PERCEPTION OF LECTURERS ON THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR THE EFFECTIVE TEACHING OF TECHNICAL EDUCATION PROGRAMME

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Abstract

The study investigated the extent to which ICT has been used in the teaching of technical education programme in tertiary institutions as well as the benefits to both staffs and students. Three research questions were posed to guide the study. The survey research design was adopted. The target population was 42 lecturers of technical education in tertiary institutions in South-South Nigeria comprising Delta State University Abraka, University of Benin, Benin City, Federal College of Education (Technical), Asaba, Umunze and Omoko. No sampling was done as the population was few. A questionnaire was developed, validated and its reliability established. Mean and standard deviation were used to answer the research questions. Results showed that the use of ICT was well entrenched and evidently of help in the teaching and learning of technical education programme in tertiary institutions in South-south Nigeria. Recommendations such as training and retraining of technical education staffs on ICT who have a part to play in improving technical education programmes were made among others.

Keywords: Communication, Computer, Information, Internet, Technology, Technical Education, Information Technology.

INTRODUCTION

In recent years, there has been an ever-growing need for the full implementation of information and communication technology knowledge geared towards effective teaching and learning in our higher institutions. The Federal Government of Nigeria pays attention to the various technological needs of the nation. The governments various launching of different satellites to improve access to information and communication is a pointer to the fact that government wants all of her citizen to be computer literate.

The use of ICT has recently been embraced in most tertiary institutions in Nigeria with the emergence of computers in offices, online payment of school fees, online registration of courses, assessing institutions online from any corner of the country and the entire world through the worldwide website, to mention but few. In the department of technical education, courses like AutoCAD, computer concepts etc. were in no doubt foster the use of information and communication technology in the teaching of technical education programme. However, researchers assert that schools have been slow in adopting such technology (Pelgrum and Plomp, 1991; Todd, 1999). Therefore, the, institutionalized objective of ICT education is to train teachers and students who can occupy positions in the ever changing economy, and dynamic society and thus calls for skilled experts (Mac-Ikemenjima, 2005).

Almost every career involves computer users in some ways. The computer users are not necessarily scientists but somehow, are computer literate (Capron, 1996). It becomes necessary to study ICT facilities due to their importance and pervasiveness in the teaching of technical education programme. Suffice it to say that no field in any department of learning that intends to increase its productivity can succeed without

making reference to the use of ICT facilities. Teachers and students therefore need training not only in computer literacy but also in the use of various applications of software in the teaching of technical education (Ololube, 2006). Furthermore, they need to learn how to integrate ICT in the classroom activities during the teaching of technical education courses. Teachers' training and retraining is therefore crucial in the use of ICT (UNESCO, 2003. The problem to be examined in this study is: to examine the perception of lecturers on the use of information and communication technology for the effective teaching of technical education programme. The study, therefore, sought answers to the following research questions.

1. What is the level of awareness of technical education lecturers on ICT?
2. What types of ICT facilities are available and used in the teaching and learning of technical education programmes?
3. To what extent has ICT helped in improving the quality of technical education programme?

Methodology

A survey design was adopted for this study because it sought the opinions of the respondents. Survey research design according to Olaitan, Ali, Eyo and Sowande (2000) is a design that employs the study of large and small population to discover the relative incidence, distribution and interrelations of sociological, psychological variables through the use of interview or questionnaire. The population comprised of 42 lecturers of technical education in tertiary institutions in South-South Nigeria comprising Delta State University Abraka, University of Benin, Benin City, Federal Colleges of Education (Technical) Asaba, Umunze and Omoko. Due to the fewness of the populations, no sampling was done. So the entire population of 42 subjects were used for the study. A 20-item questionnaire which covered extent of awareness of lecturers on the use of ICT, influence of age on lecturers on the use of ICT facilities, types of ICT facilities available and used in teaching technical education programme and how ICT has helped in improving the quality of technical education programmes. A four point scale ranging from strongly agree, agree, disagree and strongly disagree was used. The instrument was validated by two technical education lecturers exclusive of the population to be studied and was found valid. A reliability coefficient of 0.73 was realized after subjecting the instrument to test, re-test method of testing reliability. Data collected were analyzed using mean and standard deviation. Personal interview was also used to collect and update responses.

For an item to be accepted as agreed, it has to score a mean of 2.50 and above while items that score a mean of below 2.50 are regarded as disagreed.

Results

The results of the study are presented in Tables 1-4 based on the research questions.

Table 1: **Mean and Standard Deviation of Technical Education Lecturers about the level of their awareness on ICT**

S/N	Items	$\overline{X}$	SD	Remark
1.	I am aware that tertiary institutions have cyber cafés.	3.20	1.50	Agree

2.	I am aware that computer can be used in teaching technical education subjects	2.58	1.20	Agree
3.	I am aware that government is in support of the use of ICT in teaching technical subjects.	2.83	1.35	Agree
4.	I am aware that ICT motivates teaching and learning of technical education subjects	3.30	1.59	Agree
5.	I am aware that AutoCAD is an important package for teaching and learning of technical education subjects.	2.40	1.98	disagree

Table 1 indicates that the mean responses of the respondents are 3.20, 2.58, 2.83, 3.30 and 2.40 and standard deviations of 1.50, 1.20, 1.35, and 1.98. All the items were accepted as agree except item 5 which was scored disagree. It therefore connotes that lecturers of technical education in tertiary institutions in South-South, Nigeria are fully aware of Information and Communication Technology. This signifies that lecturers do not have the flare in using traditional methods of teaching but rather believe in the use of ICT in teaching technical education courses.

Table 2: **Effects of Age of lecturers on the Use of ICT Facilities in the Teaching and Learning of Technical Education subjects**

S/N	Items	$\overline{X}$	SD	Remark
1.	Lecturers age does not make him/her to perform well in the use of ICT	2.83	1.34	Agree
2.	Age is not a limiting factor for the use of ICT	3.41	1.66	Agree
3.	Lecturers age is not a substitute for his experience in using ICT	3.40	1.66	Agree
4.	Lecturers' age does not determine their experiences in using ICT facilities.	3.00	1.41	Agree
5.	Lecturers' competency in ICT depends on their familiarity with ICT facilities.	3.50	1.73	Agree

In table 2, all the items scored means of 2.50 and above. Item 5 scored the highest mean of 3.50 and a standard deviation of 1.73 while item 1 has the lowest mean of 2.83 and a standard deviation of 1.34. The scoring of the items by the respondents depicts that age of lecturers do not have any effect on their performance in ICT.

Table 3: **Mean Reponses and Standard Deviation of Lecturers on the Types of ICT facilities that are available and used in the Teaching of Technical Education Programme**

S/N	Items	$\overline{X}$	SD	Remark
1.	Computers are available for learning and teaching technical education programmes	2.57	1.34	Agree
2.	Laptops are available for teaching and learning of technical education subjects	3.51	1.46	Agree
3.	Internet can be used to obtain information for the teaching of technical education programmes	3.18	1.50	Agree
4.	Email facilities are available for teaching and learning of technical education subjects.	3.57	1.79	Agree
5.	Software like database, spreadsheet, PowerPoint,	3.33	1.55	disagree

excel, word processor, adobe will enhance the
teaching of technical education programme

Table 3 indicates that all the items scored 2.50 and above. Item 4 scored the highest mean of 3.57 and standard deviation of 1.79 while item one had the lowest mean of 2.57 and standard deviation of 1.34. It can, therefore, be deduced that ICT facilities are available and are used in the teaching and learning of technical education programmes in tertiary institutions in South-South, Nigeria.

Table 4: **Mean Response and Standard Deviation of Respondents on the extent by which ICT has improved the Quality of Technical Education Programme**

S/N	Items	$\overline{X}$	SD	Remark
1.	ICT encourages research in technical education programmes	3.80	1.97	Agree
2.	ICT promotes teachers and students use of AutoCAD	3.65	1.84	Agree
3.	ICT encourages lecturers centred learning	3.15	1.49	Agree
4.	ICT promotes information dissemination	3.68	1.66	Agree
5.	ICT has increased operational activities in the teaching of technical education programmes	3.55	1.77	Agree

From table 4, all the items were accepted as agree because they score means of 2.50 and above. Item one scored the highest mean of 3.80 and a standard deviation of 1.97 while item three scored the lowest mean of 3.15 and a standard deviation of 1.49. The result showed that ICT has improved the qualities of technical education programmes in tertiary institutions in South-South Nigeria.

Findings

This study has revealed the following findings:

1. Lecturers of tertiary institutions in South-South Nigeria are fully aware of the existence of ICT.
2. Age of lecturers do not have any effect in the use of ICT in the teaching of technical education programme.
3. ICT facilities are available and used in tertiary institutions in South-South Nigeria in the teaching of technical education programme.
4. ICT have improved the teaching of technical education programmes in tertiary institutions in South-South Nigeria.

Discussion

The findings of this study revealed that lecturers of technical education in tertiary institutions in South-South Nigeria are aware of the existence of ICT; age of Lecturers does not have any effect in the Use of ICT for the teaching and learning of technical education programme, ICT facilities are available and are used in teaching and learning and ICT has improved the teaching and learning of technical education programmes.

The finding that lecturers and students of technical education in tertiary institutions in South-South, Nigeria are aware of the existence and importance of ICT is in agreement with UNESCO. UNEVOC (2009) which states that Information and Communication Technologies (ICT) are becoming increasingly important in education and training and are opening up new learning pathways which can provide wider spread access to education and training.

To support the assertion that age of lecturers has no significant effects on the use of ICT, Kwache (2007) opined that government/private sectors at all levels should make ICT a matter of priority by provision of funds specifically needed for the training of teachers in the tertiary institutions irrespective of age in computer education who shall in turn be prepared with ICT knowledge and skills to teach pupils/students computer and/or ICT basics.

The finding that ICT facilities are available and are used by technical education lecturers and students won the prayer of (Ndukwe, 2007) who suggests that the Federal Government of Nigeria has made some efforts to enhance ICT use in teaching and learning in her higher institution of learning. According to him, one of such effort is the partnering with Afribhub-Zinox to provide ICT sustainable intervention at tertiary institutions in Nigeria and the Commissioned Digital Awareness Programme (DAP) in tertiary institutions in Nigeria. This programme according to Ndukwe (2007) involves the provision of ICT facilities in as many educational institutions as possible across Nigeria and selected tertiary institutions are equipped with about 20 computers, furniture and internet facilities.

The study also indicated that ICT has improved the quality of technical education programme. According to Ejiofor (2009) the use of ICT in education has changed what is learnt, how learning takes place and where learning takes place. According to him, ICT has introduced the concept of new learning and it has brought into education many online packages which gives lecturers, and students greater control over what they teach and learn. In supporting the views of Ejiofor (2009), on how ICT has improved the teaching of technical education programme, Ede (2009) unveiled the usefulness of ICT in teaching technical subjects particularly in technical drawing which is quicker, more comfortable, interesting and efficient means of accomplishing drawing tasks than the manual method of doing the subject.

Conclusion

Based on the findings of the study, the following conclusions were made: ICT has an impact in the technical education programme in tertiary institutions in South-South Nigeria as it helped in facilitating learning, encouraged research for teachers and students which is one of the primary objectives of higher education. ICT also helped in dissemination of information and reduced the stress lecturers and students have to face in tertiary institutions. There is, therefore, the need for the government to take ICT very seriously and invest hugely on it to make tertiary institutions a better place for academic excellence.

Recommendations

Based on the findings of the study, the following recommendations are made.

1. Workshops, seminars, conferences in-service training and capacity building programmes should be organized by schools to train lecturers and students on ICT. Lecturers should, therefore be encouraged to possess their own personal computers, modems and recharge cards in order to be connected to internet.
2. More ICT centres should be established in tertiary institutions in Nigeria. Therefore, government should provide more funds for procuring ICT facilities, tools and maintain the available ones. Similarly, maintenance culture should be improved in institutions by lecturers and students to protect the ICT facilities available from damage.
3. The private sectors, the community, agencies and organizations should always be ready to assist and partner with the schools through donations, grants and funding.

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