

The Impact of Information Communication Technology Usage on Academic Staff and Students of Tertiary Technology Institutions in Bauchi State

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Abstract

The invention and development of computers appears to be one of the greatest innovations in the history of mankind. The contribution of computers to the growth and development of human society has been very significant that eventually every human activity is being computerized today. The objective of the study is to determine whether the available Information Communication Technology infrastructures are capable of encouraging Information Communication Technology usage. The challenges to Information Communication Technology usage and acceptance on academic staff and students ranges from, lack of funds, no opportunity for training, lack of sponsorship by the school management, inadequacy of electricity supply, lack of Information Communication Technology knowledge, insufficient time due to workload, lack of interest in learning, and lack of time for practice. Survey research will adopt a structured questionnaire which will be distributed for the study. The research study is geographically limited to Bauchi state of Nigeria, and involves the academic staff and students of the eleven (11) Public Tertiary institutions in the state, out of which two are universities, two polytechnics, five colleges and two monotechnics. In addition, there is no any private university or polytechnic located in the state. Perceived ease of use, perceived usefulness, and infrastructural capabilities were considered useful factors for successfully promoting the Information Communication Technology usage on the academic staff and students of tertiary institutions in Bauchi state,

Keywords: *Information, Communication, Technology, usage, tertiary institutions*

Introduction

Information and communication technology (ICT) usage in education can be considered as an effective enabler to create access to wealth, store, transmit, and manipulate different information in audio and visual forms, due to its availability in providing proactive environment (Afzaal, 2012). ICT applications in education may be used for various purposes. Teachers, staff, students and management team may use it for effective teaching-learning processes to achieve quality education and overall development of students or for administrative purposes (Ghavifekr et al. 2013). Therefore, there is widespread belief that ICTs can and will empower teachers and learners,

transforming teaching and learning processes from being highly teacher-dominated to student-centered. Thus, transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills (Trucano, 2005). Teachers commonly agree that ICT has the potential to improve student learning outcomes and effectiveness (Chang & Wu, 2012).

This result is likely when students and teachers have not been able to acquire a full understanding of the technologies, the role ICT plays and where, how and what technology to use. When the meaning of ICT and its unlimited potentials in the educational arena are understood, rapidly changing technologies are not seen as overwhelming, but as enablers of greater critical thinking and problem solving in education (Iloanusi & Osuagwu, 2009).

However, the use of ICT in the educative process has been divided into two broad categories: ICTs for Education (development of ICTs specifically for teaching/learning purposes) and ICTs in Education (involved the adoption of general components ICTs in the teaching and learning process) (Syed, n.d). When ICT usage is aligned with the instructional goal, where ICT is integral to teaching, the integration might be successful. Otherwise, the use of technology alone is not a sufficient indicator of integration (Gülbahar, 2008). Deaney, Ruthven & Hennessy (2003) also considered three major points for using ICT: the need for wider skills for effective use of tools, the need to focus on the power of technology and the need to shift familiar patterns of classroom interaction by introducing technology.

In view of these postulations, this study examined the influence of ICT infrastructural availability, perceived usefulness (relative advantage as the extent to which an innovation is perceived as better than the idea it supersedes or its nearest alternative) and perceived ease of use (the degree to which a person believes that using a particular system would be free of effort) towards facilitating ICT usage on academic staff and students of Tertiary institutions in Bauchi state Nigeria

STATEMENT OF PROBLEM

In the information age where ICT is transforming the educational landscape around the world, HEIs in Nigeria should rise up to the challenges ahead (Oyelekan, 2008). Although computers have been widely available in educational setting for well over two decades, a concern remains that teachers and students are neither confident nor competent users of ICT, the failure to use technology by many academics in the teaching and learning process is of particular concern (Ijeoma, Joseph, & Franca, 2010). Most Nigerian HEIs do not have access to basic instructional technology facilities, which also makes the integration of instructional technology in the delivery of quality education difficult (Ololube & Egbezor, 2009).

The research problem revolves around the determinants of ICT acceptance and use by Nigerian Higher institutions academicians. Oyelekan, (2008) comment that HEIs with good network service have the problem of adoption. Archibong and Effiom, (2009) opined that, lack of interest, limited access to ICT facilities and lack of training opportunities constitute the major problem of ICT usage by academicians. Ijeoma et al, (2010) comment that inadequate ICT facilities and excess workload are major challenges to ICT usage among academic staff in Nigerian higher institutions. Given that, the academicians are the key to effective usage of information technologies in the

university education system. Therefore, It is important to understand the academicians' behavioral intention towards IT and the factors that influence these intentions (Oye, Iahad & Ab. Rahim (2012).The research intends to fill the Gap of the usage of ICT in the discharge of duties by academic staff

OBJECTIVES OF THE STUDY

The objectives of the study is to:

- i. To determine whether the available ICT infrastructures are capable of encouraging ICT usage.
- ii. To ascertain the influence of perceived usefulness on ICT usage.
- iii. To determine the effect of perceived ease of use towards ICT usage

LITERATURE REVIEW

Conceptual Framework

According to Kyakulumbye, Olobo, and Kisenyi, (2013) social activities are a crucial element of human life. People naturally live and work in communities. Under such an environment, they turn to each other for help in case challenges are encountered. In promoting ICT usage for effective teaching and development, also urges that ICTs have potentially contributed to the democratization process in societies. This argument affirms that ICT's lead to an increase in the dissemination and access to information. Hadden (1996) stressed that ICTs have potentially contributed to the information dissemination process in societies. If such information is utilized by the population this would lead to better informed decisions at micro and macro levels. Forth and Mason (2004), suggests that ICT rests on two premises: first ICT's provide means of access to relevant information, and second, that information provided is assimilated, understood and applied as intended in the teaching process.

From the above arguments, the dimensions of ICT usage focused in this study were information generation, storage, dissemination and application in the academic arena.

Theoretical Framework

A basic understanding of ICT in education is vital in keeping abreast of rapidly changing technologies (Iloanusi & Osuagwu, 2009). Emphasis has been laid on IT in administrative and financial transactions, wireless and mobile communications with promising results, funding projects in this direction has yielded proportionate outcomes too in developed and developing countries in the world (Hope, Kelly & Guyden, 2010). However, the infusion of ICT in Higher education in Nigeria is still at infant age coupled with issues that are limiting it. Ekundayo and Ajayi (2009) identified some issues that are limiting the deployment of ICT in Nigeria as: scarcity of ICT Infrastructure and lack of access, high cost to the consumer, high cost of ownership, unsteady and inadequate electricity power supply.

According to Idowu and Esere (2013) examines the integration of ICT in higher education in Nigeria, and suggested that possibilities and reach of information technologies can tear down territorial boundaries and make available equal information and knowledge of different categories as soon as necessary data are fed on their website. Nevertheless, Nigeria as a nation is yet to take full advantage of the possibilities of ICT-driven education. Idowu and Esere (2013) also highlight the challenges of ICT-driven education in Nigeria, the journey so far and the relevance of ICT in

the Nation's higher educational system. Finally, recommendations made by them include: adequate funding of ICT-driven initiatives in the education sector and a sound policy environment which encourages investment in ICT. . The University of Jos, for example, had an online library (eGranary) and federal university Dutse jigawa state also has e library and selected infrastructure on campus to support basic forms of ICT integration in education. Some of the other university websites had online-learning portals with downloadable tutorials and provisions for online chatting; however, none supported virtual classrooms, tele-conferencing and other synchronous forms of online-learning. Government departments, non-governmental organizations, financial institutions and individuals are all beginning to understand the need for these types of learning tools and have begun to fund ICT implementation in Nigerian educational institutions. Some of these organizations include the Nigerian Communications Commission (NCC) and Education Trust Funds (ETF). Strategic plans and related projects that regularly revisit Nigerian ICT targets are ongoing.

INFORMATION COMMUNICATION TECHNOLOGY USAGE

There is nothing new about the benefits of ICT in education, especially in higher education. Most of the discussions state that the potential benefits of ICT-based teaching and learning strategies, based on the following two propositions: (1) ICT offers economical efficiency for the organization of education and the academic community, (2) ICT is able to generalize students, enabling the institution to accommodate individual differences such as goal learning, teaching style, comfort learning for both students or HEIs anytime and anywhere (Massy and Zemsky, 1995, Pavlik 1996). Also Pavlik (1996) in his study mentions education by utilizing IT in education is more effective and beneficial than the use of conventional instruction technology, in terms of: (1) 30% savings of time, (2) 30% - 40% cost savings, and (3) improving student achievement.

METHODOLOGY

The research method adopted in this work is the survey research techniques The study used both qualitative and quantitative method of research. Data were collected through primary and secondary sources. The secondary was collected from annual reports, journals and survey data were obtained from 300 respondents using researcher-designed questionnaire validated by experts and shown to have a reliability coefficient of 0.90. Descriptive and ordinary least square regression statistical techniques were used in analyzing the data with the aid of Statistical package for Social Sciences (SPSS) version 21. As the study specifically focuses on how to successfully promote ICT usage on academic staff and students of tertiary institutions in Nigeria, a cross-sectional survey research will adopt and a structured questionnaire will be adopted and distributed for the study. The research study is geographically limited to Bauchi state of Nigeria, and involves the academic staff and students of the eleven (11) Public higher institutions in the state, out of which two are universities, two polytechnics, five colleges and two monotronics. In addition, there is no any private university or polytechnic located in the state.

FINDINGS

At the end of the research, here are the expected outcome:

- Digital technologies (ICTs) have the ability to reshape the quality of teaching and learning in Tertiary institutions, if accepted and used by the Lecturers
- It will discover that although the use of ICT is mandatory, however, the level of adoption

among the university academic staff and students is still low.

- Awareness of the importance/benefits of Information Communication Technology in simplifying their work, regular training on the usage of Information Communication Technology among Academic Staff and students
- Perceived ease of use, perceived usefulness, and infrastructural capabilities were considered useful factors for successfully promoting the ICT usage among the academic staff and students of tertiary institutions in Bauchi state, Nigeria
- Discover creative potentialities of Academic staff and students
- Ensure and maintain standards of Teaching and Learning

CONCLUSION

The Impact of Information Communication Technology Usage on Academic Staff and Students of Tertiary Institutions in Bauchi State is a panacea to organizational effectiveness and development. Effective usage of Information and Communication technology management will increase the productivity of staffs, it will make the scheduling of tasks easier, it will help staff to prioritize and accomplish important task on time.

Skillful management of time is not superficial but fundamental. Instead of aimlessly allowing external events and pressures control you, make deliberate choices about your use of time. Looking at the analysis from the study, the way to create a life that is consistent with your deepest values and desires is to set priorities, make plans, organize tasks and then make sure to follow through on those plans.

From the data, it is clear that in order to increase productivity and development, workers would have to use certain time management techniques to keep them motivated and on track. Great time management is indeed one of the most vital skills leaders can develop.

RECOMMENDATION

1. There is need for management of tertiary institutions to enlighten the staff and student on the impact of the usage of ICT to be reviewed which will be determined to guide policy makers in the future
2. The research will advance the efficiency and effectiveness of information and communication technology and their roles in alleviating or militating effective administration
3. The shortcomings and inadequacies of previous and current government policies towards the conduct of the usage of information and communication technology will be highlighted and the stakeholders advised accordingly
4. It will guide government and policy makers to have an insight into the awareness of the importance/benefits of Information Communication Technology with a view to re-strategize in the future

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