APPLICATION OF ICT IN TERTIARY INSTITUTIONS FOR MANPOWER DEVELOPMENT: A CASE STUDY OF IBADAN POLYTECHNIC AND EMMANUEL ALAYANDE COLLEGE OF EDUCATION IN OYO STATE, NIGERIA

ADEDEJI, Soji Aderemi
Department of Technical Education,
School of Vocational and Technical Education,
Emmanuel Alayande College of Education Oyo, Oyo State
E-mail: adedejisojiaderemi@gmail.com
Phone No: +234-803-830-2803

Abstract

Higher education is expected to contribute to national economic development through high supply of manpower, middlemen training and development. However, tertiary institutions in the country are expected to actualize these goals by engaging in teaching, research and dissemination of knowledge and community development. This paper deals with quality or resources available and level of actualization of the goals of higher education in Nigeria using Ibadan polytechnic and Emmanuel Alayande College of Education Oyo state as a case of study. It also identifies the application mode areas of Information and Communication Technology (ICT) as a means for achieving the goals of educational institutions. Two research questions and two hypothesizes were raised on the bases of these. The descriptive survey was used as design .The population of seventy five (75) academic teaching and senior non academic staff was used as respondents to collect the data through the two research assistants. The reliability was carried out using Pearson Moment Correlation Coefficient of 0.75 was obtained before test and retest after two weeks interval was carried out to determine the validity. A chi-square statistcal tool was used to analysis the data mode of ICT as it affects institutions in a case study. Base of findings results, it is recommended among other that a dare need of massive training of Nigeria graduates on ICT, funding the facilities through the grants, financial organizations, public and privates partnership can assist in no small measure to alleviate the suffering of inadequacy of ICT in tertiary institutions in Oyo State.

Keywords: Application, Institutions, Manpower, Development.

Introduction

Higher education provides post-secondary school education through teaching and research for the production of manpower in order to develop the society in all ramifications. The first higher education took place in 1936 in Yaba Higher College (Uwazurike, 1991; Magbekem 2004). The goals of tertiary education according to National Policy on Education, (FRN, 2004) are as follows:

- Contribute to national development through higher-level relevant manpower training;
- Develop and inculcate proper values for the survival of the individual and society;

- Develop the intellectual capacity of individuals to understand and appropriate their local and external environments;
- Acquire both physical and intellectual skill which will enable individuals to be self-reliant and useful members of society;
- Promote and encourage scholarship and community service;
- Forge and cement national unity; and
- Promote national and international understanding and interaction.

Nigerian tertiary education institutions are credited to achieve the stated goals in the country as Babalola (2007) emphasized that the Federal Government of Nigeria had the following expectation from higher institutions.

Nigeria allows polytechnic, colleges of education and universities as degree awarding institutions with the universities taking care of the higher level manpower requirements, Government enforced the minimum qualification of the Nigeria Certificate of Education (NCE) for teachers in Nigeria and mandated the National Commission for College of Education (NCCE) to control the training.

Information and Communication Technology (ICT)

Information and Communication Technology (ICT) is defined as a set of technological tools and responses used to communicate and to create, disseminate, store and manage information (Terry, 2002). This includes the radio television and telephone. Information and Communication Technology is used for acquisition, processing, organization and dissemination of verbal, pictorial, textual and numerical information by a micro electric based communication of computing and telecommunication (Terry, 2002). Yusuf (2000) defined ICT as an electronic application of computing, communication, telecommunication and satellite Technology. The introduction of ICT into education will be of tremendous improvement of standard of education and benefit to the students, teachers and the nation at large.

Benefit of ICT Skill in Achieving Institutional Goals

The use of ICT skill in teaching, research and entertainment in higher institution create a good atmosphere of teaching and learning among the teachers and students. Mohammed (2006) pointed out that classroom teachers are expected to utilize IC T facilities to inculcate relevant knowledge to students. A classroom teacher with adequate and professional skill in ICT utilization is expected students to perform better in classroom learning than those of the school curriculum alone as reiterated by Onuma (2007). Thus

- Challenges students to learn independently
- Updates teachers with efficient and effective tools to take care of students individual differences
- Provides opportunities for co-operation with colleagues through networking and internet services.

- Educators and learners are challenged to new methods of requiring knowledge through sharing and connections to the global world.
- The ICT tools used in classroom for educational purposes include laptop computer, local area network and internet. The computer has the capacity to put texts, graphics and pictures on the screen and accept students, which can be easily retrieved and analyzed. ICT can be utilized in the area of on-line admission registration of courses, virtual library, co-operate e-mail services of staff, e-payment of staff, video conference and the likes.

Hence, the study being reported in this paper set out to address the issue of Ibadan Polytechnic and Emmanuel Alayande College of Education, Oyo as study.

Statement of the Problem

The role of higher Education is focused mainly on the training of manpower, middle-man for Industries, National development and be self reliance. This however, referred teaching and learning with adequate supplied of modern facilities and infrastructures of test of time.

Therefore, the Information and Communication Technology mode of application is essential for this sophisticated training to replace old and obsolete methods of impacting knowledge of manpower training so as to meet the global and current challenges. It ensures adequate and competency in manpower training and National development. The archaic method of impacting knowledge and courses in any area of manpower and middle men are often relied on old methods without adequate qualities resources of modern infrastructures like ICT mode retard the progress of manpower and national development accomplished with incompetency. Educational stakeholders over the years emphasized the need to integrate ICT mode into educational courses taught in all educational levels in Nigeria. This may be rhetoric that is not matched with needed action. The fundamental scenario is that those Lecturers who are expected to incorporate ICT mode into the teaching and learning process are often not equipped to do so even when such skills are available, the implementers may lack confidence. The problem of this study therefore is whether the mode areas of ICT will improve standard production of manpower, middle men for National development in Nigeria.

Purpose of the Study

The main purpose of this study is to examine the application of Information and Communication Technology (ICT) in tertiary institutions for manpower development in Nigeria. The specific purpose is to find out if:

(i) The current mode areas of ICT applications adopted by tertiary institution for manpower development in Oyo State.

(ii) The qualities of ICT resources available for manpower development in Oyo State.

Research questions

The following research questions are formulated to guide this research work:

(i) What are the current modes of ICT application adopted by tertiary institutions for manpower development in Oyo State?
(ii) What qualities of ICT resources available for manpower development in Oyo State?

Research hypotheses

Ho_1: There is no significant difference in the current mode of ICT application adopted to achieve institutional goals in the Polytechnic Ibadan and Emmanuel Alayande College of Education, Oyo

Ho_2: There is no significant difference in the qualities of ICT resources available to achieve institutional goals in the Polytechnic Ibadan and Emmanuel Alayande College of Education, Oyo.

Methodology

The study area is the application of ICT in tertiary institutions for manpower and middlemen development. The design used for the study is descriptive survey. Sampling purposive technique was used to select seventy five (75) respondents from two sisters' higher institutions: Ibadan Polytechnic and Emmanuel Alayande College of Education at different location in Oyo state. The study covers the application of using ICT in administrative, processing the results, registration and so on in two selected higher institutions, the Polytechnic Ibadan and Emmanuel Alayande College of Education, Oyo. The study also involves the entire staff of the two sister institutions that would be of beneficiary to the mode.

The instrument tagged "Questionnaire on Information and Communication Technology in higher institution". The respondents were senior academic and non-academic staff who had been dealings with the use of ICT mode in the two sister institutions. The instrument was validated and tested for reliability, using test-retest method. The Pearson Moment Correlated Coefficient obtained was 0.75. The researcher used two research assistants for the administration of the instrument and data collected were analysis in chi-square.

Research question 1: What are the current modes of ICT application adopted by tertiary institutions for manpower development in Oyo State?

Hypothesis 1

Ho_1: There is no significant difference in the current mode of ICT application adopted by tertiary institutions for manpower development in Oyo State.

Table 1: Chi-square analysis of the current mode of ICT application adopted by tertiary institutions for manpower development in Oyo State

ICT mode	Institution	Available	Not Available	Total	X^2	Remark
On-line	Polytechnic Ibadan	75(75)	0(0)	75		Not
Admission	EACOED, Oyo	75(75)	0(0)	75		significant
	R – Total	150	0	150	0	

On-line	Polytechnic Ibadan	75(75)	0(0)	75		Not
Registration	EACOED, Oyo	75(75)	0(0)	75		significant
	R – Total	150	0	150	0	
e-learning	Polytechnic Ibadan	20(10)	55(65)	75		Significant
	EACOED, Oyo	5(15)	70(60)	75		
	R – Total	25	125	150	13.433	
V-library	Polytechnic Ibadan	75(50)	0(25)	75		Significant
	EACOED, Oyo	20(40)	55(30)	75		
	R – Total	95	55	150	16.867	
CBT	Polytechnic Ibadan	75(55)	0(20)	75		Significant
	EACOED, Oyo	25(55)	50(20)	75		
	R – Total	100	50	150	27.5923	
e-mail	Polytechnic Ibadan	65(70)	10(05)	75		Not
	EACOED, Oyo	50(70)	25(05)	75		significant
	R – Total	115	35	150	3.7879	
Staff e-payment	Polytechnic Ibadan	35(45)	40(30)	75		
	EACOED, Oyo	25(35)	50(45)	75		
	R – Total	60	90	150	2.8634	Significant
v-conferencing	Polytechnic Ibadan	10(10)	65(65)	75		
	EACOED, Oyo	10(10)	65(65)	75		Not
	R – Total	20	130	150	0	significant
Collaboration	Polytechnic Ibadan	65(40)	10(35)	75		
for service	EACOED, Oyo	55(40)	20(35)	75		
	R – Total	120	30	150	11.8207	Significant
Campus	Polytechnic Ibadan	75(60)	0(15)	75		
internet	EACOED, Oyo	65(65)	10(10)	75		Not
	R – Total	140	10	150	0	significant

Research question 2

What qualities of ICT resources available for manpower development in Oyo State?

Hypothesis 2

There is no significant difference in the qualities of ICT resources available for manpower development in Oyo State.

Table 2: Chi-square analysis of the qualities of ICT resources available for manpower development in Oyo State

Goals	Institution	Excellent	Good	Poor	V.poor	C total	X^2	Remark
Teasching	Polytechnic Ibadan	15(20)	50(20)	10(15)	0(20)	75		Significant

	EACOED, Oyo	5(20)	20(20)	40(15)	10(20)	75		
	R – Total	20	70	50	10	150	111.58	
Research	Polytechnic Ibadan	25(15)	40(35)	10(25)	0(0)	75		Significant
	EACOED, Oyo	20(15)	30(40)	15(20)	10(0)	75	22	
	R – Total	45	70	25	10	150		
Information dissemination	Polytechnic Ibadan	50(35)	25(40)	0(0)	0(0)	75		Significant
	EACOED, Oyo	15(30)	30(20)	20(25)	10(0)	75	63	
	R – Total	65	55	20	10	150		
Learning	Polytechnic Ibadan	20(17.5)	50(25)	5(25)	0(7.5)	75		Significant
	EACOED, Oyo	5(17.5)	35(30)	25(20)	10(7.5)	75	66.56	
	R – Total	25	85	30	10	150		

Discussion

Table 1 shows that the Polytechnic Ibadan and Emmanuel Alayande College of Education, Oyo were making use of online admission and as well as on line registration as mode of ICT. This is in agreement with findings of Adebayo and Isiaka (2009). Therefore, majority of the respondents of 74% and 95% in the polytechnic Ibadan and Emmanuel Alayande College of Education, Oyo representatively indicated that e-learning was not available in their institutions. However, the polytechnic Ibadan affirmed that there was v-library while 52.63% of the majority from EACOED, Oyo accepted that this mode of ICT is not available. Computer base test (CBT) was available in the polytechnic Ibadan amounting to 64% but not available in EACOED. E-mail was present in the two sister institutions as we have 100% in Ibadan polytechnic while 78% in EACOED, Oyo.

Seventy-five (75%) of the two sisters' institution showed that there was no V-conferencing mode of ICT in their institutions but as for internet, the two sisters' institutions possessed the facilities.

Table 2 shows the quality of ICT usage was better in polytechnic Ibadan more than Emmanuel Alayande College of education Oyo probably because the polytechnic had been in existence before EACOED Oyo. Again, the quality of use of ICT for research activities was commendable in each of two sister institutions even though it was better in Ibadan polytechnics as the prove made by Adebayo and Isiaka (2009) in LAUTECH and University of Ilorin.

Conclusion

It is no doubtful today, that there is no higher institution that does not embrace the application of ICT mode as it is impeccable tool for individual and collaborative teaching, learning, research and general administration. Although, there may be some perennial hindrance factors such as inadequate ICT infrastructure, lack of skilled personnel or manpower to manage the available

system, resistance to change from the traditional pedagogical methods of teaching and learning, under funding of the institutions and ineffective co-ordination of all the various ICT centre for education initiatives.

However, ICT strategies plan need holistic for the Nigerian educational system from which every school could adopt in terms of hard work, acquisition of skill, maintenance, software acquisition, development and ownership, networks and internet connectivity plus ICT funding plan.

Recommendations

(i) There should be a means of monitoring the level of acquisition of the plan of ICT by each institutions.

(ii) There should be a functional ICT training to all students and the lecturers of the Nigeria higher educational institutions from time to time in respective of their work of studies so as to enable them fit in to global economy

(iii) Capacity building workshop should be organized on continuous basis whenever new technology is introduced to the system, so that the staff will be able to adopt such technology to improve their academic functions.

(iv) Administrators should be exposed to the potential sources of fund and resources for ICT in education such as grants, public subside, private donations, fund raising in kind, support community, support dues and charge and revenues earned from business.

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