## Information and Communication Technology (ICT) Compliance and Its Efficiency in Nigerian Private Universities

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**Abstract.** The purpose of this research work was to examine the state of ICT utilization and its efficiency in private universities in Edo state, Nigeria. Three private universities in Edo state were used as case study. Some objectives were also formulated which are to ascertain the level of ICT resources in private universities, to determine the usefulness of ICT resources in private universities, to determine the efficiency and effectiveness of ICT in private universities. Four research questions were formulated to guide the study. Descriptive survey was the research design adopted for the study. The population of this work comprised Igbinedion, Benson Idahosa, and Wellspring University in Edo state. The total of 364 staff made up the population. Total enumeration sampling technique was used for the study because the population was of a manageable size. Questionnaire was the major instrument the researcher used to collect data. Simple percentage was used to analyse data from the retrieved copies of questionnaire. Major findings showed high level of ICT compliance in the area of administrative function, also handling of students records. It was also revealed that ICT is used to carry out various functions such as computer based exams, storage of information, and that ICT in private universities have been very efficient and effective. It was recommended that provision of more ICT facilities such as laptops, printers, scanners etc, the training and retraining of staff and students on ICT usage, creation of suitable infrastructure environment for them all, should be encouraged in modern day private universities.

**Keywords:** ICT, E-learning, Staff, Students, Private universities, Information, and strategies

### Introduction

Globalization and the emergence of knowledge-based economies have forced many countries to reform their education system. According to Al-Sharifa (2012), the enhancement of human capital to meet modern day demands of a knowledge economy, and equip the new generation with the capacity to meet the challenges of the 21st century has become a priority. This challenge is particularly necessary in economies typical of countries, such as Kuwait, which have been dependent on the exploitation of non-renewable natural resource (Al-Sharifa, 2012).

Transiting from a resource-based economy to an economy based on knowledge and intellectual skills poses a key challenge for an education system. According to Al-Sharifa (2012), significant in the development of this new economy has been the expansion of Information Communication Technology (ICT). In education, in particular, ICT is a tool for transforming the education setting. However, transformation is only successful where there are effective change management strategies and appropriate leadership.

Bamiro and Liverpool (2012) observe that the computer (ICT) has already invaded and dominated private universities in the developed world, while in Nigeria it has been painfully slow. Akin to this is the report that no real effort has been made in ICT development both at the individual and corporate levels, and that most universities still process results manually (The Guardian Editorial, 2006). More so, most lecturers are yet to acquire the requisite ICT skills, and where opportunities exist for them to do so, they shun them because of the phobia they have developed over the ICT. Perhaps, this explains why Okogie (2008) the former NUC

Executive Secretary declared that most varsity teachers are incompetent. One may add that incompetent varsity teachers can only produce incompetent graduates (Akuegwu, Nwiue & Agba, 2008). Lecturers can only pass on skills and ideas to their students if they themselves are masters of their trade (Bamiro & Liverpool, 2012).

The quality of lecturers' instructional service delivery cannot be divorced from their utilization of ICT in our universities, which Aginam (2009) put at less than 5 percent. According to him, most Nigerian universities have little or no infrastructure for cyber centres, computer equipped classrooms or high speed internet and do not even have the funds to implement such infrastructures on their own. In addition to these are the problems of no regular power supply, dysfunctional telephone lines, lack of requisite telecommunications infrastructure, and low level of internet connectivity amongst others. Worse still, Nigeria has no specific policy for ICT in education. It was in February 2007 that the Federal Ministry of Education created its ICT department (Wikipedia, 2014). All these act to play down the utilization of ICT in instructional service delivery of lecturers.

However, there is a ray of hope with the Federal Government introduction of Universal Mandatory Information Technology Training (UMITT), which is being embraced by universities. The development in ICT in the last two years show that lecturers have access to a wide variety of ICT facilities, materials and texts to improve their content knowledge and instructional pedagogy. It is yet to be seen the extent this development has impacted on the quality of lecturers' instructional service delivery.

## Objectives of Study

The major objective of this study is to unravel the strategies for enhancing ICT utilization in private universities in Edo state of Nigeria. The specific objectives are:
1. To ascertain the level of ICT compliance in private universities.
2. To determine the usefulness of ICT resources in private universities.
3. To determine the efficiency and effectiveness of ICT in private universities.
4. To ascertain strategies for enhancing the utilization of ICT in private universities.

### ICT Compliance in Private Universities

ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools.

## E-Learning

*E-learning,* or electronic learning, is a general term used to refer to computer-enhanced learning. It is commonly associated with the field of advanced learning technology (ALT), which deals with both the technologies and associated methodologies in learning using networked and/or multimedia technologies (Hennessy et al., 2010); it is also known as online learning. Distance education provides the basis for e-learning's development. It overcomes timing, attendance and travel difficulties. E-learning allows delivery, dialogue and feedback over the internet. It allows mass customization in terms of content and exams. E-education can provide access to the best gurus and the best practices or knowledge available (UNESCO, 2006).

E-learning is an innovative, technology-driven revolution that increases accessibility to higher education in the present global age.

Babcock University e-Learning centre was established in the year 2010. The centre was charged with the responsibility of promoting qualitative, engaging and holistic education to a diverse target population which could be categorized into those teeming, young but university-qualified individuals who had found it difficult to be absorbed into the limited number of admission slots in the existing universities and those who had been settled in the nation's work

force, married with children, unable to enrol in full-time academic programme because of other competing demands but whose yearning desires for academic and professional advancement are yet to be fulfilled.

The e-Learning centre had run several content development workshops with over hundred fulltime and associate staff who are contributing to the curriculum and course development. The centre is in partnership with several institutions, some of those are British Open University and African Virtual University.

## CBT Test

Private Universities now make use of Computer Based Test (CBT) for its entrance examinations. Also, some of the General Education Courses (GECS) exams are done through the CBT.

## Mobile Learning

Today there are more mobile phones amounting to almost more than 6 billion population of the world (UNESCO, 2015). On this pedestal, mobile technology is changing the way people live and learn. The M-Learning involves the use of mobile technology, as standalone technology, to enable learning anytime and anywhere. Learning can unfold in a variety of ways: people can use mobile devices to access educational resources, connect with others, or create content, both inside and outside classrooms. Mobile learning encapsulates efforts to support broad educational goals such as the effective administration of school systems and improved communication between schools and families. Mobile devices can be used to access educational resources, connect with others, or create content, both inside and outside classrooms. M-learning encompasses efforts to support broad educational goals such as the effective administration of school systems and improved communication between schools and families.

Different private universities provide mobile tablets with educational resources and internet bandwidth for students at all levels. This allows the student to access educational resources online and interact with their colleagues and lecturers.

However ICTs are exerting impacts on pedagogical approaches in the classrooms. Their contribution to changes in teaching practice, school innovation, and community services is considerable. A research review by Kozma (2008) suggests three significant concerns of consideration regarding ICTs impact on education.

Firstly, student outcomes such as higher scores in school subjects or the learning of entirely new skills needed for a developing economy.

Secondly, consider teacher and classroom outcomes such as development of teachers' technology skills and knowledge of new pedagogic approaches as well as improved attitudes toward teaching.

Finally, one has to consider other outcomes such as increased innovativeness in schools and access of community members to adult education and literacy.

Generally, Voogt (2010) describes the following functions of ICT in private universities as an object of learning. What is being learned in such private university depends on the level of the students.

Also in various private universities ICT is implemented in different ways such as;

- ICT as an 'assisting tool'. ICT is used as a tool, for example while making assignments, collecting data and documentation, communicating, and conducting research. Typically, ICT is used independently from the subject matter.
- ICT as a medium for teaching and learning. This refers to ICT as a tool for teaching and learning itself, the medium through which teachers can teach and learners can learn. It

appears in many different forms, such as drill and practice exercises, in simulations and educational networks.

- ICT as a tool for organization and management in schools.

According to UNESCO (2006), educational systems all over the world are under increasing pressure to use ICT to teach students the skills and knowledge they need in the 21st century. It was noted by UNESCO that ICT have radical and positive implications over the conventional teaching and learning methods in universities. It therefore, predicted a transformation of the teaching/learning process and the way teachers and students gain access to knowledge and information. ICT enhances active, evaluative and creative learning techniques of students in a learner-centred environment.

According to Tiwari and Sahoo (2013), over the last three decades rapid growth and development has occurred in the area of information and communication technologies (ICT). Particularly in the last decade, the growth in prominence of social media and Web 2.0 technologies has had a dramatic impact globally on how people communicate. Social media platforms such as Facebook, Twitter, Linkedin, Google+ and Renren have the potential to become important disruptive technologies (Mutula, 2013) for building cutting-edge models of management education. However notes that to date applications of ICT have stimulated developments in e-learning more as support mechanisms than disruptive technologies in private universities.

### Usefulness of ICT Resources in Private Universities

ICT has potential application in many areas of library and information science education in different private universities. It can be used to teach computerized classification and cataloguing for the purpose of storage and retrieval of information in libraries and information systems. ICT is very useful in teaching students on how libraries can go into cooperation with one another via computers i.e. information networks. It is also useful in electronic presentation of instruction (power point) and in all forms of electronic learning (e-learning) with the lecturer as a facilitator and mentor. ICT applications are available in all the functional areas of library and information science education including circulation system, reference services, indexing and abstracting services, compilation of bibliographies, among others.

ICT is also adopted in various administrative functions in the university.

- *Organization of Information*

Institution administrators need to have basic information on students and teacher flows. For example, categorize data on student/staff by sex, class, state of origin, performance in schools etc. They organize data into an easily accessible format that can be easily stored and retrieved from the computer.

- *Analysing the Data Quickly and Accurately*

Obaje and Chollom (2010) note that not only does ICTs facilitate information exchange, they are deepening the process of creating new modes of sharing ideas, and reducing the costs of collecting and analysing information. Use of ICT will help in analysing the available data quickly and accurately with the help of organized data. The institutional management systems arrange the data in the form of graphs, polygons, tables, means, and standard deviation etc. for analysis purpose. These are the readymade data obtained within the short period of data entry for analysis of the data accurately and quickly.

- *Increasing Coordination*

Because of lack of timely, structured and efficient information sharing, there is a chance of duplication of data collection and compilation. This leads to lack of coordination between departments and directorates, institutional management systems databases help to avoid the redundancy or duplication of data thereby enhancing data coordination with departments.

- *Effective and Quick Decision Making*

The information present in the educational institutions is in fragmented and fuzzy form, it is generally compiled in non-standard formats. Manual handling of huge data is very difficult and causes delayed information collection and compilation. This will affect in decision-making process for quality education, but with the use of ICT, well-organized and analysed data is readily available to foster effective and quick decision-making.

- *Proper Utilization and Allocation of Resources*

It is very difficult to track the teachers as well as student's movement and progress at college/university, state and central level. It is also very difficult to track the assets and ultimately this is causing the impact on financial planning and budgeting and efficient tracking of available resources and its utilization, with the use of ICT it is easier to track and allocate institutional resources thereby aiding in planning and budgeting.

- *Access to the Stakeholders*

Institutional information systems manage information about students and staff so that it can be easily accessible by the parents, students, directors and the institutional administrators.

- *Students Performance Improvement*

Institutional information systems hold the information on students' achievement so that the management can monitor the performance of the institutions and intervene where progress is weak. It can also help in sharing of good practices where progress is good.

- *Efficient Management of Education and Institution*

ICT improves management of education through more efficient administrative process, including human resource management, monitory, evaluation and resources sharing. With the ready available data for analysis the administrators can make quick decisions about the improvement in education and as well as improvement in the functioning of institution.

- *Enhancement of Effective Communication and Knowledge Sharing*

The integration of ICT for example internet, emails, chat and instant messaging programmes, discussion boards and news groups in institutional administration has opened new ventures for communication. It is convenient; cheap and allows for administrators to share and exchange ideas instantly (Onuoha, 2010). Due to the recent development in ICT, we now live in a world without borders since the world has become a global village, this allows institutional administrators use ICT for improved communication as a process of transforming thoughts, sharing and imparting of information among different schools, and knowledge experts locally and all over the world which in return enhances the administration of their schools (Tinio, 2010).

- *Enhancement of Planning*

Institutional information systems hold the information on student, staff, resources etc. This could be used by administrators to plan and make decisions on the basis of accurate and readily available facts. They budget the school expenditure and plans for replacement of both obsolete and repairs of broken down equipment or institutional facilities.

- *Improvement in Monitoring*

Institutional administrators use computers in monitoring various areas in the institution, such as teacher's performance, monitoring student's progress and achievements.

- *Managed Instruction*

Institutional administrators use computer in scheduling courses, classrooms, inventory and personnel control, recording and reporting attendance, school accounting, storage and students results management. This is capable of generating results, retrieving lecture timetable, enlisting of courses and registration online.

### The Efficiency and Effectiveness of ICT in Private Universities

With the introduction of Information Communication Technology (ICT), private schools can now align with the global best practices. ICT occupies a central stage in the senior secondary school curriculum in order to present the total experiences to which all teachers and learners must be exposed and through which the content and performance objectives of the subject must be achieved for both teachers and learners. Also, the provision of teaching and learning materials for any subject are enhanced for effective teaching and learning. Thus, these could be possibly realized if the lecturers and student can effectively integrate ICT into the classroom. According to Obaje and Chollom (2010), a good lecturer can use various teaching and learning technologies (such as computer, internet and multimedia resources) which are increasingly being used in support of the private universities functions in presenting new challenges and opportunities for lecturers and students to translate information into relevant knowledge that a student can understand, retain and pass on to others under a conducive school environment.

Today, the adventure and advancement of new technologies (ICT) has challenged the traditional method and process of teaching and learning and have also change the way education is managed to a more flexible, friendly and simplified form. The United Nation Education Scientific and Cultural Organizations (UNESCO, 2006) stressed that ICT has turned from being a technology of communication and information alone, but to a curriculum creation and delivery system for educators and learners. ICT enhances possibility by providing what lecturers are able to do, by providing an entry point into the content and enquiries that were not possible without the use of ICT, by extending what students are able to produce and as a result of their investigations and by providing lecturers with the opportunities to become learners again. It has made it possible for complicated collaborative activities of teaching and learning by dividing it in space and time with seamless connectivity between them (Obaje & Chollom, 2010).

According to Mooij (2011), the use of ICT in teaching and learning in private universities today can assist in reducing the teachers' workloads through its use for lesson preparation, instructional delivery as well as teaching and learning evaluation. He further buttressed that private university lecturers will become learning facilitator, collaborator, coach, mentor, knowledge navigator and co-learner and not only a dispenser of knowledge. The educational reform policies were aimed at integrating the use of ICT tools in the Nigerian school system.

According to Aliyu (2007), proper and effective use of information and communication technology tools in private universities will definitely improve the quality of education in several ways such as increasing lecturers' motivation and engagement, facilitating the acquisition of learner's basic knowledge and skills and also to enhance lecturers training. McDonald (2012) stressed that the effectiveness and success of an institution lies on the quality of people (teachers/learner) who form and work within the institution.

### Ways to Enhance the Utilization of ICT in Private Universities

Today, many institutions in Nigeria are faced with the developmental challenges of the use of Information Communication Technology (ICT) in terms of e-teaching and e-learning processes. In 2007, the Federal Ministry of Education created its ICT department and has since been collaborating with several government agencies and other stakeholders in the private sector to initiate ICT driven projects and programmes to affect all levels of education sector in Nigeria (Singh, 2013). Like every issue of development in the country, all universities in Nigeria are struggling to access the technology as a measure to ascertain academic excellent through teaching and learning.

In an attempt to globalize the educational sector, leaders of the South – South States in Nigeria namely Bayelsa, Rivers, Akwa-Ibom, Cross-River, Edo and Delta (BRACED) are

viewing education and human capacity development as critical to the overall development of the schools, the development of strategies for the enforcement of ICT driven programmes has become imperative. In this age of information explosion, one's skill in processing and distribution of data using computer hardware and software, telecommunications, and digital electronics will largely determine one's value in the work force. Computer literacy will likely have such impact on career opportunities in the future just as the ordinary or conventional literacy had in the past.

Menjo (2012) emphasized the use of ICT as an effective teaching tool in private university education as many private university teachers now publish their course materials via the internet. They suggested that it is insufficient for only university to use ICT for good job combination leaving out the students' ability to do same. Educational technologists have cited many reasons as to why an education system based on ICT can more effectively result in positive pedagogic outcomes than one based only on conventional techniques (Light, 2009).

According to Singh (2013), acquisition, deployment and management of information technology resources and services for teaching depend on electricity. Studies have shown that poorly maintained equipment and poor network infrastructure are prominent obstacles to the integration of ICT tools in teaching. Poor technical equipment would make negative impact on teacher's desire to integrate ICT tools in teaching all other subjects. Technological and science laboratories are run using electricity. Computers cannot operate without electricity even if all the equipment required is present. A number of teachers today have never use computers in their lives and they are terribly shy when they are confronted with this new technology and the terminology associated with using them.

Some schools do not have them provided for their teachers and some teachers may not be economically buoyant to buy one for them. At the tertiary-level of education, Onuoha (2010) noted that National Universities Commission (NUC) in Nigeria has prescribed that there should be at least one computer to every four students and one PC to every two lecturers below the grade of lecturer I, one PC per senior lecturer and one notebook per reader/ professor. NUC has gone further to establish e-learning platforms fitted with twenty smart boards in twelve Federal universities for the promotion of the use of ICT in teaching and learning.

**Method**

The researcher deploys descriptive survey for this study to investigate the strategies for enhancing ICT utilization in private universities in Edo state. According to Nworgu (2006), descriptive survey design aims at collecting data on and describing it in a systematic manner, the characteristics, features or facts about a given population. Population is the sum total of respondents or variables the researcher intends to use for the study. The population of the study comprised staff and students in selected private university libraries in Edo state.

| Name of institution | Location | Date of establishment | Number of staff |
|---|---|---|---|
| Igbinedion University | Okada | 2002 | 200 |
| Benson Idahosa University | Benin city | 2003 | 105 |
| Wellspring University | Benin city | 2009 | 59 |
| **Total** | | | **364** |

*Note:* The sampling technique used for this study was total enumeration sampling method. Interestingly, three private universities, where selected and used for the study base on the availability of ICT facilities in their institutions.

The researcher personally visited the sampled population of respondents within a period of one (1) week interval, and personally administered the data collection tools to the respondents, also carefully observing the using of information and communication

technologies. This means that the collection of data is relevant to the study and all librarians working in the sampled university libraries were contacted in order for them to provide useful data in answering the listed questions in the questionnaire. Data collected were analysed using simple percentage, to answer the research questions raised. The researcher attempted to look at the research question, drawn from the research which serves as a means of confirming the strategies for enhancing ICT utilization in private universities in Edo state.

**Analysis of data**

This chapter is concerned with the presentation and analysis of data. The raw data were analysed critically to extract useful information for making inferences and conclusions on the research question. Frequency count, simple percentage were used for data analysis. Three hundred and sixty four (364) copies of the questionnaire were administered to staff in selected private university in Edo state. Two hundred and thirty-seven (237) copies of the questionnaire were filled, returned and were considered good for analysis. This represented 65.1% return rate.

**Answers to Research Questions**

**Research Question 1: The level of ICT compliance in private universities**

**Table 1: The level of ICT compliance in private universities**

| S/N | What is the level of ICT compliance in private universities? | VHL | HL | LL | VLL |
|---|---|---|---|---|---|
| 1 | Electronic learning | 237(100%) | | | |
| 2 | Creation of functional website | 237(100%) | | | |
| 3 | University has its E-portal to handle students' academic records | 237(100%) | | | |
| 4 | Internet access provided in personal offices | 237(100%) | | | |
| 5 | ICT tools fully integrated into teaching and learning | 237(100%) | | | |
| 6 | University has enough digital resource/E-resources | 237(100%) | | | |
| 7 | ICT use for university administrative system | 237(100%) | | | |
| 8 | Introduction of Computer Based Test | 237(100%) | | | |

Table 1 shows that the level of ICT compliance in the selected private universities (that is Introduction of Computer Based Test, Internet access provided in personal offices, ICT tools fully integrated into teaching & learning, Creation of functional website and social media, Internet access provided in personal offices, Electronic learning) is on a very high extent.

**Research Question 2: What is the use of information and communication technology in private universities?**

**Table 2: The use of information and communication technology in private universities**

| S/N | What is the use of information and communication technology in private universities? | SA | A | D | SD |
|---|---|---|---|---|---|
| 1 | It is used to organize information resource at the institution | 189(79.7%) | 48(20.3%) | | |
| 2 | It is used for analysing data accurately | 190(80.2%) | 47(19.8%) | | |

| | | SA | A | D | SD |
|---|---|---|---|---|---|
| 3 | Efficient management of educational institution | 184(77.6%) | 53(22.4%) | | |
| 4 | It is used to enhance effective communication | 179(75.5%) | 58(24.5%) | | |
| 5 | It is used to improvement in monitoring | 201(84.8%) | 36(15.2%) | | |
| 6 | It is used for the enhancement of planning and decision making | 148(62.4%) | 89(37.6%) | | |
| 7 | It is used for storage of institutional information | 237(100%) | | | |
| 8 | It is also used for the conduct of computer based exams (CBE) | 237(100%) | | | |
| 9 | To monitor the performance of students | 237(100%) | | | |

Table 2 shows the frequency and percentage of responses on the use of information and communication technology in private universities. The result revealed that 200 (84.4%) strongly agree and 37 (15.6%) to the use of ICT in carrying out function private universities such as organizing information resource at the institution, analysing data accurately, storage of institutional information, conduct of computer based exams (CBE), and monitoring the performance of students etc.

**Research Question 3: How efficient and effective is the use of ICT resources in private universities?**

**Table 3: Efficiency and effectiveness of the use of ICT resources in private universities**

| S/N | How efficient and effective is the use of ICT resources in private universities? | SA | A | D | SD |
|---|---|---|---|---|---|
| 1 | Provide staff with vase amount of information resources | 152(64.1%) | 85(35.9%) | | |
| 2 | Gather record and generate result of data collected | 158(66.7%) | 79(43.3%) | | |
| 3 | For research purpose (project, assignment) | 192(81%) | 45(19%) | | |
| 4 | Efficient management of educational institution | 190(80.2%) | 47(19.8%) | | |
| 5 | Enhanced teaching and learning process | 154(65%) | 83(35%) | | |
| 6 | ICT has enhanced the quality and accessibility of education | 176(74.3%) | 61(25.7%) | | |
| 7 | It has fostered online learning environment | 189(79.7%) | 48(20.3%) | | |
| 8 | Effective conduct of computer based test and exams (CBT) | 219(92.4%) | 18(7.6%) | | |
| 9 | Promoted scholastic performance | 216(91.3%) | 21(8.7%) | | |

Table 3 shows the percentage frequency of the efficient and effective use of ICT resources in private universities. The result reviews that 183 (77.2%) strongly agree and 54 (22.8%) agree to the efficient and effective use of ICT resources which is; providing staff with vase amount of information resources, gathering record and generating result of data collected, for research purpose (project, assignment), efficient management of educational institution, fostering online learning environment, promoting scholastic performance, effective conduct of computer based test and exams (CBT) etc.

**Research Question 4: What are the possible ways to enhance utilization of ICT in private universities?**

**Table 4: The possible ways to enhance utilization of ICT in private universities**

| S/N | What are the possible ways to enhance utilization of ICT in private universities? | SA | A | D | SD |
|---|---|---|---|---|---|
| 1 | Creation of suitable ICT infrastructure environment | 154(65%) | 83(35%) | | |
| 2 | Solving cultural problem that is old method functioning | 176(74.3%) | 61(25.7%) | | |
| 3 | Institution support | 189(79.7%) | 48(20.3%) | | |
| 4 | Training of student and staff on the use of ICT | 219(92.4%) | 18(7.6%) | | |
| 5 | Personal development for lecturers in private university | 216(91.3%) | 21(8.7%) | | |
| 6 | Provision of sufficient ICT facilities | 179(75.5%) | 58(24.5%) | | |
| 7 | In every lecture there should be laptops provided to facilitate E-learning | 201(84.8%) | 36(15.2%) | | |
| 8 | Installing electricity power back up | 148(62.4%) | 89(37.6%) | | |
| 9 | Organizing workshops | 216(91.3%) | 21(8.7%) | | |

Table 4 shows the percentage of the total responds to the ways of enhancing ICT utilization in private universities. The result reviews that 189 (79.7%) strongly and 48 (20.3%) agree to the ways of enhancing ICT utilization such as: Creation of suitable ICT infrastructure environment, Solving cultural problem that is old method functioning, Organizing workshops, Personal development for lecturers in private university, In every lecture there should be laptops provided to facilitate E-learning.

**Discussion of Findings**

The discussion of the findings of the study was formulated according to the problems which the research questions sought to solve.

The findings of the study in Table 1 show that private universities' level of ICT compliance is on a very high extent such as: Creation of functional website and social media; University has its E-portal to handle students' academic records; Internet access provided in personal offices; University has enough digital resource/E-resources; ICT tools fully integrated into teaching & learning, etc. According to UNESCO (2006), educational systems all over the world are under increasing pressure to use ICT to teach students the skills and knowledge they need in the 21st century. It was noted by UNESCO that ICT have radical and positive implications over the conventional teaching and learning methods in universities. It therefore, predicted a transformation of the teaching/learning process and the way teachers and students gain access to knowledge and information. ICT enhances active, evaluative and creative learning techniques of students in a learner-centred environment.

Also the findings of the study in Table 2 show that ICT has greatly been used in private universities for various purposes such as: storage of institutional information; conduct of computer based exams (CBE); monitoring the performance of students; efficient management of educational institution; analysing data accurately; enhancing effective communication, etc. This statement is in support with that of Uwaifor (2010) who remarked that there is a noticeable role of ICT in integrating and creating pool of educational media, sound, visual, textual and numeric data for effective teaching and learning of business education. These would be meaningful if they have pedagogical utility in a classroom setting to enhance curricula

relevance and adoption. Also Obaje and Chollom (2010) note that not only does ICTs facilitate information exchange, they are deepening the process of creating new modes of sharing ideas, and reducing the costs of collecting and analysing information. Use of ICT will help in analysing the available data quickly and accurately with the help of organized data.

The study in Table 3 shows that the use of ICT in private universities in Edo state has been effective and efficient such as: providing staff with vast amount of information resources; gathering record and generating result of data collected; for research purpose (project, assignment); enhancing the quality and accessibility of education; effective conduct of computer based test and exams (CBT); fostering online learning environment; enhancing teaching and learning process, etc. Various respondents strongly agree to this. UNESCO (2006) agrees with the statement, the body stressed that ICT has turned from being a technology of communication and information alone, but to a curriculum creation and delivery system for educators and learners. Also ICT enhances possibilities by providing what lecturers are able to do, by providing an entry point into the content and enquiries that were not possible without the use of ICT, by extending what students are able to produce and as a result of their investigations and by providing lecturers with the opportunities to become learners again (Obaje & Chollom 2010). Obaje and Chollom (2010) also state that it has made it possible for complicated collaborative activities of teaching and learning by dividing it in space and time with seamless connectivity between them.

Finally, the study in Table 4 gives us the various ways in which the use of ICT can be enhanced in private library. The study of Singh (2013) shows that acquisition, deployment and management of information technology resources and services for teaching depend on electricity. Studies have shown that poorly maintained equipment and poor network infrastructure are prominent obstacles to the integration of ICT tools in teaching. This statement is in agreement with the finding gotten in this work. Also Onuoha (2010) noted that National Universities Commission (NUC) in Nigeria has prescribed that there should be at least one computer to every four students and one PC to every two lecturers below the grade of lecturer I, one PC per senior lecturer and one notebook per reader/ professor. NUC has gone further to establish e-learning platforms fitted with twenty smart boards in twelve Federal universities for the promotion of the use of ICT in teaching and learning.

**Summary of Major Findings**

The major findings of this study are summarized as followed:

1. The findings of the study on private university shows that ICT compliance is on a very high level in the area of administrative functions, also handling of student records.

2. From the study information and communication technology is used to carry out various functions such as computer based exam, storing of information, monitoring the performance of students in private universities.

3. The findings of the study show that the use of ICT in private universities has been very efficient and effective in carrying out various activities such as gathering records and generation of result of data collected, providing staff with vast amount of information resources etc.

4. From the findings of the study, ways of enhancing utilization of ICT in private universities were suggested and agreed on such as training of students and staff on the use of ICT, installation of electricity power back up etc.

**Conclusion**

Private universities are established to facilitate creation of new knowledge, innovation and technologies for the overall socio-economic empowerment of individual and national integration. The introduction of ICT in private university for e-learning process and carrying

out various activities cannot be overestimated, especially in Nigeria where emphasis is being placed on technological development. ICT is a powerful tool that can be used to enhance and encourage teaching and learning process in private universities. Through ICT, administrators, lecturers, students will be able to work effectively, independently and acquire more knowledge in their disciplines. Both the government and stakeholders should join hand together to ensure adequate provision of e-learning resources to our universities to facilitate technological advancement and to aid teaching and learning process. Computer and ICT training is very important in raising the level of computer utilization. Computer anxiety is also a major cause of underutilization of computers. One of the ways of overcoming computer anxiety is to possess a computer system. Continuous training in ICT is important to improve the way staff use ICT facilities.

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