education should be given better 'pay' and their conditions of services in areas of housing, opportunity for further training, hazard allowance, and incentives be improved.
- (4) Teachers should be encourage to make use of ICT tools, facilities equipment after the re-training them for teaching and learning to enable then retain the skill and knowledge of ICT.
- (5) The ABEN should as a matter of urgency form supervisory panels to supervise the business education programme and as such provide some ICTs tools and facilities for up-left its programme and as such give it acceptable look like other professional bodies in other fields.
- (6) All the sectors of Federal Economy to extent their assistance in the ICT development and its application in vocational and Technical Education in tertiary institution as it is a corner stone for Economic development.
- (7) The NGO should extent hands of fellowship with schools through donations of ICTs component and funding.

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