

HIGHER EDUCATION AND INFORMATION AND COMMUNICATION TECHNOLOGY IN NIGERIA: A CASE STUDY OF UNIVERSITY OF ILORIN AND LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY, OGBOMOSO

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ABSTRACT

Higher Education in Nigeria is expected to contribute to national development through high level manpower training and development. Consequently, tertiary institutions in the country are expected to actualize these goals by engaging in teaching, research, generation and dissemination of knowledge among others. This paper deals with the current mode, quality and level of actualization of the goals of Higher Education in Nigerian tertiary institutions, using University of Ilorin (a Conventional University) and Ladoke Akintola University of Technology (a Specialized University) as a case study. It identifies Information and Communication Technology (ICT) as a means for achieving the goals of the institutions by addressing the manner ICT could be applied in the various tasks of higher educational Institutions. Based on the findings of the study, it is recommended, among others that there is a dire need for a wholesome master plan for massive training of Nigerian graduates on ICT to improve their quality on their current jobs and to brighten their chances for new jobs. It further recommends the need for mandatory functional computer literacy programmes for all undergraduates and suggests enhancement of ICT facilities in schools through public private partnership.

INTRODUCTION

In Nigeria, higher education is the education given after secondary education in Colleges of Education, Monotechnics, Polytechnics and Universities. Also, higher education can be viewed from two perspectives. First, it denotes the next academic level, without research component, after secondary education. Second, it signifies the system of institutions that provides post-secondary school courses without research component.

Ojo (2007) acclaimed that education in all its forms and levels, is expected to enrich the individual through:

- i. enculturation, progressively equipping the individual with the socio-cultural skills that should enable one to fit neatly into one's

- immediate society;
- ii. acculturation, progressive exposure to outside influence from which one can intelligently borrow to expand the horizons provided by one's immediate society;
- iii. intellectual skills acquisition, for the pursuit of self-development through the acquisition of knowledge in a variety of forms and by a variety of means;
- iv. affective traits development, progressively improving on the capacity to imbibe attitudes, values and other behaviour traits that facilitate one's relationship with fellow human beings as well as one's capacity for continuous self-employment;
- v. manipulative and psycho-motor skills development, progressively awakening the physical prowess of the individual, and progressively working towards a perfect coordination of the activities of the body with those of the mind, and
- vi. Inculcation of lifelong learning skills (also called learning-to-learning skills).

What an individual stands to benefit from higher education is simply an "advanced subset" of the benefits of education in general. For instance, university education is meant to produce high level manpower, polytechnic is to produce middle level technical manpower, and College of Education is to produce middle level teachers who would serve as pillars of education. Higher education therefore, encompasses human and physical resources that are considered as vital tools in the attainment of education aims, goals and objectives.

Onuma (2007) noted that in the education industry, just like other sectors, Information Technology (IT) focuses on electronic generation, storage, retrieval, utilization and protection of information for future use, while ICT revolves around different types of technologies likely going to be utilized for processing, transmitting or communicating information. ICT provides students and teachers with practical and functional knowledge of the Computer, the Internet and other associated areas of ICT.

REVIEW OF LITERATURE

University System in Nigeria

University is the highest citadel of learning where the needed manpower is produced in order to develop the society in all ramifications. The first tertiary educational institution that came into existence in Nigeria in

1936 was the Yaba Higher College (Uwazurike, 1991; Mgbekem, 2004). In 1948, the University College, Ibadan came into existence. Initially, the University College, Ibadan was not fully autonomous. It was an affiliate of the University of London from where degrees were conferred on the products of Ibadan University College. University of Nigeria, Nsukka was established, as the first indigenous university with full capacity to award her own degrees in 1960. This opened the way for the University of Ife (now Obafemi Awolowo University), Ile-Ife, established in 1962; Bayero University, Kano (1976), Usmanu Dan Fodiyo University, Sokoto (1976), University of Port-Harcourt (1976), University of Ilorin (1976), University of Calabar (1976) and University of Maiduguri. These first generation universities paved the way for newer universities. Today, Nigeria can boast of 27 federal, 35 state and 41 private universities.

Learning at the university level of education, could be described as being effective if it results in bringing about the expected transformation in the attitude, skill and knowledge of the recipients/students over a period of time. Moreover, effective learning should result in producing graduates who are adequately informed, technically equipped and morally prepared to become productive workers, self-reliant entrepreneurs, responsible parents, good citizens and selfless leaders.

Goals of Higher Education in National Development

Higher institution (College of Education, Monotechnic, Polytechnic or University) can be likened to a manufacturing industry, where available raw materials need to be processed to become finished products. Federal Republic of Nigeria *National Policy on Education (2004)* stated the following as the goals of tertiary education in Nigeria:

- (a) contribute to national development through high level relevant manpower training;
- (b) develop and inculcate proper values for the survival of the individual and society;
- (c) develop the intellectual capacity of individuals to understand and appreciate their local and external environments;
- (d) acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;
- (e) promote and encourage scholarship and community services;
- (f) forge and cement national unity; and
- (g) promote national and international understanding and

interaction (p.30).

University, being the highest institution of learning, therefore, must thrive to achieve the stated goals in the country. Since 1999, as elucidated by Babalola (2007), the Federal Government of Nigeria has had the following improvements to its credit at the university and non-university levels:

- (i) Nigeria allows Polytechnics, Colleges of Education and Universities as degree awarding institutions with the universities taking care of the high-level manpower requirements.
- (ii) The National Open Universities of Nigeria is now revived and currently in full operation.
- (iii) There are also a number of state and private universities in the country.
- (iv) Government has embarked on efforts to synchronize the university calendar to bring sanity to an otherwise untidy situation whereby all the universities have different calendars.
- (v) Government has noticeably reduced the incidences of militant labour arises and cult activities on campuses.
- (vi) Government has brought significant communication and ICT improvements which have positively influenced teaching and research technologies in higher education.
- (vii) Government enforced the minimum qualification (the NCE) for teachers in Nigeria and mandated the National Commission for Colleges of Education (NCCE) to control the training.
- (viii) Government created the, Teachers Registration Council (TRC) to handle registration of teachers.
- (ix) Government included vocational training in Technical Centres and Applied Science and Technology in Polytechnics and Universities.
- (x) There is an increasing number and diversity of tertiary institutions over time to satisfy social, political and economic as well as manpower demands.

All these require the knowledge and applications of Information and Communication Technology to achieve the laudable goals of higher education in the country.

Information and Communication Technology (ICT)

Information and Communication Technology (ICT) can be defined as diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage

information. These technologies include the radio, television, and telephony. It can as well be viewed as the technology that is used for the acquisition, processing, organization and dissemination of verbal, pictorial, textual and numerical information by a micro electric based combination of computing and telecommunication (Terry, 2002). ICT which has proved to be the greatest of all revolution in history was defined as an electric application of computing, communication, telecommunication and satellite technology (Yusuf, 2000).

The *overall goal of integrating* ICTs into education is to bring the best educational opportunity and best practices to everyone irrespective of their geographical or social affiliation. However, the introduction of ICTs in education, *when done without careful deliberation*, can result in the further marginalization of those who are already underserved and/or disadvantaged.

Mode of ICT Used to Achieve Institutional Goals

The use of ICT in teaching, research and entertainment cannot be taken with a pinch of salt in higher education in order to create a good atmosphere of teaching and learning. Mohammed (2006) stated that classroom teachers are expected to utilize ICT facilities to inculcate relevant knowledge to students. A classroom teacher with adequate and professional skills in ICT utilization is expected to have his students perform better in classroom learning than those without such skills. ICT has the following characteristics in the complementation of the school curriculum, as reiterated by Onuma (2007):

- (i) accelerate students basic skills in school subjects like reading, sciences and mathematics;
- (ii) challenges students to learn independently;
- (iii) updates teachers with efficient and effective tools to take care of students' individuals differences;
- (iv) provide opportunities for, cooperation with colleagues through networking and internet services;
- (v) educators and learners are challenged to new methods of acquiring knowledge through knowledge sharing and connection to the global world.

The use of ICT in classroom situations sees the teachers as facilitator rather than dispenser of knowledge. Some of the tools of ICT commonly used in classroom for educational purposes include laptop computer, local area network (confined in a particular classroom building) and the internet. The computer has the capacity to put texts, graphics, pictures on screen and accept

students input which can be easily retrieved and analysed. ICT can be utilized in the areas of on-line admission, on-line registration of courses, virtual library, cooperate e-mail services for staff, video conferencing and the likes. Considering the efficacy of ICT in achieving the goals of education, especially University education and considering the recent advancement in the use of ICT in the Universities, there is the need to assess the mode, quality and level of use of ICT to achieve institutional goals in the Nigerian University System. Hence, the study being reported in this paper, set out to address this issue, using University of Ilorin (a Conventional University) and Ladoke Akintola University of Technology (a Specialized University) as a Case Study.

Methodology

Purposive sampling technique was used to select 95 respondents from each of the University of Ilorin and Ladoke Akintola University of Technology, Ogbomoso to react to the instrument tagged, "Questionnaire on Information and Communication Technology in Nigerian Universities". The respondents were senior academic and non-academic staff, who had dealings with the use of ICT in the institutions.

The instrument was validated and tested for reliability, using test-retest method. The reliability coefficient obtained was 0.72. The instrument was administered by the researchers, using research assistants.

The research hypotheses formulated to guide the study state that:

- H0₁:** There is no significant difference in the current mode of ICT used to achieve institutional goals in the University of Ilorin (a Conventional University) and Ladoke Akintola University of Technology (a Specialized University).
- H0₂:** There is no significant difference in the quality of use of ICT to achieve institutional goals in the University of Ilorin (a Conventional University) and Ladoke Akintola University of Technology (a Specialized University).

The Results

- H0₁:** There is no significant difference, in the current mode of ICT used to achieve institutional goals in the University of Ilorin (a Conventional University) and Ladoke Akintola University of Technology (a Specialized University).

Table 1
Chi-Square Analysis of the Current Mode of ICT Used to Achieve Institutional Goals in the University of Ilorin and Ladoke Akintola University of Technology

ICT Mode	Institution	Available	Not Available	C—Total	x2	Remarks
Online Admin	Unilorin	95(95)	0(0)	95	0	Not Significant
	Lautech	95(95)	0(0)	95		
	R_total	190	0	190		
Online Registration	Unilorin	95(95)	0(0)	95	0	Not Significant
	Lautech	95(95)	0(0)	95		
	R_total	190	0	190		
e-learning	Unilorin	25(15)	70(80)	95	13.33333	Significant
	Lautech	5(15)	90(80)	95		
	R_total	30	160	190		
v-library	Unilorin	95(70)	0(25)	95	17.85714	Significant
	Lautech	45(70)	50(25)	95		
	R_total	140	50	190		

ICT Mode	Institution	Available	Not Available	C—Total	x2	Remarks
CBT	Unilorin	95(65)	0(30)	95	27.69231	Significant
	Lautech	35(65)	60(30)	95		
	R_total	130	60	190		
e-mail	Unilorin	95(82.5)	0(12.5)	95	3.787879	Not Significant
	Lautech	70(82.5)	25(12.5)	95		
	R_total	165	25	190		
V_conferencing	Unilorin	20(20)	75(75)	95	0	Not Significant
	Lautech	20(20)	75(75)	95		
	R_total	40	150	190		
Collaboration for Service	Unilorin	85(65)	10(30)	95	12.30769	Significant
	Lautech	45(65)	50(30)	95		
	R_total	130	60	190		
Campus Internet	Unilorin	95(95)	0(0)	95	0	Not Significant
	Lautech	95(95)	0(0)	95		
	R_total	190	0	190		

H0₂: There is no significant difference in the quality of use of ICT to achieve institutional goals in the University of Ilorin (a Conventional University) and Ladoke Akintola University of Technology (a Specialized University).

Table 2: Chi-Square Analysis of the Quality of ICT Usage in the Universities

Goals	institution	Exc	Good	Poor	Vpoor	C_Total	x2	Remarks
Teaching	Unilorin	30(17.5)	65(42.5)	0(25)	0(10)	95	111.6807	Significant
	Lautech	5(17.5)	20(42.5)	50(25)	20(10)	95		
	R_tota l	35	85	50	20	190		
Research	Unilorin	35(25)	60(50)	0(20)	0(0)	95	52	Significant
	Lautech	15(25)	40(50)	40(20)	0(0)	95		
	R_tota l	50	100	40	0	190		
Learning	Unilorin	30(17.5)	65(55)	0(15)	0(7.5)	95	66.49351	Significant
	Lautech	5(17.5)	45(55)	30(15)	15(7.5)	95		
	R_tota l	35	110	30	15	190		
Info. Dissemination	Unilorin	55(35)	40(40)	0(20)	0(0)	95	62.85714	Significant
	Lautech	15(35)	40(40)	40(20)	0(0)	95		
	R_tota l	70	80	40	0	190		

Discussion

As shown in Table 1, both the University of Ilorin and Ladoke Akintola University of Technology, Ogbomosho were making use of online admission as well as on-line registration as modes of ICT.

However, majority of the respondents 73.68% and 94.74% in the University of Ilorin and Ladoke Akintola University of Technology respectively indicated that e-learning, as an ICT mode, was not available in their institutions. While all the respondents from the University of Ilorin affirmed that there was v-library, majority of the respondents (52.63%) from Ladoke Akintola University of Technology showed that this mode of ICT was not available in their institution. Similarly, all the respondents signified that Computer Based Test (CBT) was available for use in the University of Ilorin while 63.16% of the respondents from Ladoke Akintola University of Technology indicated that this ICT mode was not available in their institution. e-mail was available in the institutions (100% of the respondents in the University of Ilorin and 73.68% in Ladoke Akintola University of Technology indicated this), while majority of the respondents 78.95% from each of the university showed that there was no v-conferencing in their institutions. However, all the respondents in each of the institutions indicated that they

had campus internet.

As shown in Table 2, the quality of ICT usage was better in the University of Ilorin (a Conventional University) than in Ladoke Akintola University of Technology (a Specialized University) probably because the University of Ilorin is a Federal University, that is relatively better funded than Ladoke Akintola University of Technology, which is a State University. However, the quality of use of ICT for research activities was commendable in each of the Universities, even though it was better in the University of Ilorin than in Ladoke Akintola University of Technology, Ogbomoso.

Conclusion and Recommendation

It is doubtful today, if there is any aspect of Higher Institution of life and management that does not require an application of ICT. ICT has become an impeccable tool for individual and collaborative teaching, learning, research and general administration. However, some factors could be said to be a cog in the wheel of progress to fully integrate ICT into the Nigerian higher educational institutions life. Some of these factors include, inadequate ICT infrastructure, lack of skilled manpower to manage the available systems, resistance to change from the traditional pedagogical methods of teaching and learning, under funding of the institutions and ineffective coordination of all the various ICT for education initiatives.

It is, therefore, necessary to have holistic ICT strategic plan for the Nigerian educational system, from which every school could adopt. The plan should spell out in clear terms issues of hardware acquisition and maintenance, software acquisition development and ownership, issue of networks and internet connectivity plus ICT funding plan. There is also the need for a means of monitoring the level of actualization of the plan by each institution.

Furthermore, there is the need to give functional ICT training to all students of the Nigerian higher educational institutions, irrespective of their course of studies to enable them fit into the global economy that is technology driven.

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. There is the need for higher education administrators to be exposed to the potential sources of funding and resources for ICT in education. These include

grants, public subsidies, private donations, fund-raising events, in-kind support, community support, dues and charges and revenues earned from core business.

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