



Statistical Evaluation Of The Information Communication Technology (ICT) Compliance Among Staff And Students In Nigerian Polytechnics

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ABSTRACT

This study examined the level of ICT compliance among staff and students in a Nigerian public polytechnic. The study sought to explore the level of ICT compliance among staff and students in Nigerian polytechnic by identifying whether they were knowledgeable with its core value in education; and to establish whether there is significant differences between staff and students' level of ICT compliance in the polytechnic. Data were collected using a self-developed ICT related questionnaire. Descriptive statistics and independent-sample t-test were employed to analyze the data. Results show a generated lack of ICT compliance among staff and students in their educational and or administrative pursuits, as very close to half of the respondents reported having zero compliance to ICT. The results further show no significant difference between the group scores of students and lecturers/administrative staff of the polytechnic in the level of ICT compliance. The results suggest a strong need for the polytechnic management to educate the polytechnic population on the need for ICT compliance considering the huge amount of money vested in the development and upgrade of the ICT by the individual states and federal government.

Keywords: ICT compliance, Polytechnic students, polytechnic staff, ICT knowledge.

INTRODUCTION

Information Communication technology (ICT) is presently a veritable tool for quick access to ideas and experiences from a wide range of people, communities and cultures and also offers solid support for improved and enhanced service delivery (UNDP 2007). The participation of Nigerian public and private organizations in the provision of Information and Communication Technology (ICT) has continued to pave way for ICT as a tool for finding, exploring, analyzing, exchanging and presenting information responsibly and without discrimination. Selected parameters for measuring the overall contributions of ICT to the Polytechnic educational system in Nigeria will be taken based on their support for quick access to information, improved response time, increased usefulness, availability and so on (Okele 1986). Such support could be in areas such as lecture delivery, private studies, information disseminations among employee, program planning and execution, and communication at different levels. With this range of interest areas, ICT has become a versatile tool for running smooth and efficient educational activities in our tertiary institutions system. Positive attitudes towards financing good ICT projects especially in the

polytechnics sector by major stakeholders both government, parents and the private sectors is of paramount importance.

Statement Of The Problem/ Justification

It is evidently clear that, the tertiary education trust fund (TetFund) is committed to upgrading the information communication technology (ICT) among other sectors in Nigerian institutions of higher learning hence, there is need for an appraisal of these institutions' compliance to the use of the ICT in their daily academic and administrative activities. Therefore, the main objective of this study is to take a holistic view of the practical issues of the ICT compliance among polytechnic staff and students in their academic and administrative pursuit the and provides data that can serve the basis for the determination of the contribution of some factors to its present level of performance in Nigerian polytechnics particularly at Hassan Usman Katsina Polytechnic, Katsina and how to improve if the need arises. The study will in addition, also provides data that is relevant for drawing conclusion based on comparison between results cited in the literature. Hence, the study is set out to address the following objectives:

Objectives of the Study

It is evidently clear that, government through the tertiary education trust fund (TetFund) is committed to upgrading the information communication technology (ICT) among other sectors in Nigerian institutions of higher learning hence, there is need for an appraisal of these institutions' compliance to the use of the ICT in their daily academic and administrative pursuits and provides data that can serve the basis for the determination of the contribution at its present level of performance in Nigerian polytechnics and how to improve if the need arises. This study made an attempt to provide data that is relevant for drawing conclusion based on comparison between results cited in the literature and what on ground at present regarding staff and students' compliance to ICT use in Nigerian polytechnic. Hence, the study is set out to address the following objectives:

1. To explore the level of ICT compliance among staff and students in Nigerian polytechnic by identifying whether they were knowledgeable with its core value in education; and
2. to establish whether there is significant differences between staff and students' level of ICT compliance in the polytechnic.

LITERATURE REVIEW

The study of the impact of information communication technology (ICT) in institutions of higher learning has recently draw the attention of researchers with the aim of establishing the most influential constructs on the impact and or compliance of ICT among users in tertiary institutions (Babatunde, et al., 2014; 2020; Krubu, 2011; Rana, 2009). As it was opined that ICT holds the key to the success of modernizing information services, (Rana, 2009, Krubu, 2011). However, most of these researches focused on the university settings and only little or none of such researches tend to look on the ICT compliance among staff and students in the polytechnic sector and therefore, this study intends to provide some literature in this area of ICT compliance, considering the huge investment being made by the government especially the TetFund on this sector.

The emergence of information communication technology entails the transformation of business, education and all facet of human endeavor as it is one of the major enablers of educational research and development. With globalization, several trends can be noticed, with more intense competitive structures in educational setting. Organizations, including educational institutions have to innovate at a constant rate in order to be successful. The innovation is about putting new ideas in teaching/learning and day to day administrative routines of institutions of higher learning with practical reality in which task can be performed within couple of minutes or seconds. With information technologies and globalization, through web resources, and having a skilled workforce that can use them, the best and up to date materials can be provided, while staff and students can navigate through web sites and get information on most subject matter of their academic concern.

The demand for access to higher education has increased with the rise in population and living standards and the trend towards a knowledge-based society. Also rapid developments in ICT have created new

opportunities to enhance the quality of education (UNESCO, 2011). The ICT has change the component of the overall educational system, and has made it to increase in both prominent and complexity. As institutions of higher learning have expanded and established linkages with the increasing population, the need to innovate a new way of teaching and learning also increased. Most higher education institutions are using ICT to develop course materials, deliver and share the course content, lectures and presentations; facilitate communication among lecturers and students, conduct research, and provide administrative and management services (UNESCO 2009).

To encourage innovation and maximize the use of ICT for higher education, UNESCO has implemented a project in various parts of the globe in collaboration with other governmental agencies. For instances, there was a project funded by Japanese Fund-in-Trust call; “the ICT for Accessible, Effective and Efficient Higher Education”, to harness the potential of ICT in delivering higher educational goals in ASIA. The objectives of the project is to increase understanding of how ICT can be used to enhance curricular content and to examine the design, development and delivery of ICT programs in Higher institutions with the sole aim of enhancing the employability of IT graduates from the university and other tertiary institutions of higher learning. The outcomes of this project was expected to facilitate effective policy making and adaptation of innovative ICT practices in the institutions of higher learning in the Asia-Pacific region (UNESCO 2010). This trend has brought about innovations and revolutionized education sector and challenging in the way educators and administrators think, and as well affect the way they socialize and communicate. (ICT) plays a major role in improving decision making in many areas of administration system that includes personnel administration, students’ records, resources administration, financial administration, inventory management, library system, admissions through web-enabled services, sending e-mail notices and agendas to staff, rather than printing and distributing them, all day-to-day activities and general administration of the institutions of higher learning (Janet, 2019; John, et.at 2020).

The integration of information and communication technology in the institutions of higher learning provides opportunities to the managers to be acquainted with the art and science of ICT and inspire them to be innovative and develop their skills in every spectrum of administrative functions. It also provide opportunities for staff and students to search for information, solve teaching/learning problems, communicate and collaborate and thereby equipping themselves with a set of competences to be competitive in this century (Stephen, 2013; Nur, 2016; Wiredu, 2020). The ICT pervades modern society to the extent that the mastery of information and communication technology as a core element of basic management and teaching skill for all staff both teaching and non-teaching staff in the institutions of higher learning.

METHODOLOGY

Population of the Study

The population of the study consist of all staff and students of the Hassan Usman Katsina polytechnic, Nigeria. The sample was four hundred and eighty (N=480) which comprises of three hundred and sixty (N=360) students randomly selected from seven colleges and departments of the polytechnic and One hundred and twenty (N=120) staff purposively sampled from academic and administrative departments of the polytechnic. The portion representing students group was larger considering the fact that they are of higher population then the staff. The purposive sampling was applied to staff since it was only the academic and senior administrative staff that were targeted for the study since they are majorly the one using the ICT for teaching/research and the administrative activities in the polytechnic.

Instrument for Data Collection

The study utilized a self-developed ICT related questionnaire which comprises of three sections. Section A contained demographic items requesting details about gender, department, field of study/administrative position, and computer experience. Section B contained twelve (12) Likert-type items that requested the respondents to rate their level of compliance to the ICT. The response categories used were “*High*”, “*Quite High*”, “*Moderate*”, “*Low*” and “*None*”. Section C contained ten (10) True or False items assessing

the respondents' knowledge of ICT. A third option of "I don't know" was provided to reduce guessing and or getting the correct answer by chance. All these items were validated expert in computer content and psychometric properties before they were pilot tested for improvement prior to the actual data collection. The internal consistency of the data derived from the 12 items was Cronbach's alpha $\alpha= 0.98$, while that drawn from the ten computer knowledge items was $\alpha=0.88$.

Data Collection

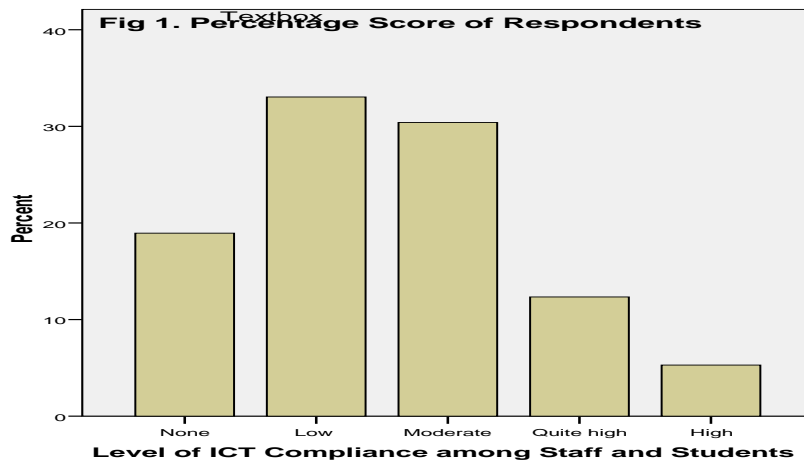
Data were collected through three different means. First in the colleges and departments, we approached a number of lecturers to help us administer the questionnaires in the classes in which students were asked to fill them out on the spot and returned them after class. This method had ensured quite a good response rate from students group. The second means was that we approached lecturers and administrative staff individually and invited them to participate in the survey. This was done with the help of research assistants who went round departments by departments and offices to and met the administrative staff. We made phone calls and sent e-mails and messages reminders to encourage participants to respond in the survey. At the end a total of 456 usable questionnaires were returned, constituting a response rate 95%.which is a very good returned.

Data Analysis

The analysis of the data involved a combination if descriptive statistics (i.e. (percentages and frequency count) and independent sample t-test, each addressing research objectives one and two respectively. The descriptive statistics (percentage and frequency count) computed from the responses to the Likert's type items using SPSS for windows to determine the level of staff and students' compliance to the ICT while, the independent sample t-test was run on the mean scores for staff and students responses to the Likert's type items in order to establish whether a significant difference exist between staff and students levels of ICT compliance in their pursuit of academic and administrative activities in the polytechnic.

PRESENTATION OF RESULTS

The first research objective was to *explore the level of ICT compliance among staff and students in Nigerian polytechnic by identifying whether they were knowledgeable with its core value in education*". A percentage analysis of the Likert's type items on the level of ICT compliance among staff and students in Nigerian polytechnic (Fig. 1) shows that a majority (62.4%) of the respondents have either very low level or no ICT compliance at all, while the remaining (37.6%) of the respondents have between moderate and high level of ICT compliance in their academic and or administrative pursuit. This result shows that about half of the sample completely do not utilize the ICT in their academic and or administrative activities, meaning that majority of the polytechnic staff and students up to this time decided to remain analogue despite all efforts made by the government to provide support for the development of ICT in Nigerian institution of higher learning.



The second objective of the study is “to establish whether there is significant differences between staff and students’ level of ICT compliance in the polytechnic”. To address this question, an independent sample t-test was performed on the group scores of students and lecturer/administrative staff. The results are presented in Table 1.

Table 1.

T-Test Results of Staff and Students’ ICT Compliance						
Respondents	N	df	M	SD	t	p-value
Staff	114	452	9.40	4.621	0.873	0.291*
Students	342		8.76	4.263		

*not significant at $p < 0.05$

The results point out that there is no significant difference between the group scores of students and lecturers/administrative staff of the polytechnic. Although lecturers/administrative staff yielded a higher mean score ($M=9.40$, $SD=4.621$) than students, this difference was not statistically significant. It can be concluded that both groups are about equal in terms of ICT compliance ($t=0.873$, $df=324$, $p=0.291$).

CONCLUSION

The findings of the study shows staff and students generally have either low level of ICT compliance or none at all. Very close to half of the respondents reported having zero compliance to ICT. The result shed light on the level of ICT compliance by staff and students in the polytechnic. The scenario that emerged from the findings is less than desirable, given the importance of ICT in education and all other endeavors of life in this present era. The polytechnic should therefore, take the first step in educating staff and students in raising their awareness levels on the important of ICT in widening their chances getting more and current information particularly in educational sector. Hence, more studies of this nature that delve into the level of ICT compliance of diverse higher education institutions populations are much needed to provide baseline data for ICT compliance in Nigerian higher institutions. This will generate insightful data into the state of ICT compliance among the higher institutions’ population considering the huge amount of money vested in the development ICT by the individual states and federal government.

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