IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON THE MANAGEMENT OF UNIVERSITIES IN NIGERIA

BY

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PH.D/EDUC/23369/2012-2013

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DOCTOR OF PHILOSOPHY (Ph.D) IN EDUCATIONAL ADMINISTRATION AND PLANNING,

DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND CURRICULUM,
FACULTY OF EDUCATION,
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ZARIA, NIGERIA

SEPTEMBER, 2018

DECLARATION

I hereby declare that this Thesis titled, "IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON THE MANAGEMENT OF UNIVERSITIES IN NIGERIA", has been written by me in the Department of Educational Foundations and Curriculum under the supervision of Dr. E.I. Makoju, Dr. A.A. Igunnu and Professor B.A. Maina.

The information derived from the literature review has been duly acknowledged in the text and a list of references provided. No part of this Thesis was previously presented for another degree or diploma at any University.

_____ _____

Omolara Taiwo OLADELE Date

CERTIFICATION

This Thesis titled, "IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON THE MANAGEMENT OF UNIVERSITIES IN NIGERIA", meets the regulations governing the award of Doctor of Philosophy degree in Educational Administration and Planning of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my loving husband, Professor S.B. Oladele, and my Children, Emmanuel Oluwadamilola, Samuel Oluwabukunmi and Precious Oluwatoyin.

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All praises and thanks be to God for sparing my life, for giving me inspiration and grace to fulfill my dream. My profound gratitude goes to my able supervisors, Dr. E.I. Makoju, Dr. A.A. Igunnu and Professor B. A. Maina, for their support, guidance, tolerance and for ensuring the completion of this work. May God see you through in all your endeavours, and bless you with good health. Amen.

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ABSTRACT

The study investigated the "Impact of Information and Communication Technology (ICT) on the Management of Universities in Nigeria". Nine objectives were postulated in line with research questions and hypotheses. The variables investigated in the objectives include communication, decision-making, planning, staff development, maintenance of discipline, provision of welfare and health services, maintenance of records, interpersonal relationship and provision of games/recreational services. The research design employed in this study was descriptive survey design. The population for the study comprised 138 universities as at the time of the study. These universities include 40 Federal, 40 State and 58 Private universities. These 138 universities were further grouped into six geo-political zones of Nigeria. A stratified sampling technique was adopted for this study in order to give equal chance to all sample representatives and be able to cover all the universities across the six geo-political zones. Consequently, one university was randomly selected from each of the three groups of universities in each geo-political zone, making a total of 18 selected universities. A purposive sampling was used to share 50 copies of questionnaire in each of the 18 universities, which gave a total of 900 as sample size. The data obtained were analyzed using percentages, descriptive statistics and Analysis of Variance (ANOVA) statistics. Results showed that Information Communication Technology (ICT) enhanced better information dissemination in the Universities, there were inadequate provision of welfare and health services such as lecture room, clinics and accommodation for both staff and students in the Universities and there were inadequate computer centres where the youth, within the neibouring community, can learn in the Universities. Based on the findings, it was concluded that ICT has both positive and negative impacts on the management of universities in Nigeria and that availability of ICT has positive impact on communication in universities in Nigeria. It was recommended among others that university authorities should be more proactive in the provision of modern or up-to date information and communication systems in their universities. Furthermore, in order to enhance discipline in the universities ICT should be used for payment of all fees and levies and be used in conducting computer based tests and examinations.

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OPERATIONAL DEFINITION OF TERMS

Information and Communication Technology (ICT): ICT means a range of new technologies and their application, including all aspects of the use of computer, micro-electronic, satellite and communication technologies.

Management: Management implies direction, planning, programming, regulating financial, personnel equipment management, output and time, control the conduct of meetings and upward as well as downward communication.

Management Information Services: involves various processes covering records or data generation, which may also involve planning, coordinating, organizing, directing and controlling certain activities in an organization.

Decision Making: is a process of identifying alternatives, and choosing one of the alternatives to solve a problem or address an opportunity.

Planning: can be defined as the process of peering a set of decisions which are to serve as the basis of human action.

Staff development: deal with the development of quality staff in different areas of human endeavours.

Maintenance of Discipline: is often referred to when students are taught to respect the school authorities, to observe school rules and regulations and to maintain an established standard of behavior.

Welfare and Health Services in Schools: Welfare refers to the promotion and maintenance of good learning, good mental and physical health as well as social well-being of students and conditions which are conducive.

Interpersonal Relationship: is concerned with relationship between two people or two groups of people. Interpersonal relationship in this context is the relationship that exists between the university and its environment.

Games/Recreational Services: games/recreational services are aimed at developing and maintaining physical fitness and total well being of citizens.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Nigeria as a nation has recognized the potential of information and communication technology (ICT) in new educational system. The national policy on computer education emphasised the need for the integration of ICT into the Nigeria educational system. The main purpose of ICT in university education is to involve university management into teaching and learning processes with the aid of ICT facilities. ICT facilities comprises internet, e-mail, computer assisted machine (CAM), e-library, facsimile telephone among others. However, ICTs represent a cluster of associated technologies defined by their functional usage in information accessed communication which also involve internet. Internet is worldwide network of computers, and a network of people using computers that make vast information available.

The researcher observed the entire world as a global village. Technological advancement has brought information and communication technology (ICT) into virtually all human endeavours, including teaching and learning processes, acquisition of computer literacy skills as well as good face-value certificate. The researcher also sees that ICT has redefined living globally. Presently, the university management is not left behind in the globalization. The management of the university uses ICT as a tool needed within the university organization to improve and achieve better performances in the following areas of managerial functions: Planning, staff development, decision making, communication, discipline and students' welfare/ health services, etc. The emergence of multimedia automated information packaging as well as the internet has increasingly reduced old method of keeping information. Also, the emergence of revolutionizing computers and telecommunications, the conventional techniques are no longer adequate for the exchange of information. The convergences of computer and telecommunications have therefore drastically changed the method and spread of exchange of information. Thus, the information technology has taken over a substantial part of the roles played by the orthodox method of information dissemination.

Adeyemi (2011) stated that computers and computerization have ushered in a management revolution never equaled in human history when it comes to information processing, storage and retrieval. Thus, there is an urgent need to integrate the information and communication technology to assist universities' governing councils at all levels of management.

Human existence has been privileged through scientific process of acquiring facts and knowledge. These are impetus to collections of information updated overtime to meet dynamics response to value added environment. Thus, the validity and reliability of which such valuable existence are scientifically proven through relative experience (Rodgrigvez and Wilson, 2000). Such empirical studies over a phenomenon have and in most cases element or rudimentary attachment to a more similar or different phenomena either past or present, and may likely have a future

connotation. Early researchers serendipitously trampled over events that necessitated the need for value existence.

Infrastructure is central in achieving the goal of digital inclusion, enabling, sustainable and affordable access to ICT (Mohammed, 2006). The introduction of ICT into management of universities clearly changes the way education is conducted. Not only is it possible to work with distance learning and achieve a closer collaboration between different universities, ICT also paves the way for a new pedagogical approach, where students are expected to play more active role than before. Successful open and distance learning depends largely on well-established and properly maintained ICT infrastructure. The ICT in education has been a welcome development even in the classroom.

Advances in ICT facilitate advancement and improvement in education. Lecturers can convert their power-point slide presentations to portable documentation folder files (electronic documents), which students can download and print from a web site. Teachers may also use other web sites for illustration within their classroom lectures. Students may be asked to participate in online discussion forum, and to discuss the lecture afterwards among themselves.

On decision making and management principles, it is an established fact that universities have a lot of decisions to make on day to day activities of the school. Ability to make and take the right decision from various available options is seen evidence to a successive management of institution anywhere. Various studies on decision making have established the fact that when decision making is jointly made and taken, tendency for success is high compared to when it is singularly made. Events in the schools in the recent time portray exclusively in the way actions are taken on most important issues. Management staff and ICT instructors see policies as “their” policies which we must follow rather than “our” policies which we must all join hands to ensure success. This study believes that when decision making is inclusive, personal responsibility is enshrined. When the reverse is the case, people simply carry out other people’s orders so that when it fails, responsibility is shifted to the university management. With this background, understanding of decision making, this study considers it a vital objection to be examined for this study.

On the issue of maintenance of discipline, various studies have established this as a global challenge and therefore not peculiar to university alone. It is of importance to this study because indiscipline in Nigeria universities is assuming an alarming proportion. No serious academic achievement can be achieved under a lawless and undisciplined learning environment. Since tendency for indiscipline is peculiar to youths in general and university students in particular, stake holders in general and university management in particular need to fashion out viable management techniques to control indiscipline in our institutions. This is why this study considers this an important objective of investigation for the study.

School facilities provision and maintenance is another area of importance to the study. Its management in our universities over the years has put everyone in state of confusion if anything is

ever done on school facilities. Studies have shown that most public universities are deficient in both provision and maintenance of school facilities. People read from the media of how government allocates billions of naira to the educational sector while little is seen on what the allocation is used for. It is therefore a cause of interest to this study to investigate the impact of Information and Communication Technology (ICT) on the management of Universities in Nigeria.

The success of any educational institution cited in any community can only be guaranteed by its cordial relationship with the community where it is situated. Universities are basically established to educate people in a community. If the university does not enjoy the corporation of such community, it is not likely to meet its objectives. The role of the community in smooth management of university is very vital because the school is not just located in their midst. This puts on them the responsibilities of security, occasional assistance in facilities provision, augmentation and sourcing for man power when occasion demands and many other services.

Other variables like staff development, maintenance of records and planning in the universities not left out in this evolution. The study investigated how these universities manage the above mentioned factors or variables to see if they are in line with laid down rules and regulations of government and that of other authorities in the field of educational administration and planning. The study also investigated to see to what extent universities are in compliance to laid down principles, rule and regulations in their day-to-day management of their institutions.

In Nigeria, there has not been explicit policy on ICT. The National policy on education does not give any guidelines on school technology plan. National policy on education cannot adequately take care of the need of the Nigerian educational system. There is the need to revise the Nigeria National policy on education. Such revision should be taken to involve stakeholders in the area of education so that they can ensure that the policy covers issues about ICT and learning through ICT. Indeed explicit policy on ICT in education should provide guide to development of ICT infrastructure.

In Nigeria, the available infrastructures for ICT in most of these universities are grossly inadequate. It was observed that most university students still visit internet cafes off campus because of too much demand on the internet on campus. The bandwidths shared on most of these systems at cyber cafes are still low; hence much time is still wasted on internet browsing. Government policy has been the deregulation of telecommunication industry. ICT infrastructures are therefore mostly provided by private entrepreneurs for business purposes.

Education is the development of an individual to be useful to himself, his family and the society. Generally, development in this case does not only mean physical development that we can always see, but it also includes intellectual and emotional developments that only manifest in the individual. In an age of science and technology, an individual, as a result of his training would be equipped to serve his nation and use his acquired skill to develop and maintain the tools that are essential for the scientific and technological development.

Education can also be seen as an all-round development of a child. No meaningful development can be achieved without the education of an individual within the society. The world declared in 1948 that education should be made unto all. This slogan gathered momentum at the approach of the 21st century as every government sees education as the only means of eradication of illness, poverty and disease. It is also a way of producing citizens who are socially adjusted, morally dependable, mentally and physically alert, intellectually fit, economically in the area of ICT, nationally oriented and culturally adjusted. Education is the sure way for an egalitarian citizenship. Technology has certainly changed the way we live. It has impacted different facet of life and redefined living. Undoubtedly, technology plays an important role in every sphere of life. Several manual tasks can be automated, thanks to technology.

Technology, according to Norris et al. (2003) is the mother of civilizations of arts and of sciences. It has revolutionized the field of education. The importance of technology in schools cannot be ignored. Infact, with the onset of computer, impartation of knowledge has become easier. Technology has made the process of learning enjoyable. For example, addressing systems using microphones and speaker make it possible for teacher to reach a larger number of people (students). Computer technology has significantly changed our lives enormously both at home and work. It has changed our lives more than anyone would ever have imagined. In the last 50 years, the advances made in science have been far greater than all the combined discoveries in mankind's history.

During the early 70's, computers were large bulky machines afforded only by the mega rich corporations. However, that has changed and in the last two decades almost every home in urban area has at least one personal computer or phone. Today, many people live their lives on computers. Computers knowledge has opened up another dimension to many of our lives. One can chat, phone, see movies, watch photos, read, travel, work, play games and perform almost any activity on personal computers. The days of phoning and mailing letters have become obsolete. Computers can instantly send messages to anyone anywhere and get an instant reply. It would be difficult to find a type writer or fax machine today, the ICT (computer) evolution has led to a new industry of scanners, digital cameras and printers. The social impact of ICT has led to a redefinition of our lives and vastly improved our knowledge as people can now go to the moon every night and travel across the different galaxies from the privacy of our homes.

1.2 Statement of the Problem

The researcher observed that inspite of the much importance attached to the usefulness of ICT, most universities in Nigeria are not making use of this helpful tool maximally. Much is still needed to be done to improve ICT, especially in the area of communication; maintenance of records, decision making, planning, discipline; interpersonal relationship; staff development; student welfare/health services and provision of games/recreation services.

It has also been observed by the researcher that ICT infrastructure in most of these universities are grossly inadequate, most universities management staff, Heads of Departments and lecturers still carry office works to private business centres. Also, it is worthy to note that ICT is faced with myriads of constraints, which have restricted its efficient and effective use.

The importance and usefulness of ICT cannot be overemphasized. The National Policy on Education (2014) recognizes the prominent role of Information Communication Technology ICT in the modern world today hence the integration of ICT in Education in Nigeria. Information has a vital role to play in human life and others area such as staff development, discipline, planning, decision making process, maintenance of records, communication and students welfare/health services in the universities in Nigeria. The 20th century ushered in increase in information as a result of social progress and vigorous technological development, information technology is therefore an important area of study on its own right and has impact across all areas of study in the universities in Nigeria. Increase access to ICT facilities in the home, at work and educational institutions has promoted E-learning in schools. The rapid development of technology has brought constant insistent evaluation of learning process as a result of the easy worldwide communication which provides access to huge collection of data.

Another problem is poor maintenance of the available ICT infrastructure. Therefore, the study was set to investigate impact of ICT in the management of universities in Nigeria.

1.3 Objectives of the Study

The study was set to achieve the following objectives, to:

1. assess the impact of ICT on communication in universities in Nigeria;
2. find out the impact of ICT on decision making process in universities in Nigeria;
3. ascertain the impact of ICT on planning in universities in Nigeria;
4. examine the impact of ICT on staff development in universities in Nigeria;
5. assess impact of ICT on maintenance of discipline in universities in Nigeria;
6. assess the impact of ICT on provision of students' welfare/health services in universities in Nigeria;
7. ascertain impact of ICT in the maintenance of records in universities in Nigeria;

8. examine impact of ICT on interpersonal relationship in universities in Nigeria; and

9. ascertain impact of ICT on provision of games/recreational services in universities in Nigeria.

Research Questions

The following research questions are presented to guide the study:

1. What is the impact of ICT on communication in universities in Nigeria?

2. In what ways do ICT impact on decision making process in universities in Nigeria?

3. How does ICT impact planning in universities in Nigeria?

4. What is the impact of ICT on staff development in universities in Nigeria?

5. What is the impact of ICT on maintenance of discipline in universities in Nigeria?

6. How does ICT impact provision of students' welfare/health services in universities in Nigeria?

7. In what ways do ICT impact maintenance of records in universities in Nigeria?

8. In what ways do ICT impact interpersonal relationship in universities in Nigeria?

9. What is the impact of ICT on provision of games/recreational services in Nigeria?

1.5 Research Hypotheses

The following null hypotheses were postulated:

HO1 There is no significant difference in opinions of the respondents on the impact of ICT on communication in universities in Nigeria;

HO2 There is no significant difference in the opinions of the respondents on impact of ICT on decision-making process in universities in Nigeria;

HO3 There is no significant difference in the opinions of the respondents on impact of ICT on planning in universities in Nigeria;

HO4 There is no significant difference in the opinions of the respondents on impact of ICT on staff development in universities in Nigeria;

HO5 There is no significant difference in the opinions of the respondents on maintenance of discipline in universities in Nigeria;

HO6 There is no significant difference in the opinions of the respondents on impact of provision of students' welfare/health services in universities in Nigeria;

HO7 There is no significant difference in the opinions of the respondents on impact of maintenance of records in universities in Nigeria;

HO8 There is no significant difference in the opinions of the respondents on impact of ICT on interpersonal relationship in universities in Nigeria; and

HO9 There is no significant difference in the opinions of the respondents on provision of games/recreational services in universities in Nigeria.

1.6 Basic Assumptions

The study was based on the assumptions that:

1. ICT helps smoothing the relationship between the university management staff and the general community;

2. ICT usage in the institution will lead to more rational decision making process;

3. planning in the university will be more effective with the usage of ICT in universities in Nigeria;

4. staff development would be more effective with the usage of ICT in universities in Nigeria;

5. ICT improves maintenance of discipline in universities in Nigeria;

6. student welfare services will be more effective with the usage of ICT in universities in Nigeria;

7. ICT will improve maintenance of records in universities in Nigeria;

8. ICT will improve interpersonal relationship in universities in Nigeria; and

9. games/recreational services will be more effective with the usage of ICT in universities in Nigeria.

Significance of the Study

Presently, the government and other stakeholders in the education sector have shown great interest in information and communication technology in Nigeria. A study of this nature, then would hopefully boost greatly the interest of the government and other stakeholders in the education sector towards information and communication technology. The study will help to fill the gap in the existing dearth of knowledge and also contribute to knowledge in the field of education

management. The findings of this study would help universities staff and students; and governments and non-governmental agencies to develop interest and help to create more awareness on the importance of ICT in the area of educational development.

This study is significant at this time that the Nigerian educational system is going through reforms as it is expected to provide useful information towards embracing ICT as a management option from raising the quality of university education in Nigeria as a whole. The researcher believe that the findings of this research work is of the great importance to Nigeria universities on the need to expose all academic staff, especially those holding administrative positions, to attend periodic workshops, seminars and conferences in the area of ICT on the management of universities in Nigeria to enhance qualitative educational services to members of the universities.

This research work is also expected to sensitize policy makers in Nigeria about the merits and demerits of ICT as management option, thereby working to overcome their disadvantages. Thus, it is expected to guide educational planners on the provision of educational ICT facilities that would improve the quality of universities administration. Finally, the result of this study would contribute to development in the field of educational management since the information contained there may serve as a vital source for further research work.

1.8 Scope of the Study

The study focused on impact of ICT on the management of universities in Nigeria. While there were many principles of management that could be used as tools/indicators to measure and improve the level of impact of ICT, the following variables were considered: communication, planning, decision-making, staff development, maintenance of discipline and provision of students' welfare/health services, maintenance of records, interpersonal relationship and games/recreational services.

The scope of the geographical coverage of this study were all universities in Nigeria, Federal, State and Private universities selected randomly from the six geopolitical zones. A fundamental limitation of the study was the severe problem confronting the universities' staff background with ICT variables as data gathered from their perception could be a limiting factor. For instance, the information through survey data might only give peripheral and incomplete evidence of impact of ICT as the sample population was 18 universities.

The dearth of literature in the area of empirical research particularly as related to impact of ICT in the Nigerian setting was a limiting factor. As a result of the foregoing limitation, the interpretation of the findings and any generalizations should be cautiously guided and executed.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviewed the related literature on impact of information and communication technology (ICT) on the management of universities in Nigeria. The assessment was organized under the following sub-headings:

2.2 Conceptual Framework;

2.2.1 Concept of Management;

2.2.2 Management Information Service (MIS);

2.2.3 Decision Making Process in Organization;

2.2.4 Planning in Organization;

2.2.5 Staff Development in Organization;

2.2.6 Maintenance of Discipline in Organization;

2.2.7 Students' Welfare and Health Service in Schools;

2.2.8 Maintenance of Records in Organization;

2.2.9 Interpersonal Relationship in Organization;

2.2.10 Games/Recreational Services in Schools;

2.2.11 Staff Development Programme in Nigeria;

2.3 Theoretical Framework;

2.3.1 Theoretical Framework on Communication;

2.3.2 Theoretical Framework on Decision-Making;

2.3.3 Theoretical Framework on Planning;

2.3.4 Theoretical Framework on Staff Development;

2.3.5 Theoretical Framework on Maintenance of Discipline;

2.3.6 Theoretical Framework on Students' Welfare/Health Services;

2.3.7 Theoretical Framework on Maintenance of Records;

2.3.8 Theoretical Framework on Interpersonal Relationship;

2.3.9 Theoretical Framework on Games/Recreational Services;

2.4 Problem Militating Against ICT in Universities in Nigeria;

2.5 Empirical Studies; and

2.6 Summary.

2.2 Conceptual Framework

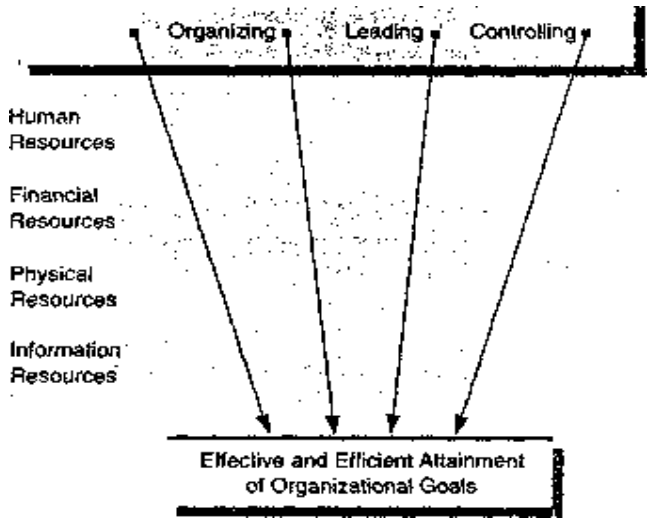
The conceptual framework of this study was expatiated under the following headings:

2.2.1 Concept of Information and Communication Technology (ICT)

Information and communication technology (ICT) is an indispensable part of the contemporary world. In fact, culture and society have to be adjusted to meet the challenges of the knowledge age. The pervasiveness of ICT has brought about rapid technological, political and economic transformation which has eventuated in the network society organized around ICT (Alter, 2004). The field of education has not been unaffected by penetrating influence of information and communication technology. Undoubtedly, ICT has impacted on the quality and quantity of teaching and learning dynamic, interactive and engaging content and provide real opportunities for individualized instruction information; it has accelerated, enriched and deepen skills and could engage students in learning, help to relate school experiences to work, practice, help to create economic viability for workers and contributes to radical changes in school; strengthen teaching and provides opportunities for connection between the school and society (Kirschnaveni and Meenakumeri, 2010). In research, ICT provides opportunities for schools to communicate with one another through e-mail/mailing list and chat rooms etc. It also provides quicker and easier access to more extensive and current information, and it can be used to do complex mathematical and statistical calculations. Furthermore, it provides research avenue for the dissemination of research report and findings (Emechebe, 2003). The utilization of ICT in instructional service delivery among lecturers in Nigeria universities according to Okebukola (2006) has been more of departmental affairs.

The real increases in organizational productivity due to information technology come from the ability and effort of the university management to communicate in new and different ways in the following areas: Planning, decision making, staff development, record keeping, discipline, security, welfare and university community relationship.

Figure 1: Basic managerial functions



Managers engage in the four basic functions of planning, organizing, leading, and controlling. These functions are applied to human, financial, physical, and information resources, with the ultimate purpose of attaining organizational goals efficiently and effectively.

Source: Zainally (2008)

The illustration above shows that integration of ICT to managerial functions will promote the following effective and efficient attainment of the communication, decision making, planning, maintenance of discipline, student welfare/health services and staff development.

Information and communication technology has been subjected to varieties of definitions, course equality as a pertinent question that brings to mind what exactly is ICT? Techterms (2010) elucidated ICT as an acronym for Information and Communication Technologies but beyond this acronym there is not a universally accepted definition of ICT. This is because the concepts, method and applications involved in ICT are constantly evolving on an almost daily basis. It is difficult to keep up the changes since they happen so fast. A good way about ICT is to consider all uses of digital technologies that already exist to help individuals. In view of these definitions therefore, ICT can be defined as the use of information in order to meet human need or purpose including reference to the use of contemporary devices such as the internet etc.

Techterms (2010) observed that ICT includes any communication device or application encompassing, radio, television, cellular phones computer and network, hardware and software, satellite systems and so on as well as the various services and applications associated with them (Search Cio-midmarket, 2012).

Again, in the word of Tutortou (2006), ICT is all embracing term that includes any communication device or the application about radio, television, cellular phones, computer satellite system as well as the various services and applications associated with them, such as video conferencing and distance learning. From these definitions, some of the applications of ICT become clear learning electronic administration of which can be facilitated by tertiary institutions. Rodriguez and Wilson (2000) also viewed ICT as the set of activities which facilitate, by electronic means, the processing transmission and display of information.

In addition, Capron (2000) identified information and communication technologies as what people use to share, distribute and gather. Also Cole (2000) viewed information technology as the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by micro electronics based combination of computing and telecommunications. Information and communication technology refers to technologies that provide access to information technology, but focus primarily on communication technologies these includes the internet, wireless networks, cell phones, and other communication media. Okebukola (2006) stated that information and communication technology usually abbreviated as ICT often used as an extended synonym for information technology (IT) but is usually a more general term that stresses the role of unified communications and integration of telecommunications (telephone lines and wireless signals), computer as well as, necessary enterprise, soft ware, middle ware, storage and audio visual systems, which enable users to create, access, store, transmit and manipulate information.

In other word, ICT consists of IT as well as telecommunication broadcast media, all types of audio processing and transmission and network based control and monitoring functions. Consequently, ICT is an information to communicate through computers and networks (Ajayi, 1997; Adebayo, 2007; Bamigboye et al., 2007). Ogunsola and Aboyade (2005) perceived information and communication technologies as a complex varied set of goods. Applications and services used for producing, distributing, processing, transforming information (including) telecoms, TV and radio broadcasting, hardware and software, computer service and electronic media. ICTs represent a cluster of associated technologies defined by their functional usage in information access and communication of which one embodiment is the internet. According to Ogunsola and Aboyade (2005) the internet technically and functionally can be conceptualized as a worldwide network of computers. But logically it is also important to consider it as network of people using computers that make most of information available given the two (basic) services of system communication and information retrieval. Moreover, the ICTs represented by the internet deliver at once a world-wide broadcasting capacity, a mechanism for information dissemination, a medium for interaction between individuals and market place for goods and services pointed out by

Krebs and Patalas-Maliszenwska (2009), mails, telephone, radio, books newspapers and periodicals are the tradition ways users send and receive information, however, data communications system, computer system that transmits data over communications lines such as telephone lines or cables has been evolving since the mid-1960s. Also, Ravichandran (2007) described the internet simply as

“the net” which is a computer network connecting millions’ of computers all over the world. It provides communications to governments, business, universities, schools and homes. Any modern computer can be connected to the internet using existing communications system (Techterms, 2010).

Universities normally access the internet through their own educational networks, but private individuals with an internet service provider (ISP). Although the internet is, in fact, a network of networks, it appears to users as a network of individual computer. The internet dates back to the group of interconnected network that evolved from the ARPANET of the late 60’s and early 70’s. It has grown from a handful of interconnected networks into a huge network of millions of computers. The main internet services of interest to educators are generally e-mail and world-wide web. The world wide web is only part of the internet but many people treat both terms as synonyms (Chiemeka, 2007).

According to Okebukola (2006) information and communication technology is defined as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage. These technologies include computers, the internet, broadcasting technologies (radio and television) and telephone system. Ibrahim (2008) explained further that, currently there has been an upsurge of interest in how computers and the internet can best be used to enhance the efficiency and effectiveness of education at all levels and both formal and non-formal settings, but ICT is more than just these technologies, older technologies such as the telephone, radio and television, although now given less attention have a longer and richer history as instructional tools. For instance, radio and television have for over forty years been used for open and distance learning, while print remains the cheapest, most accessible and therefore most dominant delivery mechanism in both developed and developing countries (Obeng, 2004).

According to the European Union Commission the importance of ICT lies less in the technology itself than in its ability to create access to information and communication in underserved populations. Many countries around the world have established organizations for the promotion of ICT, because it is feared that unless technologically advanced areas have a chance to catch up, the increasing technological advances in developed nations will only service to exacerbate the already existing economic gap between technological “have” and “have not” areas. Internationally, the United Nations actively promotes ICT development as a means of bridging the digital divide (Search Cio-midmarket, 2012).

Information and communication technology covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form. For example, personal computers, digital television, e-mail robots. So ICT is concerned with the storage, retrieval, manipulation, transmission or receipt of digital data. Importantly it is also concerned with the way these different uses can work with each other. In business, ICT is often categorized into two broad types of product:

1. The traditional computer based technologies (things you can typically do on a personal computer or using computers at home or at work), for example, word processing, spreadsheets, data base and so on, and

2. The more recent and fast-growing range of digital communication technologies (which allow people and organization to communicate and share information digitally) an example of this is the internal networks. This is usually referred to as a local area network (LAN) and its involves linking a number of hardware items (input and output device in addition to computer processing)together within an office or building of LAN is to be able to share hardware facilities, such as printers or scanners, software applications and data. This type of network is invaluable in the tertiary institutions and office environment where colleagues need to have access to common data or programmes. The counterpart of internal networks is the external networks in this case they will need to be among the wise area network (WAN) the internet is the ultimate WAN. It is a vast network of networks (Wikipedia, 2012).

The use of computers and the internet is still low in developing countries, if they are use at all due to limited infrastructure and the attendant high costs of access. Besides, different technologies are typically used in combination rather than as the sole delivery mechanism. An illustration of this is the Kothmale community radio internet using both radio broadcast and computer and internet technologies to facilitate the sharing of information and provide educational opportunities in a rural community in Sri Lanka (Search Cio-midmarket, 2012).

Similarly, Techterms (2010) affirmed that in the past few decades ICTs have provided society with a vast array of new communication capabilities. For example, people can communicate in real time with others in different countries using technologies, such as instant messaging voice over IP (VOIP) and video-conferencing. Social networking websites like facebook allow users from all over the word to remain in contact and communicate on a regular basis. Modern ICTs have created a global village in which people can communicate with others across the world as if they were living next door. For this reason, ICT is often studied in context of how modern communication technologies affect the society.

UNESCO (2002) defined ICTs as the range of technologies that are applied in the process of collecting, storing, editing, retrieving and transferring of information in various forms. Information and communication technologies could therefore be understood as all those electronically mediated information gathering and dissemination process. These include radio sets, television sets, audio tape players video players' projectors and soft ware and hard ware, which are used in the teaching and learning processes.

Omirin (2007) opined that the difference between administrators, teachers and students of Nigerian schools and those of other world class schools is the civilization. For education planners and administrators in Nigeria to bridge the gap, there is need for the practical adoption of ICTs in all

the nation's educational organizations most especially in the higher institutions and where it seems there is now more than ever before population explosion.

Bassey et al. (2006) noted therefore, that the era of long awaited result is over with the presence of ICTs. Today, the Joint Admission and Matriculation Board and National Education Certificate examinations results can be checked online. Obtaining and filling of post university examination aptitude test for university admissions is through the use of scratch cards. This has made school administration easy without any pressure. It is thus pertinent for all the universities in Nigeria to imbibe the use of ICTs in the management of administration.

Information and communication technology tools have shattered the defensive barriers of time, space and language. It has compressed the world into a global village with a common outlook, access, colour and taste. Therefore, it is pertinent for every educational organization to embrace ICT since it grew out of the need for fast and efficient communication which prior to this period was dominated by the analog telephone system, facsimile (fax) technology with its attendant costs, limitations and low coverage (Long, 1991). Sofoluwe (2003) opined that in Nigeria, the information technology breakthrough could not have come at a more opportune time. Subscribers were already frustrated with the monopolistic tendencies of the Nigerian Telecommunication Commission (NITEL) which was plagued with inefficiency, poor quality of service and exorbitant, cost of owning telephone lines.

Repairs on NITEL lines took weeks and phone lines were exclusive revenue of the privilege few. Nigerians therefore have a sign of relief when internet services and the global system for mobile communication (GSM) in particular placed at their disposal great opportunities to communicate, interact and become part of the ongoing information technology revolution around the world. In that wise, any organization that need effective management, university institution not excluded, has to embrace the new way of doing it better. The information and communication technology however, if any innovation is to be useful (ICT not excluded) it must be accepted (Kumar and Kumar, 2005). Chiemeke (2007) observed that the acceptance of any innovation such as ICT determines its fullness and effectiveness.

2.2.2 Concept of Management

Management is the performance of executive duties, carrying out of policies and decision to fulfill a purpose and the controlling of the day to day running of the organization (Peretomode, 2001). Lucey (1997) defined management as a process of achieving the organizational goals, while Dare (2006) described management as creating and maintaining environment through planning, organizing, directing and controlling the scarce resources. Ogunyejo (2009) defined management as the process involving techniques by which a group of people (managers) coordinate the activities of

others. He emphasized that management is more concerned with the direct and control of an enterprise and involves the planning and directing of the work of others.

The researcher views management as what we do every day by everyone. It is a process practiced daily in home setting, school and private organizations. In other word, management is universal process. With the definitions above, the use of ICT in the management of universities in Nigeria will make management work less cumbersome and more effective in all the variables mentioned in this study.

2.2.3 Management Information Service [MIS]

Information management involves various processes covering records or data generation, which may also involve planning, coordinating, organizing, directing and controlling certain activities in an organization. The above functions of information management require decision making, and decision making in turn requires information. How well these functions are performed depend on how well the information needed are available. According to Ojo (1999), MIS is a comprehensive system of providing

information to all levels of management to ensure that functions necessary to meet the objectives of an organization can be performed effectively. It is an organized method of providing information for decision making (Rosandich, 2008). Therefore, the main objective of MIS is to provide the right information when needed.

The modern age is doubtless characterized by amazing technological advancement in information, communication, science, education etc. In ICT, the smart phone, tablet, computer and the internet are prominent. Infact, the internet is referred to as information “super high way”, probably because of the speed and efficiency with which it processes information (Anon, 2016). Of all the technological development of the modern world, ICT seems to be the most notable and widespread. It affects every sphere of life including education, banking, trading, entertainment, government and the military. ICT is one major area of breakthrough in the 21st century. With the development of ICT, humanity now enjoys more comfort and ease with faster speed in accomplishing tasks.

2.2.4 Decision Making Process in Organization

Decision making is a process of identifying alternatives, and choosing one of the alternatives to solve a problem or address an opportunity (Olagboye, 2004; Adeyemi, 2011). Opadokun (2006) were of the opinion that decisions are made within the hierarchy of authority in any organization in which university management is not left out.

Decisions can be creative and intermediary. Creative decision requires insight initiatives and courage which foster change. Intermediary decisions are in response to authoritative

communication from superior officers, while appellate decisions are from subordinate (Asiabaka and Aku, 2009; Babalola, 2009).

The researcher sees decision making process as an integral part of management. Decisions are made daily by individuals to their satisfaction. It is true that decision making is fundamental to organizational growth and development, the truth is that every decision comes with a risk of which university management is not exempted from this risk.

ICT offers greater opportunities and solving challenges by providing support in teaching and learning process, administrative and management process, decision analysis, decision implementation, feedback mechanism, creativity and brain storming (Olagboye 2004, Abanikanda, 2011).

2.2.5 Planning in Organization

Planning can be defined as the process of peering a set of decisions which are to serve as the basis of human action. Therefore, planning entails preparing of a series of decisions and these decisions are futuristic (Babalola, 2009).

Edem (2005) viewed planning as a particular type of decision making that addresses specific future. It is the first of the five trains of major activities in management process. According to Obanya (2004), planning is an ongoing process that reflects and adapts to changes in environment surrounding each organization. Furthermore, planning is a process of setting goals and choosing the means to achieve those goals (Shehu and Tijani, 2007).

The researcher views planning as a process of thinking carefully about something, an individual or group of people or an organization would like to do in future. This means that planning involves application of human knowledge to the process of making decisions. Furthermore, to the researcher, planning is like locomotive that drives the train of management.

From all the definitions above, it is obvious that without planning managers would not know how to organize resources effectively. This is because faulty planning negatively affects the entire organization. As important as planning is in every organization, it has to be properly documented and stored in the system to be retrieved when needed (Babalola, 2009). This means that the use of ICT has an important role to play in every management process.

2.2.6 Staff Development in Organization

ICT helps in the development of quality staff in different areas of human endeavours. According to Ibrahim (2008), the revolution of ICT has upgraded and empowered staff development, while Obeng (2004) was of the opinion that ICT helps in the recruitment and allocation of work. A great advantage of ICT to staff development is the inherent processing of voluminous records within a short period, thereby facilitating data retrieval (Alter, 2004; Singh, 2008).

ICT as a tool offers greater opportunities for staff development in an organization. This is because the strength, motivation and morale of staff can be greatly enhanced by the use of ICT. For example, education has been relatively made easy in this modern time with online resource, academic programmes and materials, such as online degree programmes, distant learning, e-classes, e-books and portable document format (pdf). People with disabilities no longer have to panic over how to acquire formal education in the face of assistive technologies like mechanical and non-mechanical, electronic and non-electronic aids among other specialized instructional materials. More importantly, academic research is now relatively easier than the previous generation since academic materials are abundantly available on the internet generally, and internet library in particular (Anon, 2016).

2.2.7 Maintenance of Discipline in Organization

Technological advancement and other changes in the world, with all their great benefits to humanity, have brought with them moral decadence and series of catastrophes. The media glamorizes lewdness, worldliness, hooliganism, brutality, violence, drug addiction, alcoholism and defiant behaviour, making the youths, especially immoral, alcoholics, drug addicts and disobedient to constituted authorities.

And what about malpractice in schools, mostly occasioned by the decline in the reading culture because students would rather socialize with friends on the social media than studying their books. These days, we hear of high school students paying some people to take their final school certificate examinations for them. The list of evil and moral perversion in our modern world is endless (Anon, 2016). The internet has brought about cybercrimes, and many people have been regrettably defrauded by internet fraudsters. Hackers have also succeeded in hacking into unsuspecting victims' personal data, manipulating them to their own advantage. Several organizations have had their secret information stolen by hackers. Identity and credit card theft are other ugly practices on the internet. More painfully, hackers have fraudulently accessed military and para-military intelligence by hacking into their database, holding a whole nation to ransom (Anon, 2016).

Obsession with technological devices like cell phone is another subtle distraction from meaningful activities, especially among youths. Ardent users even feel sick or uncomfortable without them. Unnecessary time wastage, poor reading culture, and poor performance in academics generally are other noticeable negative effects of such obsession.

It is obvious that technological advancement has not and cannot solve the problems of the world. If anything, it has added other dimensions to the problems.

2.2.8 Students' Welfare and Health Services in Schools

The welfare and health services of the students are paramount to the university management. ICT can help to improve welfare/health services of the students. Tella (2002) was of the opinion that modern ICT health facilities can greatly improve student and staff health condition, while Tutortou (2006) suggested that free medical treatment for all university students should be made available. It is believed that provision of good ICT facilities in hospitals of universities would be of great help in reducing incidences of diseases and death in the university communities (Akoh, 2008; Zainally, 2008). This is because beyond the normal health care administration, technology has greatly aided in incredible surgical operations like cochlear (implanted hearing aid), which helps people with hearing impairment, gastrotomy (a surgical procedure in which an artificial opening for excreting waste matter is created) and artificial limbs, hip and knee implant. Radiotherapy (x-rays or beta rays) and respiratory assistance like oxygen supplementation are some other areas where medical technology improves human life. Moreover, complicated diseases are accurately diagnosed and treated. This, of course, has contributed immensely to healthy living (Anon, 2016). Despite its numerous benefits, modern technology has some serious adverse effects on the world. There are technology related health hazards. Due to prolonged use, the rays from computer and cell phones can cause blurred sight, leading to early use of eye glasses. Similarly, protracted use of earphone can cause artificial hearing impairment. Prolonged use of the computer can also result in back and headaches as well as neck strain. Humanity is also prone to risks associated with sedentary lifestyle, such as diabetes and obesity (Anon, 2016).

2.2.9 Maintenance of Records in Organization

ICT as a tool can be used to maintain records in the university organization. For example, computer has an inbuilt memory that can store information for future use. Computer can also keep information safe. It can store information in CD or flash which can be revised anytime the record is needed. ICT can be used to maintain and retain records in the university from the storage of the computer and can be retrieved when needed (Jeremy et al., 2000).

The importance of ICT in maintenance of records cannot be over emphasized. Computer has an inbuilt memory where it can store data to secondary devices, such as diskette. Electronic data processing machines are usually implored for analyzing complex data. The value of electronic data processing machines make work faster in the university (Asiabaka and Aku, 2009).

2.2.10 Interpersonal Relationship in Organization

In general, interpersonal relationship is concerned with relationship between two people or two groups of people. Interpersonal relationship in this context is the relationship that exists between the university and its environment. The relationship may involve collaborative activities between the university and the host community, involving exchange of knowledge and ideas, training, employment and provision of infrastructure (Idowu, 2013).

ICT has made the world a global village. Chiefs among its tremendous benefits are the internet (and its World Wide Web component) and cell phones. You can now access life-transforming information through e-mail, you Tube, instant messaging, biogging, Facebook, Instagram, Twitter, and video conferencing in the comfort of your room, office and in the university environment. In addition, the internet is highly commercially maximized. Aside from the production of business-facilitating modern machines, internet (or online) marketing is becoming more rampant in this present generation. Internet shopping and banking is getting more popular by the day. This has helped to reduce cost, remove the distance barrier and reach wider range of customers or consumers outside while you are in the university environment.

2.2.11 Games/Recreational Services in Schools

The university games/recreational services are concerned with development of desirable standard of behaviour, social and moral conduct. Students need to be able to get along with others and take turns when necessary. Students should learn to exercise self control in activities which are often emotionally intensed. Students can develop the powers of judgment, observation and decision through the medium of games/recreation (Rosandich, 2008).

Games/recreation does not only teach the students to maintain the physical stamina, but also the habit of obedience and discipline, and the determination to win with power. ICT helps sports participants to relax and feel good. A good mood is conducive to performing well in other fields, because there is peace of mind that allows greater concentration during games/recreation. It is believed that sports acts as a great outlet for frustration of any kind (Heidary et al., 2014).

2.2.12 Development of Universities in Nigeria

After the recommendation of the Ashby commission, a law to establish a university each in the Eastern and Northern regions of Nigeria was passed. The date marks the formal beginning of the enactment of this legislation and the culmination of many years of taught and discussion by several Nigerian leaders and inspired particularly by the then Premier of Eastern region, Dr. Nnamdi Azikwe. One of the first steps taken by the Eastern Nigeria government towards the implementation of its commitment was an invitation to both the United States of America and the United Kingdom to send advisers to help in the planning of physical and educational aspects of the proposed university (Fafunwa, 1974).

Under the joint auspices of the inter-university council for higher educational and overseas and the international cooperation administration (now the United States Agency for International Development) W. Cook, Vice-Chancellor of the university of Exeter, Dr John A. Hannah, president of Michigan State University and Dr. Wen L. Taggert, Dean of International Programmes at the same University, came to Nigeria in 1958. The team surveyed the site at Nsukka and extensively investigated a great variety of factors pertinent to the establishments of a new university. The results of their efforts were contained in a white paper issued by the Eastern Nigeria government on 30th November 1958. They had recommended that the development of the university of Nigeria

based upon the concept of service to problems and needs of Nigeria, is a desirable project and one that should receive support from any source which could help to make it a sound endeavour (Fafunwa, 1974).

They further recommended that a provisional council be established to "draw upon the technical and consultative resources available throughout the world for help in planning the institution". The provisional council, authorized by the Eastern Nigeria Legislature was appointed by the governor in council in April, 1959, and given necessary financial and administrative powers to build a sound university, it reflected the spirit of international cooperation which has given birth to the institution. It consisted of Dr. Nnamdi Azikwe, Chairman, Dr. T. Olawale Elias and Dr. Okechuckwu Ikejiani from the federation of Nigeria, Futan from the United Kingdom Dr. Mergierite Cartwright and Dr. Eldon Lee Johnson from the United States of America (Olagboye, 2004).

The university was formally opened on 2nd October, 1960, as the climax to the Nigerian independence celebrations in the Eastern Region. Her Royal Highness Princess Alexandra of Kent, representing her Majesty Queen Elizabeth II at the Nigerian independence celebrations, performed the opening ceremonies and laid the foundation stone of one of the university's early buildings. Lectures began on 17 October 1960 with enrolment of 220 students and 13 members of the academic staff. The opening convocation address was delivered by the chairman of the provisional council, Dr. Nnamdi Azikwe, the first president of the Federation of Nigeria, and by Dr John A. Hannah, president of Michigan State University USA (Fafunwa 1974).

The Birth of Yaba Higher College following Hussey's proposal to the Nigerian parliament in 1930 of the need to structure Nigerian education into three levels as earlier highlighted the last stage of this proposal eventually led to the establishment of Yaba College in 1932. Yaba Higher College was the first Nigerian Institution that provided higher education to train Nigerians to be qualified personnel in the fields of medicine, engineering, teachers training, agriculture, forestry, commerce, veterinary medicine and survey. Officially, Yaba Higher college was opened in 1934 and admitted and accommodated its students in 1932 at Kings College, Lagos. By 1934 official opening, the students were already in their first, second and third years (Ayandele, 1974).

The establishment of Yaba Higher College was elementally criticized and lampooned by the Nigeria nationalists who preferred a University to the College. The

nationalists found the curriculum of the college too narrow, inferior to and incapable of meeting the needs of the country. The certificate of the College had no recognition outside Nigeria and only qualified Nigerians as junior staff and assistants in colonial civil service. With all the criticisms, the Yaba Higher College existed for fifteen years and turned out a number of educated Nigerians who became ripe for administrative and technical positions in the Nigerian civil service at independence in 1960. However, and despite the long period of the College and existence, the nationalists did not relent in their agitation for a University. To this extent two distinct commissions were set up on the

prospect for the establishment of University in British colonies and specifically in Nigerian (Obanya, 2004; Yusuf, 2013).

The Asquith and Eliot commissions were set up in 1943. These commissions were set up to consider the principles which should guide the promotion of higher education sites in the colonies; and to explore means by which universities and other appropriate bodies can cooperate and bring the principles to achievable ends. The commission recommended that:

1. Universities should be established as soon as possible in areas not served

by an existing one and should begin as University College.

2. Universities should be residential and open to both male and female.

3. Colonial Universities should be autonomous.

Arthur Greechtones in 1947 advocated establishment of two University Colleges as well as Elliot's recommendation of establishing University College in Ibadan. All these culminated in the establishment of University Colleges in Ibadan in 1948 and the approval was also given for the transfer of about 104 students of Yaba Higher College to form the foundation students to the new University. Dr. Kenneth Mellanby was appointed the first principal of the University College Ibadan (Ayandele, 1974).

The general public and the press were antagonistic to this new University that the very first five years were characterized with criticisms and agitation for full university and not University Colleges. There were a lot of discriminations in the staff strength and conditions of service. Students enrolment and admission policy, so as the curriculum was British oriented. Between 1948 and 1949, the university had forty expatriates and Africans. From this period till 1953 the number of expatriates increased to eighty-one, while that of Africans remained stagnated at six. Also, from 1952 to 1962, the certificates issued to University Colleges graduate were similar to those given to private candidates who sat for London University examinations (Olubadewo, 1992).

At independence, the first indigenous and full university status institution was established and named University of Nigeria at Nsukka.

The spirit of establishing full Nigerian Institution of university standard and states started. Some of the universities later established include Ahmadu Bello University, Zaria (1962), University of Ife, Ile-Ife (1962) now Obafemi Awolowo University. University of Lagos, Lagos, and University of Ibadan, first established as University College and renamed as autonomous. University of Benin was later established in 1970 for the people to have sense of belonging after the creation of mid-western region (Okiki, 2011).

The third National Development Plan of 1975 to 1980 gave Nigeria six New Federal Universities, vis-a-viz the Bayero University, Kano, Usmanu Danfodiyo University, Sokoto, University

of Ilorin, University of Calabar, University of Port Harcourt, University of Maiduguri and University of Jos. These Universities are today known as second generation Universities. The first and second generations Universities were Federal Government owned. There are other Universities by the Federal Government of Nigeria up to the New Federal Universities, not excluding specialized ones like Universities of Agriculture, Universities of Technology, National Open University of Nigeria (Federal Republic of Nigeria, 2004).

The involvement of the States Governments in the establishment of universities was pioneered by the Old Rivers State Government with the establishment of Rivers State University of Science and Technology. Other states of the federation joined in the establishment of university institutions including those which are conventional, specialized and educational, i.e., Universities of Agriculture, Universities of Technology and Universities of Education (Bassey et al, 2006; Jega, 2007a, b).

In 1999, private ownership of University was liberalized and individuals and religious organizations became increasingly interested. Igbinedion University was the first to be issued licence of operation in 1999 and followed by Bowen in 2001; Covenant, Pan African, Benson Idahosa Universities in 2002. Since 1999, there was no year that a university or more, Federal, State or private were not established till the year 2016. As at 2015, Nigeria has a total of 138 universities with 40 being Federal, 40 State-owned, and 58 privately-owned providing university education for Nigerians and foreign nationals.

2.3 Theoretical Framework

Theories are not mere assumptions and suppositions. They provide guidelines for further empirical observations and practical applications (Afolabi, 2001). Therefore, theories guide universities management in providing practical solutions to her day to day administrative problems. The universities are expected to be familiar with government policies, rules and regulations. The knowledge of theory will enable the university through

the use of ICT plan the school events which include organization and maintenance of facilities such as school buildings, supply of equipments, school records, transportation and school library. The use of information communication technology will also enables the university to carry out the above effectively because ICT will equip individuals in the management with appropriate managerial skills.

Edem (2005) defined theory as a ‘set of assumptions from which larger set of empirical laws can be drawn by purely mathematical procedures. A theory is a formulated set of ideas that is intended to explain why something happens or exists. It is the principles on which a particular subject is based (Afolabi, 2001). Obanya (2004) said theory is an academic prescription that is usually impracticable and does not relate to experience. Olagboye (2004) also defined theory as a set of inter-related concepts, assumptions and generalization that systematically describes and

explains behaviours which establish relationship between variables by describing and explaining observed behavior and events through systematic experiment.

Theories provide guidelines for further empirical observation, practical applications, purpose of the research and what the outcome of the research work is expected to add to knowledge. A researcher needs to have in-depth knowledge of management theories for effective management of the university.

The theoretical framework is meant to arouse viewers' knowledge on impact of information communication technology, on the management of universities in Nigeria. System theory and Neo-classical theories of Max Webber would be presented to be able to adequately explain the purpose for the study. System theory is an entity with a purpose that has interdependent parts. The system is seen as a system which can be, further sub divided into subsystems each having a supra system which constitutes his environment. All the subsystems work toward the maintenance of the life of the social system as a whole, the survival of which depends on its capacity to maintain constancy in its process and relationships with outside the system. The system theory places emphasis on the interdependence and interrelatedness of all the administrative units within an organization. System theory has the ability to maintain itself in equilibrium.

Olubadewo (1992) sees system theory as a process from a larger environment variable, such as information communication technology, communication, planning, student welfare services, decision making, university community relationship put back into society to function. Also, Neo-classical theories of Max Webber would be used as the bureaucracy. This theory is regarded as most efficient because the key elements of the principles as laid down when transformed into the management of the university as a complex organization are stipulated rules, division of labour, hierarchy of authority and impersonality of office documentation.

Information and Communication Technology when combined with theories assist university management to ensure effective communication, well coordination of fund; good record keeping; staff development, discipline, improved security, good decision making, planning, cordial relationship between university and the community and improved student welfare services can also supervise and evaluate the performance of all the units in the departments and units in the university.

The researcher sees knowledge of theories and ICT very important in decision making as it affects students' welfare and admissions, staff development and employment, promotion, discipline, security as well as the communication pattern in the university system.

The complex nature of managing schools, especially, university calls for the knowledge of theories which will help build solid management foundation rooted on theoretical facts and empirical procedures. The study need to have in-depth knowledge of management theories for effective management of information and communication for goal attainment. Management is

generally defined as social process designed to ensure that cooperation, participation, interaction and involvement of others in the effective achievement of a given or determined objectives (UNESCO, 2008).

Classical organization theory of Henry Fayol is applicable under management because he classified management into five functions or elements which identified key management process/functions and skills often prescribed as universal. They are: Planning, organizing, commanding, coordinating and controlling (Afolabi, 2001).

The importance of Henry Fayol's contribution to management theory lay into two features. First, his systematic analysis of the process of management, and second, his firm advocacy of the principle of management. Henry Fayol postulated fourteen principles of management which form common features in day to day management of university management. These principles are: Division of labour, parity of authority, discipline, unity of command, unity of direction, subordination of individual and remuneration (Afolabi, 2001). In this write-up different theories have been used to discuss the variable investigated in this study as follows:

2.3.1 Theoretical Framework on Communication

System theory is an important theory used to discuss availability of ICT on communication. This is because system theory is a set of elements functioning as a whole. An example of system theory is management information service. It is a system designed under quantitative management theory to provide information that will be communicated where the information is needed. The information could be informs of oral communication or written communication. The theory when transformed will make communication more effective in an organization (Asibiaka and Oku, 2008).

It is impossible to manage human organization without communication. For example, school administration will collapse without communication. Similarly, home will break if there is no communication between couples.

ICT has drastically improved method of communication. Many innovations on communication are based on new technologies, computerized information process, system of telecommunication, internet and electronic communication which help one to be reached while he could not reached physically.

Every administrator wants to see the success of the whole school under his/her authority as well as provide a nurturing environment for students and staff. The student wants to get through school without feeling unmotivated and bored (Cuban, 1995; Yusuf and Onasanya, 2004).

Computer can be used as a tool of communication without staff feeling hassled. With the use of computer network, information can be communicated within a very short time to thousands of people who are many kilometers away (Lucey, 1997; Encarta Encyclopedia, 2007).

Communication either within or outside an office has become easier with the use of computer. Hence, it is possible to:

i) Communicate from one person's computer to other computers.

ii) Transmit data from one person's computer to another.

iii) Share information among several users.

Communication is a process of expression. A communication among individuals and groups is vital in all organizations. The primary purpose is to achieve coordinated action just as the human's nervous system responds to stimuli and coordinates responses by sending messages to the various parts of the body. Similarly, communication coordinates action of the parts of the body. ICT can be effectively used to coordinate the actions of the parts of an organization, which will help to improve the management of the university (Adeoye et al., 2013).

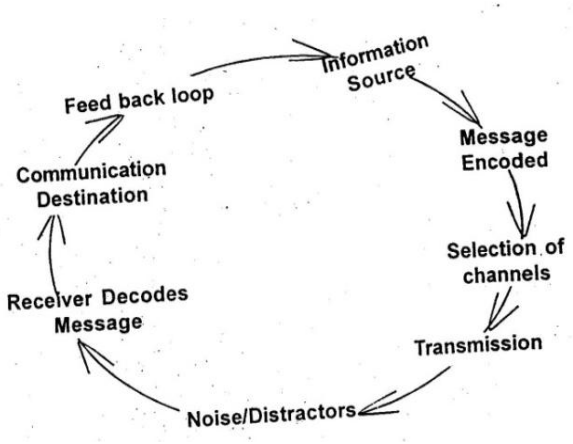
Another impact of availability of ICT on communication in the management of universities in Nigeria is information sharing. The most important information relates to organizational goals, which gives members a sense of purpose and direction. Another information sharing function of communication is to give specific task directions to individuals. Also, communication is essential to the decision making process (Olaore, 2014).

Communication process is a loop that connects the sender and receiver and operates in both directions. Communication is not complete until the original sender knows that the receivers understand the message (Lucey, 1997).

University relation is responsible for telling story to the world. It consists of two functional areas. Media relations and community relations. The focus of the division is to form strategic and provocative approaches to measurably improve institutional communications, community relations and media engagement. This work is accomplished through a variety of tactics including focused emphasis on earned media, support for long term strategic priorities and signature programs, greater stakeholders and promotion of taught leadership through channels like university voice and social media (Encarta Encyclopedia, 2007).

However, in reality communication can be more complicated than such a simplistic explanation. A more realistic approach is presented by Ijaiya (2002) as general communication model (Figure 2), based on ideas that communication is about "five Ws: who says what, to whom, in which channel, with what effect".

Figure 2: General Communication Model



Source: Ijaiya (2002)

The general communication model (GCM) involves the receiver receiving and correctly decoding (that is, interpreting) the message encoded through whatever channel and supplying a response, signal or feedback to the source that the message is adequately received (Cuban, 1997; Opadokun, 2006).

ICT has made communication easy by generating, dissemination and implementing new ideas more effectively. In effect, ICT help universities in Nigeria to be "knowledge based" learning organization that are continually generating new ideas to improve themselves (Lucey, 1997).

The above can only occur in the management of Nigeria university when is computerized and expert ICT knowledge is communicated and available in the management of universities in Nigeria. In agreement with the foregoing explanation on communication, I see communication as information sharing because knowledge exist where information is shared. Communication is essential to the decision making process, it also assists good planning process.

I also see communication as an element of interpersonal relations, it is a process of transfer of information, and the information transformation must be understandable to the receiver. In summary, communication involves the transmission of information direction of ideas, feelings, attitudes and understanding. In other words, communication serves major functions in an organization.

2.3.2 Theoretical Framework on Decision-Making Process

Scientific management theory of Urwick and Grulik is considered under this topic because this theory classifies seven management processes with the acronym POSDCORD which stands for planning, organizing, staffing, directing, coordinating, reporting, and budgeting (Obanya, 2004).

All these principles centered on decision making in an organization and school system. Quantitative management theory also focuses decision making by providing management with decision making tools and techniques.

Decision making is daily routine of the administrator in any well organized system, especially in the university set up. Decision making is choosing one alternative from among several alternatives (Ojo, 1999). The new communication system emerged as a result of the marriage between computers and telecommunications. This implies that when two or more computers are connected on the telephone network, anything stored in each computer can be transmitted in a matter of seconds to other users (Adeyemi, 2011).

Decision-making process in an organization as that of the university makes administration to be rationed in deciding when and how to carry out effective decision on cardinal areas of administration, such as employment of staff, planning, admission of students, task performances, financial position, promotion, discipline, staff development and maintenance of the existing structure. These, if rationally decided and effectively implemented will pave way for good communication in the school system (Bradley et al., 2006).

One of the most important issues in an organization is how to make the best decision, decision making usually involves choice and entails cost. It is not an end itself but a means to achieve organizational goals and objectives (Ovwigho, 2004; Saint, 2005).

2.3.2.1 Steps to Organization Goal in Decision-Making Process:

1. Thoroughly canvassed a wide range of alternative courses of action

2. Survey the full range of objectives to be fulfilled and the values implied in the choice.

3. Carefully weigh whatever is known about the cost and risks of negative consequences as well as the positive consequences that could flow from each alternative.

4. Intensively search for new ICT information relevant to further evaluation of the alternatives.

5. Re-examine the positive and negative consequences of all unacceptable, before making a final choice (Bradley et al., 2006).

2.3.2.2 Benefits of Good Decision-Making Process

1 Good decision has the tendency of acceptance by those affected by the outcome of the decision in the area of formulation and implementation.

2 Good decision reduces the amount of coordination necessary to bring the decision into play.

3 Good decision also promotes easier communication and reduces the amount of communication necessary to implement the decision.

4 Good decision provides variety of alternative and solutions.

5 Good decision also clears the rumour and gives people psychological self belonging (Saxena and Chopra, 2006).

Advances in computing and communication have created opportunities that were preciously regarded as the decision support system (Singh, 2008). A programmed ICT that requires the decision support system in developing and evaluating alternatives is a system that is concerned with the application of the computer in decision making in any organization. Decisions are usually made on policy issues, setting goals and priorities, resource allocation, discipline, reward system among others. ICT makes decisions to be highly influenced by the quality of the information they have. System decision often draw upon a wide range of source of influence (Abobaniyi, 1989) Thus, a computer-based support for generating such quality information. One of the most important issue in an organization is how to make the best decision. Decision making is choosing among two or more alternatives. Decision making can be defined as "the process of identifying and selecting a course of action to deal with specific problem or take advantage or an opportunity".

2.3.2.3 Steps to Good Decision Making Process (Akoh, 2008):

1. Identifying the problem and understand it.

2. Define and specify the goals to be achieved.

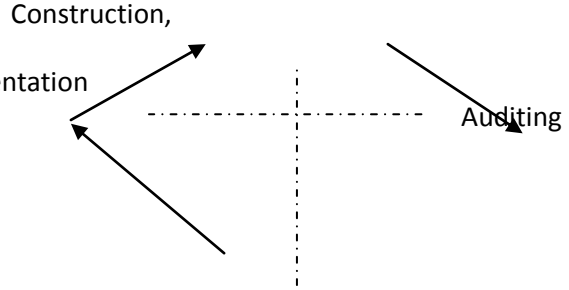
3. Determine the alternative course of action that could lead to the attainment of the goals.

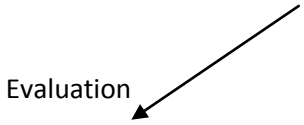
4. Evaluate the alternative.

5. Re-examine the positive and negative consequences of all unacceptable, before making a final choice.

The university management with the use .of decision support system application in computer to make decision could use old cases similar to the issue at hand to revisit the new case by returning it from the system.

Figure 3: Steps to good decision making





Source: Adapted from Akoh (2008)

2.3.3 Theoretical Framework on Planning

Planning is crucial for management. Planning is an ongoing process that reflects and adapt to changes. Planning is the process of setting goals and choosing the means to achieve those goals. Henry Fayol Hierarchy of organization plans as well as his fourteen principles of management theory (Olagboye, 2004). The theory of Henry Fayol with the use of ICT will incorporate these principles into planning system of management.

Planning is an essential component of organization. It is through planning that organizational goals are designed and processed. It is concerned with goals, means and ends where decisions and actions are made. Planning involves individuals groups, companies, government and entire society working together towards attainment of specific goals (Zainally, 2008).

Ovwhigo (2004) sees planning as a continuous process of projecting or forecasting future circumstances and requirements to achieve desired results. It is a set of decisions for future actions. Obanya (2004) stated that planning provides an avenue for the assessment of needs in an organization. This enables planners and administrators to obtain the required data for identifying, and subsequently, eliminating high priority needs in their institutions. Proper documentation of needs in the process of planning provides the necessary information for the successful operation of educational programmes (Nwosu, 1999).

In agreement with the above definition, the researcher sees planning as studying and analyzing the environment, deciding on appropriate goals, outlining strategies for achieving those goals and developing tactics to help execute strategies.

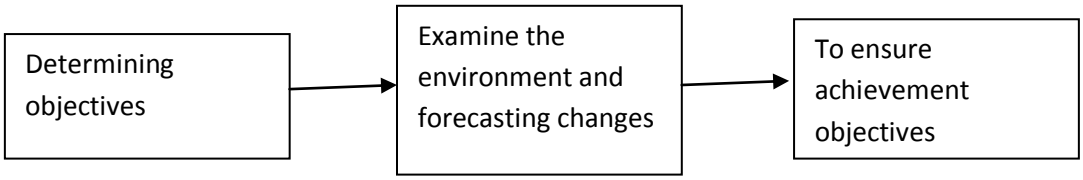
When an administrator has access to computer, proper planning becomes possible to decide on how a programme should be carried out in the university. For example, previous programmes can be retrieved and modified for future use (Ogunsaju, 1989; Sofoluwe, 2003).

The use of computer also helps management staff to cope with the problem of change in policy and programme. Computer can be used to measure and store the new programmes for implementation that could facilitate the attainment of the goals and objectives of the school (Okebukola, 2006).

Planning is an important administrative component in education, through which educational purposes are initiated, translated into programmes and implemented. Planning (also called for taught) is the process of thinking about and organizing the activities required to achieve a desired goal. It involves the creation and maintenance of plan such as psychological aspect that require conceptual skills. Obanya (2004) sees planning as a fundamental property intelligent behavior. Planning holds to forecasting which can be described as predicting what the future will look like. Planning is one of the most important in project management and time management techniques (Talvitie, 2004). Planning involves preparing a sequence of action to achieve some specific goals.

2.3.3.1 Model of Organizational Planning Process

Figure 4: Model of Organization Planning Process



Source: Adapted from Olubadewo (1992)

The school, Vice-Chancellor, the commissioner as well as Minister of Education and other administrators perform these functions called administrative process. The University engages in both long and short term plans as it is in the best interest of their organizations. Proper planning entails good record keeping such as students, lecturers, classrooms, sport facilities (Olubadewo, 1992; Taylor, 2004).

2.3.3.2 How ICT can improve Planning in the Organization of Universities in Nigeria

The purpose of planning in the university is to improve the quality of administration, teaching and learning in the school through the successful management of innovation and change using ICT as a

development plan to involve the quality of teaching and learning in the university through the successful management (Olaore, 2014).

ICT helps the university to provide practical answers to questions because poor planning results into wasted resources. The university is able to organize what is already doing and what it needs to do in a more purposeful and coherent way through the use of computer (Akoh, 2008).

The distinctive feature of a computerized development in the university is that it brings together an overall plan on national policies and initiative, the university aims and values, its existing achievements, and its needs for development by coordinating aspects of planning which are otherwise separate. The university will now acquire a shared sense of direction and is able to control and manage the task of development and change (Aboyade, 2005). When computer is involved in planning university administration, the involvement will ensure that the plan is put into effects and the plan which is statement of intension reflects the university vision.

An understanding of a computerized development planning is the key to administrative success. The production of a good plan and successful implementation depends upon a second grasp of the success involved and a wise content for the plan as well as development (Okebukola, 2006).

In line with all the explanations and definitions on planning above, the researcher sees planning as the most integral process in any organization no matter how small the organization is. There is an adage that says “if you fail to plan ahead you will crash land” because there is no plan at the beginning to fall back to. Planning entails studying and analyzing the environment, deciding on appropriate goals, outlining strategies for achieving those goals and developing tactics to help execute the strategies.

2.3.4 Staff Development

Theoretical facts help in building solid management foundation, especially in developing staff capacity for greater output (Aboyaniyi, 1989).

Maslow’s Hierarchy of Needs Theory of Human Motivation is one of the useful theories in school management which can greatly enhance staff development. Maslow believes that to get the best from staff in any organization the needs of the staff have to be

met. Maslow also believes that higher needs of staff become reiterated as lower level needs are met (Afolabi, 2001).

ICT provides a comprehensive and coordinates approach to all aspects of planning which covers assessment, teaching, management organization, finance and resources (Nwosu, 1999). ICT helps the quality of staff development to improve in such a way that partnership between the teaching staff and governing body is strengthened. It helps to capture the long management and short term

goals. The priorities contained in the plan represent the universities translation of policy into agenda for action. Also, the task of reporting on the work of the universities is made easier (Emechebe, 2003).

ICT in the management of universities in Nigeria plays important role in the structure and procedures that is required to coordinate the diverse activities of university organization. University like any complex organization has to create system with the use of ICT for effective planning and decision making in allocating roles and responsibilities, making decisions on daily basis, consultation and communication among schools partners and management. The above are some of the function that empower people and make them very efficient. The utilization of ICT in the managements of universities in Nigeria in accessing and obtaining accurate information database is therefore needed.

The use of ICT will also help the students to have more control over their leaving environment and access to wider range of materials to use in the learning environment and access to wider range of materials to use in the learning process. ICT helps to foster education reform and helps to designs a self improving university. Problems of ICT is that, it has not fully gained its root in Nigerian schools, its impact is not strongly felt by all, especially by our students this is because there are some challenges facing its implementation in our society (Fasanmi, 2003).

The challenges of computer according to Akoh (2008) are both educational and administrative. The prominent among the administrative problems is the cost of computer which has been on the high side. This has been deterrent to the adoption of computer into universities in Nigeria couple with this is the exorbitant price of software, it flows the same pattern as the hardware.

The depressed economic situation of Nigerian has incapacitated the government to fund education effectively. The meager funding of education in Nigeria coupled with low technological level has been an impediment to the provision. Also, poor technological development in Nigeria where a large number of Nigerians are ignorant of tremendous advantages of technology, is also a big problem (Adeyemi, 2011).

2.3.5 Maintenance of Discipline

Scientific management theory of Fredrick Taylor which is concerned with management of work and workers. It also deals with job of individual employee (Edem, 2005). Scientific management theory has significant impact on management when it comes to discipline today, by applying scientific principles to job specialization (Afolabi, 2001; Yusuf and Onasanya, 2004).

Scientific theory is a device to get things done well by each employee. For example, there is the introduction of computerized time clock to work force. This device has helped in many organization to reduce staff lateness to work and being absent from work.

The concept of discipline is capable of various interpretations with special reference to the school system. However, discipline is often referred to when students are taught to respect the school authorities, to observe school rules and regulations and to maintain an established standard of behavior.

Discipline can be examined from three perspectives namely:

1. as a concept which provides theoretical and modes of behaviour.

2. as a reality which shows clearly the dividing line between acceptable and unacceptable behavior.

3. as a practice which relates to normative modes of doing things within a given time (Obanya, 2004).

The achievement of self discipline depends upon the mental ability of the individual to assess the consequences. Self discipline will help student to know their wroth and to appreciate the environment they find themselves in, which will assist them to set goals of the school as an organization (Eze, 2002). Self-discipline will therefore help in promoting good moral behavior, growth and development of self-respect necessary for a healthy attitude to raise the level of students' academic performance (Ajiboye, 2002).

Discipline can be defined as readiness or ability to respect constituted authority and observe conventional or established laws of the society or any other organization. This implies self control, restraint, respect for one-self and respect for other, it calls for sacrifice, perseverance to tolerance and recognition of human dignity; discipline could connote orderliness (Obanya, 2004).

The purpose of discipline is to create community of people who would freely and willingly learn the norms, principles and ways of life of that community. In school context, the purpose of discipline would appear to produce a bread of well-cultured that will develop respect for students themselves and the society at large but also to the school authority (Obanya, 2004; Ibrahim, 2008).

Disciplines in the universities are to put up strategies to co-ordinate, correct, and focus the organization towards maintaining the standards. The purpose of discipline in the university is to instill discipline in all the activities in the university so produce a well culture and conducive learning environment void of vices. ICT can improve discipline in Nigeria university, if we hinge on creating access and modalities to pattern of raising responsible and right thinking with sensitivity to social problem and involvement through the use of up to date ICT facilities (Obanya, 2004; Idowu, 2013).

2.3.6 Students' Welfare/Health Services in Schools

Clayton. Alderfer's (2012) existence theory is suitable for discussing provision of student welfare/health services. This theory helps to develop cordial relationship between the students and

university management. The university management can also meet the existence needs of the students. Hunger, thirst, good health are existence needs to be satisfied through provision of welfare and health services.

Students are the primary concern of all educational effort. Olagboye (2004) is of the opinion that governance and administrative structures of the university is centered around students. Obanya (2004) is of the view that the establishment, incorporation and functions of the university are students centered. According to him, if there are no students to teach, there will be no university. Therefore, the welfare of students is paramount to the university. These welfare services include provision of games and recreation; provision of health services and total welfare of students both academic and non-academic.

Student welfare services are important for individual as well as techniques by which university can best serve the students. Olagboye (2004) eulogizes services as a pack of programmes designed to increase learners feeling of satisfaction, belongings, identification, achievement etc. It is a summary of service rendered to students while in school. Therefore, the theory of Abraham Maslow of motivation for effective and efficient performance is equally important when discussing students' welfare. Welfare refers to the promotion and maintenance of good learning, good mental and physical health as well as social well-being of students and conditions which are conducive. The university has responsibility to every student to ensure they have best educational experience. The universities have welfare policies designed to provide clear guidelines for all students.

Student welfare is integral to all aspect of school life, is a part of student administration and services. It is also a legal entity responsible for the welfare of student. It is a legal responsible for the welfare of students. This has to do with all student academic studies which include accommodation, finance offices, student affair office. Also, regular price survey activities are embarked upon in order to discourage exploitation of students' goods and services (Idowu, 2013).

The student welfare services provide a fully integrated support service for the student. It also regulates price survey activities embarked upon in order to discourage students' exploitation, provide free and confidently support and assistance for students.

Students' welfare services according to Idowu (2013) refer to the promotion and maintenance of good learning, good mental and physical, health as well as social well-being of students and conditions which are conducive.

The Nigerian universities health services is deeply committed to promoting the physical and mental well-being of students of the university organization. Usually, medical care and laboratory services are free for students and staff of universities in Nigeria. The university health services in Nigerian Federal and State universities are NHIS Accredited Primary care provider, it is a user friendly health services. The universities health policy place sufficient emphasis on cleanliness and sanitation as well as on preventive measures against the outbreak and spread of diseases.

Also, the university provides basic medical health services to students and staff as well as the general public. In addition to providing basic health needs, the health centre ensures adequate referral support services. The university health centre is dedicated to helping people achieve and maintain healthy living and restoration of health to maximum attainable levels. The university health centre will be nationally recognized for improving the health of the citizens of Nigeria through innovative integration of research, education and clinical care which will be viewed as a model for the integration of the latest knowledge (ICT) into the provision of health care and disease prevention (Idowu, 2013).

2.3.6.1 Mission of University Health Services:

(a) To promote good health for students and staff of the University.

(b) Is to promote and protect the health and well being of students and the broader campus communities in order to enable individuals in the university community and environs to better achieve their educational and personal goals.

(c) The mission is to respond to health needs of the people.

(d) To use ICT as a tool for healthy developments.

From the researchers' views, evidences abound that some private universities health services are well equipped with high standard and sophisticated health facilities for students and staff. Although, the private university health care services are very expensive.

2.3.7 Maintenance of Records

Quantitative management theory of Ludwig is suitable for discussing maintenance of records in management of universities in Nigeria.

Effective school management hinges on good record keeping. However, effective and efficient maintenance and management of records require integrity, modesty, fact, discipline, commitment and hard work on the part of management (Bradley et al., 2006).

Records are sources of information for the university management. There are numerous benefits to be derived from record keeping. For example, records provide useful information in school system to employers of labour who may be interested in recruiting exercise. School records provide data bank for educational planners to project into the future. It can be invaluable in human resource management (Alter, 2004).

Characteristic of good records include factual (veritable facts, honesty), clear, legible and capable of interpretation; prevention of guess work to ensure authenticity (Encarta Encyclopedia, 2007).

2.3.8 Interpersonal Relationship

Human relation theory of Claydon P. Aderfer can help to develop cordial relationship between the university and the community where the university is sited. The university can meet the existence needs of the community. Related needs are satisfied by mutual relationship and feelings with one another (Alabi, 2000).

Interpersonal relationship in the management of universities in Nigeria deals with the relationship between the university and its community. When the university develops good relationship with the community, existence needs of the people around could be met (Alter, 2006).

2.3.9 Games/Recreational Services in Schools

System theory and hierarchy of need motivation theory of Abraham Maslow are useful in discussing theoretical framework on games/recreational services in management of universities in Nigeria. It is believed that games/recreational services are aimed at developing and maintaining physical fitness and total well being of citizens. Similar advantages go for staff and students of the university at developing desirable social standard and concept (Alabi, 2000). Therefore, from the above, Abraham Maslow theory of human relation of motivation is suitable for motivating and encouraging staff and students in relation to games or recreational services. On the other hand, system theory can also be applied to make ICT facilities available (Wikipedia, 2012).

2.4 Problem Militating against ICT in Universities in Nigeria

The development of information and communication technology in universities in Nigeria is faced with many challenges. These include the followings:

Inadequate Funding: Inadequate funding is a major challenge because it has negatively affected many areas of education in universities in Nigeria Gbadamosi (2006). Areas it has affected include funding of ICT projects, training and retraining of teachers, provision of technological infrastructure, development and maintenance of software packages and electricity. The current level of funding in universities in Nigeria with reduced budgetary

allocation to the education sector is a major constraint in the provision of ICT equipment computers, its accessories, software packages and maintenance. Moreso, with the slogan of global economic “melt down”, available funds are used to satisfy other vital needs instead of investing them in ICT development in universities in Nigeria.

Lack of Qualified Personnel: In universities in Nigeria, there is lack of qualified personnel to manage available systems, develop and use information communication technology facilities for the teaching-learning process. However, in schools where these personnel exist, they lack skills in designing and delivering courses/lectures in electronic formats. Ibadin (2001) argue that there is acute shortage of well-trained ICT handlers. There is need to provide adequate manpower, train

and retrain personnel on ICT programme management. This will help to ensure that these personnel become conversant with ICT techniques and strategies.

Lack of Basic Infrastructures/Resources: In every educational system, certain basic facilities are required. The National Policy on Education (2004) posits that the government should provide facilities and necessary infrastructure for the promotion of ICT at all levels of education. However, in many Universities in Nigeria, there is inadequate or non-existence of physical facilities and material resources such as computer rooms, furniture, electricity or electric generators. Electricity is essential for the operation of all ICT appliances without which they cannot function effectively.

Poor Policy Formulation and Implementation: There is lack of well-articulated educational policy by the Nigerian government. More attention is given to other sectors than to education. This is posing problems to the development of ICT education in Universities in Nigeria.

2.5 Empirical Studies

Adeyanju and Olakeye (2010) carried out research on "Utilization of ICT in the Effective Management of Schools in Ekiti State Public Secondary Schools". The objective was to assess the extent of utilization of ICT in secondary schools in Ekiti state. The population of study was 376 schools. Purposive sampling method was used for the study. The result revealed that 51.7% of the respondents maintained that the computers are used for typing, processing and storage of data which enhanced the effective administration of the various schools.

However, the study revealed that ICT equipment like the internet services, printers, photocopying machines, Xerox and handsets were only occasionally utilized due to non-availability of this equipment. The study indicated a low level utilization of ICT equipment in the schools. This is a pointer to educational planners of the need for the provision of this necessary equipment in order to enhance administrative effectiveness. In addition, respondents' responses of the perceived advantage of using ICT in the effective management of secondary schools in Ekiti state, Nigeria showed that the utilization of ICT in the schools can produce radical changes in school administration. It could also make schools more effective and productive. The research is therefore relevant to this study as it focuses on utilization of ICT in effective management of secondary schools. Also, the both research used descriptive survey design which served as guiding for the current study.

Edudu-Eyo et al. (2011) studied the "Use of ICT and Communication Effectiveness among Secondary School Administrators in Akwaibom state, Nigeria". The objective was to evaluate communication effectiveness. The study employed ex-post factor research design since researcher had no direct control of the variables of the study as they had already occurred. The sample size of the study comprised 396 school/administrators which represented 57% of the study population. The result showed that the extent of school administrators in the use of ICT was high, which meant that most secondary school administrators use ICT which confirms that secondary schools' administrators in the study area were literate in the use of ICT for their routine administration of schools. Similarly,

administrators' effectiveness in communication was high and all these gains could be attributed to the utilization of ICT and the influence of the monitoring and supervising team overseeing the activities of the administrators, staff and students of the institutions.

Other studies by Edudu-Eyo et al. (2011) affirmed that administrative effectiveness of educational administrators is related to the use of ICT in universities in Nigeria. This entails that administrators who are committed to the utilization of ICT would perform effectively in their day-to-day educational administration, while communication is vital in any organization, ICT tools are essential not only in secondary schools, but rather in every private or public organization. It was also found that ICT had high positive role in effectiveness of educational administrators in the study much more than was expected. The research work is relevant to the current study. The first variable on the current study is on communication. Therefore, the study was used as a guide in setting questionnaire of the variable. Also, the research work guided the current study on the choice of sample and sampling technique used for the present study. The research work lacked good research questions which the present study will fill the gap.

Challo et al. (2005) examined the level of availability, effectiveness and utilization of computer technology among high school mathematic teachers in the instructional process in Cross River state, Nigeria. The study also sought to ascertain whether significant difference existed among teachers in different size school districts on the levels of availability, effectiveness and utilization of computer technology. Objective of the study was to ascertain level of availability, effectiveness and utilization of ICT among high school mathematic teachers. Data for the study was gathered using a five-part structured questionnaire administered to 74 mathematics teachers. The findings revealed that computer technology is useful in instructional procedures and in the student learning process. The findings also showed that the teachers had problems accessing computers. Thus, there was strong need for more curriculum-based software. The research study is relevant to the present study since it both focusing on ICT. The result of the findings was relevant because it shows that some teachers had problems assessing computers. This means that there was seriously need for curriculum based soft ware which the present study would take into consideration so as to breach the gap.

Fansanmi (2003) investigated the relationship between ICT utilization and administrative effectiveness in eight tertiary institutions in Ekiti state. The objective was to investigate the relationship between ICT utilization and administrative effectiveness in tertiary institutions in Ekiti State. The research design employed was descriptive survey of correlation type. The population for the study comprised all the eight tertiary institutions in Ekiti state purposive sampling technique was used to select five (63%) out of the eight tertiary institutions.

In addition, stratified random sampling technique was used to select 80 participants (75%) out of the 108 target population. The questionnaire titled "Availability, utilization and Administrative Effectiveness Questionnaire (ICAVAEQ)" was used to collect relevant data. Means and percentages were calculated to answer research questions raised. Person product moment correlation formular

was used to test the main operational hypotheses 1 and 2, while analysis of variance was used to test null hypotheses.

Findings of the research revealed that ICT facilities were readily available (x=81.33) and that the administrators of the tertiary institutions had access (x=73.24) to select ICT facilities, but the level of ICT utilization (x=26.64) was very low.

Consequently, all the empirical studies are related to the research under study in a macro way. Although, some were carried out in secondary schools while the research under study is in Nigerian Federal, State and Private Universities.

2.6 Summary

Impact of ICT in management plays important role in the structure and procedures that are required to coordinate the diverse activities of university organization like any other complex organization. Complex organization like university has to create system with the use of ICT for effective planning and decision making in allocating roles and responsibilities, making decisions on daily basis, consultation and communication among schools, partners, stakeholder and management. The above are some of the functions that empower people and make them very efficient. The utilization of ICT in the university will help the university management in accessing and obtaining an accurate information database needed.

The use of ICT will also help the students to have more control over their learning environment and access to wider range of materials to use in the learning process. The utilization will also provide a systematic way of carrying out and accessing the process of learning and teaching in terms of specific objectives. ICT education also helps to foster education reforms.

The review of literature revealed that ICT has become a necessary tool in accomplishing the managerial tasks with ease. It was also revealed that good management has a strong relationship with adequate availability and utilization of information communication and technology facilities. This entails that the more the good management of ICT facilities by the university management the better would be their effectiveness. Both theoretical and empirical literature reviewed revealed that the use of internet, besides reducing the cost on university management and reducing inconveniences, the same information on the internet can be mailed to all departments without having to send it individually. The review also showed that provision of ICT facilities by university management will enhance their administrative effectiveness in the area of learner and scholastic, personnel, infra structural management as well as general administrations. The use of ICT is important in maintaining personal students' records, fees, management and efficient examination performances and analysis.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter examines the appropriate methodologies used for the study which includes; research design, population and sample size of the study, sampling technique, instrument for data collection, procedure for data collections and methods of data analysis.

3.2 Research Design

The research design adopted for this study was descriptive survey design. The rationale for the design is that it can select sample from the target population (Akuezullo and Agu, 2004). In a study such as this one, it is not easy to study the entire population. In this situation, samples were used to represent the population being studied which consisted of all the universities in Nigeria. Telia (2002) stated that descriptive survey tries to investigate the state of things as they existed, and correlation research design is an approach that seeks to establish relationship between two or more complex variables on the basis of which predictions are made. The descriptive survey of correlation type was appropriate for this study because it allows the researcher to examine the meaning of the information that was obtained from the representative sample of the population and to describe the impact of ICT on the management of universities in Nigeria. There are nine (9) variables in this study and each variable has its ten (10) items.

3.3 Population of the Study

The population for this study comprised all the one hundred and thirty eight (138) universities in Nigeria as at the time of this study. The universities were grouped into three

categories namely: Federal universities, State universities and Private universities. There are forty Federal universities, forty State universities and fifty-eight private universities in Nigeria as at the time of the study.

The universities were further grouped into six geo-political zones namely: North East, North West, North Central, South East, South West and South-South. One university each was randomly picked from each category in each geo-political zone. This gave a total of eighteen (18) universities as the target population. The participants included the following: Management staff, lecturers and ICT instructors.

Table 1:Summary of Population Distribution in Six Geo-political Zones of Nigeria

	Universities		
Geo-political Zone	Federal	State	Private
North West	9	7	1
	5	5	1
North East	6	7	10
North Central	6	7	10
South East	7	8	25
South West	7	6	11
South South			
Total	40	40	58

Source: NUC, 2015

Table 2: Distribution of Population and Sample Size of Faculties/Colleges and Departments from the Eighteen Sampled Universities in Nigeria

S/No	University	Number of Faculty/College	Number of Department	Category
1.	Federal University of Technology, Minna	12	32	Federal
2.	Kwara State University, Ilorin	5	20	State
3.	Salem University, Lokoja	3	10	Private
4.	Federal University, Dutsema	8	8	Federal
5.	Kaduna State University	10	39	State
6.	Al-Qalam University, Katsina	4	16	Private
7.	Federal University of Agriculture, Umudike	10	15	Federal
8.	Abia State University	10	20	State
9.	Madonina University, Okija	9	22	Private

10.	Federal University Otu Oke	5	12	Federal
11.	Delta State University	10	22	State
12.	Novena University Delta	4	11	Private
13.	University of Lagos	16	32	Federal
14.	Ladoke Akintola University, Ogbomoso	7	42	State
15.	Lead City University, Ibadan	5	12	Private
16.	University of Maiduguri	11	30	Federal
17.	Yobe State University	3	18	State
18.	American University of Nigeria, Yola	5	12	Private

Source: NUC, 2015

3.4 Samples and Sampling Techniques

A sample is defined by Best and Khan (1998) as small proportion of the population that is selected for study and analysis. It is equally seen as a portion of the population being studied and drawn through a definite procedure (Bichi, 2004).

According to Magaji (2006) stratified sampling is used when the population of the study was vast and shared similar characteristics or attributes. The justification for the use of this technique was because the population of the study was vast and shared similar characteristic. The researcher adopted stratified sampling technique in order to give equal chance to all sample representatives and to be able to cover all the Federal, State and Private universities across the six geo-political zones of Nigeria. The universities were further grouped into three: Federal, State and Private per zones. Consequently, one university was randomly selected from each of three groups in each zone. In all, 18 universities were randomly selected from the six geo-political zones. This number was considered a good representation of the universities. The sample size for this study was based on the recommendation of Research Division of the National Education Association Texas University, USA cited in Akuezilo and Agu (2004) who suggested that in a population of 1,000 to 1,000,000 people, 386 respondents suffice and could be used for study. However, sample could be enhanced, depending on the nature of population. The sample size for this study was enhanced to 900.

As a result of the above explanation, purposive sampling recommend by Hussan (1995) was used to share 50 copies of questionnaire each in the 18 universities where the study was carried out. That is, 50 x 18 = 900. This represent the sample size. Twenty-five (25) lecturers from each university were sampled, i.e., 25 x 15 = 450. 15 Management staff from each university was also sampled, i.e., 15 x 18 = 270; and 10 ICT instructors from each university were sampled, i.e., 10 x 18 = 180.

It is believed that purposive sampling is ideal when seeking or considering one or more specific predefined group that is capable of providing the required data (Hussan, 1995).

Table 3: Population and Sample Size of the Subjects

S/No	Subjects	Population	Sample Size
1.	Management Staff	10,162	270
2.	Lecturers	36,520	450
3.	ICT Instructors	5,686	180
	Total	52,368	900

Source: System wide staff audit, NUC (2015).

3.5 Instrumentations

The main instrument used for the collection of data in the study is structured questionnaire which was designed after a thorough review of related literature. The questionnaire titled, “Impact of information and communication technology in the management of universities in Nigeria”. The layout of the questionnaire was divided into two sections: Sections A and B. Section A focused on the bio-data information of the participants, such as name of institution, department,

qualifications, present status, age, sex, and years of administrative experience in the present institution among others. Section B contained items which sought information on ICT in terms of university management. The rating technique used for the questionnaire was the five point likert scale of Strongly Agreed (SA), Agreed (A), Undecided (UD), Strongly Disagreed (SD), and Disagreed (D). The items were five and the variables are 10.

3.5.1 Validation of the Instrument

Validity entails the degree to which an instrument can measure what it is expected to measure (Abanikanda, 2011).

The instrument was scrutinized and ascertained valid and reliable by the expert statistician in Educational Administration and Planning Unit of the Faculty of Education, Ahmadu Bello University, Zaria.

In order to ascertain the validity of the instrument used to collect data for this study, copies of the draft questionnaire were also given to the supervisors of the student and experts in the Department of Educational Foundations and Curriculum, Ahmadu Bello University, Zaria.

3.5.2 Pilot Study

The pilot test was carried out in three selected universities which were excluded from the main study within a time interval of two weeks. The universities used for pilot studies were: Bayero University, Kano, (Federal university), Kogi State University, Anyigba (State university) and Igbinedon University, Okada (Private university).

3.5.3 Reliability of the Instrument

The data collected from the pilot study were statistically analyzed for the purpose of reliability coefficient. The Cronbach alpha reliability coefficient was used. Consequently, reliability coefficient of alpha 0.880 was obtained for the whole of the 900 respondents. On individual analysis, a reliability of 0.750 was obtained for Administrators, 0.767 for Lecturers and a reliability coefficient of 0.789 was obtained for ICT Instructors. The reliability coefficient was considered adequate for the internal consistencies of the instruments. This was confirmation of test of reliability according to Hassan (1995), who said an instrument is considered reliable if its reliability coefficient lies between 0 and 1, and that the closer the calculated reliability coefficient is to zero, less reliable is the instrument and the closer the calculated reliability coefficient is to 1, the more reliable is the instrument. This therefore, confirmed the reliability of the data collection, and that the instrument used was fit for the work.

3.6 Procedure for Data Collection

The researcher with the help of two research assistants administered the instrument on the subjects. The researcher used on the spot questionnaire administration technique. Nwosu (1999)

reported that the method helps to ensure 80% retrieval of the research instrument and to avoid contradiction and ambiguity in the instrument. The method also makes it possible to get more adequate data than collecting information by post, telephone or other means (Best and Kahn, 1998).

3.7 Method of Data Analysis

The statistical procedure was descriptive analytical approach in data analysis. Inferential statistic was used to test the research hypotheses. The inferential statistics adopted was Analysis of Variance (ANOVA) and Scheffe test was adapted to further check the extent of the significant differences with the degree of freedom at 0.05 level of significance.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter sought to present, interpret and discuss the results of data analysis.

The study investigated the impact of information and communication technology (ICT) on the management of universities in Nigeria. To achieve this, the study was structured along nine specific objectives with nine research questions that were answered as well as nine research hypotheses were tested. A total of 895 respondents responses were used as data in this study. The data were analyzed with statistical package of version IBM 23. The analysis was presented in three main sections. The first section presented the frequency and percentage distribution of the bio-data variables. The second section answered the nine research questions with descriptive mean and standard deviations statistics. The third section tested the nine null hypotheses. The Analysis of Variance (ANOVA) statistics was used to test the hypotheses which sought for differences in perception among the three categories (Management staffs, ICT Instructors and Lecturers) in each

of the nine sections of the study. All hypotheses were tested at 0.05 alpha level of significance. The Summary of major findings as well as conclusion and recommendations were also included.

4.2 Descriptive Analysis of the Bio-data of the Respondents

Table 4: Distribution of Respondents by Name of University

Name of the Universities	Frequency	Percent
Federal University of Technology, Minna	50	5.6
Kwara State University, Ilorin	50	5.6
Salem University, Lokoja	50	5.6
Federal University, Dutsema	50	5.6
Kaduna State University, Kaduna	50	5.6
Al-Qalam University, Katsina	50	5.6
Federal University of Agriculture, Umudike	50	5.6
Abia State University	50	5.6
Madonna University, Okija	50	5.6
Federal University, Otu Oke	50	5.6
Delta State University	47	5.3
Novena University, Delta	50	5.6
University of Lagos	50	5.6
Ladoke Akintola University, Ogbomoso	50	5.6

Lead City University, Ibadan	50	5.6
University of Maiduguri, Borno State	48	5.4
Yobe State University, Yobe	50	5.6
American University of Nigeria, Yola	50	5.6
Total	895	100.0

From Table 4, a total of 895 respondents' data were used. A total of 18 universities were used for this study. Each of the universities had either 47 or 50 respondents. Three universities were represented from each of the six geo-political zones.

Table 5: Distribution of Respondents According to their Type of University

University	Frequency	Percent
Federal	279	31.2
State university	306	34.2
Private	310	34.6
Total	895	100.0

From Table 5, a total of 279, representing 31.20% of the respondents were sampled from Federal universities, while 306 or 34.2% were from State owned universities and the rest 310 or 34.6% were from Private owned universities. This shows that all the three categories of universities were well represented in this study.

Table 6: Distribution of Respondents According to their Status

Status	Frequency	Percent
Management Staffs	318	35.5
ICT Instructors	256	28.6
Lecturers	321	35.9
Total	895	100.0

Table 6 states that, the respondents were basically categorized into three according to their status. A total of 318, representing 35.5% were management staff, while 256 representing 28.6% were ICT instructors and the rest 321 or 35.9% were lecturers.

Table 7: Distribution of Respondents According to their Gender

Gender	Frequency	Percent
Male	592	66.1
Female	303	33.9
Total	895	100.0

Details of Table 7 revealed that 592, representing 66.1% of the respondents were males and the rest 303, representing 33.1% were females. Both males and females were relatively well represented in this study.

Table 8: Distribution of Respondents According to their Geo-political Zones

Geo-political Zone	Frequency	Percent
North central	150	16.8
North west	150	16.8
South East	150	16.8
South-South	150	16.8
South West	150	16.8
North East	148	16.5
Total	895	100.0

Table 8 shows respondents that were drawn from the six geo-political zones of Nigeria. These were North Central, North West, South East, South, South West and North East with each having the following respondents of 150, 150, 147, 150, 150 and 148, respectively.

Table 9: Distribution of Respondents According to their State

State	Frequency	Percentage

Niger	50	5.6
Kwara	50	5.6
Kogi	50	5.6
Katsina	50	5.6
Kaduna	50	5.6
Abia	50	5.6
Anambra	50	5.6
Anambra	50	5.6
Abia	50	5.6
Bayelsa	50	5.6
Delta	47	5.3
Delta	50	5.6
Lagos	50	5.6
Oyo	50	5.6
Ogun	50	5.6
Borno	48	5.4
Yobe	50	5.6
Adamawa	50	5.6
Total	895	100.0

Table 9 shows the respondents according to the State where their universities were situated. A total of 18 States were covered. Each State was represented by one university which may be Federal, State or Private University.

Table 10: Distribution of Respondents According to their Age

Age	Frequency	Percent
21-30 yrs	324	36.2

31-40 yrs	364	40.7
41-50 yrs	87	9.7
51-60 yrs	108	12.1
61and above	12	1.3
Total	895	100.0

Table 10 shows the respondents age groups. A total of 324 or 36.2% were between 21-30 years, while 364 or 40.7% fell within ages 31-40 as against 87 or 9.7% within ages 41-50 years, while 108 or 12.1% were from ages 51-60 years and the remaining 12 or 1.3% were from 61and above years..

Table 11: Distribution of Respondents According to their Qualification

Qualification	Frequency	Percent
NCE	54	6.0
First degree	481	53.7
Higher degree	186	20.8
Others	174	19.4
Total	895	100.0

In Table 11 the respondents' highest qualification shows that a total of 54 or 6.0% possessed NCE certificate, while 481 or 53.7% had First degree as against 186, representing 20.8% that possessed higher degrees. The rest of the respondents 174 or 19.4% had other forms of qualifications other than those listed above. This implies that most of them possessed at least first degree qualifications.

Table 12: Distribution of Respondents According to their Years of Experience

Years of Experience	Frequency	Percent
1-5 yrs	331	37.0

6-10 yrs	180	20.1
11-26 yrs	186	20.8
16-20 yrs	81	9.1
21-25 yrs	117	13.1
Total	895	100.0

Table 12 shows the respondents' years of working experience, it was noted that 331 or 37% had between 1-5 years experience, while 180 or 20.1% between 6-10 years of working experience as against 186 or 20.8% who had between 11-26 years of working experience as against 81 or 9.1% that had between 16-20 years of working experience. The rest 117 respondents or 13.1% had between 21-25 years of working experience.

4.3 Respondents' Opinions on the Impact of Information and Communication Technology in the Six Geo-political Zones of Nigeria

This section presented respondents' opinions on the nine variables in the objective which include communication, decision making, planning, staff development, maintenance of discipline and records, interpersonal relationship and provision of games/recreational services. Response percentages among the three categories of respondents of management staff, lecturers, and ICT instructors in each of the nine variables were determined.

4.3.1 Respondents' Opinions on the Impact of ICT on Communication in the Management of Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to determine the impact of availability of ICT on communication in universities in Nigeria. Details show in table 13.

Table13: Respondents' Opinions on the Impact of Availability of ICT on Communication in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	ICT enhances better information dissemination.	Mgt Staff	183	57.5	105	33.0	30	9.4	0.	0.0	0	0.0
		Instructors	154	60.2	96	37.5	6	2.3	0	0	0	0.0
		Lecturers	204	63.6	111	34.6	6	1.9	0	0	0	0.0
2	ICT has eliminated previous communication Methods	Mgt Staff	75	23.6	117	36.8	111	34.9	15	4.7	0	0.0
		Instructors	136	53.1	72	28.1	45	17.6	3	1.2	0	0.0
		Lecturers	42	131	135	42.1	138	43.0	0	0.0	6	1.9
3	Online comm. are better facilitated in universities due to ICT usage.	Mgt Staff	93	29.2	21	66.0	0	0	0	0.0	15	4.7
		Instructors	63	24.6	187	73.0	6	2.3	0	0.0	0	0.0
		Lecturers	111	34.6	92	54.0	6	1.0	0	0.0	12	3.2
4	E-mail is a way of ensuring better rapid text-based communication	Mgt Staff	39	12.3	141	44.3	129	40.6	0	0.0	9	2.8
		Instructors	48	18.8	31	59.	39	15.2	0	0.0	18	7.0
		Lecturers	42	13.1	195	61.2	36	11.2	1	0.0	48	15.0
5	Communication with staff using e-	Mgt Staff	72	22.6	225	71.8	21	6.6	0	0.0	0	0.0

	media enhances better job performance of administrators I	Instructors	57	22.3	106	76.6	3	1.2	0	0.0	0	0.0
		Lecturers	54	16.8	201	62.6	36	11.2	0	0.0	30	9.3
6	E-media communication create better atmosphere for fees payment	Mgt Staff	96	30.2	174	54.7	21	6.6	9	2.8	18	5.7
		Instructors	130	50.8	99	38.7	21	8.2	0	0.0	6	2.3
		Lecturers	135	42.1	156	48.6	12	3.7	12	3.7	6	1.9
7	Availability of internet com. enhances better management output	Mgt Staff	129	40.6	168	52.8	21	6.6	0	0.0	0	0.0
		Instructors	148	57.8	78	30.5	30	11.7	0	0.0	0	0.0
		Lecturers	75	23.4	234	72.9	12	3.7		0.0	0	0.0
8	E-media enables students to apply for institutions exams	Mgt Staff	135	42.5	153	48.1	21	6.6	0	0.0	9	2.8
		Instructors	97	37.4	129	50.4	3	11.7		0.0		0.0
		Lecturers	60	18.7	21	62.4	48	15.	12	3.7	0	0.0
9	E-payment enhances a better accountability time usage of ICT	Mgt Staff	135	43.5	174	54.7	0	0	9	2.8	0	0.0
		Instructors	93	36.3	157	61.3	6	2.3	0	0.0	0	0.0
		Lecturers	126	34.3	195	6.7	0	0	0	0.0	0	0.0
10	ICT usage enhances staff development	Mgt Staff	45	14.2	267	84.0	6	1.9	0	0.0	0	0.0

Instructors	24	9.4	208	81.3	24	9.4	0	0.0	0	0.0
Lecturers	105	32.1	186	57.9	24	7.5	0	0.0	6	1.9

Table 13 shows that a total of 183 or 57.5%b of management staff as against 154 or 60.2% of ICT instructors and 204 or 63.6% of the lecturers believed that ICT enhances better information dissemination. Majority of each of the three categories also believed that E-media enables students to apply for institutions examinations.

4.3.2 Respondents' Opinion on the Impact of Decision Making Process in Universities in Nigeria

Tabulations, frequencies and percentages on the responses of the three categories of respondents' opinions were used to determine the impact of ICT on decision making process. Details shows in table 14.

Table 14: Respondents` Opinions on the Impact of ICT on Decision Making Process in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	Inadequacy of ICT computer machines slows down decision	Mgt Staff	18	5.7	165	51.9	129	40.6	0	0.0	6	1.9
		Instructors	69	27.0	124	48.4	63	24.6	0	0.0	0	0.0

		Lecturers	66	20.6	105	32.9	144	49.1	6	1.9	0	0.0
2	ICT ensures acquisition, retention and upgrading of records for positive decision making	Mgt Staff	150	49.2	147	46.2	15	43.7	6	1.9	0	0.0
		Instructors	66	25.8	163	63.7	27	10.5	0	0.0	0	0.0
		Lecturers	174	54.2	111	34.6	36	11.2	0	0.0	0	0.0
3	Decision making is choosing one alternative from among several alternatives.	Mgt Staff	75	23.6	216	67.9	21	6.6	6	1.9	0	0.0
		Instructors	69	27.0	133	52.0	42	16.4	12	4.7	0	0.0
		Lecturers	48	15.6	231	72.0	42	13.1	0	0.0	0	0.0
4	Computer is a device that is capable of storing information which can be recalled at decision-making when needed.	Mgt Staff	198	62.3	96	30.2	24	7.5	0	0.0	0	0.0
		Instructors	151	59.0	87	34.0	18	7.0	0	0.0	0	0.0
		Lecturers	168	52.3	153	47.7	0	0.0	0	0.0	0	0.0
5	Usage of ICT facilitates good decision making in this university.	Mgt Staff	168	52.3	153	47.7	0	0.0	0	0.0	0	0.0
		Instructors	195	61.3	114	35.8	0	0.0	0	0.0	9	2.8
		Lecturers	115	44.9	123	48.0	18	7.0	0	0.0	0	0.0
6	E-mail internet video are always used in this university.	Mgt Staff	120	37.4	153	47.7	42	13.1	0	0.0	6	1.9
		Instructors	15	4.7	150	47.2	120	39.7	15	4.7	18	5.4

		Lecturers	12	4.7	118	46.1	81	31.6	21	8.2	24	9.4
7	Usage of ICT in decision making reduces complexity of school functions.	Mgt Staff	18	8.6	129	40.2	156	48.6	0	0.0	10	5.6
		Instructors	36	1.3	159	50.0	125	38.7	0	0.0	0	0.0
		Lecturers	12	4.7	166	64.8	6	23.4	0	0.0	18	7.0
8	There are programme implementation support system, which facilitate decision making.	Mgt Staff	48	15.0	147	45.8	126	39.3	0	0.0	0	0.0
		Instructors	63	19.8	132	41.5	123	38.7	0	0.0	0	0.0
		Lecturers	42	16.4	117	45.7	91	35.5	6	2.3	0	0.0
9	Through good ICT decisions are made resulting in good administrative control. In this University	Mgt Staff	63	19.6	138	43.0	84	26.2	24	7.5	12	3.7
		Instructors	81	25.5	222	69.8	15	4.7	0	0.0	0	0.0
		Lecturers	60	23.4	129	50.4	61	23.8	6	2.3	0	0.0
10	Current decision support system are available in this University.	Mgt Staff	36	11.2	249	77.6	24	7.5	0	0.0	12	3.9
		Instructors	36	11.3	156	49.1	123	38.7	3	9.0	0	0.0
		Lecturers	48	15.0	147	45.8	102	31.8	6	1.9	18	5.6

Table 14 shows that majority of the management staff, ICT instructors and lecturers believed that computer is capable of storing information which can be recalled during decision making when needed. A total of 198 or 62.8% management staff were in strong agreement, while 151 or 59.0% of the ICT instructors and 168 or 52.0% of the lecturers were in strong agreement with this view.

4.3.3 Respondents' Opinions on the Impact of ICT on Planning in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to determine the impact of ICT on Planning in universities in Nigeria.

Table15: Respondents' Opinions on the Impact of ICT on Planning in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	ICT enhances better information dissemination.	Mgt Staff	183	57.5	105	33.0	30	9.4	0.	0.0	0	0.0
		Instructors	154	60.2	96	37.5	6	2.3	0	0	0	0.0
		Lecturers	204	63.6	111	34.6	6	1.9	0	0	0	0.0
2	ICT has eliminated previous communication Methods	Mgt Staff	75	23.6	117	36.8	111	34.9	15	4.7	0	0.0
		Instructors	136	53.1	72	28.1	45	17.6	3	1.2	0	0.0
		Lecturers	42	131	135	42.1	138	43.0	0	0.0	6	1.9
3	Online comm. are better facilitated in universities due to ICT usage.	Mgt Staff	93	29.2	21	66.0	0	0	0	0.0	15	4.7
		Instructors	63	24.6	187	73.0	6	2.3	0	0.0	0	0.0
		Lecturers	111	34.6	92	54.0	6	1.0	0	0.0	12	3.2
4	E-mail is a way of ensuring better rapid text-based	Mgt Staff	39	12.3	141	44.3	129	40.6	0	0.0	9	2.8
		Instructor	48	18.	31	59.	39	15.	0	0.0	18	7.0

	communication	s		8				2				
		Lecturers	42	13.1	195	61.2	36	11.2	1	0.0	48	15.0
5	Communication with staff using e-media enhances better job performance of administrators I	Mgt Staff	72	22.6	225	71.8	21	6.6	0	0.0	0	0.0
		Instructors	57	22.3	106	76.6	3	1.2	0	0.0	0	0.0
		Lecturers	54	16.8	201	62.6	36	11.2	0	0.0	30	9.3
6	E-media communication create better atmosphere for fees payment	Mgt Staff	96	30.2	174	54.7	21	6.6	9	2.8	18	5.7
		Instructors	130	50.8	99	38.7	21	8.2	0	0.0	6	2.3
		Lecturers	135	42.1	156	48.6	12	3.7	12	3.7	6	1.9
7	Availability of internet com. enhances better management output	Mgt Staff	129	40.6	168	52.8	21	6.6	0	0.0	0	0.0
		Instructors	148	57.8	78	30.5	30	11.7	0	0.0	0	0.0
		Lecturers	75	23.4	234	72.9	12	3.7		0.0	0	0.0
8	E-media enables students to apply for institutions exams	Mgt Staff	135	42.5	153	48.1	21	6.6	0	0.0	9	2.8
		Instructors	97	37.4	129	50.4	3	11.7		0.0		0.0
		Lecturers	60	18.7	21	62.4	48	15.	12	3.7	0	0.0
9	E-payment enhances a better accountability time	Mgt Staff	135	43.5	174	54.7	0	0	9	2.8	0	0.0
		Instructor	93	36.	15	61.3	6	2.3	0	0.0	0	0.0

	usage of ICT	s		3	7						
		Lecturers	126	34.3	195	6.7	0	0	0.0	0	0.0
10	ICT usage enhances staff development	Mgt Staff	45	14.2	267	84.0	6	1.9	0	0.0	0	0.0
		Instructors	24	9.4	208	81.3	24	9.4	0	0.0	0	0.0
		Lecturers	105	32.1	186	57.9	24	7.5	0	0.0	6	1.9

Table 15 shows that most of the respondents agreed that ICT has impact on planning. A total of 169 or 66.0% of the ICT instructors and 189 or 59.4% of the management staff believed that planning with the usage of ICT provide room for the assessment of educational needs in universities in Nigeria.

4.3.4 Respondents' Opinions on the Impact of ICT on Staff Development in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to determine the impact of ICT on staff development in universities in Nigeria.

Table16: Respondents' Opinions on the Impact of ICT on Staff Development in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	Staff development is carried out in this institution through the usage of ICT.	Mgt Staff	48	15.1	99	31.1	63	19.8	0	0.0	108	34.0
		Instructors	6	2.3	142	55.5	54	21.1	0	0.0	54	21.1
		Lecturers	87	27.1	84	26.2	72	22.4	6	1.9	72	22.4
2	Organizational goals are achieved through staff development.	Mgt Staff	69	21.7	237	74.5	12	3.8	0	0.0	0	0.0
		Instructors	24	9.4	232	90.6	0	0.0	0	0.0	0	0.0
		Lecturers	81	25.2	228	71.0	6	1.9	0	0	6	1.9
3	ICT helps to design a self improving university staff.	Mgt Staff	108	34.0	210	66.0	0	0	0	0.0	0	0.0
		Instructors	54	21.1	196	76.6	6	2.3	0	0.0	0	0.0
		Lecturers	93	29.0	192	59.8	30	9.3	0	0.0	6	1.9
4	E-mail creates better atmosphere for interaction between staff.	Mgt Staff	198	62.3	120	37.7	0	0.0	0	0.0	0	0.0
		Instructors	93	36.3	157	61.3	6	2.3	0	0.0	0	0.0
		Lecturers	156	48.6	111	34.6	36	11.2	6	1.9	12	3.7

5	Poor interest among many members of staff to adopt the use of computers.	Mgt Staff	21	6.6	237	74.5	60	18.5	0	0.0	0	0.0
		Instructors	18	7.0	115	44.9	105	41.0	18	7.0	0	0.0
		Lecturers	42	13.1	207	64.5	36	11.2	6	1.9	30	9.3
6	Online dissemination of information among staff enhances staff development better.	Mgt Staff	33	10.4	162	50.9	123	38.7	0	0.0	0	0.0
		Instructors	18	7.0	157	61.3	81	31.6	0	0.0	0	0.0
		Lecturers	84	26.2	105	32.7	120	37.4	6	1.9	6	1.9
7	ICT provides better opportunities for staff to communicate with one another.	Mgt Staff	126	39.6	171	53.8	15	4.7	0	0.0	6	1.9
		Instructors	57	22.3	144	56.3	55	21.5	0	0.0	0	0.0
		Lecturers	177	55.1	96	29.9	30	9.3	6	1.9	12	3.7
8	With internet facilities lecturers are better able to lecture by getting high quality.	Mgt Staff	153	48.1	150	47.2	15	4.7	0	0.0	0	0.0
		Instructors	69	27.0	166	64.8	21	8.2	0	0.0	0	0.0
		Lecturers	180	58.9	120	37.6	6	1.9	0	0.0	6	1.9
9	E- learning helps lecturers and students to improve their knowledge in their respective fields.	Mgt Staff	186	58.5	132	41.5	0	0.0	0	0.0	0	0.0
		Instructors	63	24.6	157	61.3	36	14.1	0	0.0	0	0.0
		Lecturers	144	44.9	153	47.7	18	5.6	0	0.0	6	1.9

10	Lecturers improve their Knowledge through on-line conferences and seminars.	Mgt Staff	108	34.0	189	59.4	15	4.7	6	1.9	0	0.0
		Instructors	102	39.8	81	31.6	73	28.5	0	0.0	0	0.0
		Lecturers	150	46.7	147	45.8	18	5.6	0	0.0	6	1.9

Table 16 shows that some of the respondents were of the opinions that E- learning helps lecturers and students to improve their knowledge in their respective fields for better performance in universities in Nigeria. A total of 198 or 62.3% of management staff and 156 or 48.6% of lecturers strongly agreed that E-mail creates better atmosphere for interaction between staff.

4.3.5 Respondents' Opinions on the Impact of ICT on Maintenance of Discipline in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to determine the impact of ICT on maintenance of discipline in universities in Nigeria.

Table17: Respondents' Opinions on the Impact of ICT on Staff Development in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	Utilization of ICT enhances better orderliness and discipline	Mgt Staff	54	17.0	102	32.1	132	41.5	6	1.9	24	7.5
		Instructors	82	32.0	108	42.2	34	21.1	6	2.3	6	2.3
		Lecturers	86	26.2	108	33.6	129	410.2	0	0.0	0	0.0
2	E-payment prevent fraudulent practices.	Mgt Staff	63	19.8	219	68.9	6	2.9	12	3.8	24	5.7
		Instructor	36	14.	20	81.3	0	0.0	6	2.3	6	2.3

		s		1	8							
		Lecturers	132	41.1	183	57.0	6	1.9	0	0.0	0	0.0
3	Using ICT instill disciplinary measures by reducing ghost workers	Mgt Staff	156	49.1	114	35.8	18	5.7	6	1.9	24	7.5
		Instructors	66	25.8	160	62.5	18	7.0	6	2.3	6	2.3
		Lecturers	159	49.5	114	35.5	48	15.30	0	0.0	0	0.0
4	There is orderliness in the usage of ICT in the payment of fees	Mgt Staff	102	32.1	189	59.4	21	6.6	6	1.9	0	0.0
		Instructors	130	50.8	96	37.5	12	4.7	0	0.0	18	7.0
		Lecturers	162	50.5	141	43.9	12	3.7	0	0.0	6	1.9
5	Computer based exams enhances good discipline among students	Mgt Staff	84	26.4	195	61.3	24	7.5	6	1.9	9	2.8
		Instructors	75	29.3	145	56.6	18	9.0	0	0.0	18	7.0
		Lecturers	117	36.4	168	52.3	30	9.3	0	0.0	6	1.9
6	ICT promotes exam validity and reliability in this universality	Mgt Staff	246	77.4	51	16.0	15	4.7	6	1.9	0	0.0
		Instructors	106	41.4	114	44.5	12	4.7	0	0.0	24	9.6
		Lecturers	111	36.4	186	51.4	6	1.9	0	0.0	12	3.7
7	Effective use of ICT promote good discipline among staff management	Mgt Staff	150	47.2	156	49.1	6	1.9	6	1.9	0	0.0
		Instructor	12	47.	10	41.0	12	4.7	0	0.0	18	7.0

	& students	s	1	3	5						
		Lecturers	84	26.2	201	62.6	18	5.6	6	1.9	12	3.7
8	Online allocation of hostel accommodation has help to curb indiscipline in room allocation to students in this University	Mgt Staff	153	48.1	150	47.2	15	4.7	0	0.0	0	0.0
		Instructors	69	27.0	166	64.8	21	8.2	0	0.0	0	0.0
		Lecturers	180	58.9	120	37.6	6	1.9	0	0.0	6	1.9
9	Computer based examination enhances time validity in this University.	Mgt Staff	186	58.5	132	41.5	0	0.0	0	0.0	0	0.0
		Instructors	63	24.6	157	61.3	36	14.1	0	0.0	0	0.0
		Lecturers	144	44.9	153	47.7	18	5.6	0	0.0	6	1.9
10	Payments of fee or levy in this University are computer base.	Mgt Staff	108	34.0	189	59.4	15	4.7	6	1.9	0	0.0
		Instructors	102	39.8	81	31.6	73	28.5	0	0.0	0	0.0
		Lecturers	150	46.7	147	45.8	18	5.6	0	0.0	6	1.9

Table 17 shows that a total of 246 or 77.4% administrators believed that ICT promotes examination validity and reliability in the university, while a total of 75 or 29.3% of the ICT instructors believed that effective use of ICT promotes good discipline among students, and a total of 156 or 48.6% of the lecturers believed that payment of fees or levy in the universities are now computer based.

4.3.6 Respondents' Opinions on the Impact of ICT on Provision of Welfare/Health Services in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to

determine the impact of ICT on Provision of Welfare/Health Services in universities in Nigeria.

Table18: Respondents' Opinions on the Impact of ICT on Provision of Welfare/Health Services in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	Online drastically reduce students long queue in banks and offices	Mgt Staff	208	71.7	51	16.0	39	12.3	0	0.0	0	0.0
		Instructors	132	51.6	48	18.8	64	25.0	12	4.7	0	0.0
		Lecturers	210	65.4	81	25.2	18	3.6	6	1.9	6	1.9
2	E-circulars from the institutions on	Mgt Staff	168	50.8	129	40.6	6	1.9	9	2.8	6	1.9

	students' matters leads to good management	Instructors	63	24.6	134	60.2	6	2.3	9	3.5	24	9.4
		Lecturers	135	42.1	136	48.6	24	7.5	6	1.9	0	0.0
3	Availability of e-kiosk improves student welfare better than before.	Mgt Staff	111	34.7	39	12.3	162	50.9	0	0.0	6	1.9
		Instructors	54	21.1	69	27.0	103	40.2	6	2.3	24	9.4
		Lecturers	45	14.0	114	33.5	126	39.3	24	7.5	12	3.7
4	Provision of E-media for student enhances better managerial outputs	Mgt Staff	72	22.6	114	35.8	126	39.6	0	0.0	6	1.9
		Instructors	73	28.5	111	43.4	48	18.8	0	0.0	24	9.4
		Lecturers	42	13.1	177	55.1	96	29.9	6	1.9	0	0.0
5	Utilization of E-media by students creates better atmosphere for learning	Mgt Staff	87	27.4	210	66.0	12	3.8	0	0.0	9	2.8
		Instructors	63	24.6	175	68.4	12	4.1	0	0.0	6	2.3
		Lecturers	111	34.6	124	54.2	24	7.5	6	1.9	6	1.9
6	The university organization ensure that lecture rooms are well ventilated.	Mgt Staff	138	43.4	153	48.1	21	6.6	0	0.0	6	1.9
		Instructors	72	28.1	129	50.4	49	19.1	0	0.0	6	2.3
		Lecturers	150	46.1	165	51.4	6	1.9	0	0.0	0	0.0
7	Before effective learning, students	Mgt Staff	168	52.8	1023	38.7	0	0.0	15	4.7	12	3.8

	have to be physically strong and healthy.	Instructors	93	36.3	90	35.2	0	0.0	49	19.1	24	9.4
		Lecturers	183	51.0	132	41.1	6	1.9	0	0.0	0	0.0
8	The universities health policy place emphasis on cleanliness and sanitation.	Mgt Staff	147	46.2	144	45.3	0	0.0	21	6.6	6	1.9
		Instructors	63	24.6	132	51.6	6	2.3	49	19.1	6	2.3
		Lecturers	159	49.5	156	48.6	6	1.9	0	0.0	0	0.0
9	The health services is to respond to health needs of the students/staff.	Mgt Staff	177	55.7	108	34.0	21	6.6	6	1.9	6	1.9
		Instructors	84	32.8	99	38.7	49	19.1	0	0.0	24	9.4
		Lecturers	150	46.7	165	51.4	6	1.9	0	0.0	0	0.0
10	The mission is to use ICT as a tool for health developments.	Mgt Staff	60	18.9	99	31.1	144	45.3	9	2.8	6	1.9
		Instructors	139	54.3	69	27.0	42	16.4	0	0.0	6	2.3
		Lecturers	54	16.8	162	50.5	105	32.2	0	0.0	0	0.0

Table 18 shows that all the three categories of respondents agreed that online services drastically reduce students' long queues in banks and offices. A total of 168 or 52.8% of the management staff 93 or 36.3% of the ICT instructors and 183 or 51.0% of the lecturers were of this opinion that before effective learning, students have to be physically strong and health.

4.3.7 Respondents' Opinions on the Impact of ICT on Maintenance of Records in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to determine the impact of ICT on maintenance of records in universities in Nigeria.

Table19: Respondents' Opinions on the Impact of ICT on Maintenance of Records in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	Record keeping is an important part of managerial work in this university	Mgt Staff	129	40.6	183	57.5	0	0.0	0	0.0	6	1.9
		Instructors	126	49.2	124	48.4	6	2.3	0	0.0	0	0.0
		Lecturers	123	38.3	174	56.2	18	5.6	0	0.0	6	1.9
2	ICT has made retrieval of data such as students records easier	Mgt Staff	204	64.2	102	32.1	6	1.9	0	0.0	6	1.9
		Instructors	133	52.0	87	34.0	36	14.1	0	0.0	0	0.0
		Lecturers	153	47.7	144	44.9	18	5.6	0	0.0	6	1.9
3	With computer, record keeping is effective	Mgt Staff	192	60.4	100	34.0	6	1.9	0	0.0	12	3.8
		Instructors	160	62.5	54	21.1	42	16.4	0	0.0	0	0.0
		Lecturers	174	54.2	123	38.3	18	5.6	1	0.0	6	1.9
4	Reports from computer are conveniently produced from	Mgt Staff	168	52.8	111	34.9	29	8.5	6	1.9	6	1.9
		Instructors	45	17.6	157	61.3	54	21.1	0	0.0	0	0.0

	stored records.	Lecturers	159	49.5	138	43.0	18	5.6	0	0.0	6	1.9
5	Fax is used to transmit both graphic data and alpha numeric data	Mgt Staff	108	34.0	54	17.0	117	36.8	0	0.0	39	12.3
		Instructors	121	47.3	45	17.6	81	31.6	6	2.3	3	1.2
		Lecturers	63	19.6	96	29.9	108	33.6	6	1.9	48	15.0
6	Organization of students records is better carried out by computer	Mgt Staff	69	21.7	219	68.9	18	5.7	0	0.0	12	3.8
		Instructors	15	5.9	190	74.2	45	17.6	6	2.3	0	0.0
		Lecturers	102	31.8	201	62.6	12	3.7	0	0.0	6	1.9
7	Computer students' results are more reliable than the analog.	Mgt Staff	201	63.2	93	29.2	6	1.9	12	3.8	6	1.9
		Instructors	99	38.7	112	43.8	45	17.6	0	0.0	0	0.0
		Lecturers	165	51.4	138	43.0	12	3.7	0	0.0	6	1.9
8	Computer ensures acquisition retention and upgrading of school records	Mgt Staff	186	58.5	108	34.0	6	1.9	0	0.0	18	5.7
		Instructors	129	50.4	109	42.6	18	7.0	0	0.0	0	0.0
		Lecturers	174	54.2	141	43.9	6	1.9	0	0.0	0	0.0
9	Through ICT there are easy data storage in this university	Mgt Staff	47	46.2	147	46.2	6	1.9	6	1.9	12	3.8
		Instructors	51	19.9	205	80.1	0	0.0	0	0.0	0	0.0

		Lecturers	144	44.9	165	51.4	12	3.7	0	0.0	0	0.0
10	Computer is good for document follow-up in this university.	Mgt Staff	150	47.2	144	45.3	6	1.9	6	1.9	12	3.8
		Instructors	103	40.2	135	52.7	12	4.7	0	0.0	6	2.3
		Lecturers	177	55.1	126	34.3	12	3.7	0	0.0	6	1.9

Table 19 shows that 204 or 64.2% of the management staff and 133 or 52.0% of lecturers believed that ICT has made retrieval of data, such as students' records easier. A total of 192, representing 60.4% of the management staff and 160 or 62.5% of ICT instructors believed that with computer, record keeping is effective. On the other hand, a total of 177 or 55.1% of the lecturers believed that computer is good for document follow-up in universities in Nigeria.

4.3.8 Respondents' Opinions on the Impact of ICT on Interpersonal Relationship in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to

determine the impact of ICT on interpersonal relationship in universities in Nigeria.

Table20: Respondents' Opinions on the Impact of ICT on Interpersonal Relationship in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	ICT can help to improve interaction within and outside the university.	Mgt Staff	258	81.1	54	17.0	6	1.9	0	0.0	0	0.0
		Instructors	120	46.9	106	41.4	18	7.0	12	4.7	0	0.0
		Lecturers	20	64.	96	26.9	18	5.6	0	0.0	0	0.0

			7	5							
2	ICT enhances community university relationship	Mgt Staff	14	45.3	15 9	50.0	15	4.7	0	0.0	0	0.0
		Instructors	10 2	39.8	69	27.0	49	19.1	18	7.0	18	7.0
		Lecturers	15 6	48.6	14 7	45.8	12	3.1	6	1.9	0	0.0
3	ICT accurate information unites university with its surroundings	Mgt Staff	90	28.3	21 3	67.0	0	0.0	15	4.7	0	0.0
		Instructors	54	21.1	13 5	52.1	12	4.7	55	21.5	0	0.0
		Lecturers	10 2	31.8	18 3	57.0	24	7.5	6	1.9	6	1.9
4	ICT strengthens the university community relationship better than analog	Mgt Staff	17 4	54.7	12 0	37.7	24	7.5	0	0.0	0	0.0
		Instructors	48	18.8	18 1	70.7	15	5.9	0	0.0	12	4.7
		Lecturers	13 5	42.1	16 2	50.5	24	7.5	0	0.0	0	0.0
5	There is poor ICT relationship among this university and the neighborhood.	Mgt Staff	17 1	53.8	69	21.7	69	21.7	9	2.8	0	0.0
		Instructors	12 1	47.3	10 3	41.0	12	4.7	12	4.7	6	2.3
		Lecturers	18 9	58.9	56	16.8	60	18.7	6	1.9	12	3.7
6	ICT allow effective communication and chart on current information	Mgt Staff	14 7	46.2	14 4	45.3	27	8.5	0	0.0	0	0.0
		Instructors	54	21.1	16 6	64.8	30	11.7	6	2.3	0	0.0
		Lecturers	13	43.	15	47.7	30	9.3	0	0.0	0	0.0

			8	0	3							
7	Effective utilization of ICT promotes better university-community relationship	Mgt Staff	138	43.0	153	47.7	30	9.3		0.0	0	0.0
		Instructors	54	21.1	66	25.8	130	50.8	6	2.3	0	0.0
		Lecturers	162	50.5	105	32.7	54	16.8	0	0.0	0	0.0
8	There are adequate computer centres where community can learn	Mgt Staff	51	16.0	72	22.6	195	61.3	0	0.0	0	0.0
		Instructors	15	5.9	48	18.8	109	66.0	24	9.4	0	0.0
		Lecturers	54	16.8	96	29.9	153	47.7	18	5.6	0	0.0
9	ICT improve cordial relationship with community.	Mgt Staff	39	12.3	114	35.8	162	50.9	9	2.8	0	0.0
		Instructors	21	8.2	93	36.3	118	46.1	24	9.4	0	0.0
		Lecturers	18	5.6	156	48.6	112	36.4	24	7.5	6	1.9
10	ICT has reduced the rate of unemployment among the youth	Mgt Staff	159	50.0	81	25.5	57	17.9	6	1.9	15	4.7
		Instructors	69	27.0	133	52.0	21	8.2	30	11.7	3	1.2
		Lecturers	96	29.9	99	30.8	90	28.0	24	7.5	12	3.7

Table 20 shows that a total of 258 or 81.1% of the management staff believed that ICT can help to improve interaction within and outside the university, while 121 or 47.3% of the ICT instructors believed that there is poor ICT relationship among university and the neighborhood. On the other hand, a total of 162 or 50.5% of the lecturers believed that effective utilization of ICT promotes better university-community relationship.

4.3.9 Respondents' Opinions on the Impact of ICT on Games/Recreational Services in Universities in Nigeria

Tabulations, frequencies and percentages of respondents' opinions were used to determine the impact of ICT on games/recreational services in universities in Nigeria.

Table21: Respondents' Opinions on the Impact of ICT on Games/Recreational Services in Universities in Nigeria

S/No	Item Statement	Category of Respondent	Response Categories									
			SA		A		UD		D		SD	
			Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
1	ICT has provided innovation for teaching and learning	Mgt Staff	258	81.1	54	17.0	6	1.9	0	0.0	0	0.0
		Instructors	120	46.9	106	41.4	18	7.0	12	4.7	0	0.0
		Lecturers	207	64.5	96	26.9	18	5.6	0	0.0	0	0.0
2	ICT has played a vital role in games and recreations.	Mgt Staff	93	29.2	18	57.5	21	6.6	9	2.8	12	3.8
		Instructors	72	28.1	1227	49.1	51	19.9	0	100	6	02.3

		Lecturers	84	26.2	189	58.9	42	13.1	6	1.9	0	0.0
3	ICT contribute to improvements in games & recreations	Mgt Staff	84	26.4	189	59.4	21	6.6	0	0.0	24	7.5
		Instructors	36	14.1	181	70.7	33	12.9	0	0.0	6	2.3
		Lecturers	111	36.4	132	41.1	66	20.6	6	1.9	0	0.0
4	ICT is readily useful in games and recreation.	Mgt Staff	102	32.1	189	59.4	6	1.9	9	2.8	12	3.8
		Instructors	61	23.8	141	55.1	30	11.7	18	7.0	6	2.3
		Lecturers	69	21.5	198	61.7	42	13.1	12	3.7	0	0.0
5	Universities maintain virile sporting athletic and recreational activities.	Mgt Staff	96	30.2	204	64.2	0	0.0	0	0.0	18	5.7
		Instructors	73	28.5	135	32.1	24	9.4	18	7.0	6	2.3
		Lecturers	45	14.0	234	72.9	36	11.2	0	0.0	6	1.9
6	All the universities participates in both national and international sport.	Mgt Staff	144	45.3	150	47.2	0	0.0	0	0.0	24	7.5
		Instructors	54	21.1	151	59.0	45	17.6	0	0.0	6	2.3
		Lecturers	96	29.9	111	34.3	96	29.9	18	5.6	0	0.0
7	ICT has redefined all aspects of sports facilities.	Mgt Staff	66	20.8	117	36.8	117	36.8	0	0.0	18	5.7
		Instructors	45	17.6	106	41.4	81	31.6	0	0.0	24	9.2

		Lecturers	30	9.3	165	51.4	114	35.5	6	1.9	6	1.9
8	Effective utilization of ICT could promote good sport relationship	Mgt Staff	72	22.6	108	34.1	114	35.8	6	1.9	18	5.7
		Instructors	37	22.3	145	56.6	48	18.8	0	0.0	6	2.3
		Lecturers	90	28.0	141	43.9	78	24.3	6	1.9	6	1.9
9	ICT provides new skills and information in games and recreationals.	Mgt Staff	72	22.6	202	65.1	12	3.8	12	3.8	15	4.7
		Instructors	67	26.2	147	57.4	36	14.1	0	0.0	6	2.3
		Lecturers	87	27.1	210	65.4	12	3.7	6	1.9	6	1.9
10	ICT sport equipment has improved training of students athletic in Nigeria	Mgt Staff	51	16.0	189	59.4	54	17.0	6	1.9	18	5.37
		Instructors	52	20.3	105	41.0	75	29.3	0	0.0	24	9.4
		Lecturers	36	11.2	240	74.8	33	10.3	6	1.9	6	1.9

Table 21 shows that all the categories of respondents believed that ICT has increasingly played a vital role in games/recreational services. For examples. 187 or 57.5% of management staff agreed that ICT plays a vital role in games and recreations, while 210 or 70.7% of ICT instructors agreed that ICT contributes to improvements in games and recreational services. On the other hand, 234 or 72.9% of lecturers agreed that universities maintain virile sporting and recreational activities.

4.4 Answering of Research Questions

Introduction

This section presents the set of the nine null hypotheses raised for this study. The analyses of Variance, descriptive statistics as well as the Scheffe post hoc mean comparisons were all used to determine presence or absence of significant mean opinion among the tree categories of respondents in each of the nine test variables.

Question One: Is there any significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on communication in the management of universities in Nigeria?

Table 22: Descriptive Statistics on Differences in Opinions of management staff, Lecturers and ICT Instructors on the Impact of ICT on Communication in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	41.3302	3.31439	.18527
ICT Instructors	256	41.7288	2.47631	.15199
Lecturers	321	40.6337	4.21360	.23179
Total	895	41.1541	3.54735	.11695

There was no difference in the opinions of management staff, lecturers and ICT instructors on the impact of availability of ICT on communication in universities in Nigeria. The descriptive statistics showed that their computed mean opinion concerning the opinions of management staff, lecturers and ICT instructors on the impact of ICT on communication in universities in Nigeria are 41.3302, 41.7288 and 40.6337, respectively.

Question Two: Is there any difference in opinions of management staff, lecturers and ICT Instructors on the impact of ICT on decision making process in

Universities in Nigeria?

Table 23: Descriptive Statistics on Differences in Opinions of management staff, the Lecturers and ICT Instructors on the Impact of ICT on Decision Making Process in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	40.0472	2.60177	.14544
ICT Instructors	256	39.2034	4.09701	.21556
Lecturers	321	39.1584	3.61035	.19654
Total	895	39.5226	3.38496	.10746

There was no difference in the opinions of management staff lecturers and ICT instructors on the impact of ICT on decision-making process in universities in Nigeria. Their mean opinions concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on decision-making process in universities in Nigeria are 40.0472, 39.2034 and 39.1584, respectively.

Question Three: What is the difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on planning in universities in Nigeria?

Table 24: Descriptive Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Planning in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	40.0660	3.16910	.17715
ICT Instructors	256	39.4746	4.56507	.24236
Lecturers	321	39.6238	2.52528	.13985

Total	895	39.7669	3.31807	.10619

Results of the descriptive statistics revealed that there was no difference in the opinion of management staff, lecturers and ICT instructors on the impact of ICT on planning in universities in Nigeria. Their mean opinion concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on planning in universities in Nigeria are 40.0660, 39.4746 and 39.6238, respectively.

Question Four: What is the difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on staff development in universities in Nigeria?

Table 25: Descriptive Statistics on Differences in the Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Staff Development in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	41.2358	2.51302	.14048
ICT Instructors	256	39.7119	2.52608	.13659
Lecturers	321	40.6436	4.88996	.27014
Total	895	40.6729	3.64073	.11818

Outcome of the descriptive statistics on the mean and standard deviations on opinions of administrators, lecturers and ICT instructors on the impact of ICT on staff development in the management of universities in Nigeria showed huge differences among them. Their mean opinion concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on staff development in universities in Nigeria are 41.2358, 39.7119 and 40.6436, respectively. This outcome showed that the ICT instructors had the least mean opinion, while management staff and lecturers had significantly higher mean opinion placed.

Question Five: What is the difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the maintenance of discipline in the management of universities in Nigeria?

Table 26: Descriptive Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Maintenance of Discipline in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	1.7547	2.51302	.14048
ICT Instructors	256	38.7458	6.24940	.36338
Lecturers	321	42.0693	4.49724	.24334
Total	895	41.2068	14.25965	.16357

Outcome of the descriptive statistics revealed that differences exist in the opinion of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in universities in Nigeria. Their mean opinion concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in universities in Nigeria are 1.7547, 38.7458 and 42.0693, respectively. This outcome showed that while the ICT instructors had the least mean opinion, the management staff and lecturers had higher mean opinion on the impact of ICT on maintenance of discipline in universities in Nigeria.

Question Six: What is the difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the provision of welfare and health services in universities in Nigeria?

Table 27: Descriptive Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Provision of Welfare and Health Services in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	41.6226	5.42385	.30319
ICT Instructors	256	38.9831	7.10146	.41375
Lecturers	321	41.9208	2.90063	.15902
Total	895	41.1504	5.21825	.17466

The results of the descriptive statistics revealed that differences exist in the opinions of Management Staff, lecturers and ICT instructors on the impact of ICT on provision of welfare and health services in universities in Nigeria. Their mean opinion concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on provision of welfare and health services in universities in Nigeria are 41.6226, 38.9831 and 41.9208, respectively. The ICT instructors had the lowest mean opinion than the management staff and lecturers on the impact of ICT on provision of welfare and health services in universities in Nigeria.

Question Seven: Is there difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in universities in Nigeria?

Table 28: Descriptive Mean and Standard Deviation Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Maintenance of Records in Universities in Nigeria.

Management Staff	318	47.2830	6.49359	.36299
ICT Instructors	256	45.6271	5.20245	.28775
Lecturers	321	46.9703	5.22964	.28529
Total	895	46.7970	5.77602	.18406

The mean and standard deviations descriptive statistics revealed that there was no difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in universities in Nigeria. Their mean opinion concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in universities in Nigeria are 47.2830, 45.6271 and 46.9703, respectively. The opinions of the three categories of respondents concerning maintenance of records in universities in Nigeria are the same.

Question Eight: What is the difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the interpersonal relationship in universities in Nigeria?

Table 29: Descriptive Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Interpersonal Relationship in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	42.1038	3.64085	.20352
ICT Instructors	256	38.6102	6.72365	.36296
Lecturers	321	41.2574	4.62526	.24998
Total	895	41.0075	5.00037	.16299

Outcome of the descriptive statistics on the mean opinion of the three categories of respondents showed that differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on interpersonal relationship in universities in Nigeria. Their mean opinions concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on interpersonal relationship in universities in Nigeria are 42.1038, 38.6102 and 41.2574, respectively. The ICT instructors had lower mean opinion than the management staff and lecturers who had higher mean opinion regarding their mean perception of the impact of ICT on interpersonal relationship in universities in Nigeria.

Table 30: Descriptive Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Games/Recreational Services in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	39.8396	7.73752	.43253
ICT Instructors	256	37.3220	6.67585	.38871
Lecturers	321	39.8713	4.09796	.22509
Total	895	39.2932	6.39727	.20622

It is obvious from the descriptive statistics table above that differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on games/recreational services in Nigeria. Their mean opinion concerning the opinion of management staff, lecturers and ICT instructors on the impact of ICT on games/recreational services in universities in Nigeria are 39.8396, 37.3220 and 39.8713, respectively. It revealed that the ICT instructors had the least mean opinion, while the management staff and lecturers had higher mean opinion as regards the impact of ICT on games/recreational services in universities in Nigeria.

4.5 Hypotheses Testing

This section deals with hypotheses testing. The hypotheses were related to variables identified in the research objectives. The issues include; impact of ICT on communication in University, impact of ICT on decision making process in University, impact of ICT on planning in University, impact of ICT on staff development in University, impact of ICT on maintenance of discipline in University, impact of ICT on provision of students' welfare/health services in University, impact of ICT on maintenance of records in University, impact of ICT on interpersonal relationship in University and impact of ICT on provision of games and recreational services in University. The nine hypotheses were tested using One Way Analysis of Variance (ANOVA) at 0.05 level of significance. A hypothesis is rejected if the p-value is less than the level of significance set by the study.

Hypothesis One

Hypothesis one states that, there is no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on communication in University in Nigeria. Items 1-10 in the questionnaire relate to these Hypotheses. Responses of all stakeholders were collected, analyzed and presented in a table using ANOVA. Thus, Table 31 gives the details.

Table 31: Analysis of Variance (ANOVA) Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Communication in Universities in Nigeria.

Status	Sum of Squares	Df	Mean Square	F-value	p.value	F.critical
Between Groups	50.130	2	25.065	2.007	0.136	2.60
Within Groups	3284.550	263	12.489			
Total	3334.680	895				

Table 31 shows the results of the Analysis of variance (ANOVA) statistics that there was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on communication in universities in Nigeria. Reasons being that, the calculated p value of 0.136 is higher than the 0.05 alpha level of significance, while the calculated F-ratio value of 2.007 was found to be lower than the 2.60 F critical value. Therefore, the null hypothesis is retained.

Hypothesis Two:

The null hypothesis states that there is no significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on decision making process in universities in Nigeria.

Table 32: Analysis of Variance (ANOVA) Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Decision Making Process in Universities in Nigeria.

Status	Sum of Squares	Df	Mean Square	F.value	p.value	F.critical
Between Groups	48.576	2	24.288	2.138	.120	2.60
Within Groups	2987.789	263	11.360			
Total	3036.365	895				

Table 32 shows the results of the Analysis of variance (ANOVA) statistics that there was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on decision-making process in universities in Nigeria. Reasons being that, the calculated p value of 0.120 is higher than the 0.05 alpha level of significance while the calculated F value of 2.138 was found to be lower than the 2.60 F critical value. Their mean opinion concerning the opinions of management staff, lecturers and ICT instructors on the impact of ICT on decision-making process in universities in Nigeria. Therefore, the null hypothesis was accepted.

Hypothesis Three:

The null hypothesis states that, there is no significant difference in opinions of administrators, lecturers and ICT instructors on the impact of ICT on planning in the management of universities in Nigeria.

Table 33: Analysis of Variance (ANOVA) Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the impact of ICT on Planning in Universities in Nigeria.

Status	Sum of Squares	Df	Mean Square	F.value	p.value	F.critical
Between Groups	16.596	2	8.298	.752	.472	2.60
Within Groups	2900.953	263	11.030			
Total	2917.549	895				

Table 33 shows the results of the Analysis of variance (ANOVA) statistics that there was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on planning in universities in Nigeria. Reasons being that, the calculated p value of 0.472 is higher than the 0.05 alpha level of significance, while the calculated F value of 0.752 was found to be lower than the 2.60 F critical value. Therefore, the null hypothesis was retained.

Hypothesis Four

The null hypothesis four states that, there is no significant difference in opinions of administrators, lecturers and ICT instructors on the impact of ICT on staff development in the management of universities in Nigeria.

Table 34: Analysis of Variance (ANOVA) Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Staff Development in Universities in Nigeria.

Status	Sum of Squares	Df	Mean Square	F.value	p.value	F.critical
Between Groups	88.171	2	44.086	3.386	.035	2.60
Within Groups	3424.374	263	13.020			
Total	3512.545	895				

Table 34 shows the result of the Analysis of variance (ANOVA) statistics that significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on staff development in universities in Nigeria. Reasons being that, the calculated p value of 0.035 is lower than the 0.05 alpha level of significance, while the calculated F value of 3.386 was found to be higher than the 2.60 F critical value. Therefore, the null hypothesis was rejected.

Table 35: The Scheffe Post Hoc Comparison statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on Staff Development in Universities in Nigeria.

Status	N	Mean	Std. Deviation	Std. Error

Management Staff	318	41.2358	2.51302	.24409
ICT Instructors	256	41.7119	2.52608	.32887
Lecturers	321	40.6436	4.88996	.48657
Total	895	40.6729	3.64073	.22323

Table 35 shows the mean opinions of management staff, lecturers and ICT instructors on the impact of ICT on staff development in universities in Nigeria are 41.2358 of management staff, 41.7119 of ICT instructors and 40.6436 of lecturers, respectively. The Scheffe Post Hoc comparison statistics further confirm that the mean score of management staff 41.2358 was found to be closer to that of ICT instructors 41.7119, implying that the difference between the two respondents was not significant. While lecturers had significantly lower mean 40.6436. This implies that the management staff and ICT instructors differ significantly in their opinions regarding the impact of ICT on staff development in universities in Nigeria.

Hypothesis Five

The null hypothesis states that there is no significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the maintenance of discipline in universities in Nigeria.

Table 36: Analysis of Variance (ANOVA) Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Maintenance of Discipline in Universities in Nigeria.

Status	Sum of Squares	Df	Mean Square	F.value	p.value	F.critical
Between Groups	464.304	2	232.152	9.550	.000	2.60
Within Groups	6393.324	263	24.309			
Total	6857.628	895				

Table 36 shows the result of the Analysis of variance (ANOVA) statistics that significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in universities in Nigeria. Reasons being that, the calculated p value of 0.000 is lower than the 0.05 alpha level of significance, while the calculated F value of 9.550 was found to be higher than the 2.60 F critical value. Therefore, the null hypothesis was rejected.

Table 37: The Scheffe Post Hoc Comparison statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Maintenance of Discipline in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	41.7547	4.47812	.43495
ICT Instructors	256	38.7458	6.24940	.81360
Lecturers	321	42.0693	4.49724	.44749
Total	895	41.2068	5.08703	.31191

Table 37 shows the mean opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in universities in Nigeria are 41.7547of management staff, 38.7458 of ICT instructors and 42.0693of lecturers, respectively. The Scheffe Post Hoc comparison statistics further confirmed that the mean score of management staff 41.7547 was found to be closer to that of 42.0693of lecturers, implying that the difference between the two respondents was not significant. While ICT instructors had significantly lower mean 38.7458. This implies that the management staff and ICT instructors differ significantly in their opinions regarding the impact of ICT on staff development in universities.

Hypothesis Six

The null hypothesis six states that, there is no significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the provision of welfare and health services in universities in Nigeria.

Table 38: Analysis of Variance (ANOVA) Statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Provision of Welfare and Health Services in Universities in Nigeria.

	Sum Squares	of Df	Mean Square	F,value	p.value	F.critical
Between Groups	360.730	2	180.365			
				6.920	.001	2.60
Within Groups	6855.255	263	26.066			
Total	7215.985	895				

Table 38 shows the result of the Analysis of variance (ANOVA) statistics that significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on provision of welfare and health services in universities in Nigeria. Reasons being that, the calculated p.value of 0.001 is lower than 0.05 alpha level of significance, while the calculated F value of 6.920 was found to be higher than the 2.60 F critical value. Therefore, the null hypothesis was rejected.

Table 39: The Scheffe Post Hoc Comparison statistics on Descriptive Statistics on Differences in Opinions of management staff, Lecturers and ICT Instructors on the Impact of ICT on the Provision of Welfare and Health Services in Universities in Nigeria.

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	41.6226	5.42385	.52681
ICT Instructors	256	38.9831	7.10146	.92453
Lecturers	321	41.9208	2.90063	.28862
Total	895	41.1504	5.21825	.31995

Table 39 shows the Scheffe Post Hoc comparison statistics further confirmed that the mean score of management staff 41.6226 was found to be closer to that of 41.9208 of lecturers, implying that the difference between the two respondents was not significant. While ICT instructors had significantly lower mean 38.9831. This implies that the management staff and ICT instructors differ significantly in their opinions regarding the impact of ICT on staff development in universities.

Hypothesis Seven

The null hypothesis seven states that, there is no significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the maintenance of records in universities in Nigeria.

Table 40: Analysis of Variance (ANOVA) statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Maintenance of Records in Nigerian Universities.

	Sum of Squares	Df	Mean Square	F.value	P.value	F.critical
Between Groups	108.821	2	54.410	1.639	.196	2.60
Within Groups	8732.217	263	33.202			
Total	8841.038	265				

Table 40 shows the results of the Analysis of Variance (ANOVA) statistics that there was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in universities in Nigeria. Reasons being that, the calculated p value of 0.196 is higher than the 0.05 alpha level of significance, while the calculated F value of 1.639 was found to be lower than the 2.60 F critical value. Therefore, the null hypothesis which states that there is no significant difference among the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in Universities in Nigeria, was consequently, retained.

Hypothesis Eight

The null hypothesis eight states that, there is no significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the interpersonal relationship in Universities in Nigeria.

Table 41: Analysis of Variance (ANOVA) statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Interpersonal Relationship in Universities in Nigeria.

	Sum Squares	of Df	Mean Square	F.value	P.value	F,critical
Between Groups	472.786	2	236.393			
				10.104	.000	2.60
Within Groups	6153.199	263	23.396			
Total	6625.985	895				

Table 41 shows the result of the Analysis of Variance (ANOVA) statistics that significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on interpersonal relationship in universities in Nigeria. Reasons being that, the calculated p value of 0.000 is lower than the 0.05 alpha level of significance, while the calculated F value of 10.104 was found to be higher than the 2.60 F critical value. Their mean there was a significant difference in the opinion of management staff, lecturers and ICT instructors on the impact of ICT on interpersonal relationship in universities in Nigeria. Therefore, the null hypothesis was rejected.

Table 42: The Scheffe Post Hoc Comparison statistics on Differences in Opinions of Management Staff, Lecturers and ICT instructors on the Impact of ICT on the Interpersonal Relationship in Universities in Nigeria

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	42.1038	3.64085	.35363
ICT Instructors	256	38.6102	6.72365	.87534
Lecturers	321	41.2574	4.62526	.46023
Total	895	41.0075	5.00037	.30659

Table 42 shows the Scheffe Post Hoc comparison statistics further confirm that the mean score of management staff 42.1038 was found to be closer to that of 41.2574 of lecturers, implying that the difference between the two respondents was not significant. While ICT instructors had significantly lower mean 38.6102. This implies that the management staff and ICT instructors differ significantly

in their opinions regarding on the impact of ICT on interpersonal relationship in universities in Nigeria.

Hypothesis Nine

The null hypothesis nine states that, there is no significant difference in opinions of management staff, lecturers and ICT instructors on the impact of ICT on the games/recreational services in universities in Nigeria.

Table 43: Analysis of Variance (ANOVA) statistics on Differences in Opinions of Management Staff, Lecturers and ICT Instructors on the Impact of ICT on the Games/Recreational Services in Universities in Nigeria.

	Sum of Squares	Df	Mean Square	F.value	P.value	F.critical
Between Groups	294.646	2	147.323	3.6724	.027	2.60
Within Groups	10550.482	263	40.116			
Total	10845.128	265				

Table 43 shows the result of the Analysis of Variance (ANOVA) statistics that significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on games/recreational services in universities in Nigeria. Reasons being that, the calculated p value of 0.027 is lower than the 0.05 alpha level of significance, while the calculated F value of 3.672 was found to be higher than the 2.60 F critical value. Their mean there was a significant difference in

the opinions of management staff, lecturers and ICT instructors on the impact of ICT on games/recreational services in universities in Nigeria. Therefore, the hypothesis was rejected.

Table 44: The Scheffe Post Hoc Comparison statistics on Differences in Opinions of Management Staff, Lecturers and ICT instructors on the Impact of ICT on the Games/Recreational Services in Universities in Nigeria

	N	Mean	Std. Deviation	Std. Error
Management Staff	318	39.8396	7.73752	.75153
ICT Instructors	256	37.3220	6.67585	.86912
Lecturers	321	39.8713	4.09796	.40776
Total	895	39.2932	6.39727	.39224

Table 44 shows the Scheffe Post Hoc comparison statistics further confirm that the mean score of management staff 39.8396 was found to be closer to that of 39.8713 of lecturers, implying that the difference between the two respondents was not significant. While ICT instructors had significantly lower mean 37.3220. This implies that the management staff and ICT instructors differ significantly in their opinions regarding on the impact of ICT on games/recreational services in universities in Nigeria.

Table 45: Summary of Hypotheses Testing

Ho	Hypothesis Statement	Test Statistics	Results	Level of Significance	Conclusion
1	There was no significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of availability of communication in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 2.007 and P value is 0.136	0.05	Ho1 is retained

2	There was no significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on decision making process in the management of universities in Nigeria	Analysis ofvariance (ANOVA)	The F value is 2.138 and P value is 0.120	0.05	Ho2 retained	was
3	There was no significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on planning in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 0.752 and P value is 0.47	0.05	Ho3 retained	was
4	There was significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on staff development in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 3.386 and P value is 0.035	0.05	Ho4 rejected	was
5	There was significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in the management of Universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 9.550 and P value is 0.000	0.05	Ho5 rejected	was
6	There was significant difference exist in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on provision of welfare and health services in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 6.920 and P value is 0.001	0.05	Ho6 rejected	was
7	There was no significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on maintenance of records in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 1.639 and P value is 0.196	0.05	Ho7 retained	was

8	There was significant difference exist in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on interpersonal relationship in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 10.104 and P value is 0.000	0.05	Ho8 was rejected
9	There was significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on games/recreational services in the management of universities in Nigeria	Analysis of Variance (ANOVA)	The F value is 3.6724 and P value is 0.027	0.05	Ho9 is rejected

4.6 Summary of Findings

The study revealed that:

Information Communication Technology (ICT) enhanced better information dissemination in the Universities in Nigeria;

Information Communication Technology (ICT) ensured acquisition, retention and upgrading of records for positive decision making in the Universities in Nigeria;

through the use of Information Communication Technology (ICT), there was effective and better planning, regular inspection and supervision in Universities in Nigeria;

with the use of internet facilities, lecturers are better and able to lecture by getting quality materials from the net in the Universities in Nigeria;

there was low level of discipline among the management staff, lecturers and ICT instructors in Nigerian Universities. Also inappropriate online allocation of hostel accommodation create more indiscipline measures in room allocation to students in the Universities;

there were inadequate provision of welfare and health services such as lecture room, clinic and accommodation for both staff and students in the Universities in Nigeria;

through Information Communication Technology (ICT), there was easy data storage in the University. Also computer ensure acquisition retention and upgrading of school records in the Universities in Nigeria;

there were inadequate computer centres where the youth within the neibouring community can learn in the Universities; and

there was low level of participation for the Universities in Nigeria in both national and international sport.

4.7 Discussion of Findings

The study assessed the impact of information and communication technology (ICT) on the management of universities in Nigeria. The variables investigated include: Communication, decision-making process, planning, staff development, maintenance of discipline, provision of welfare and health services, maintenance of records, interpersonal relationship and games/recreational services.

The results revealed that availability of ICT has tremendous impact on communication in the management of universities in Nigeria. This is evidenced by the fact that the three groups of respondents unanimously shared the same view. Information and communication technology enhances management of universities through dynamic interactive communication and its engaging contents. Communication has the potentials to accelerate, enrich and deepen skills, motivate and engage students' learning, helps to relate school experience to work practice, strengthens teaching and learning. Communication also provides opportunities for connecting students and staff of the institution, and even with the whole world at large (Adeoye et al., 2013).

It is believed that ICT can make the school more efficient and productive, by organizing a variety of tools to enhance and facilitate lecturers' professional activities through efficient communication (Adeyemi, 2011). Yusuf and Onasanya (2004) were of the view that communication provides opportunities for school to transmit information with one another through e-mail, mailing list, chat room and other facilities. Communication provides lecturers with steady avenue for the dissemination of research reports and findings (Adeoye, 2013). Information and communication technology brings some very powerful aid for translating the theory into practice by using special communication aids, such as computer assisted learning and distance education. Using these aids, students, lecturers or administrative staffs often have access to pure education system designed specifically to provide instructions to help users learn communication tools and reference materials, including e-mail, web, encyclopedia, books and other reference materials. With the use of communication gadgets, tools such as word processor, graphics software, video tape, players and recorders are now used as means of communication (Moursund, 2005). Olaore (2014) is of the view that ICT incorporates and extends some of power of reading, writing, communication and automation of many mental activities.

From the above, it is obvious that information is a key resource which permeates teaching, learning, research and publishing. Therefore, universities in Nigeria should make available to staff and students all necessary ICT gadgets for communication.

The three groups of respondents were of the view that ICT has positive impact on decision making process in management of universities in Nigeria. This result is not surprising because the assessment of the impact of ICT on decision making process has now become a global issue, and

thereby gaining interest in both developed and developing societies (Bradley et al., 2006; Adebayo, 2007). Furthermore, Harrison (1987) views decision making process as the dynamic element that activates and sustains administrative process, thereby supporting the views of the three groups of respondents in this study.

Decision-making process relies on information, therefore, the quality of information in any decision or situation determines the quality of decision. For example, ICT enhances decision making process by providing quality information. Decision making process in most organization include problem identification , developing alternatives, choosing the best alternative, implementing the decision, control and evaluation of decision outcome (Bradley et al., 2006). All these are influenced by the use of ICT. Decision making process in universities in Nigeria can therefore, be enhanced by using ICT to computerize evaluation responses from students and all categories of staff on sensitive issues, such as improving academic issues and staff promotion.

The three groups of respondents were unanimous in their opinions that ICT has positive impact on planning in the management of universities in Nigeria. This finding is in line with the result of Zainally (2008) who was of the view that utilization of ICT enhances administrative effectiveness and efficiency when proper planning is in place. Lecturers, ICT instructors and administrators can utilize ICT in planning and to a large extent in supervision and evaluation of academic, financial and administrative affairs.

Planning school curriculum, meetings, lectures and lecture time table, holidays, seminars, conferences, symposia etc is made easier using ICT facilities. Talvitie (2004) was of the opinion that planning using ICT enhances activities with improved functionality, possibility to implement solutions which would previously not to have been possible. In addition to programme of planning of educational activities, further training should be updated in specific area in the universities as well as development of new planning theories, methods and models (Talvitie, 2004). Although, some universities have incorporated ICT into curriculum and demonstrated level of effective and appropriated the use of ICT to support teaching and learning across a wide range of subject areas (Olaore, 2014), yet, many more have not done so. However, some Universities, for example, Ahmadu Bello University, Zaria and her affiliates are in the early phase of adopting ICT completely in all their activities.

If properly harnessed, ICT will enhance proper planning and learning processes. Although ICT has potential to contribute to substantial improvements in the educational system (Moursund, 2005), however, to date, relatively little of these potentials have been harnessed by many universities in Nigeria. All planning authorities in the universities should therefore take the decision to incorporate ICT as new element into planning.

The relative unanimous opinions of the three groups of respondents on the impact of ICT on staff development in the management of universities in Nigeria are not completely surprising. This is because all the respondents are educated and are all staff of the university, who are aware of the

importance and relevance of staff development. Furthermore, the fact remains that ICT offers several possibilities and facilities for educational administrators and lecturers to accomplish their tasks.

Krishnaveni and Meenakumari (2010) were of the opinion that communication and information systems have changed the nature of higher institution of learning by allowing information to be transferred, stored retrieved and processed by almost all individuals who work, study or interact with given institution. Otaghsara et al. (2012) are of the view that most organizations, especially educational institutions are trying to reduce cost and training time to improve the efficiency of education process. Therefore, the use of ICT in training of university staff would tend to reduce cost and increase efficiency. This is because the ultimate goal of education is to improve job performance through positive transfer of knowledge, and hence, increase staff development (Adeyemi, 2011; Fasanmi, 2013).

The finding in this study is in line with the report of UNESCO (2002) that administrators should keep up to date with new administrative techniques, especially through relevant life-long learning programme. This organization further stressed that staff of an institution should receive special training in methods and problems associated with specific feature in their institution programme, such as continuous training in relevant areas in their places of work. For example, services provided by ICT, such as internet browsing, programming capabilities, system analysis etc are normally embraced and used by lecturers, ICT instructors and administrators. They are therefore, in advantage position to know the relevance, usefulness and indispensability of staff development in the management of universities in Nigeria.

Studies have shown that students' academic performance, especially in computer education positively correlated with teachers' opportunities to develop their own computer skills (Gordin and Pea, 1995; Jeremy et al., 2000; Kolade-Ojo, 2007).

From the above, computer literacy among university staff will be of great advantage in the management of universities in Nigeria. This is because effective use of ICT in the university requires increased opportunities for university staff to learn more about various components and parts of ICT, and consequently, mastering of the structure of the knowledge in their domain (Jeremy, 2000).

There were also divergent opinions among the respondents on the impact of ICT on maintenance of discipline in the management of universities in Nigeria. It is believed that most lecturers, ICT instructors and administrators have minimal control on the use of ICT by the students. As a results, some students just download assignments from the internet without editing. It is also believed that the use of ICT encourages plagiarism; hence the negative view of some respondents on the impact of ICT on maintenance of discipline in the management of universities in Nigeria is a welcome idea. Furthermore, it is believed that some students prefer computer-based applications that attempt to make retentive skill, known to decrease educational performance, to computer-based application, such as database and programming which encourage students to reason deeply about certain

subjects (Kulik, 1994; Wenglinsky, 1998; Wikramanayeke, 2013). On the other hand, it is believed that e-payment may enhance good disciplinary measure by provoking fraudulent practices; and the use of ICT may instill disciplinary measures by reducing ghost workers in an organization. Also, it is believed that computer-based examination enhances time validity (Bamigboye et al., 2007; Otaghsara et al., 2012).

There were relative unanimous opinions among the three groups of respondents on the impact of ICT on provision of welfare/health services in the management of universities in Nigeria. The present result is contrary to the findings of Qureshi et al. (2014) who found that public health organization are far behind in using ICT in health sector, and that executing of public organizations neither take interest in the adoption and use of ICTs nor have awareness and experience to solve their health problems.

The relative unanimous opinions of the three groups of respondents is expected. This is because globally the e-health or health telemetric sector is fast emerging as the third industrial pillar of the health sector after the pharmaceutical and the medical (imaging) devices industry (Heidary et al., 2014; Qureshi et al., 2014). Symptoms, diagnosis, treatment and purchase of drugs of some diseases can be browsed online.

From the above advantages, universities in Nigeria should pool more of their resources toward developing ICT tools and systems with the ultimate aim of facilitating management by improving health care through better delivery of preventive and curative services, which will consequently, increase management services in the universities. In this respect, the increasing adoption of ICT in health care services of universities in Nigeria is highly welcome.

The three groups of respondents were of the opinion that ICT has positive impact on record keeping in the management of universities in Nigeria. The opinion of these respondents is not surprising because it is believed that records are valuable assets, and because they are assets, they must be managed by a regulatory frame work that is robust and rigorous like ICT (Olaore, 2014).

Good record keeping is fundamental to the success of any university. Information and communication technology systems will therefore fail, if electronic records cannot be used, if they are improperly stored or if they cannot be linked to related paper records. If this happens, the e-record initiative will fail and the students' trust in the university management will be eroded. Therefore, officials at all levels must be aware of the role records play as asset. A policy must be in place, accountability must be assigned and an organization must delegate the authority to oversee record management.

Students and staff records, examinations and results records, records of purchase, budget, grants, administration etc. must carry proper documentation for reference purposes. These records were kept in hard copies before introduction of ICT. Fortunately, with availability and accessibility of ICT and their integration in various sectors make it possible and easy for administrators, lecturers, ICT instructors and students to process their data online (Qureshi et al., 2014).

Although there were divergent opinions in this study on the impact of ICT on interpersonal relationship in the management of universities in Nigeria, it is believed that ICT enhances interpersonal skill that helps interaction within and outside an organization such as the university. Goldman et al. (1996) is of the view that some of the most prominent users of computer are communication oriented and permit a broad new range of collaborative activities. Therefore, using ICT to provide collaborative activities can enhance the degree to which universities, the communities, Faculties, Departments or Units are academically active and productive, and may also encourage interaction and expansion of their Units or Departments. Information and communication technology is important in collaborative learning, such as, ICT-based learning interaction and cooperation among students, teachers and profession, regardless of their location. Apart from bilateral relations, ICT-based learning provides opportunities for students to work with people of different cultures, and thereby, provides the communication skills of learners to improve their classification in global awareness (Otaghsara et al., 2012).

Universities have facilitated and contributed to societal development. Universities play a significant role in building up a country's capacity for a mutually beneficial engagement in an increasing knowledge-based global economic environment (Olaore, 2014). Furthermore, the university as institution for knowledge generation and its transfer to society has been central to development, contributing ideas, skills, technology and expertise in many spheres of human endeavours. The university is also centre of creative undertakings, innovation and inventions, and it impacts skills pertinent to all those who qualify for enrolment (Jega, 2007 a, b).

Since the university is relevant in national development, information is very important for national development as well. So to help move the nation forward, the use of ICTs should be encouraged and practiced in all universities in Nigeria.

Although the three groups of respondents have divergent views on the impact of ICT on games/recreational services in the management of universities in Nigeria, it is known that knowledge and utilization of ICT is imperative to modern potentials games and sports managers, so that the present day modern trends in many aspects of sport management can be achieved. In modern world, in most collegiate sports, ICT is highly utilized to facilitate organization and conducting of many competitions (Heidary et al., 2014). For example, game experts apply ICT to increase capacity and improve results like recording athlete's specific information like team, biographic information, including name, sex, weight, age, registration number. Information and communication technology is also used for advertising games events and other logistic (Rosandich, 2008).

In the university system, ICT can be used in organizing training, tours before, during and sporting events. Information and communication technology has been used for sale of tickets, game fixture and officiating (Wikramanayake, 2013).

From the above, it is obvious that despite the divergent views of the respondents, games and sport managers in the universities in Nigeria are not left behind in using ICT to achieve many sporting goals and objectives.

From this study, there were divergent views on some of the variables, while some of the respondents had same opinions regarding some variables. Such views are expected in a dynamic society, but one must realize that for decades, considerable resources have been invested in ICT facilities, training and support actions under the scope of improving the quality of teaching and research in Nigeria. In many cases, however, implementation policies have not been a consequence of systematic analysis and reflection. As a result, we still know little about impact and effectiveness of ICT in the management of universities in Nigeria.

Undoubtedly, some developing countries, like Nigeria have made considerable progress in bringing networked-ICT into educational sector and made it possible for teachers and students to use them. Indeed, the use of ICT in education and training has been a key priority in Nigeria in the last decades, although progress has been uneven. Infact, there are considerable different in ICT expenditure levels between institutions within the country.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a brief summary of the entire work, offers some conclusions as well as put forwards some recommendations. The suggestions for further studies in other related areas are also included

5.2 Summary

The study investigated the impact of information and communication technology (ICT) in universities in Nigeria. The study was categorized into five chapters. This section presents the main idea of each of the five chapters.

The first chapter presents the general background of the study, the historical development and introduction of the ICT in the affairs of universities. The problems associated with the effective implementation of ICT in Nigerian universities, such as inadequate ICT personnel, high cost of ICT equipment as well as failing soft ware internet facilities that characterized the use of ICT on major examinations, such as Joint Admissions and Matriculation Board and West Africa School Certificate Examinations were all highlighted. To achieve the objectives of the study, the study was structured along nine specific objectives with nine research questions that were answered as well as nine research hypotheses that were tested. The study was significant as its outcome will help improve the general management in the universities, including proper keeping of records as well as offer other ICT potentials in the universities. The study was limited to six regions of the country with particular references to ICT in universities in Nigeria, whose respondents were classified into lecturers, management staff and ICT instructors.

The second chapter presents the review of related literature and empirical studies. These were presented under such sub headings like computer frame work; concept of ICT, concept of ICT on communication; impact of ICT on communication, planning, decision making, welfare/health services, staff development, maintenance of discipline and records, interpersonal relationship and games/recreational services.

Chapter three was devoted to the research methodologies. The survey design was used in this study as it involved the distribution of questionnaires as the main instrument for data collection to all the selected universities. Three universities on the basis of ownership of Federal, State and Private were selected from each of the selected States in each of the selected six geo-political zones of the country, making a total of 18 selected universities from the country. A total of 895 respondents duly responded to this study. The instrument used for gathering of data was the structured questionnaire. This was divided into different sections. The first section consists of nine biodata variables. The rest sections contained at least 10 items each. Each of the section was tailored in line with each of the studies nine objectives, questions and hypotheses.

The fourth chapter consists of the study analysis and discussion of results. The nine biodata variables were presented in frequencies and percentages distribution. These include respondents' sex, age, universities, geo political zones, status, type of ownership, years of experience, qualifications. The nine research questions were answered using means and standard deviations to determine if differences exist among the respondents. The following were the summary of the data analysis:

There was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of availability of ICT on communication in universities in Nigeria.

There was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on decision making process in universities in Nigeria.

There was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on planning in universities in Nigeria.

Significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on staff development in universities in Nigeria.

Significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in universities in Nigeria.

Significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on provision of welfare and health services in universities in Nigeria.

There was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in universities in Nigeria.

Significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on interpersonal relationship in universities in Nigeria.

Significant differences exist in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on games/recreational services in universities in Nigeria.

5.3 Conclusions

Based on the findings from the study, the following general conclusions were made:

All the three categories of respondents on the basis of impact of availability of ICT on communication in universities in Nigeria have the same (mean) opinion, that availability of ICT has positive impact on communication in universities in Nigeria.

Management staff, lecturers and ICT instructors have the same (mean) opinion on the impact of ICT on decision making process in universities in Nigeria. These three groups of respondents opined that ICT has positive impact on decision making in universities in Nigeria.

Management staff, lecturers and ICT instructors are in the same (mean) agreement concerning the impact of ICT on planning in universities in Nigeria, i.e., the three groups of respondents agreed that ICT has positive impact on planning in universities in Nigeria.

On impact of ICT on staff development in universities in Nigeria, ICT instructors had the least mean opinion, that is, they were of the opinion that ICT has no impact on staff development in universities in Nigeria, while management staff and lecturers had significantly higher mean opinion, that ICT has impact on staff development in universities in Nigeria.

There was a significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of discipline in universities in Nigeria. The ICT instructors were of the opinion that ICT has negative impact on maintenance of discipline in universities in Nigeria, while lecturers and management staff opined that ICT has positive impact on the maintenance of discipline in universities in Nigeria.

The ICT instructors had the least mean opinion, while management staff and lecturers had significantly higher mean opinion on the impact of ICT on provision of welfare and health services in universities in Nigeria. The ICT instructors were of the opinion that ICT has no impact on provision of welfare and health services in universities in Nigeria, while lecturers and management staff opined that ICT has impact on provision of welfare and health services in universities in Nigeria.

There was no significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on maintenance of records in universities in Nigeria. The three groups of respondents opined that ICT had positive impact of maintenance of records in universities in Nigeria.

The ICT instructors had the least mean opinion, while management staff and lecturers had significantly higher mean opinion on the impact of ICT on interpersonal relationship in universities in Nigeria. The ICT instructors were of the view that ICT has no impact on interpersonal relationship in universities in Nigeria, while management staff and lecturers were of the view that ICT has positive impact on interpersonal relationship in universities in Nigeria.

There was a significant difference in the opinions of management staff, lecturers and ICT instructors on the impact of ICT on games/recreational services in universities in Nigeria. The ICT instructors were of the opinion that ICT has no impact on games/recreational services in universities in Nigeria, while the management staff and lecturers were of the opinion that ICT has impact on games/recreational services in universities in Nigeria.

5.4 Recommendations

Based on the findings from the study, the following recommendations are hereby put forward:

1. The management of universities should organize seminars and workshops for lecturers and other categories of staff on the use of the several communication sites, such as e-mail, e-media and e-payment;

2. Decision making process in universities can be enhanced by using ICT to computerize evaluation responses from students and all categories of staff on sensitive issues, such as improving academic issues, staff promotion issues;

3. During planning all inputs from all Departments of the universities should be collated and analyzed using the ICT;

4. All offices within universities should be networked to facilitate staff communication and facilitation of information sharing among the staff for proper staff development;

5. In order to enhance discipline in the universities ICT should be used for payment of all fees and levies and should be used in conducting computer based tests and examinations;

6. The use of ICT can enhance better information on new medical discoveries on epidemics control in the universities which should be properly implemented;

7. The use of ICT in organizing, keeping and maintaining records for students and staff should be enhanced in all universities in Nigeria;

8. The ICT can be used to enhance communication and information between the universities and the host communities, thereby fostering better interpersonal relationship; and

9. The use of ICT in promoting and giving out new information on games and sports should be utilized by the categories of staff for optimum sports performance in the universities.

5.5 Suggestions for Further Studies.

1. This studies is by no means exhaustive, therefore the researcher believes that further studies be carried out on the effect of using ICT on the academic performance and moral levels of students in Federal, State and Private universities in Nigeria.

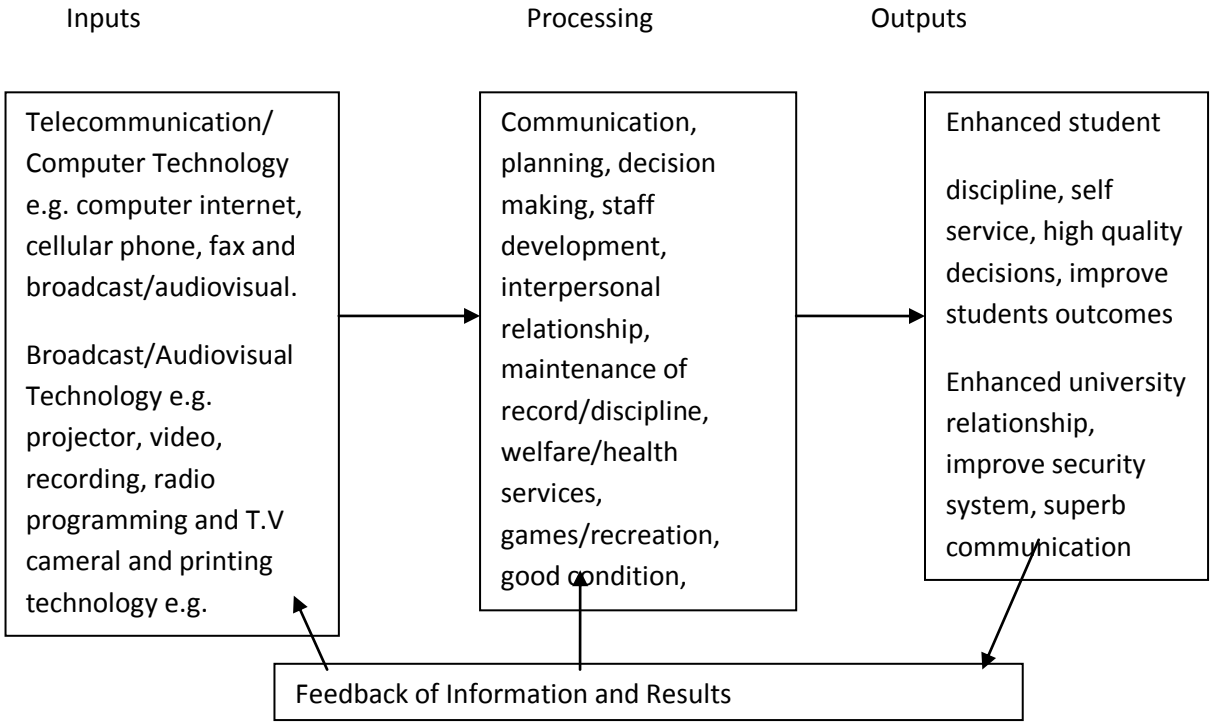
2. Another study can be carried out on the challenges and prospects of ICT in the management of universities in Nigeria.

Contributions to the Knowledge

Information and Communication Technology has become a necessary tool in accomplishing tasks with ease and as well has a major role to play in every management process;

From this research work, there were more ICT facilities in Federal Universities followed by some private universities than some state universities;

3. The Researcher Developed a Model of Input and Output of ICT on the Management of Nigerian Universities as Illustrated below:



4. Adequate provision of information and communication technology (ICT) facilities by the government will enhance the administrative effectiveness in Universities in Nigeria;

5. Information and communication technology helped in maintaining personal students records;

6. Information and communication technology play a vital role in supporting powerful and efficient management in Universities in Nigeria; and

7. Information and communication technology plays a major role in reducing operational inefficiency and improving communication.

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APPENDICES

APPENDIX I

QUESTIONNAIRE ON IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON THE MANAGEMENT OF UNIVERSITIES IN NIGERIA

Department of Educational Foundation and Curriculum,

Faculty of Education,

Ahmadu Bello University,

Zaria.

Dear Respondent,

Request to Fill Questionnaire

I am a PhD student of the above named institution, carrying out a research in the topic: "Impact of Information and Communication Technology (ICT) on the Management of Universities in Nigeria". This is purely an academic exercise which your honest response may improve the performance of management in the course of their role towards university objectives. I therefore, solicit for your attention in filling the questions below as applicable to you and the information shall be treated with utmost confidence.

Yours faithfully,

Omolara Taiwo Oladele

APPENDIX II

QUESTIONNAIRE ON IMPACT OF INFORMATION COMMUNICATION AND TECHNOLOGY (ICT) ON THE MANAGEMENT OF UNIVERSITIES IN NIGERIA

SECTION A:

Demographic Variables of Respondents (Administrators,

Lecturers, Computer Instructors)

(1) Name of the University: _____

(2) Geo-political Zone:_____

(3) State:_____

(4) Type of University:

(i) Federal University ( )

(ii) State University ( )

(iii) Private University ( )

(5) Status:

(i) Management ( )

(ii) Dean ( )

(iii) HOD ( )

(iv) Computer Instructor ( )

(v) Lecturer ( )

(6) Gender: Male ( ) Female ( )

(7) Age:

(i) 21 – 30 ( )

(ii) 31 – 40 ( )

(iii) 41 – 50 ( )

(iv) 51 – 60 ( )

(v) 61 – 70 ( )

(8) Highest Educational Qualification:

(i) N.C.E ( )

(ii) First Degree ( )

(iii) Higher Degree ( )

(iv) Others ( )

(9) Year of Experience:

(i) 1 - 5 ( )

(ii) 6 - 10 ( )

(iii) 11 – 15 ( )

(iv) 21 – 25 ( )

(v) 26 – 40 ( )

(vi) 41 – 45 ( )

(vii) 46 and above ( )

APPENDIX III

QUESTIONNAIRES

This part is divided to thirteen sections B-N it is on impact of Information Communication Technology (ICT) on the management of Universities of Nigeria. You are requested to response to all the items in all the ten sections by ticking the options that agrees with your facts. The choice options are strongly agree (SA), agree (A), disagree (D) undecided (UD) and strongly disagree (SD), available, not-available, adequate, not-adequate, obsolete, good condition and bad condition. Please tick (√) as appropriate.

S/N	Section B: Impact of Information Communication Technology (ICT) on Communication in the Management of Universities in Nigeria	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)
1	Information Communication Technology (ICT) enhances better information dissemination in this University.					

2	Information Communication Technology (ICT) has eliminated previous communication methods in this University.					
3	Online communication of academic issues and activities to students are better facilitated in Universities due to ICT usage.					
4	e-mail is a way of ensuring better rapid text-based communication in this University.					
5	Communication with staff using e-media enhances better job performance of administrators in this University.					
6	e-media communication create better atmosphere for fee payment in this University.					
7	Availability of internet communication in this university enhances better management output in this University.					
8	e-media communication by students to apply for institutions examination enhances better student performance in this University.					
9	e-payment communication enhances a better accountability time usage of ICT in this University.					
10	Information Communication Technology (ICT) usage enhances staff development better in this University.					

S/N	Section C: Impact of ICT on Decision Making Process in the Management of Universities in Nigeria	Strongly Agree (SA)	Agree (A)	Disagree	Undecided	Strongly Disagree (SD)

				(D)	(UD)	
1	Inadequacy of ICT computer machines slows down decision in the University					
2	ICT ensures acquisition, retention and upgrading of records for positive decision making in this University.					
3	Decision making is choosing one alternative from among several alternatives. This is enhanced by ICT in this University.					
4	Computer is a device that is capable of storing information which can be recalled at decision-making when needed which is a regular practice in this University.					
5	Usage of ICT facilitates good decision making in this University.					
6	e-mail internet video is always used in this University.					
7	Usage of ICT in decision making reduces complexity of school functions.					
8	In this University there are programme implementation support systems, which facilitate decision making.					
9	Through good ICT decisions are made resulting in good administrative control. In this University.					
10	Current decision support systems are available in this University.					

S/N	Section D: Impact of ICT on Planning in the Management of Universities in	Strongly	Agree	Disagre	Undecide	Strongly Disagre

	Nigeria	Agree (SA)	(A)	e (D)	d (UD)	e (SD)
1	Effective Planning is carried out in this institution through the usage of ICT.					
2	It is through planning that organizational goals are designed in this University with the aid of ICT					
3	This university has foresights that results in effective planning due to the use of ICT.					
4	There is improvement on the quality of planning through successful use of ICT.					
5	ICT brings together an over-all plan on policies and initiative in this University.					
6	Through ICT, this university has better and regular inspection and supervision in University.					
7	Planning with the use of ICT could facilitate the attainment of goals and objectives.					
8	Computer provides a comprehensive and co-ordinate approach to all aspects of planning (better than analog) in this University.					
9	ICT helps the management to plain and organize her activities and how to accomplish them better than analog in this University.					
10	Planning with the usage of ICT provides room for the assessment of needs in the					

	university.					

S/N	Section E: Impact of ICT on Staff Development in the Management of Universities in Nigeria	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)
1	All staff in this University is computer literate.					
2	Computer helps the quality of staff development in this University					
3	ICT helps to design a self improving University staff.					
4	e-mail creates better atmosphere for interaction between staff of this University.					
5	Poor interest among many members of staff to adopt the use of computers and for the University management.					
6	Online dissemination of information among staff enhances staff development better in this University.					
7	ICT provide better opportunities for staff to communicate with one another in this University.					
8	With internet facilities lecturers are better able to lecture by getting quality materials from the net in this University.					
9	E-learning helps lecturers and students to improve their knowledge in their respective fields for better performance.					
10	Lecturers improve their Knowledge through on-line conferences and					

	seminars.					

S/N	Section F: Impact of ICT on Maintenance of Records in the Management of Universities in Nigeria	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)
1	Record keeping is an important part of managerial work in this University.					
2	ICT has made retrieval of data such as students' records easier in this University.					
3	With computer record keeping is effective in this University.					
4	Reports from computer are conveniently produced from stored records.					
5	Fax is used to transmit both graphic data and alpha numeric data in this University.					
6	Organization of students records is better carried out by computer in this University					
7	With current computer students' results are more reliable than the analog.					
8	Computer ensures acquisition retention and upgrading of school records in this University.					
9	Through ICT there is easy data storage in this University.					

10	Computer is good for document follow-up in this university.					
11	Computer eradicates destruction of documents by insects and rats in this University.					

S/N	Section G: Impact of ICT on Games/Recreational Services in the Management of Universities in Nigeria.	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)
1	ICT has provided innovation for teaching and learning in this University.					
2	ICT has increasingly played a vital role in games and recreations.					
3	ICT has the potential to contribute to substantial improvements in games and recreations in Universities in Nigeria.					
4	ICT is readily useful in games and					

	recreation.					
5	Universities in Nigeria maintain a virile programme of sporting athletic and recreational activities.					
6	All the Universities in Nigeria participate in both national and international sport.					
7	ICT has redefined all aspects of sports facilities.					
8	Effective utilization of ICT could promote good sport relationship in these Universities.					
9	ICT provides new skills and information in games and recreational.					
10	ICT sport equipment has improved training of students athletic in Nigeria organization.					

S/N	Section I: Impact of ICT on Maintenance of Discipline in the Management of Universities in Nigeria	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)

1	Utilization of ICT enhances better orderliness and discipline in this University by curbing corruption.					
2	E-payment enhances good disciplinary measure by preventing fraudulent practices in this University.					
3	The use of ICT instills disciplinary measures better than the old method by reducing ghost workers in this University.					
4	There is orderliness and discipline in the usage of ICT in the payment of school fees in this University.					
5	Computer based examination enhances good discipline among students in this University.					
6	ICT promotes exam validity and reliability in this University					
7	Effective utilization of ICT in Nigerian university promotes good discipline and orderliness among staff, management and students in this University.					
8	Online allocation of hostel accommodation has help to curb indiscipline in room allocation to students in this University					
9	Computer based examination enhances time validity in this University.					
10	Payments of fee or levy in this University are computer base.					

S/N	Section J: Impact of ICT on Provision of Welfare/Health Services in the Management of Universities in University	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)
1	Online registration has drastically reduced students long queue in banks and administrative offices better than before in this University.					
2	E-circulars from the institutions regarding students' matters leads to good management in this University.					
3	Availability of e-kiosk in this University improves student welfare better than before.					
4	Provision of e-media for student enhances better managerial outputs in this University.					
5	Utilization of e-media by students creates better atmosphere for learning in this University.					
6	The University organization is expected to ensure that lecture rooms are well ventilated.					
7	Before effective learning can take place the students have to be physically strong and healthy.					
8	The Universities organization health policy place sufficient emphasis on cleanliness and sanitation.					
9	The mission of University health services is to respond to health needs of the					

	students/staff.					
10	The mission is to use ICT as a tool for health developments.					

S/N	Section K: Impact of ICT on Interpersonal Relationship in the Management of Universities in Nigeria.	Strongly Agree (SA)	Agree (A)	Disagree (D)	Undecided (UD)	Strongly Disagree (SD)
1	ICT is an interpersonal skill that can help to improve interaction within and outside the organization.					
2	ICT enhances community university relationship better than the old method of communication in this University.					
3	Community relations unite the University with its surrounding communities through effort design to provide accurate ICT information.					
4	ICT strengthens the University community relationship better than analog in this University.					
5	There is poor ICT relationship among this University and the neighbourhood.					

6	ICT could provide better opportunities for University and neighbouring community to communicate chat and access current information.					
7	Effective utilization of ICT promotes better university-community relationship in this University.					
8	There are adequate computer centres where community can learn in this University.					
9	ICT has improved cordial relationship between this university and the community.					
10	ICT has reduced the rate of unemployment among the youth in the neighborhood in this University.					

S/N	Impact of ICT on Facility Management. The following ICT Equipment are Available for Management Utilization in Universities in Nigeria	Available	Not Available
1	Projector		
2	TV Camera/programme		
3	Radio programme		
4	Posters		
5	Calendar of work		
6	Diaries		
7	Annual report		
8	Newspaper		

9	Magazines		
10	Journals		
11	Soft Ware		
12	Video		
13	Computer		
14	Media van		
15	Intercom		
16	Fax		
17	E-mail		
18	CD-Rom		
19	Internet		
20	Newsletter		
21	Research Bulletin		
22	Handsets/cellular Phones		
23	Scanners		
24	Printers		
25	Satellites dishes		
26	CCTV		

S/N	Impact of ICT on Facility Management. The following ICT Equipment are Available and Good Condition for Management Utilization in Universities in Nigeria	Good Condition	Bad Condition	Obsolete
1	Projector			
2	TV Camera/programme			
3	Radio programme			

4	Posters			
5	Calendar of work			
6	Diaries			
7	Annual report			
8	Newspaper			
9	Magazines			
10	Journals			
11	Soft Ware			
12	Video			
13	Computer			
14	Media van			
15	Intercom			
16	Fax			
17	E-mail			
18	CD-Rom			
19	Internet			
20	Newsletter			
21	Research Bulletin			
22	Handsets/cellular Phones			
23	Scanners			
24	Printers			
25	Satellites dishes			
26	CCTV			

S/N	Impact of ICT on Facility Management. The following ICT Equipment are Adequately Available for Management Utilization in Universities in Nigeria	Adequate	Inadequate
1	Projector		
2	TV Camera/programme		
3	Radio programme		
4	Posters		
5	Calendar of work		
6	Diaries		
7	Annual report		
8	Newspaper		
9	Magazines		
10	Journals		
11	Soft Ware		
12	Video		
13	Computer		
14	Media van		
15	Intercom		
16	Fax		
17	E-mail		
18	CD-Rom		
19	Internet		
20	Newsletter		
21	Research Bulletin		
22	Handsets/cellular Phones		

23	Scanners		
24	Printers		
25	Satellites dishes		
26	CCTV		

APPENDIX IV

List of Accredited Federal Universities in Nigeria with their Websites, Year Founded and Current Vice-Chancellors

S/N	Federal University	Vice-Chancellor	Website Address	Year Founded
1	Abubakar Tafawa Balewa University, Bauchi	Professor Saminu Ibrahim	http://www.atbu.edu.ng	1988
2	Ahmadu Bello University, Zaria	Professor Ibrahim Garba	http://www.abu.edu.ng	1962
3	Bayero University, Kano	Professor Yahuza Muhammad Bello	http://www.buk.edu.ng	1975
4	Federal University Gashua	Professor Shehu Abdulrahman	http://www.fugashua.edu.ng	2013
5	Federal University of Petroleum Resources, Effurun	Professor John Ovwata Etu-Efeotor	http://www.fupre.edu.ng	2007
6	Federal University of Technology, Akure	Professor Adebiyi Gregory Daramola	http://www.futa.edu.ng	1981
7	Federal University of Technology, Minna.	Professor Musibau Adewunmi Akanji	http://www.futminna.edu.ng	1982
8	Federal University of Technology, Owerri	Professor Chigozie C. Asiabaka	http://www.futo.edu.ng	1980

S/N	Federal University	Vice-Chancellor	Website Address	Year Founded
9	Federal University, Dutse, Jigawa State	Professor Jibril Dahiru Amin	http://www.fud.edu.ng/	2011
10	Federal University, Dutsin-ma, Katsina	Professor James O.I. Ayatse	http://www.fudutsinma.edu.ng	2011
11	Federal University, Kashere, Gombe State	Professor Mohammed Kabiru	http://www.fukashere.edu.ng	2011
12	Federal University, Lafia, Nasarawa State	Professor (Mrs.) Ekanem Ikpi Braide	http://www.fulafia.edu.ng	2011
13	Federal University, Lokoja, Kogi State	Professor Abdulmumini Rafindadi	http://www.fulokoja.edu.ng	2011
14	Federal University, Ndufu-Alike, Ebonyi State	Professor Oye Ibidapo-Obe	http://www.funai.edu.ng	2011
15	Federal University, Otuoke, Bayelsa	Professor Mobolaji E. Aluko	http://www.fuotuoke.edu.ng	2011
16	Federal University, Oye-Ekiti, Ekiti State	Professor Isaac Asuzu	http://www.fuoye.edu.ng	2011
17	Federal University, Wukari, Taraba State	Professor Geoffrey Okogbaa	http://www.fuwukari.edu.ng	2011
18	Federal University, Birnin Kebbi.	Professor Lawal Suleiman Bilbis	http://www.fubk.edu.ng	2013
19	Federal University, Gusau.	Professor Ben Chuks Okeke	http://www.fugus.edu.ng	2013
20	Michael Okpara University of Agriculture, Umudike	Professor Hillary Odo Edoga.	http://www.moua.org	1992
21	Modibbo Adamawa University of Technology,	Professor B. H.	http://www.futy.edu.ng	1988

S/N	Federal University	Vice-Chancellor	Website Address	Year Founded
	Yola	Usman		
22	National Open University of Nigeria, Lagos.	Professor Vincent A. Tenebe	http://www.nou.edu.ng	2002
23	Nigeria Police Academy Wudil	Professor Munzali Jibril	http://www.npf.gov.ng	2012
24	Nigerian Defence Academy, Kaduna	Professor S.O Okeniyi	http://www.nda.edu.ng	1985
25	Nnamdi Azikiwe University, Awka	Professor Joseph E. Ehaneku	http://www.unizik.edu.ng	1992
26	Obafemi Awolowo University, Ile-Ife	Professor Bamitale Omole	http://www.oauife.edu.ng	1962
27	University of Abuja, Gwagwalada	Professor Machael Umale Adikwu	http://www.uniabuja.edu.ng	1988
28	University of Agriculture, Abeokuta.	Professor O.B. Oyewole	http://www.unaab.edu.ng	1988
29	University of Agriculture, Makurdi.	Professor Emmanuel I. Kucha	http://www.uam.edu.ng	1988
30	University of Benin	Professor Faraday Orumwense	http://www.uniben.edu.ng	1970
31	University of Calabar	Professor James Epoke	http://www.unical.edu.ng	1975
32	University of Ibadan	Professor Abel Idowu Olayinka	http://www.ui.edu.ng	1948
33	University of Ilorin	Professor Abdulganiyu Ambali	http://www.unilorin.edu.ng	1975

S/N	Federal University	Vice-Chancellor	Website Address	Year Founded
34	University of Jos	Professor Hayward B. Mafuyai	http://www.unijos.edu.ng	1975
35	University of Lagos	Professor Rahman A. Bello	http://www.unilag.edu.ng	1962
36	University of Maiduguri	Professor Ibrahim	http://www.unimaid.edu.ng	1975
37	University of Nigeria, Nsukka	Professor Benjamin C. Ozumba	http://www.unn.edu.ng	1960
38	University of Port-Harcourt	Professor Joseph Ajienka	http://www.uniport.edu.ng	1975
39	University of Uyo	Professor Comfort M. Ekpo	http://www.uniuyo.edu.ng	1991
40	Usmanu Danfodiyo University	Professor Abdullahi Audu Zuru	http://www.udusok.edu.ng	1975

APPENDIX V

List of State Universities in Nigeria with their Websites, Year Founded and Current Vice-Chancellors.

S/N	State University	Vice-Chancellor	Website Address	Year Founded
1	Abia State University, Uturu.	Professor Chibuzo B. Ogbuagu	http://www.abiastateuniversity.edu.ng	1980
2	Adamawa State University Mubi	Professor Alkasum Abba	http://www.adsu.edu.ng	2002
3	Adekunle Ajasin University, Akungba.	Professor Mahzeem O. Mimiko	http://www.adekunleajasinuniversity.edu.ng	1999
4	Akwa Ibom State University of Technology, Uyo	Professor Eno James Ibanga	http://www.aksu.edu.ng	2004
5	Ambrose Alli University, Ekpoma,	Professor (Mrs.) Caroline A. Agbebaku	http://www.aauekpoma.edu.ng	1980
6	Anambra State University of Science & Technology, Uli	Professor C.C. Anene (Ag.)	http://www.ansu-edu.net	2000
7	Bauchi State University, Gadau	Professor Ezzildin M. Abdulrahman	http://www.basug.edu.ng	2011
8	Benue State University, Makurdi.	Professor Moses Msugh Kembe	http://www.bsum.edu.ng	1992
9	Bukar Abba Ibrahim	Professor	http://www.baiu.edu.ng	2006

S/N	State University	Vice-Chancellor	Website Address	Year Founded
	University, Damaturu.	Musa Alabe		
10	Cross River State University of Science &Technology, Calabar	Professor Effiom Ene-Obong	http://www.crutech.edu.ng	2004
11	Delta State University Abraka	Professor E.A. Arubaye	http://www.deltastate.edu.ng	1992
12	Ebonyi State University, Abakaliki	Professor F.I. Idike, OON	http://www.ebsu-edu.net	2000
13	Ekiti State University	Professor E.D. Adelowo (Ag.)	http://www.unad.edu.ng	1988
14	Enugu State University of Science and Technology, Enugu	Professor Cyprian C. Onyeji	http://www.esut.edu.ng	1981
15	Gombe State University, Gombe	Professor Abdullahi Mahadi	http://www.gomsu.org	2004
16	Ibrahim Badamasi Babangida University, Lapai	Professor Ibrahim Kolo	http://www.ibbuniversity.com	2005
17	Ignatius Ajuru University of Education, Rumuolumeni	Professor R.D. Green-Osahogulu (Ag.)	http://www.iaue.edu.ng	2010
18	Imo State University, Owerri	Professor B.E.B. Nwoke	http://www.imsu.edu.ng	1992
19	Jigawa State University	Professor Abdullahi	http://www.jsu.edu.ng	2013

S/N	State University	Vice-Chancellor	Website Address	Year Founded
		Yusuf Ribadu		
20	Kaduna State University, Kaduna	Professor William Barnabas Qurix	http://www.kasu.edu.ng	2004
21	Kano University of Science & Technology, Wudil	Professor Ibrahim Garba	http://www.kustportal.edu.ng	2000
22	Kebbi State University, Kebbi	Dr. Amina Abubakar	http://www.ksusta.edu.ng	2006
23	Kogi State University Ayingba	Professor Hassan S. Isah	http://www.ksu.edu.ng	1999
24	Kwara State University, Ilorin	Professor A. Na-Allah	http://www.kwasu.edu.ng	2009
25	Ladoke Akintola University of Technology, Ogbomoso	Professor Adeniyi S. Gbadegesin	http://www.lautech.edu.ng	1990
26	Ondo State University of Science and Technology Okitipupa	Professor Adegbite Adegoke Emmanuel	http://www.osustech.edu.ng	2008
27	River State University of Science and Technology	Professor Blessing Chimezie Didia	http://www.ust.edu.ng	1979
28	Olabisi Onabanjo University, Ago Iwoye	Professor Saburi Adejimi Adesanya	http://www.oouagoiwoye.edu.ng	1982
29	Lagos State University	Professor John Oladapo	http://www.lasu.edu.ng	1983

S/N	State University	Vice-Chancellor	Website Address	Year Founded
	Ojo	Obafunwa		
30	Niger Delta University Yenagoa	Professor Humphrey Ogoni	http://www.ndu.edu.ng	2000
31	Nasarawa State University Keffi	Professor Muhammad Akaro Mainoma	http://www.nsuk.edu.ng	2002
32	Plateau University Bokkos	Professor Dokan Sheni		2005
33	Tai Solarin University of Education Ijebu Ode	Professor Oluyemisi Obilade	http://www.tasued.edu.ng	2005
34	Umar Musa Yar'adua University Katsina	Professor Idris Isa Funtua	http://www.umyu.edu.ng	2006
35	Osun State University Osogbo	Professor Bashir Adekunle Okesina	http://www.uniosun.edu.ng	2006
36	Taraba State University, Jalingo	Professor Mohammed S. Yahaya	http://www.tsuniversity.edu.ng	2008
37	Sokoto State University	Professor Nuhu Yaqub	http://www.ssu.edu.ng	2009
38	Northwest University Kano	Professor Razali Agus	http://www.nwu.edu.ng	2012
39	The Technical University,			2012

S/N	State University	Vice-Chancellor	Website Address	Year Founded
	Ibadan			
40	Sule Lamido University, Kafin Hausas			2013

APPENDIX VI

List of Private Universities in Nigeria with their Websites, Year Founded and Current Vice-Chancellors.

S/N	Private University	Vice-Chancellor	Website Address	Year Founded
1	Achievers University, Owo	Professor Tunji Samuel Ibiyemi	http://www.achievers.edu.ng	2007
2	Adeleke University, Ede.	Prof. O.O.G Amusan	http://www.adelekeuniversity.edu.ng	2011
3	Afe Babalola University, Ado-Ekiti – Ekiti State	Professor M.O. Ajisafe	http://www.abuad.edu.ng	2009
4	African University of Science & Technology, Abuja	Professor Charles Chidume (Ag.)	http://aust-abuja.org	2007
5	Ajayi Crowther University, Ibadan	Professor K.T. Jaiyeoba	http://www.acu.edu.ng	2005
6	Al-Hikmah University, Ilorin	Professor S.A. Abdulkareem	https://www.alhikmah.edu.ng	2005
7	Al-Qalam University, Katsina	Professor Shehu G. Ado	http://www.auk.edu.ng	2005
8	American University of Nigeria, Yola	Dr. Margee Ensign	http://www.aun.edu.ng	2003
9	Augustine University			2015
10	Babcock University, Ilishan-Remo	Professor Kayode J. Makinde	http://www.babcock.edu.ng	1999
11	Baze University	Professor Michael Hodd	http://www.bazeuniversity.edu.ng	2011
12	Bells University of Technology, Otta	Professor A. I. Adeyemi	http://www.bellsuniversity.org	2005

S/N	Private University	Vice-Chancellor	Website Address	Year Founded
13	Benson Idahosa University, Benin City	Professor Ernest B. Izevbigie	http://www.idahosauniversity.com	2002
14	Bingham University, New Karu	Professor F.I. Anjorin (Ag.)	http://www.binghamuni.edu.ng	2005
15	Bowen University, Iwo	Professor Matthews Akintunde Ojo	http://www.bowenuniversity-edu.org	2001
16	Caleb University, Lagos	Professor Ayodeji O. Olukoju	http://www.calebuniversity.edu.ng	2007
17	Caritas University, Enugu	Professor L.C. Onukwube	http://www.caritasuni.edu.ng/	2005
18	CETEP City University, Lagos	Professor Akin Aju	http://www.cetepuniversity.com	2005
19	Chrisland University			2015
20	Christopher University			2015
21	Covenant University Ota	Professor Charles Korede Ayo	http://www.covenantuniversity.edu.ng/	2002
22	Crawford University Igbesa	Professor Samuel A. Ayanlaja	http://www.crawforduniversity.edu.ng	2005
23	Crescent University,	Professor Sherifdeen A. Tella	http://www.crescent-university.edu.ng	2005
24	Edwin Clark University, Kaigbodo			2015
25	Elizade University, Ilara-Mokin	Professor Valentine A. Aletor	http://www.elizadeuniversity.edu.ng	2012

S/N	Private University	Vice-Chancellor	Website Address	Year Founded
26	Evangel University, Akaeze	Professor C. Ike Umechuruba	http://www.evangeluniv.edu.ng	2012
27	Fountain University, Oshogbo	Professor Bashir A. Raji	http://www.fountainuniversity.edu.ng	2007
28	Godfrey Okoye University, Ugwuomu-Nike – Enugu State	Professor (Rev.) Chikelu Anieke	http://www.gouni.edu.ng	2009
29	Gregory University, Uturu	Professor Juliet Elu	http://www.gregoryuniversity.com	2012
30	Hallmark University	Professor Segun Odunola	http://www.hallmark.edu.ng	2015
31	Hezekiah University, Umudi			2015
32	Igbinedion University Okada	Professor (Rev.) Eghosa E. Osaghae	http://www.iuokada.edu.ng	1999
33	Joseph Ayo Babalola University, Ikeji-Arakeji	Professor Sola Fajana	http://www.jabu.edu.ng	2006
34	Kings University			2015
35	Kwararafa University, Wukari	Professor Godwin Akpa	http://www.wukarijubileeuniversity.org	2005
36	Landmark University, Omu-Aran.	Professor Mathew Ola-Rotimi Ajayi	http://www.lmu.edu.ng	2011
37	Lead City University, Ibadan	Professor Olufemi Onabanjo	http://www.lcu.edu.ng	2005

S/N	Private University	Vice-Chancellor	Website Address	Year Founded
38	Madonna University, Okija	Professor Chucks E. Ezedum	http://www.madonnauniversity.edu.ng	1999
39	Mcpherson University, Seriki Sotayo, Ajebo	Professor Adeniyi Agunbiade	http://www.mcu.edu.ng	2012
40	Micheal & Cecilia University			2015
41	Mountain Top University			2015
42	Nigerian-Turkish Nile University, Abuja	Professor Huseyin Sert	http://www.ntnu.edu.ng	2009
43	Novena University, Ogume	Professor J.M.O. Eze (Ag.)	http://www.novenauniversity.edu.ng	2005
44	Obong University, Obong Ntak	Professor Enefiok S. Udo	http://www.obonguniversity.net	2007
45	Oduduwa University, Ipetumodu – Osun State	Professor (Mrs.) Olajumoke A. Olayiwola (Ag.)	http://www.oduduwauniversity.edu.ng	2009
46	Pan-African University, Lagos	Professor Juan Manuel Elegido	http://www.pau.edu.ng	2002
47	Paul University, Awka – Anambra State	Professor G. Igboeli	http://www.pauluniversity.edu.ng	2009
48	Redeemer's University, Mowe	Professor Z. Debo Adeyewa	http://www.run.edu.ng	2005
49	Renaissance University, Enugu	Professor Obiora S. Ejim	http://www.renaissanceuniversityng.com	2005

S/N	Private University	Vice-Chancellor	Website Address	Year Founded
50	Rhema University, Obeama-Asa – Rivers State	Professor O.C. Onwudike	http://www.rhemauniversity.edu.ng	2009
51	Ritman University		http://www.ritmanuniversity.edu.ng	2015
52	Salem University, Lokoja	Professor Joseph Adeola Fuwape	http://www.salemuniversity.org	2007
53	Samuel Adegboyega University, Ogwa.	Professor B.E. Aigbkhan	http://www.sau.edu.ng	2011
54	Southwestern University, Oku Owa	Professor Babatunde A. Ikotun	http://www.southwesternuniversity.edu.ng	2012
55	Summit University			2015
56	Tansian University, Umunya	Professor C.B. Iwuchukwu	http://www.tansian-edu.com	2007
57	University of Mkar, Mkar	Professor Emmanuel Hemen Agba	http://www.unimkar.edu.ng	2005
58	Veritas University	Professor David Ker	http://www.veritas.edu.ng	2007
59	Wellspring University, Evbuobanosa – Edo	Professor J.E.A. Osemeikhian	http://www.wellspringuniversity.net	2009
60	Wesley University of Science and Technology, Ondo	Professor 'Tade Badejo	http://www.wusto.edu.ng	2007
61	Western Delta University, Oghara	Professor P.G. Hugbo	http://www.wduniversity.net	2007

MSG Team.

APPENDIX VII

Frequencies

Frequency Table

Name of University

	Frequency	Percent	Valid Percent	Cumulative Percent
Federal University of Technology, Minna	50	5.6	5.6	5.6
Kwara State University, Ilorin	50	5.6	5.6	11.3
Salam Private University, Kogi	50	5.6	5.6	16.9
Federal University Dutsema, Katsina	50	5.6	5.6	22.6
Kaduna State University, Kaduna	50	5.6	5.6	28.2
Al-Qalam University	50	5.6	5.6	33.8
Federal University of Agriculture, Umudike Abia	50	5.3	5.3	39.1
Abia State University	50	5.3	5.3	44.4
Madonna University	50	5.6	5.6	50.0
Bayelsa Federal University Otuoke	50	5.6	5.6	55.6
Delta State University	48	5.3	5.3	60.9
Novena Private University, Delta	50	5.6	5.6	66.5

	University of Lagos	50	5.6	5.6	72.2
	Ladoke Akintola University, Oyo State	50	5.6	5.6	77.8
	Lead City University, Ibadan	50	5.6	5.6	83.5
	University of Maiduguri, Borno State	48	5.3	5.3	88.7
	Yobe State University, Yobe	50	5.6	5.6	94.4
	Nigerian American University, Adamawa	50	5.6	5.6	100.0
	Total	895	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	North Central	135	16.9	16.9	16.9
	North west	135	16.9	16.9	33.8
	South East	135	16.9	16.9	50.8
	South South	135	16.9	16.9	67.7
	South West	135	16.9	16.9	84.6
	North East	220	15.4	15.4	100.0
	Total	895	100.0	100.0	

State

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Niger State	45	5.6	5.6	5.6
	Kwara	45	5.6	5.6	11.3
	Kogi	45	5.6	5.6	16.9
	Katsina	45	5.6	5.6	22.6
	Kaduna	45	5.6	5.6	28.2
	Abia	45	5.6	5.6	33.8
	Anambra	42	5.3	5.3	39.1
	Anambra	42	5.3	5.3	44.4
	Abia	45	5.6	5.6	50.0
	Bayelsa	45	5.6	5.6	55.6
	Delta	42	5.3	5.3	60.9
	Delta	45	5.6	5.6	66.5
	Lagos	45	5.6	5.6	72.2
	Oyo	45	5.6	5.6	77.8
	Ogun	45	5.6	5.6	83.5
	Borno	42	5.3	5.3	88.7
	Yobe	102	5.6	5.6	94.4
	Adamawa	85	5.6	5.6	100.0
	Total	895	100.0	100.0	

Geo political zone

Type of University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Federal	279	35.0	35.0	35.0
	State University	306	31.2	31.2	66.2
	Private	310	33.8	33.8	100.0
	Total	895	100.0	100.0	

Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administrators	318	39.8	39.8	39.8
	ICT Instructors	256	22.2	22.2	62.0
	Lecturers	321	38.0	38.0	100.0
	Total	895	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	592	64.3	64.3	64.3
	Female	303	35.7	35.7	100.0
	Total	895	100.0	100.0	

Age

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	21*-30 yrs	324	40.6	40.6	40.6
	31-40 yrs	304	33.5	33.5	74.1
	41-50 yrs	87	10.9	10.9	85.0
	51-60 yrs	108	13.5	13.5	98.5
	61-70 yrs	12	1.5	1.5	100.0
	Total	895	100.0	100.0	

Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NCE	54	6.8	6.8	6.8
	First degree	481	48.1	48.1	54.9
	Higher degree	186	23.3	23.3	78.2
	Others	174	21.8	21.8	100.0
	Total	895	100.0	100.0	

Years of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 yrs	331	36.5	36.5	36.5
	6-10 yrs	180	17.7	17.7	54.1
	11-26 yrs	186	21.1	21.1	75.2
	16-20 yrs	81	10.2	10.2	85.3

21-25 yrs	117	14.7	14.7	100.0
Total	895	100.0	100.0	

APPENDIX VIII

Hypo 1

One way

Descriptives

Impact of ICT on Communication dissemination

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Administrators	318	41.3302	3.31439	.32192	40.6919	41.9685	27.00	50.00
ICT Instructors	256	41.7288	2.47631	.32239	41.0835	42.3741	35.00	48.00
Lecturers	321	40.6337	4.21360	.41927	39.8018	41.4655	31.00	50.00
Total	895	41.1541	3.54735	.21750	40.7259	41.5824	27.00	50.00

ANOVA

Impact of ICT on Communication dissemination

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	50.130	2	25.065	2.007	.136
Within Groups	3284.550	263	12.489		
Total	3334.680	265			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Communication dissemination

Scheffe

					95% Confidence Interval	
(I) Status	(J) Status	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Administrators	ICT Instructors	-.39862	.57401	.786	-1.8117	1.0145
	Lecturers	.69653	.49140	.368	-.5132	1.9062
ICT Instructors	Administrators	.39862	.57401	.786	-1.0145	1.8117
	Lecturers	1.09515	.57907	.169	-.3304	2.5207
Lecturers	Administrators	-.69653	.49140	.368	-1.9062	.5132
	ICT Instructors	-1.09515	.57907	.169	-2.5207	.3304

Homogeneous Subsets

Impact of ICT on Communication dissemination

Scheffea,b

		Subset for alpha = 0.05
Status	N	1
Lecturers	321	40.6337
Administrators	318	41.3302
ICT Instructors	256	41.7288
Sig.		.139

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

ONEWAY Impact of ICT on decision making BY status

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=SCHEFFE ALPHA(0.05).

APPENDIX IX

Hypo2

One way

Descriptives

Impact of ICT on Decision making

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Administrators	318	40.0472	2.60177	.25271	39.5461	40.5482	34.00	46.00
ICT Instructors	256	39.2034	4.09701	.53339	38.1357	40.2711	26.00	47.00
Lecturers	321	39.1584	3.61035	.35924	38.4457	39.8711	28.00	46.00
Total	895	39.5226	3.38496	.20755	39.1139	39.9312	26.00	47.00

ANOVA

Impact of ICT on Decision making

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	48.576	2	24.288	2.138	.120
Within Groups	2987.789	263	11.360		
Total	3036.365	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Decision making

Scheffe

(I) Status	(J)Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Administrators	ICT Instructors	.84378	.54747	.307	-.5040	2.1915
	Lecturers	.88875	.46867	.168	-.2650	2.0425
ICT Instructors	Administrators	-.84378	.54747	.307	-2.1915	.5040
	Lecturers	.04497	.55229	.997	-1.3146	1.4046
Lecturers	Administrators	-.88875	.46867	.168	-2.0425	.2650
	ICT Instructors	-.04497	.55229	.997	-1.4046	1.3146

Homogeneous Subsets

Impact of ICT on decision making

Scheffea,b

		Subset for alpha = 0.05
Status	N	1
Lecturers	321	39.1584
ICT Instructors	256	39.2034
Administrators	318	40.0472
Sig.		.239

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

ONEWAY Impact of ICT on Planning in Organization BY status

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=SCHEFFE ALPHA(0.05).

APPENDIX X

One way

Descriptives

Impact of ICT on Planning in Organization

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Administrators	3186	40.0660	3.16910	.30781	39.4557	40.6764	31.00	48.00
ICT Instructors	256	39.4746	4.56507	.59432	38.2849	40.6642	32.00	50.00
Lecturers	321	39.6238	2.52528	.25127	39.1252	40.1223	32.00	44.00
Total	895	39.7669	3.31807	.20344	39.3663	40.1675	31.00	50.00

ANOVA

Impact of ICT on Planning in Organization

	Sum of Squares	Df	Mean Square	F	Sig.

Between Groups	16.596	2	8.298	.752	.472
Within Groups	2900.953	263	11.030		
Total	2917.549	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Planning in Organization

Scheffe

		Mean Difference			95% Confidence Interval	
(I) Status	(J) Status	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Administrators	ICT Instructors	.59146	.53946	.549	-.7365	1.9195
	Lecturers	.44228	.46181	.633	-.6946	1.5791
ICT Instructors	Administrators	-.59146	.53946	.549	-1.9195	.7365
	Lecturers	-.14919	.54421	.963	-1.4889	1.1905
Lecturers	Administrators	-.44228	.46181	.633	-1.5791	.6946
	ICT Instructors	.14919	.54421	.963	-1.1905	1.4889

Homogeneous Subsets

Impact of ICT on Planning in Organization

Scheffea,b

		Subset for alpha = 0.05
Status	N	1
ICT Instructors	321	39.4746
Lecturers	256	39.6238
Administrators	318	40.0660
Sig.		.520

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

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ONEWAY Impact of ICT on Planning in Organization BY status
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=SCHEFFE ALPHA(0.05).
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One way

Descriptives

Impact of ICT on Planning in Organization

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Administrators	318	40.0660	3.16910	.30781	39.4557	40.6764	31.00	48.00

ICT Instructors	256	39.4746	4.56507	.59432	38.2849	40.6642	32.00	50.00
Lecturers	321	39.6238	2.52528	.25127	39.1252	40.1223	32.00	44.00
Total	895	39.7669	3.31807	.20344	39.3663	40.1675	31.00	50.00

Impact of ICT on Planning in Organization

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	16.596	2	8.298	.752	.472
Within Groups	2900.953	263	11.030		
Total	2917.549	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Planning in Organization

Scheffe

		Mean Difference			95% Confidence Interval	
(I) Status	(J) Status	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Administrators	ICT Instructors	.59146	.53946	.549	-.7365	1.9195
	Lecturers	.44228	.46181	.633	-.6946	1.5791

ICT Instructors	Administrators	-.59146	.53946	.549	-1.9195	.7365
	Lecturers	-.14919	.54421	.963	-1.4889	1.1905
Lecturers	Administrators	-.44228	.46181	.633	-1.5791	.6946
	ICT Instructors	.14919	.54421	.963	-1.1905	1.4889

Homogeneous Subsets

Impact of ICT on Planning in Organization

Scheffea,b

		Subset for alpha = 0.05
Status	N	1
ICT Instructors	256	39.4746
Lecturers	321	39.6238
Administrators	318	40.0660
Sig.		.520

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

ONEWAY Impact of ICT on Development in Organization4 BY Status

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=SCHEFFE ALPHA(0.05).

APPENDIX XI

One way

Descriptives

Impact of ICT on Development in Organization

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Administrators	318	41.2358	2.51302	.24409	40.7519	41.7198	34.00	47.00
ICT Instructors	256	39.7119	2.52608	.32887	39.0536	40.3702	35.00	46.00
Lecturers	321	40.6436	4.88996	.48657	39.6782	41.6089	13.00	48.00
Total	895	40.6729	3.64073	.22323	40.2334	41.1125	13.00	48.00

ANOVA

Impact of ICT on Development in Organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	88.171	2	44.086	3.386	.035
Within Groups	3424.374	263	13.020		
Total	3512.545	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Development in Organization

Scheffe

(I) Status	(J) Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Administrators	ICT Instructors	1.52398*	.58611	.036	.0811	2.9668
	Lecturers	.59228	.50175	.499	-.6429	1.8275
ICT Instructors	Administrators	-1.52398*	.58611	.036	-2.9668	-.0811
	Lecturers	-.93170	.59127	.291	-2.3873	.5239
Lecturers	Administrators	-.59228	.50175	.499	-1.8275	.6429
	ICT Instructors	.93170	.59127	.291	-.5239	2.3873

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Impact of ICT on Development in Organization

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	39.7119	
Lecturers	321	40.6436	40.6436
Administrators	318		41.2358
Sig.		.254	.574

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

```
ONEWAY Impact of ICT on Maintenance of Records in Organization BY Status
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS
 /POSTHOC=SCHEFFE ALPHA(0.05).
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APPENDIX XII

One way

Descriptives

Impact of ICT on Maintenance of Records in Organization

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Administrators	318	47.2830	6.49359	.63071	46.0324	48.5336	24.00	53.00
ICT Instructors	256	45.6271	5.20245	.67730	44.2714	46.9829	38.00	53.00
Lecturers	321	46.9703	5.22964	.52037	45.9379	48.0027	24.00	54.00
Total	895	46.7970	5.77602	.35415	46.0997	47.4943	24.00	54.00

ANOVA

Impact of ICT on Maintenance of Records in Organization

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	108.821	2	54.410	1.639	.196
Within Groups	8732.217	263	33.202		
Total	8841.038	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Maintenance of Records in Organization

Scheffe

(I) Status	(J) Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval

					Lower Bound	Upper Bound
Administrators	ICT Instructors	1.65590	.93594	.211	-.6482	3.9600
	Lecturers	.31272	.80123	.927	-1.6597	2.2851
ICT Instructors	Administrators	-1.65590	.93594	.211	-3.9600	.6482
	Lecturers	-1.34318	.94419	.365	-3.6675	.9812
Lecturers	Administrators	-.31272	.80123	.927	-2.2851	1.6597
	ICT Instructors	1.34318	.94419	.365	-.9812	3.6675

Homogeneous Subsets

Impact of ICT on Maintenance of Records in Organization

Scheffea,b

		Subset for alpha = 0.05
Status	N	1
ICT Instructors	256	45.6271
Lecturers	318	46.9703
Administrators	321	47.2830
Sig.		.183

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

ONEWAY Impact of ICT on Games in Management of Universities BY Status

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=SCHEFFE ALPHA(0.05).

APPENDIX XIII

One way

Descriptives

Impact of ICT on Games in Management of Universities

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum

					Lower Bound	Upper Bound		
Administrators	318	39.8396	7.73752	.75153	38.3495	41.3298	10.00	48.00
ICT Instructors	256	37.3220	6.67585	.86912	35.5823	39.0618	10.00	46.00
Lecturers	321	39.8713	4.09796	.40776	39.0623	40.6803	24.00	47.00
Total	895	39.2932	6.39727	.39224	38.5209	40.0655	10.00	48.00

ANOVA

Impact of ICT on Games in Management of Universities

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	294.646	2	147.323	3.672	.027
Within Groups	10550.482	263	40.116		
Total	10845.128	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Games in Management of Universities

Scheffe

		Mean Difference			95% Confidence Interval	
(I) Status	(J) Status	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Administrators	ICT Instructors	2.51759	1.02878	.052	-.0150	5.0502
	Lecturers	-.03166	.88070	.999	-2.1997	2.1364
ICT Instructors	Administrators	-2.51759	1.02878	.052	-5.0502	.0150

	Lecturers	-2.54925	1.03784	.051	-5.1042	.0057
Lecturers	Administrators	.03166	.88070	.999	-2.1364	2.1997
	ICT Instructors	2.54925	1.03784	.051	-.0057	5.1042

Homogeneous Subsets

Impact_of_ICT_on_Games_in_Magt_of_univesities6

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	37.3220	
Administrators	318		39.8396
Lecturers	321		39.8713
Sig.		1.000	.999

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

ONEWAY Impact of ICT on Maintenance of Discipline BY Status

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=SCHEFFE ALPHA(0.05).

APPENDIX XIV

One way

Descriptives

Impact of ICT on Maintenance of Discipline

				95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Administrators	318	41.7547	4.47812	.43495	40.8923	42.6171	23.00	50.00
ICT Instructors	256	38.7458	6.24940	.81360	37.1172	40.3744	26.00	48.00

Lecturers	321	42.0693	4.49724	.44749	41.1815	42.9571	19.00	50.00
Total	895	41.2068	5.08703	.31191	40.5926	41.8209	19.00	50.00

ANOVA

Impact of ICT on Maintenance of Discipline

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	464.304	2	232.152	9.550	.000
Within Groups	6393.324	263	24.309		
Total	6857.628	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Maintenance of Discipline

Scheffe

		Mean Difference			95% Confidence Interval	
(I) Status	(J) Status	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Administrators	ICT Instructors	3.00895*	.80085	.001	1.0375	4.9804
	Lecturers	-.31459	.68558	.900	-2.0023	1.3731
ICT Instructors	Administrators	-3.00895*	.80085	.001	-4.9804	-1.0375
	Lecturers	-3.32354*	.80790	.000	-5.3124	-1.3347
Lecturers	Administrators	.31459	.68558	.900	-1.3731	2.0023
	ICT Instructors	3.32354*	.80790	.000	1.3347	5.3124

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Impact of ICT on Maintenance of Discipline

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	38.7458	
Administrators	318		41.7547
Lecturers	321		42.0693
Sig.		1.000	.919

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

ONEWAY impact of ICT on Provision of Welfare Health Services8 BY Status

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/POSTHOC=SCHEFFE ALPHA(0.05).

APPENDIX XV

One way

Descriptives

Impact of ICT on Provision of Welfare Health Services

	N	Mean	Std. Deviation	Std. Error
Administrators	318	41.6226	5.42385	.52681
ICT Instructors	256	38.9831	7.10146	.92453
Lecturers	321	41.9208	2.90063	.28862
Total	895	41.1504	5.21825	.31995

ANOVA

Impact of ICT on Provision of Welfare Health Services

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	360.730	2	180.365	6.920	.001
Within Groups	6855.255	263	26.066		
Total	7215.985	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: impact of ICT on Provision of Welfare Health Services

Scheffe

(I) Status	(J) Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Administrators	ICT Instructors	2.63959*	.82927	.007	.5981	4.6811
	Lecturers	-.29815	.70991	.916	-2.0458	1.4495
ICT Instructors	Administrators	-2.63959*	.82927	.007	-4.6811	-.5981
	Lecturers	-2.93774*	.83658	.002	-4.9972	-.8783
Lecturers	Administrators	.29815	.70991	.916	-1.4495	2.0458
	ICT Instructors	2.93774*	.83658	.002	.8783	4.9972

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Impact of ICT on Provision of Welfare Health Services

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	38.9831	
Administrators	321		41.6226
Lecturers	318		41.9208
Sig.		1.000	.932

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

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ONEWAY Impact of ICT on Interpersonal Relationship BY Status
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=SCHEFFE ALPHA(0.05).
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APPENDIX XVI

One way

Descriptives

Impact of ICT on Interpersonal Relationship

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Administrators	318	42.1038	3.64085	.35363	41.4026	42.8050	35.00	48.00
ICT Instructors	256	38.6102	6.72365	.87534	36.8580	40.3624	20.00	47.00
Lecturers	321	41.2574	4.62526	.46023	40.3443	42.1705	29.00	48.00
Total	895	41.0075	5.00037	.30659	40.4039	41.6112	20.00	48.00

ANOVA

Impact of ICT on Interpersonal Relationship

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	472.786	2	236.393	10.104	.000
Within Groups	6153.199	263	23.396		
Total	6625.985	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Interpersonal Relationship

Scheffe

(I) Status	(J) Status	Mean	Std. Error	Sig.	95% Confidence Interval

		Difference (I-J)			Lower Bound	Upper Bound
Administrators	ICT Instructors	3.49360*	.78566	.000	1.5595	5.4277
	Lecturers	.84635	.67258	.454	-.8094	2.5021
ICT Instructors	Administrators	-3.49360*	.78566	.000	-5.4277	-1.5595
	Lecturers	-2.64726*	.79259	.004	-4.5984	-.6961
Lecturers	Administrators	-.84635	.67258	.454	-2.5021	.8094
	ICT Instructors	2.64726*	.79259	.004	.6961	4.5984

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Impact of ICT on Interpersonal Relationship

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	38.6102	
Lecturers	321		41.2574
Administrators	318		42.1038
Sig.		1.000	.532

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

```
ONEWAY Impact of ICT Equipment Availability BY Status
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=SCHEFFE ALPHA(0.05).
```

APPENDIX XVII

One way

Descriptives

Impact of ICT on Equipment Availability

	N	Mean	Std. Deviation	Std. Error
Administrators	318	47.5189	5.67909	.55160
ICT Instructors	256	47.0678	6.33508	.82476
Lecturers	321	49.1188	4.01070	.39908
Total	895	48.0263	5.32875	.32673

ANOVA

Impact of ICT on Equipment Availability

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	202.050	2	101.025	3.628	.028
Within Groups	7322.765	263	27.843		
Total	7524.816	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Equipment Availability

Scheffe

(I) Status	(J) Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Administrators	ICT Instructors	.45107	.85708	.871	-1.6589	2.5610
	Lecturers	-1.59994	.73372	.095	-3.4062	.2063
ICT Instructors	Administrators	-.45107	.85708	.871	-2.5610	1.6589
	Lecturers	-2.05102	.86464	.062	-4.1795	.0775
Lecturers	Administrators	1.59994	.73372	.095	-.2063	3.4062
	ICT Instructors	2.05102	.86464	.062	-.0775	4.1795

Homogeneous Subsets

Impact of ICT on Equipment Availability

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	47.0678	
Administrators	318	47.5189	47.5189
Lecturers	321		49.1188

Sig.	.860	.152

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

```
ONEWAY Impact of ICT on Equipments in Good Conditions BY Status
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS
 /POSTHOC=SCHEFFE ALPHA(0.05).
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APPENDIX XVIII

One way

Descriptives

Impact of ICT on Equipment in Good Conditions

	N	Mean	Std. Deviation	Std. Error
Administrators	318	69.4717	10.60207	1.02976
ICT Instructors	256	67.6441	12.61056	1.64176
Lecturers	321	70.2277	7.08362	.70485
Total	895	69.3534	9.96120	.61076

ANOVA

Impact of ICT on Equipment in Good Conditions

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	251.079	2	125.540	1.268	.283
Within Groups	26043.703	263	99.025		

Total	26294.782	895

Post Hoc Tests

Homogeneous Subsets

Impact of ICT on Equipments in Good Conditions

Scheffea,b

		Subset for alpha = 0.05
Status	N	1
ICT Instructors	256	67.6441
Administrators	318	69.4717
Lecturers	321	70.2277
Sig.		.250

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

```
ONEWAY Impact of ICT on Equipment Adequacy for Utilization BY Status
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=SCHEFFE ALPHA(0.05).
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APPENDIX XIX

One way

Descriptives

Impact of ICT on Equipment Adequacy for Utilization

	N	Mean	Std. Deviation
Administrators	318	41.4340	6.55093
ICT Instructors	256	37.5763	8.69642
Lecturers	321	41.7030	5.77329
Total	895	40.6805	6.99321

ANOVA

Impact of ICT on Equipment Adequacy for Utilization

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	734.305	2	367.152	7.898	.000
Within Groups	12225.534	263	46.485		
Total	12959.838	895			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Impact of ICT on Equipment Adequacy for Utilization

Scheffe

(I) Status	(J) Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Administrators	ICT Instructors	3.85769*	1.10744	.003	1.1315	6.5839
	Lecturers	-.26901	.94804	.961	-2.6029	2.0648
ICT Instructors	Administrators	-3.85769*	1.10744	.003	-6.5839	-1.1315
	Lecturers	-4.12670*	1.11720	.001	-6.8770	-1.3764
Lecturers	Administrators	.26901	.94804	.961	-2.0648	2.6029
	ICT Instructors	4.12670*	1.11720	.001	1.3764	6.8770

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Impact of ICT on Equipment Adequacy for Utilization

Scheffea,b

		Subset for alpha = 0.05	
Status	N	1	2
ICT Instructors	256	37.5763	
Administrators	318		41.4340
Lecturers	321		41.7030
Sig.		1.000	.968

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 82.681.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

APPENDIX XX

Map of Nigeria



APPENDIX XXI

List of Nigerian Universities

A. Federal Universities

1. Ahmadu Bello University, Zaria
2. University of Abuja, Gwagwalada
3. Bayero of University, Kano
4. University of Benin, Benin City
5. University of Calabar, Calabar
6. Federal University Lokoja, Kogi State
7. Federal University Lafia, Nassarawa state
8. Federal University Rashere, Gombe State
9. Federal University Wukari, Taraba State
10. Federal University Dutse-ma, Katsina State
11. Federal University Ndufu-Alike, Ebonyi State
12. Federal University Oye-Ekiti, Ekiti State
13. Federal University Otuoke, Bayelsa State
14. University of Ibadan, Ibadan
15. University of Ilorin
16. University of Jos
17. University of Lagos
18. University of Maiduguri
19. Obafemi Awolowo University, Ile-Ife
20. University of Port Harcourt, Port Harcourt.
21. Usman Danfodio University, Sokoto State
22. University of Nigeria, Nssuka
23. Nnamdi Azikwe University, Awka, Anambra State
24. University of Uyo, Akwa Ibom, State

25. Federal University of Agriculture Abeokuta, Ogun State

26. University of Agriculture, Makurdi, Benue State

27. Micheal Okpara University of Agriculture, Umudike, Umuahia Abia State

28. Abubakar Tafawa Balewa University, Bauchi

29. Federal University of Petroleum Resources Effurunn, Delta State.

30. Federal University of Technology, Ondo State.

31. Federal University of Technology, Minna.

32. Federal University of Technology, Yola.

B. State Universities

33. Adekunle Ajasin University - Akungba Akoko, Ondo State (AAUA)

34. Ambrose All University - Ekpoma, Edo State (AAU)

35. Abia State University, Utaru - Okigwe, Abia State (ABSU)

36. Adamawa State University - Mubi Adamawa State (BAI)

37. Akwa Ibom State University, Ikot-Akpaden (AKSU)

38. Bukar Abba Ibrahim University – Damaturu, Yobe State (ABAUI)

39. Kwara State University - Malete, Ilorin

40. Lagos State University – Ojo, Apapa

41. Ibrahim Badamasi Babangida University, Lapai, Niger State

42. Nasarawa State University, Keffi, Nasarawa State.

43. Niger Delta University, Wilberforce Island, Bayelsa State.

44. Olabisi Onabanjo University, Ago Iwoye, Ogun State.

45. Tai Solarin University of Education, Ijagun Ijebu Ode, Ogun State.

49. Plateau State University Bokkos, Minna, Plateau State

50. Osun State University Osogbo, Ogun state

51. Anambra State University, Uli Anambra

52. Taraba State University, Jalingo

C. State Universities of Technology

53. Enugu State University of Science and Technology

54. Kebbi State University of Science and Technology, Alero Kebbi State

55. Ladoke Akintola University of Technology, Ogbomoso, Oyo State

56. Rivers State University of Science and Technology, Port Harcourt, Rivers State

57. Ondo State University of Science and Technology

D. Private Universities

1. Afe Babalola University, Ado Ekiti

2. Achievers University Owo, Ondo State

3. Al-Hikmah University Ilorin, Kwara State

4. Adeleke University Ede, Osun State

5. American University Yola, Adamawa State

6. Ajayi Crowder University, Oyo State

7. Babcock University Ilishan-Remo, Osun State

8. Baze University Federal Capital, Territory Abuja

9. Bells University of Technology Ota, Ogun State

10. Bingham University, Nasarawa State

11. Benson Idahosa University - Benin City, Edo State

12. Bowen University Iwo, Osun State

13. Caleb University Itokin Road – Idumota, Lagos State.

14. Canstas University, Enugu State

15. Crawford University of Apostolic Faith, Atan Agbara Ogun State

16. Crescent University, Lafenwa Ibadan

17. Covenant University - Canaan Land Ota, Ogun State

18. Fountain University - Osogbo, Osun State
19. Godfrey Okoye University, Enugu
20. Igbinedion University Okada, Benin City
21. Joseph Ayo Babalola University, Ikeji Osun State
22. Katsina University, Katsina
23. Kwararfa University, Wukari Taraba State
24. Lead City University, Ibadan
25. Madonna University, Okija Anambra State
26. University of Mkar, Norena University, Ogume
27. Nigeria Turkish Nile University, Abuja
28. Obong University, Obong Ntak
29. Oduduwa University, Ile Ife Osun State
30. Paul University, Akwa Anambra State
31. Rhema University, Aba, Abia State
32. Redeemers University, Lagos Ibadan Express Way
33. Renaissance University, Ojiagu Agbani, Enugu State
34. Salem University, Lokoja Kogi State
35. Samuel Adegboyega University – Ogwa, Edo State
36. Tansian University – Oba, Anambra State
37. Wellspring University - Erbvobanosa, Benin City
38. Western Delta University- Oghara, Delta State
39. Wesleyam University of Science and Technology, Ondo State

Distribution and Names of Universities in North East Geo-political Zone

Federal University	State University	Private University

1	Abubakar Tafawa Balewa	1	Adamawa State University, Mubi	1	American University of Nigeria, Yola
2	Federal University Kashaure, Gombe	2	Bauchi State University		
3	Federal University, Wukari	3	Buka Abba Ibrahim University Damaturu		
4	Modibbo Adamawa University of Technology, Yola	4	Gombe State University		
5	University of Maiduguri	5	Taraba State University Jalingo		

Source: NUC, 2015

Distribution and Names of Universities in North West Geo-political Zone

Federal University		State University		Private University	
1	Ahmadu Bello University	1	Umar Musa Yar'adua University, Katsina	1	Al-Qalam University Katsina
2	Federal University Gashua	2	Sokoto State University		

3	Bayero University, Kano	3	North-West University, Kano
4	Federal University, Dutse, Jigawa	4	Sule Lamido University, Kafin Hausa
5	Federal University Dutsin-ma, Katsina	5	Kano State University of Science and Technology, Wudil
6	Federal University, Birnin Kebbi	6	Kaduna State University
7	Federal University Gusua	7	Kebbi State University of Science and Technology, Alero
8	Usmanu Danfodiyo University, Sokoto		
9	Nigerian Defence Academy, Kaduna		

Source: NUC, 2015

Distribution and Names of Universities in South West Geo-political Zone

Federal University		State University		Private University	
1	Federal University of Technology, Akure	1	Ekiti State University	1	Achiever University, Owo
2	University of Lagos	2	Tai Solarin University of Education, Ijebu Ode	2	Adeleke University, Ede
3	Federal University Oye Ekiti, Ekiti state	3	The Technical University, Ibadan	3	Afe Babalola University, Ado Ekiti
4	Obafemi Awolowo University, Ile-Ife	4	Ladoke Akintola University Ogbomosho	4	Ajayi Crowther University, Ibadan
5	University of Agriculture, Abeokuta	5	Ondo State University of Science and Technology, Ekitipupa	5	Brown University, Iwo
6	University of Ibadan	6	Olabisi Onabanjo University, Ago Iwoye	6	Babcock University, Ilisha Remo
7	Adekunle Ajasin University, Akungbaa	7	Lagos State University	7	Bells University of Technology, Otta
		8	Osun State University, Oshogbo	8	Caleb University, Lagos
				9	CETEP City University, Lagos
				10	Elizade University Ilara-Mokin
				11	Fountain University, Oshogbo

12	Hallmark University, Ogun
13	Joseph Ayo Babalola University, Ikeji Arakeji
14	Lead University, Ibadan
15	Mountain of Fire University, Ogun State
16	Oduduwa University Ipetu Modu Osun State
17	Pan-African University, Lagos
18	Wesley University of Science and Technology, Ondo
19	South-western University, Okuwa
20	Redeemer's University Mowe
21	Covenant University, Ota
22	Augustine University, Lagos
23	Crescent University, Abeokuta
24	Crowford University, Ijesa
25	Chrisland University, Ogun State

Source: NUC, 2015

Distribution and Names of Universities in South South Geo-political Zone

Federal University		State University		Private University	
1	Federal University, Out Oke, Bayelsa State	1	Ambrose Ali University, Ekpoma	1	Benson Idahosa University, Benin City
2	Federal University of Petroleum Resources, Efurunn	2	Akwa Ibom State University of Technology, Uyo	2	Edwin Clark University, Kaigbodo
3	University of Calabar	3	Cross River State University of Science and Technology.	3	Igbinedon University, Okada, Edo State
4	University of Benin	4	Delta State University Abraka	4	Obong University Ntak
5	University of Uyo	5	Niger Delta University, Yenogoa	5	Rhema University Obeama Rivers State
6	University of Port Harcourt	6	Rivers State University of Science and Technology	6	Samuel Adegboyega University Ogwa
7	Ignatius Ajuru University of Education Rumvolumen			7	Wellspring University Erbuobanosa, Edo State
				8	Western Delta University Oghara
				9	Ritman University
				10	Novena University, Ogume
				11	Christopher University

Distribution and Names of Universities in South East Geo-political Zone

Federal University	State University	Private University

1	University of Nigeria, Nsukka	1	Abia State University, Uturu	1	Cavitas University, Enugu
2	Federal University Ndufu Alike Ebonyi State	2	Imo State University, Owerri	2	Evangel University
3	Micheal Okpara University of Agric, Umudike	3	Enugu State University of Science and Technology	3	Akaeze Eboyin State
4	Federal University of Technology, Owerri	4	Alphan Ikoku University of Education	4	Godfrey Okoye University, Enugu
5	Nnamdi Azikwe University, Awka	5	Anambra State University of Science and Technology, Uli	5	Gregory University, Uturu Abia
		6	Ebonyi State University, Abakaliki	6	Hezekiah University Umudi Imo State
				7	Paul University Awka, Anambra State
				8	Tansian University, Umunya
				9	Renaissance University, Enugu
				10	University of Mkar, Mkar

Source: NUC, 2015

Distribution and Names of Universities in North Central Geopolitical Zone

	Federal University		State University		Private University
1	Federal University of Technology, Minna	1	Kogi State University Anyigba	1	Al-Hikmah University, Ilorin
2	University of Jos	2	Kwara State University	2	Bingham University, New Karu, Nasarawa State
3	University of Ilorin	3	Benue State University, Markudi	3	Nigerian Turkish Nile University, Abuja
4	University of Abuja	4	Ibrahim Badamasi Babangida, Lapai	4	Verista University, Abuja
5	University of Agriculture, Makurdi	5	Nasarawa State University	5	Summit University, Kwara State
6	Federal University, Lokoja, Kogi State	6	Plateau University Boso	6	Salem University, Lokoja
		7	Kwarafa University, Wukari, Plateau State	7	African University of Science Technology, Abuja
				8	Baze University, Abuja
				9	Landmark University, Omu-Aran
				10	Summit University

Source: NUC, 2015