



Enhancing University Administration through ICTs in Nigeria

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Abstract

The importance of Information and Communication Technologies (ICTs) in enhancing university administration cannot be over-emphasised. However, there are many challenges facing the use of ICTs in the effective and efficient delivery of services in universities in Nigeria. The main objective of the paper is, therefore, to examine the challenges and proffer sustainable solutions. The General System Theory was adopted as the theoretical framework for the study. The research is descriptive and quantitative. Sources of data were primary and secondary while a well-structured questionnaire was used to elicit information from one hundred and seventy four (174) respondents, randomly selected out of an estimated population of three thousand, five hundred (3,500) ICT users, comprising academic, non-teaching staff and students from three universities (federal -1, state -1 and private -1) in Ogun State, reputed to be the only state with the highest number of universities in Nigeria. Relevant hypotheses were tested and the data were presented using tables and percentages. Chi-Square and ANOVA statistical tools were used to analyse the data. Findings show that the challenges facing the use of ICTs in the universities include high cost of ICTs, low computer-literacy among university staff and students, epileptic power supply, absence of ICT policies and poor political-will to implement such policies, where they exist. The paper concludes that the prospects are bright and that more universities would embrace the use of ICTs in their operations when the identified challenges are tackled.

Keywords: Education; ICTs; Learning; Teaching; University Administration.

1. Introduction

Generally speaking, public administration is the organisation and management of men and materials to achieve the goals of government (Olaleye, 1998). Educational administration, a field of study in public administration, can be described as the management of an educational organisation or institution, for the purposes of facilitating teaching, learning and research. It consists of the process of facilitating the designing of goals and policies that would stimulate the development of appropriate programmes for teaching, learning, procuring as well as managing personnel and materials to implement teaching and learning (CDLCE:15). An important component of educational administration is known as university administration. Startup (1979) defines a university as an organisation or institution, where people meet at specific times and in patterned ways, to engage in teaching, research and community service.

University administration is the scientific approach to the management of human and material resources to achieve the goals and objectives of the university. Maki (2008) argues that the usage of information and communication technologies is crucial to university administration. The 1990s witnessed advances in information and communication technologies (ICTs), particularly with the Internet expanding into the public domain (Akpan-Obong & Alozie, 2016). The usage of ICTs, in the university system, involves harnessing of technology for better planning, setting standards, effecting change and monitoring results of the core functions of universities such that the integration of ICTs in higher education is inevitable (UNESCO, 2009). Despite the enormous importance and advantages of ICTs in driving university administration, some factors such as inadequate computers, epileptic supply of electricity and high maintenance cost pose serious challenge in making this possible thus derailing the aspiration of a nation from realising its educational goals through university administration within the Nigerian context.

The paper attempts to examine these challenges facing ICTs in enhancing university administration with a view to finding solutions, to make universities ever relevant as ivory towers. The study attempts to examine the challenges and prospects of ICTs in university administration in Nigeria. Therefore, three universities were chosen in Ogun State, to reflect the three categories/classes of universities in Nigeria. They are: Federal - Federal University of Agriculture, Abeokuta (FUNAAB); State - Tai Solarin University of Education, Ijebu-Ode (TASUED); and Private - Babcock University, Ilishan-Remo, Ogun State.

2. Statement of the Problem

The importance of information and communication technologies (ICTs) to the realisation of university's tripartite mandates of teaching, research and community service cannot be over-emphasised (Maki, 2008). Despite this clearly stated mandates and enormous resources allocated to university education over the years, many institutions and universities in Nigeria are still unable to maximally use ICTs in achieving their tripartite mandates (Kupoluyi, 2015; Jagboro, 2003). Hence, the study strives to look into this problem of why ICTs have not played dominant role in the universities, as citadels of academic excellence, to be better positioned to attain their mandates, objectives and goals for national development (Hasan et al, 2007).

3. Objectives of the Study

The objectives of the study are to:

- i) Identify the demographic characteristics of the users ICTs in universities.
- ii) Examine the frequency of the use of ICT platforms among university staff and students.
- iii) Examine the perception militating against the use of ICT platforms among respondents.
- iv) Proffer solutions to the challenges facing the use of ICTs in the universities.

4. Hypothesis

- i) There is no significant association between respondents' demographic characteristics and their perception of ICTs.
- ii) There is no significant difference between the respondents' perception of ICT platforms across the study areas.

5. Literature Review

5.1 University Administration

The name 'university' originated about the middle of the eleventh century, from the Latin word, *universitas*. Over the centuries, however, the name evolved into that of its present usage; meaning 'an institution incorporating the scholars, teachers, generality of subjects being taught and the physical location of the organisation' (Ladipo, 2012). Administration can simply be referred to as the complex process of formulating and implementing policies for the attainment of public good. Educational administration as a field of study in public administration is the management of any organisation or institution having the purposes connected with the education of the groups of individuals forming that organisation. Universities inclusively educate and transmit knowledge to deserving students and scholars by participating in those activities in the local and international arena that enhance the common good and well-being of all mankind in the sense that they play important roles in modern society and are seen as crucial national assets in addressing many policy priorities (Bamiro, 2012).

Supporting this crucial role of the university is Startup (1979), who maintains that in sociological terms, a university provides an important platform for knowledgeable people to meet in patterned ways to engage in teaching, research and rendering service. University administration is, therefore, the scientific approach to the management of human and material resources such as ICTs, to achieve the goals and objectives even though Nigerian universities are bugged down by the problems of brain drain, infrastructural decay, inadequate funding, shortage of manpower and policy inconsistency (Kupoluyi, 2011:51).

5.2 Information and Communication Technologies (ICTs)

According to Adebayo (2013), information and communication technologies (ICTs) refer to the technology that supports activities involving the creation, storage, manipulation, communication of information using microelectronic and telecommunications tools such as laptops, computers, computer networks, Internet digital printers and mobile technology that are used by the administrator to record, store, process, retrieve and transmit information (Kokt & Koelane, 2013). Supporting this view is Maki (2008), who notes that ICT activities relate to the management of university administration through the personnel administration of students, resources, finance and general administration. The integration of ICTs into this process enhances the overall admission activities of universities by making it more accessible to many (Kwaku

& Obeng, 2004). Information and communication technologies and their applications in recent times have offered many opportunities for economic and human development (Akomaye, 2015). ICTs decentralise power, democratise information and brings together people, processes and organisations in greater ways than ever before (Akpan-Obong & Alozie, 2016). ICTs help in providing a good communication system in the university system by providing timely information to all concerned (Magni, 2009) such that the integration of ICTs into general administration has brought about increased efficiency and optimal resource utilisation (Hasan et al, 2007).

Furthermore, ICT platforms serve as the powerful tool for extending educational opportunities, provide remote learning resources and offer a steadily expanding range of new services that have major economic consequences for the standardisation of information in universities (Nwafor, 2005) while Yusuf (2005) agrees that the computer-based tool is used for the processing of information and communication needs in the universities that tallies with the objectives of the Federal Government of Nigeria on information technology that are well articulated in terms of making the use of ICTs mandatory at every level of education (Yusuf, 2005) even though, Akpan-Obong (2010) observes that the adoption and applications of ICTs often proceeds from a systemic level by concentrating on the actions of states and their agencies. Unfortunately, the efforts of the government at ensuring the use of ICT platforms in the realisation of educational objectives are far from become a reality. The use of ICTs requires an initial investment in time and energy to learn the new system that involves costs. Further investment in ICTs would be pointless, if there was no intention to fully integrate ICTs in government in a deliberate and productive manner (Akpan-Obong & Alozie, 2016).

5.3 Challenges Facing ICTs in University Administration

The strategic place of ICTs has further been highlighted by Adeogun (2003), who maintains that ICTs have broken the barriers of time, distance and location, which used to impede the growth of formal education in the past while Ehikhamenor (2002) equally observes that ICTs are changing the ways in which academics seek information, communicate with each other, conduct research and distribute research results, adding that the application of web-based information retrieval trends of researchers is ever increasing and the electronic material will eventually replace the traditional library and users need not go there to find and collect information they need (Islam, 2007). Universities are functionally required to handle large volume of data that are processed so as to provide information for decision-making as well as meeting the information requirements of the various stakeholders such as students, parents, alumni, government, information community and the general public (Okoli, 2007).

Despite this importance, Jagboro (2003) gives reasons for the low level of utilisation of ICTs in the university. These include low level of connectivity, high cost of cyber café facilities, lack of substantial online learning resources, absence of faculty compensation for teaching online and inadequate funding. Not only that, there are challenges of awareness and mindset, lack of top-level commitment for the progress in ICT integration, a systematic method implementation, cost of bandwidth and efficient utilisation of ICTs, lack of technical support, insufficient knowledge, gender, age of teacher, lack of motivation, lack of technical skills, insufficient availability of hardware/software and inability of many Nigerian teachers to be computer-literate (Kupoluyi, 2015:6).

Ojedokun and Owolabi (2003) believe that in surmounting these challenges, lecturers and teachers in the developing world would have to change their teaching styles and acquire relevant skills and technologies to transform the various classrooms, hence, the need for instructors to learn new skills to teach students how to search for and use information to access to up-to-date research reports and gain global knowledge (Nwokedi, 2007) and by providing proper technical infrastructure, equipment and support to secure the success of the use of ICT platforms (Sipila, 2010) while Ifinedo (2007) provides additional information by arguing that infrastructural inhibitors, institutional factors and human capital problems as Bolaniran and Ademola (2004) have added the difficulty and cost in procuring ICT platforms appear to be beyond the reach of many people; an argument that forms the basis for Abasilim and Edet (2015) to call on the government to carefully address the issues of human factor and others that inhibit the utilisation of ICT platforms to improve e-governance because low ICT competences of very high level policy makers and decision takers could translate into lack of advocates for change at the appropriate authority level (Anim, 2015).

6. Theoretical Framework

The theoretical framework is hinged on the General System Theory that was developed by David Easton in 1953. The theory was adapted from the natural sciences, especially Biology in the works of Ludwig Von Bertallanty (Olaniyi, 2001; Ray, 2011). It found its way into the social sciences through anthropology and sociology (Olaniyi, 2001; Johari, 2013). This system views an administrative system as a sub-system of the society. It looks at various parts of an administrative system and examines the inter-linkages among the various parts. It analyses the dynamic interactions between the administrative system and its external environment. Easton (1967) observes that a system, just like the information, communication technologies (ICTs), is made up of a combination of elements: inputs, outputs, environment, conversion process and feedback.

According to Koontz et al (1980), almost all life is a system; that is the human body, family, educational institutions, bank, government and a house are all systems and each of them has interrelated parts which work together to form a complex unity. Katz and Khan (1982) argue that all social systems are contrived systems in the sense that they are made by human beings and are imperfect systems such as the university that should be seen as a total system which has inter-related parts with a single goal. Every department in the university may have its own sub-goals but these sub-goals of the various departments tend towards the achievement of the central goals of the entire organisations and invariably, if there is a fault in one subsystem or department, it would affect the whole system. Therefore, the sum total of the performance of the subunits or departments affects the overall performance of the whole set-up. The systems approach helps in the identification and solution of specific organisational problems (Yalokwu, 2006).

A major drawback of the theory is that it is “too broad a framework for political analysis to take note of the complete psychological aspects of interaction function” (Young cited in Johari: 2013). Hence, it may not be able to answer question that relate to scope, depth and weight of power as the concept is being used (Johari, 2013). The university system is like the general system whereby various component parts are working harmoniously to keep the system in stability and optimal performance (Koontz et al, 1980). In this context, ICTs serve as the platform to connect the facets of university structures for the delivery of the teaching, research and community service mandates while any disruption in ICTs operations would bring about a setback to the ability of universities to achieve their goals, objectives and mandates.

7. Methodology

The study is descriptive and quantitative. Sources of data were primary and secondary while a well-structured questionnaire was used to elicit information from one hundred and seventy-four (174) respondents, randomly selected out of an estimated population of three thousand, five hundred (3,500) ICTs users; comprising academic, non-teaching staff and students from the three selected universities for the study.

8. Findings

8.1 Demographics Characteristics of Respondents

Institution: Result shows that 34.5 per cent of the respondents were from FUNAAB and Babcock University, respectively.

Age: More than half; 60.9 per cent of the respondents were above age of 26, as 23.6 per cent were between the ages of 21-15 while 13.2 per cent of the respondents were between the ages of 16-20.

Category: Findings from the study show that 60.1per cent of the respondents were staff while 28.2 were student.

Tribes: More than half of the respondent; 69.8 per cent were Yoruba, 23.1 per cent were Igbo and others 3.4 per cent belong to other tribes.

Gender: 58.6 per cent of the respondents were male and 41.4 per cent were female. This indicates that majority of the respondent were males.

Marital Status: Results show that 56.0 per cent of the respondents were married while 44.0 per cent were single.

Variables	Frequency	Percentage
Institution		
TASUED	60	34.5
Babcock	54	31.0
FUNAAB	60	34.5
Gender		
Male	102	58.6
Female	72	41.4
Age		
16-20	73	42.0
21-25	97	55.7
26 and above	4	2.3

Category		
Staff	100	57.4
Student	49	28.2
	25	14.4
Tribe		
Igbo	39	22.4
Yoruba	118	67.8
Hausa	11	6.3
Source: Researchers' Fieldwork (2017)		

8.2 Hypotheses Testing

Hypothesis 1

Relationship between the Respondents' Demographic Characteristics and their Perception of ICTs

Chi-square analysis was used to test the relationship between the demographic characteristics of respondents against the perception of respondents on the use of ICTs. The null hypothesis was H_{01} : There is no significant relationship between the respondents' demographic characteristics and their perceptions of ICTs. Results in Table 2 showed that there were no significant relationship between gender, marital status, age, institution and tribe of respondent and their perception to the use of ICTs.

Table 2: Results of Chi-Square Analysis

Variable	Chi-square value	Df	Asymp. Sig (2- sided)	Decision
Institution	0.035	2	0.983	NS
Gender	0.702	1	0.402	NS
Marital status	0.480	2	0.787	NS
Age	2.094	4	0.718	NS
Categories	0.802	2	0.670	NS
Tribe	1.143	3	0.767	NS
Source: Researchers' Fieldwork (2017)				

8.3 Test of Difference in the Perception of Respondent across the Study Locations

In Table 3, ANOVA test showed that there was significant difference in the perception of respondents across the study locations. ($F=1.146$, $p=0.321$) at $P \leq 0.05$. This implies that not all the respondents surveyed across the different locations (TASUED, Babcock and FUNAAB) have the same perception towards the use of ICTs in university administration across the locations. Therefore, the hypothesis was rejected and the alternate hypothesis is that there is a significant difference among respondents in the study locations towards use of ICTs in university administration.

Hypotheses 2: There is No Significant Differences in the Respondents' Perception of ICTs across the Study Locations**Table 3: ANOVA of Respondents' Perception on ICTs across the Locations**

Sources of Variation	Sum of Squares	Df	Mean Square	F-Valve	Sig.	Decision
Between Group	263.402	2	131.701	1.146	0.321	NS
Within Group	15968.577	139	114.882			
Total	16231.979	141				

9. Summary of Findings

From the responses, 36.7 per cent of respondents indicate they regularly use desktop computers, 30.8 per cent of respondents rarely use desktop computer while 12.6 per cent of them indicate that they use desktop computer once in a while. Results further showed that very few of the respondents; 35.1 per cent use projectors regularly, 32.2 per cent indicate that they rarely use projectors, while 7.5 per cent indicate they use projectors very regularly (Kupoluyi, 2015). 41.4 per cent of respondents indicate that they use computer software regularly, 28.7 per cent of respondents rarely use ICT platforms, 21.3 per cent indicate they use computer software very regularly while only 8.6 per cent use computer software very rarely. 49.4 per cent of the respondents use e-mails regularly for daily activities. From the study, the major challenges facing the use of ICTs in the universities include high maintenance cost of ICTs, low literacy level of teachers and epileptic power supply (Ifinedo, 2007; Jagboro, 2003).

The study indicates that there is no significant relationship between the respondents' demographic characteristics and their perception of ICTs. The result further showed that there were no significant relationship between gender, marital status, age, institution and tribe of respondent and their perception to the use of ICTs. The study further illustrated that there was a significant difference perception of respondent across the study locations. This implies that not all the respondent surveyed across the different locations (TASUED, Babcock and FUNAAB) have the same perception towards use of ICTs in university administration across the locations. Therefore, the hypothesis was rejected and the alternate hypothesis is that there is a significant difference among respondents in the study locations towards use of ICTs in university administration.

10. Conclusion

The paper has been able to identify the demographic characteristics of the users ICTs in universities, examine the frequency of use of ICT platforms among university staff and students, examine the perception militating against the use of ICT platforms among respondents and proffer solutions to the problems facing the use of ICTs in the universities. Findings show that the challenges facing the use of ICTs in the universities include high cost of ICTs, low computer-literacy among university staff and students, epileptic power supply, absence of ICT policies and poor political-will to implement such policies. The paper concludes that the prospects are bright and more universities would embrace the use of ICTs in their operations when the identified challenges are tackled in the course of administering Nigerian universities.

11. Recommendations

The study recommends the following:

In the first place, the use of ICTs should always be encouraged to enable universities achieve their mandates. This can be done through enlightenment programmes that would focus on the benefits of ICTs, and encourage usage.

Secondly, computer literacy should be promoted among lecturers and teachers, to increase the quality of teachers and learning in the universities. Trainings through workshops, seminars and lectures can be organised from time-to-time, in order to enhance their skills on ICTs usage and keep them abreast of new innovations and development.

Moreover, government should fund universities better to enable them surmount the challenge of high costs of ICTs facing them. Better funding will enhance the provision of ICT facilities in the universities. Facilities for networking through university computer centres should be well developed to prevent hacking and other forms of tribal crimes that can seriously impede communication within the universities. Stakeholders of private universities should make the development of ICTs a major priority in their institutions.

In addition, universities should develop sustainable policies to promote the use of ICTs for teaching, learning and research through public-private partnership in which universities would partner financial institutions for loans or information technology companies, for the purchase of ICT materials for their staff.

Lastly, there is the need to encourage more staff and universities to use ICTs while those that are compliant should be rewarded to encourage others. Such rewards can be in form of provision of laptops, projectors and accessories by government agencies.

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