# INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON TEACHING OF BUSINESS EDUCATION COURSES IN COLLEGES OF EDUCATION IN NORTH-WEST GEO-POLITICAL ZONE, NIGERIA

**BY**

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**AHMADU BELLO UNIVERSITY, ZARIA**
**NIGERIA**

**SEPTEMBER, 2014**

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**BY**

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**M.ED/EDUC/3103/2009/2010**

**A THESIS SUBMITTED TO SCHOOL OF POST GRADUATES STUDIES, AHMADU BELLO UNIVERSITY, ZARIA**
**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF A M.ED IN BUSINESS EDUCATION**
**DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION**
**FACULTY OF EDUCATION**
**AHMADU BELLO UNIVERSITY, ZARIA**

**SEPTEMBER 2014**

## DECLARATION

I declare that the work in this thesis titled **"Influence of Information and Communication Technology on Teaching Business Education courses in Colleges of Education in North-West geo-political zone Nigeria"** has been carried out by me in the Department of Vocational and Technical Education. The information derived from the literature has been duly acknowledge in the text and a list of references provided. No part of this thesis was previously presented for another degree at this or any other institution.

Rilwan Daramola _____ _____

Signature Date

## CERTIFICATION

This thesis titled INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON TEACHING BUSINESS EDUCATION COURSES IN COLLEGES OF EDUCATION IN NORTH-WEST GEO-POLITICAL ZONE, NIGERIA by Rilwan DARAMOLA meets the regulations governing the award of M.Ed (Business Education) of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

| | | |
|---|---|---|
| Prof A.A Udoh | _____ | _____ |
| Chairman, Supervisory Committee | Sign | Date |
| Prof M.M Aliyu | _____ | _____ |
| Member, Supervisory Committee | Sign | Date |
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| Dean, School of Postgraduate Studies | Sign | Date |

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## DEDICATION

This research study is dedicated to my Late Father, Alh. Abdulfatai Daramola, my beloved mother, Hajia Mansura Daramola, and my wife Ajoke and the children.

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## LIST OF ABBREVIATIONS

| | |
|---|---|
| A: | Agree |
| CAD: | Computer-Aided Design |
| CAI: | Computer-Assisted Instruction |
| D: | Disagree |
| FCE (T): | Federal College of Education (Technical) |
| ICT: | Information and Communication Technology |
| LAN: | Local Area Network |
| M.Ed: | Master of Education |
| NCCE: | National Commission for Colleges of Education |
| NCE: | Nigeria Certificate in Education |
| SA: | Strongly Agree |
| SD: | Strongly Disagree |
| WAN: | Wide Area Network |

## Abstract

There has been a persistent problem of lecturers and students of Business Education at the N.C.E level not applying information and communication technology (ICT) in teaching and learning. Interactions and observations with respondents prompted investigation on the influence of ICT in teaching and learning business education in North-West Nigeria. This study was conducted in the eleven Colleges of education in North-West Nigeria with a population of 1392, using descriptive and survey design. Five research questions were raised as well as five null hypothesis postulated. Data collected were analyzed using percentages, and the five null hypotheses were tested at 0.05 level of significance using Independent T-test. The findings of the study among other revealed that ICT have not made significant positive change on teaching and learning of business education due to non availability of ICT facilities, cost of acquiring ICT facilities, and poor network. The first, second, third and fifth null hypotheses were rejected because the t-value was greater than t-critical value. On the basis of the findings the researcher concluded that most business education lecturers and students lack ICT skills which makes it difficult for them to compete in the world of work. The researcher made some recommendations which includes, that business education lecturer should engaged themselves in continuous training in ICT facilities to enable them delivered a more effective instruction. Also, there should be adequate and sustainable funding to enable the programme survive.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the study

Education is the most important agent of change and the bed rock of industrial development as well as socio-economic growth. Education can be said to be the greatest investment a nation can make for the quick development of its social, economic, political, technology and human resources.

Hence most nations of the world give education high priority in their developmental efforts. Developed countries such as USA, Britain and Japan among others have embraced and recognized technology as a means of realizing economic independence and self-reliance. Information and communication goes hand in hand and although information can always be communicated, yet not everything that is communicated is information. Communication becomes information only when data derived from it have been organized and interpreted in such a way that they contain meaning beyond the individual facts and can be used in decision making. While technology means the tools people and organization apply to operation to get things done more quickly, more easily or more efficiently.

Information and Communication Technology is a force that has changed many aspects of the ways we live. If one was to compare such fields as medicine, tourism, business, law, banking, engineering and architecture, the impact of ICT across the past two or three decades has been enormous. The ways these fields operate today is vastly different from the ways they operated in the past, but when one looks at business education, there seems to have been an uncanny lack of influence and far less change than other field have experienced.

Business education is an important integral part of general education which emphasizes skill and competence acquisition for use in offices and business. Aliyu (2006) considers business education as education for the development of skills and competencies, attitudes which are necessary for efficiency of the eco-social system. In the view of Nwanewezi (2010), business education encompasses education for office occupations, business teaching, business administration and economic understanding. In today's world of business, business education

curriculum needs to replace the traditional pedagogical practices that still underpin its teaching and learning process. From a competitive stand point, the greatest challenges faced by business education products are that they appear to be relatively deficient in computer skills and understanding of international business trends. The curriculum needs ICT component not only as a tool for communication, but also as a tool for teaching and learning and in carrying out of researches.

The rapid advancement in information and communication technologies is offering new potentials for producing and distributing knowledge. These technologies are fundamentally altered how we live and work as well as how we learn and have transformed into a global community. This is in line with the view of Ononogbo (1990) of Information and Communication Technology as a revolution, which has penetrated almost all fields of human activities, thus, transforming our economic and social life. Information and Communication Technology therefore, refers to the use of skills such as browsing, power point, Microsoft word, in combining information and communication processes and devices to obtain, analyze, store, recall and transmit accurate information from one place to another at very high speed.

Teaching generally is a planned effort to bring about desirable change in behaviour. The changes cover the three major domains of blooms taxonomy of education, which comprises cognitive, affective and psychomotor abilities. Teaching influences the cognitive ability by increasing in storing useful information and understanding of basic concept, principles and operation taught in a particular subject. In affective domain, teaching provides a change in the possession of desirable attitudes and ideals. It also develops the learner through increasing satisfaction about learning achievements. Teaching in the area of psychomotor abilities provides changes in the acquisition of practical skills, abilities and habits on how to perform certain job activities efficiently.

Learning is seen as a modification of a person's behaviour in a particular area of study so that his or her behaviour is changed on a more permanent basis. In learning, learner's behavior can be modified through organized experience provided in the learning process. In the learning process, learners are provided the opportunity to acquire knowledge to enable them perform a given task completely.

Globally, the nature of teaching and learning is changing rapidly due to increase interaction from more accessible global telecommunication networks driven by the content of the internet. With the increasing capacity of information and communication technology, there is a rise in new learning opportunities beyond the traditional "Book-teacher's model". The shift from the teacher centered to student learning via the internet means teachers and students at all level need to embrace information and communication technology.

Information and communication technology is generally accepted as a model instrumental tool that enables the business educator to modify the teaching and learning methods use in order to increase the student's interest. Though the chalkboard, textbooks, typewriters, duplicating machine, dictating machine, radio, film have been used in teaching business education over the years, none has quite impacted on the teaching and learning of business education process like the computer-internet. Typewriters and radio impact only on the audio-visuals facilities of users and acquisition of skills in a slow pace, the computer is capable of activating the sense of sight, hearing and touch of the users. ICT has the capacity to provide higher interactive potentials for users to develop their individual skills, intellectual and creative ability. The collective and rigid nature of learning and the nature of the learning associated with the use of typewriter, radio, duplicating machine and chalk-board do not contribute serious innovative changes to traditional methods of teaching business education programme. Information and Communication Technology are being used in the developed world for instructional functions in teaching and learning as many nation are adding computer literacy, reading and writing literacy as skills students will need for succeeding in a technologically developed world.

The goals of reviewing existing or designing a new programme is to ensure that it meets existing or emerging challenges in a discipline. The major purpose of curriculum study and development programmes in business education is to improve the quality of schools in order to make them more proficient in fortifying students with broad knowledge and varied skills.

Studies attest that there is deficiency in the curriculum content of business education. Okeke and Eze [2010] submitted that vocational education [business education inclusive ] has inadequate curriculum to meet with the current technological development which hinges on information and communication technology. However, there should be reasonable degree of

correlation between the curriculum in use and knowledge and skills required by the employers .School curriculum should be built to produce graduates for current jobs and not jobs that existed in some years ago.

With the emergences of Information and Communication Technology on teaching business education courses in colleges of education, teaching and learning has changed from traditional chalkboard to electronic learning requiring such skills as internet browsing, Microsoft word, power point, Microsoft excel and teleconferencing gadgets from teachers and students. Nwosu (2003) specifies the benefits of ICT skills to business education students to cover development of multiple sensory delivery, increased self expression, active and cooperative learning. A graduate of business education from various colleges of education are supposed to be at the fore front of applying ICT skills in their daily contact which is geared towards preparing them for the place of work and also the classroom. All these therefore form the background to which the study is based on influence of Information and Communication Technology on teaching business education courses in Colleges of Education in North West geo-political zone, Nigeria was planned.

**1.2 Statement of the Problem**

Even with the incorporation of ICT into the curriculum of business education in colleges of education in Nigeria, the performance of NCE business education students has not changed. Despite the introduction of the new teaching method that are ICT based, most lecturers prefer to use the traditional method in teaching and learning business education such as chalk board, outdated equipment for teaching skills acquisition courses such as type writer. A lot of reasons were advanced by lecturers and students for still maintaining the old method of teaching and learning.

Based on the researcher's interaction with some lecturers from colleges studied, it was observed that the incorporation of ICT in teaching business education courses has not made any much impact due to unavailability of the relevant ICT facilities for teaching purpose. Similarly, the students interviewed complained that the ICT facilities provided by the colleges cannot go round the students due to their unavailability, which is making the students to be deficient in using the new technology, lack of adequate ICT facilities tends to hamper effective teaching of

business education courses. Some other students the researcher interacted with complained that some lecturers are not skilled in using ICT in teaching their students. This is why such lecturers prefer to stick to the traditional method of teaching. This can be supported with the view of Adeshina (2007) who stated that for business education lecturers to grow professionally and remain relevant, they must possess ICT skills.

On the basis of the foregoing, the researcher is concerned with knowing the level of influence that ICT had in teaching business education courses in Colleges of Education in North-West geo-political zone, Nigeria

### 1.3 Objectives of the Study

The main objective of this study is to determine the level to which Information and Communication Technology influences teaching of business education courses in Colleges of Education in North-West geo-political zone, Nigeria. The specific objectives are to:

1. establish the extent to which business education lecturers and are skilled in the use of ICT facilities in teaching business education courses in Colleges of Education in North-West geo-political zone, Nigeria.
2. identify the extent of availability of ICT facilities for teaching business education courses in Colleges of Education in North-West geo-political zone, Nigeria.
3. ascertain the extent of utilization of ICT facilities provided for teaching business education courses in Colleges of Education in North-West geo-political zone, Nigeria.
4. identify the challenges in the use of ICT facilities for teaching business education courses in Colleges of Education in North- West geo-political zone, Nigeria.
5. determine the extent to which available ICT facilities has help students in learning business education courses in Colleges of Education in North- West geo political zone, Nigeria.

### 1.4 Research Questions

For the purpose of this research work, the following research questions were answered:

1. Are business education lecturers skilled in the use of Information and Communication Technology facilities in teaching business education courses in Colleges of Education in North-West geo-political zone, Nigeria?
2. Are ICT facilities available for teaching business education courses in Colleges of Education in North West geo-political zone, Nigeria?
3. To what extent are ICT facilities utilized for teaching business education courses in Colleges of Education in North-West geo-political zone, Nigeria?
4. What are the challenges in the use of ICT facilities in teaching business education courses in North West geo-political zone, Nigeria?
5. To what extent do available ICT facilities help business education students in learning business education courses in Colleges of Education in North – West geo-political zone, Nigeria?

**1.5 Research Hypotheses**

In line with the specific objectives and research questions, the following null hypotheses was tested:

1. There is no significant difference in the opinion of business education lecturers and students in the use of Information and Communication Technology facilities for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.
2. There is no significant difference in the opinion of business education lecturers and students on the availability of Information and Communication Technology facilities for teaching business education courses in colleges of education in North-West geo-political zone Nigeria.
3. There is no significant difference in the opinion of business education lecturers and students on the utilization of Information and Communication Technology facilities provided for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.
4. There is no significant difference in opinion of business education lecturers and students on the challenges in the use of ICT facilities for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.

5. There is no significant difference in the opinion of business education lecturers and students on the help of available ICT facilities in learning business education courses in colleges of education in North-West geo-political zone, Nigeria.

## 1.6 Significance Of The Study

The significance of a study is to announce and indicate those who are to benefit from the research findings. Therefore, it's hoped that this study will be of great benefit to federal and state government, National Commission for Colleges of Education, business education lecturers, students and other researchers.

The result of the study will be beneficial to the federal and states government as an employer of labour in that it will tackle the problem of obsolete and outdated office equipment, poor working condition, poor infrastructure, and inadequate network. Also, National Commission for Colleges of Education (NCCE) whose statutory responsibility is to managed the colleges of education in Nigeria will find this work useful. It will assist the commission to evaluate the implementation of ICT in teaching and learning in colleges of education in North-West Nigeria and make necessary recommendations to the Federal Ministry of Education.

The outcome of the study will provoke business education lecturers in Colleges of Education to acquired Information and Communication Technology skills relevant in teaching business education courses and the need for the lecturers to attend conference, seminar and workshops to update their knowledge. Also, the outcomes of the study will be beneficial to students of Nigeria Certificate in Education (NCE) as the study will unravel Information and Communication Technology skills needed by business education graduates from Colleges of Education. The result will provide guide and direct the students to acquired saleable skills that will give them competitive advantage in the world of work.

In addition, intending researcher will find the work useful for further studies in this area. Also, Management of different Colleges of Education can used the result of this research to provide adequate Information and Communication Technology facilities for teaching and learning business education in their various institutions.

## 1.7 Basic Assumptions of the Study

The researcher has the following assumptions:

a. Information and Communication Technology enhances students over all learning experience.
b. Lecturers and students are skillful in Information and Communication Technology.
c. Adequacy of Information and Communication Technology facilities in Colleges of Education.
d. There is no obstruction of power supply in the use of Information and Communication Technology.
e. All instructional materials for teaching and learning are provided by the colleges.

## 1.8 Delimitation of the study

This study was delimited to all the Colleges of Education both Federal and State in North-West geo- political zone, Nigeria. Within these Colleges, the study was equally restricted to all business education lecturers and NCE III students requiring ICT skills such as internet browsing, Microsoft word, power point and Microsoft Excel. This was because they are direct beneficiaries involved in using Information and Communication Technology in teaching business education courses. This is in line with National Commission for Colleges of Education (NCCE) minimum standards for NCE teachers. Also, the two beneficiaries was delimited to the use of questionnaire which was administered by the researcher as instrument for collecting data.

# CHAPTER TWO

# REVIEW OF RELATED LITERATURE

This chapter reviewed relevant literature under the following sub-headings:

2.1 Theoretical framework

2.2 Concept of Information and Communication Technology (ICT)

2.3 The Concept of Business Education

2.4. Concept of teaching and learning in Business Education

2.5 Influence of Information and Communication Technology on teaching and learning Business Education courses

2.6 Empirical Studies

2.7 Summary of Literature Reviewed

## 2.1 Theoretical Framework

The theoretical framework that informs this study is the Engagement theory. This was first propounded by Kearsley and Shneiderman (1999) as:

> *a schema for building learning activities that evoke engaged learning. Engaged learning occurs when active cognitive processes, such as problem-solving, decision-making and evaluating are involved. Engagement theory focus on the learner as constructor allies with those in the Constructivist domain; and by championing experiential learning and self-direction.*

The choice of this theory was based on the framework for technological-based teaching and learning which is related to the topic under study. The fundamental idea underlying engagement theory is that students must be meaningfully engaged in learning activities through interaction with others and worthwhile tasks. While in principle, such engagement could occur without the use of technology. It is believed that technology can facilitate engagement in ways

which are difficult to achieve otherwise. So engagement theory is intended to be a framework for technology-based learning and teaching. Shneiderman (1994) asserted that:

> *Although not directly derived from other theoretical frameworks for learning, it has much in common with many such frameworks. For example, with its emphasis on meaningful learning, it is very consistent with constructivist approaches. Because it emphasizes collaboration among peers and a community of learners, it can be aligned with situated learning theories. Because its focuses on experiential and self-directed learning, it is similar in nature to theories of adult learning.*

By engaged learning, we mean that all student activities involve active cognitive processes such as creating, problem-solving, reasoning, decision-making, and evaluation. In addition, students are intrinsically motivated to learn due to the meaningful nature of the learning environment and activities. Engagement theory is based upon the idea of creating successful collaborative teams that work on ambitious projects that are meaningful to someone outside the classroom.

These three components, summarized by Shneiderman (1994), imply that learning activities:

- occur in a group context (i.e collaborative teams)

- are project-based

- have an outside (authentic) focus

The first principle (the "Relate" component) emphasizes team efforts that involve communication, planning, management and social skills. The modern workplace demands proficiency in these skills, yet historically students has been taught to work and learn on their own. Research on collaborative learning suggests that in the process of collaborative, students are forced to clarify and verbalize their problems, thereby facilitating solutions. Collaborative also increases the motivation of students to learn, a significant consideration in settings with high drop-out rates (teenagers, distance learners). Furthermore, when students work in teams, they often have the opportunity to work with others from quite different backgrounds and this facilitates an understanding of diversity and multiple perspectives.

The second principle (the "Create" component) makes learning a creative, purposeful activity. Students have to define the project (problem domain) and focus their efforts on application of ideas to a specific context. Conducting their own projects is much more interesting to students than answering sterile textbook problems. And because they get to define the nature of the project (even if they don't choose the topic), they have a sense of control over their learning which is absent in traditional classroom instruction. According to Barrows and Tamblyn (1980), project orientation is the essence of Problem-Based Learning (PBL) approaches which are often used in medical and others types of professional education.

The third principle (the "Donate" component) stresses the value of making a useful contribution while learning. Ideally each project has an outside "customer" that the project is being conducted for. The customer could be a campus group, community organization, school, church, mosque, library, museum, government agency, local business, or needy individual. In many cases, the projects can be work-related, that is, an activity that fits into a team's occupational or career interest. The authentic learning context of the project increases student motivation and satisfaction. This principle according to Jacoby and Associates (1996) is consistent with the emphasis on school-to-work programs in many schools systems and colleges, as well as the "service" philosophy of contemporary corporate training efforts.

Engagement theory is different from many older models of computer-based learning in which the emphasis was on individualized instruction and interactivity. Engagement theory does promote interaction, but human interaction in the context of group activities, not individual interaction with an instructional program. The latter form of interaction tended to be measured by single responses (key presses or mouse clicks) whereas engagement requires assessment of larger units of work (reports, programs, user satisfaction). The difference between engagement and interactivity reflects the shift in thinking about computers in education as communication tools rather than some form of media delivery devices. Furthermore, Shneiderman (1994), stated that engagement theory places a great deal of emphasis on providing an authentic (i.e. meaningful) setting for learning, something not present in previous models.

## 2.2 Concept of Information Communication and Technology

Many authorities looked at Information Communication and Technology and give their kind of view for example; Nwosu (1999) described Information Communication and Technology as the convergence of tools of micro electronics telecommunications and computers. While Akinde and Adagunodo (2000) noted that Information Communication and Technology are mechanism by which a wide variety of audience can be reached especially with information that can make meaningful contributions for informed decision making in government, banking, oil industry, manufacturing, commerce and education sectors.

According to Thomas and Ranga (2000), the application of computer and other communication technologies in education was divided into broad categories: Pedagogical essentially, with the more effective learning with the aid of the various components of Information Communication and Technology. Pedagogy through the application of Information Communication and Technology has the advantage of heightening the motivation, helping recall previous learning, providing new instructional stimuli activating the learner response.

Butcher (2003) view Information Communication and Technology as electronic technologies for collecting, storing, processing and communication information. This is in line with Ademulegun (2006) explained Information Communication and Technology as the item of equipment (hardware) and computer programme (software) that allow us to access, retrieve, store, organize and manipulate information.

Ohunba (2006) stated that Information Communication and Technology is an Umbrella term for acquiring, processing, storing and dissemination of information either in textual, vocal, numerical, pictorial, graphical; etc from using computer and telecommunication. While Nevkar (2006) view Information Technology (IT) as the technology that merges computing with high speed communication link camping data, sound and video. It is a communication process in which information (input) is recorded, stored and retrieved process for decision making (output) on planning operation and controlling.

Ikelegbe (2007) categorized the different kinds of information communication technologies into five basic types as:

1. **Sensing Technologies**: These are devices that help us to gather information from the environment and translate the information into a form that can be understood by computer. Examples are data collection devices such as scanners, computer keyboards, computer, and mouse. These are technologies that tie together and communication between the various kinds of technologies. Examples include fax (screen etc).
2. **Communication Technologies**: Facsimile machine landed cellular telephone, computer networks. A network is a group of devices that is linked together. Example is the private branch exchange (PBXB) which is Local Area Network (LAN) which covers several floors within a building or an entire building or ever a campus in case of the school environments. The Wide Area Network (WAN) which covers larger geographical areas and uses telephone line, microwaves and satellite communication network.
3. **Analyzing Technologies**: The computer hardware and software come with this category. Computer takes information from sensing and communication devices and them store and process the information.
4. **Display Technologies**: These are essential output devices. They make processed data available to human for use either through loud speaker, printer and display screen like photocopying machines.
5. **Storage Technologies**: This is another important category of I.C.T. They help us to store large quantities of information in a form that can be easily accessed. This is made up of the secondary storage devices such as magnetic tape magnetic disc, optical disc (CD-ROMs Read Only Memory, VCDs, and Video Compact Disc etc).

In the recent years there has been increased emphasis on individualized programmed instruction and Information Communication and Technology to facilitate learning at all levels of education and training. The feasible application of microcomputer in the Nigerian classroom for teaching and learning is gradually gaining recognition as a result of great importance and educational appropriateness it offers. The following include some of the ways in which Information Communication and Technology can be used for instructional delivery according to Lemke (1999).

1. **Computer Assisted Instruction (CAI):** Is the term used to describe the use of computer to provide instruction to students by simulating teaching and learning. Opportunities in

the classroom are in the areas of drift and practice, tutorial, simulation demonstration designing, data collection, analysis and games. Computer Managed is for managing instruction. In the case of CMI, Abimbola (1998) observed that the students do not receive any instruction from the computer, rather students' instructions are managed using computer. Harold (1999) classified the functions performed by CMI into two: Instruction management and Function support. The support for basic group of users, including students' instructions administrators and curriculum developers and evaluators. The instructional management related functions as discussed by Harold (1999) including the following:

a. **Diagnosis**: This is the process by which ranges of instructional alternatives are suggested based on diagnosis to either the students or the teacher.
b. **Performance Monitoring**: This involves the process by which an individual and groups rate of progress is watched and supervised closely. Both students and teachers performance are monitored and this supports evaluation and planning.
c. **Resource Allocation/Scheduling**: This is the process for allocation of instructional resources specified by the prescriptive process within a particular time frame in order to make the most effective use of the available resources.
d. **Reporting**: This involves a process by which one retrieves and updates information used on characteristics of the information via a data system and by which information is tabulated and formulated in a form interpretable by human beings.
e. **Data Base Use**: Students and teachers can use computer to keep and produce records (i.e. Information storage and retrieval) about current events and other disciplines.

2. **Computer Aided Design (CAD):** Another dramatic use of Computer in the classroom is through computer aided design. CAD offers a variety of 3-dimentional and modeling and visualization features. CAD is also successful in instructional applications because teachers, designers and students have unlimited access to a wide range of vital design materials and construction techniques that make it possible to explore more advance technical designs.
3. **Programming**: Computer Programming is the art of conceiving a problem in term of the steps to its solution and expressing those steps as instruction for the computer to follow. Bright man programming language is a collection of commands that directs the control of

a computer programmes and run the same on the computer. Students and teacher can develop their programmes using special computer languages like BASIC (Beginner's All-Purpose Symbolic Instruction Code) PASCAL RGP (Report Program Generator), FORTRAN and COBOL. Students will finds it interesting in converting their ideas into executed programmes.

4. **Problem Solving**: Computer is invading the educational system in a way unparalleled in previous education history. Computer permits students to develop programmes and to suit the programmes to solve numerous problems.

Information Communication and Technology are generally accepted as a modern instrumental tool that enables the educators to modify their teaching methods they use in order to increase students' interest and to facilitate learning. According to Ohomba (2006) some of the tools used in the path of Information Communication and Technology among other include:

a. **E-Learning**: This is the main Information Communication and Technology new education tool for teaching and learning. E-Learning usually refers to structured and managed learning experience and may be provided partially or wholly via a web browser or through the internet or an intranet or multimedia platform such as CD-Rom or DVDs, or other media and communications.
b. **Video Lecture**: These are specially prepared lectures that are transmitted live on the internet or can be access from a website at anytime. Charts and diagrams etc can be accessed separately.
c. **E-Library**: There are thousands of books that a person can find access via the internet. This is very good for research and it's used to increase knowledge.
d. **Internet**: This is a global collection of many types of computer and computer networks that are linked together.
e. **Distance Learning**: Also known as tele-learning is a form of study in which students and teachers are at different locations.

### 2.3 Concept of Business Education

Business education as a programme of study which offers students who wish to pursue a career in business an opportunity to develop those skills, abilities and understanding that will

enable them to enter, perform and progress in a business occupation after graduating from high school or the university. Azuka, (2000). In the same vein, Osuala (2004) sees business education as a programme of instruction which consist of two points, office education and general business education that provide students with information and experiences which are needed by all in managing personal business affair and using the services of the business.

Aliyu (2006), identifies two purposes for business education for the students planning for gainful employment in business education and general business education programme. Business education is the field of training in business practices and in specific skills such as accounting, information, processing, keyboarding/typewriting and shorthand. The objectives of Business Education as contained in the NCCE minimum standards for Nigeria Certificate in Education 2008 are as follow:

1. To produce well qualified and competent NCE graduates in business subjects who will be able to teach business subjects in our secondary schools and other related educational institutions.
2. To produce NCE business teachers who will be able to inculcate the vocational aspects of Business Education into the society.
3. To produce NCE Business teachers who will be involved in the much desired revolution of vocational development right from the primary and secondary schools.
4. To equip students with necessary competences so as to qualify them for a post-NCE degree programme in Business Education.
5. To equip graduates with the right skills that will enable them to engage in a life of work in the office as well as for self-employment.

The objectives of Business Education at the degree level are similar to that of NCE.

Business education is saddled with lofty objectives. However, according to Aliyu (2006), the following are the objectives of business education at the tertiary institutions;

1. To develop a matured understanding of the general nature of business.
2. To provide the needed background of the general nature of business.
3. To provide training for leadership in business.
4. To provide training in specialized phases of business activity.

5. To lay a cultural and ethical foundation for the development of the fore-going objectives.

Similarly, Igoke (2005) noted that business education at all levels of education enables the recipients to;

1. Acquire skills and knowledge of business.
2. Develop basic skills for personal use in the future.
3. Relate the knowledge and skills acquired to national development.
4. Develop skills for office occupation.
5. Prepare students for further training in business studies.
6. Provide orientation and basic skills with which to start a life of work for those who may not undergo further training.

In the view of Nwanewezi (2010), business education encompasses education for office occupations, business teaching, business administration and economic understanding. However, one can say that business education is the intellectual and vocational instructions given to students to earn a living in the contemporary industrial and ever changing business environment. The tenet of business education embraces entrepreneurship, basic education, business environment and vocational practices. To this end, if general education is seen as a means of adjustment of the individual to his environment, then business education should simply be seen as a means of adjustment of the individual to his business environment.

In Nigeria, business education is offered at different levels of education but done as a fully fledged course in the tertiary institutions, particularly in the Colleges of Education and faculties of education of the universities.

## 2.4 Concept of Teaching and Learning Business Education

In an attempt to understand the meaning of business education, it is vital to look at the objective which business education set out to achieve. The aims or objectives that justify the introduction of business studies as an area of great importance to the development of the economy include these as stated by Osuala (2004):

a. Manpower/skill development
b. Economic development

c. Work habit attitudes

Okafor (1990) asserted that business education is education for and about business with two major objectives.

a. To provide occupational instruction for student deriving careers in business and
b. To help develop consumer and economics understanding and competencies of students at all grades and age levels.

Osuala (2004) also observed that business education is a program of instruction which consist of office education which is a vocational programme that provides information and competencies needed for managing and using businesses. While Aluwong (2003), Ibrahim (2003), Adeshina (2007) all explained that business education is education that prepares students for entry into and advancement in jobs within business.

Generally, business education is encompassing program which equip its recipient with the necessary knowledge, skills and attitude that will enable him succeed in whatever business endeavor he may engage in, hence leading to economic development.

Teaching and learning are central activities in all educational institutions. For teaching and learning to be effective, relevant methods and strategies must be adopted by the teacher, who is the distributor of knowledge, in order to capture and sustain learner interest in the course being taught and learned. Variable teaching and learning conditions as well as teacher quality are very imperative for the achievement of teaching and learning objectives in Business Education.

Teaching according to Overbaugh (2003) is the science and art of assisting a person to learn. To him, the science in teaching entails use of acquired knowledge from natural and behavioral sciences in order to help appreciate the circumstances and personality of the learner while the art aspect of teaching involves the use of creative and demonstrative skills in aiding the delivery of instruction. For Ogwo and Oranu (2006), teaching is a partnership between the teacher and the student which ultimately leads to permanent changes in the behavior of the student. The nature of teaching act is so complex and integrated that its dimensions scope and outcomes need to be planned carefully and systematically ever before teaching commences.

Learning as posited by Anderson and Block (1987) is "a relatively permanent change in behaviour that manifests due to reinforced practices". They maintained that the phrase "relatively permanent' excludes from the definition changes in behavior that result from temporary or transient conditions such as fatigue, influence of drugs or adaptation. They from the views point of development further explains learning as "Knowledge as skills accumulated throughout a life time".

More so, Ogwo and Oranu (2006), describe learning as: the process by which some activities enable the learner acquire experiences that tend to influence (change) his/her future behavior, provided that the characteristics of the change in behavior cannot be explained on the basis of native response tendencies, maturation or temporary state of the learner. It is a common knowledge that for effective learning to take place there must be learning resources. These are devices, real objects or representations which teachers use to communicate effectively with learners. Examples include real objects, models, overhead projectors, films, radio, videotaped, chart, pictures and many others.

Igoke (2005) listed the following as the learning processes:

1. **Trial and Error:** To achieve competence in a thing, mistakes are often made and correlations taken until learners attain perfection". This is applicable to typewriting and shorthand that demand constant practice.
2. **Learning by Demonstration:** Here the teacher conducts the operations or construction before the class and explain his actions as he proceeds.
3. **Learning by thinking:** Learners or students learn when their instructors allow them to think by asking questions and taking part in discussions.
4. **Learning of observation:** Learners acquire information, collect data and obtain ideas about things and events as they watch the teacher perform, hence learner abilities are developed.

Teaching method is the professional technique teachers adopt in their instructional exercise to enable them impact relevant knowledge and skills to their students.

According to Osuala (2004), Obi (2005) and Ogwo and Oranu (2006) teaching methods at the disposal of Business Education teacher include:

1. **Lecture Method:** The lecture method is the process whereby Business Education teachers give a talk on a subject to students, while the students listen and think about the lesson taught. This method though has its shortcoming if not allowing students' participation is useful in a large class and in advanced level of learning and not in secondary school. It is also referred to as teacher centered method.
2. **Discussion Method:** In this method of teaching and learning, teachers talk about issues or concepts of a subject matter with student by defining the topic to be discussed, stimulating and guiding the discussion, contributing help question and comments, supplying needed facts, analyzing the topic and summarizing topics discussed. (Osuala, 1996). Teachers here play the role of a moderator, and it could be teacher-centered, talk-centered or student-centered.

   The discussion method, according to Osuala (2004) is most recommended for secondary school where building student's interest in the subject is a fundamental task. By allowing students full participation, they become more knowledgeable and able to transfer such knowledge to real situation.
3. **Demonstration Method:** Demonstration method of teaching and learning is a method in which teachers dramatize topics to be taught by using recorded materials, while students are made to practice the skills demonstrated in readiness for the time they will be asked to display their level of efficiency in the performance of those skills. (Asuquo, 2005).
4. **Field Trip (excursion) Method:** Field trip is a method in which students are taken out of the classroom to an industrial or commercial concern to see things, for themselves. It is a special arrangement between the college and the industrial and commercial concern for students to visits and get familiar with the operations and machine of these organizations such as production process relevant to what they have learnt theoretically in the classroom. This method is another effective and practical method of teaching and learning Business Education courses and exposes students to real life or work situation. (Osuala 2004). It allows students to concretize their knowledge about the operations of the organizations visited.
5. **Problem Method:** This is an advanced method of teaching and learning and since it involves making observations, investigations and data gathering for solving problems, it appears scientific, it helps both the teachers and students of Business Education to:

a. Learn new concepts and ideas through problems solving, leading to discovery
b. Apply previous knowledge to solve problem in Business Education.
c. Identify problem areas of students based on what they have learnt.

6. **Visual Aids Method:** Visual aids are real objects, films, flash cards, maps, diagrams, pictures and any other objects that are relevant to the teaching and learning of Business Education courses. Pictorial recorded Business Education events or activities are very useful in concretizing theoretical instructions in students mind. This method can be adopted in teaching and learning Business Education at all levels.
7. **Project Method:** Project method is a student-centered method of teaching and learning in Business Education in which learners are allowed a great deal of involvement right from the beginning to the end of the project. It is another effective method which enhances students' full participation and quick assimilation of skills (Asuquo, 2005).

For teaching and learning of Business Education to be effective therefore, the Business Education teacher should adhere strictly to these general rules of teaching.

Teaching as stated by Obi (2005) should start from:

1. General knowledge to specific knowledge
2. Concrete things to abstract
3. Known to unknown: Teaching should be done with reference to related knowledge to the subject matter the learner already have
4. Simple things to complex things
5. Teaching should be learner centered

## 2.5 Influence of Information and Communication Technology on Teaching and Learning in Business Education Courses

The prevalence and rapid development of Information and Communication Technology has transformed human society from the information technology age to the knowledge age (Galbreath, 2000). Information and Communication Technology can be used to improve the quality of teaching and learning in Business Education through the following ways (anonymous):

1. **Preparing individual for the work place:** Information and Communication Technology have the capacity to prepare the present generation of students for a work place where computers, the internet and related technologies are becoming more and more ubiquitous. Technological literacy is the ability to use Information and Communication Technology effectively and efficiently is thus seen as representing a competitive edge in an increasingly globalizing job market. Gates(2004)

This is supported by Lemke (2004) who noted interlia "Today's students live in a global knowledge based age and they deserve teachers whose practice embraces the best that technology can bring to learning". Through teachers use of Information and Communication Technology students can be given the opportunities of becoming a part of the knowledge age and skills imparted to the young people in an increasingly complex world, teachers will need to use Information and Communication Technology in order to equip tomorrow's employee and customers with the requisite competence and knowledge to use Information and Communication Technology within their work (Gates 2004).

Enguage in Tinio (2002) identified other jobs skills referred to as 21st century skills. These include digital age literacy (consisting of functional literacy, visual literacy and technological literacy). Information and Communication Technology have the potential to promote the acquisition of these skills through using it as a tool for raising business education quality.

2. **Expanding Access to Education:** Expanding education is enhanced through access to remote learning resources. With the internet and the World Wide Web, a wealth of learning materials can be accessed from anywhere at any time of the day by unlimited number of people. Thus, teachers and students no longer have to rely solely on printed books and other materials in physical libraries which are limited in quantities for their educational needs. Information and Communication Technology also facilitate access to resources persons all over the world. Haddad(2002)
3. **Improving the quality of Business Education:** Improving the quality of business education and training is a critical issue considering the level educational expansion in Nigeria. Haddad (2002) observes that Information and Communication Technology enhance the quality of business education by increasing learner motivation and engagement (through videos, television and multimedia computer software that combine

text sound and colorful moving images) facilitating the acquisition of basic skills (through drill and practice applicable typing and shorthand) and enhancing teacher training (web-based courses through the internet, satellite based one way video and two way audio conferencing by telephone email and fax).

The introduction of Information and Communication Technology in business education programme offers the opportunity for students to learn by themselves precluding the need for teachers, Gaible and Burns (2005) argue that there is no compelling evidence to support such approaches system-wide.

4. **Transforming the Learning Environment into Learner-Centeredness:** Information and Communication Technology supported business education can promote the acquisition of the knowledge and skills that will empower students for lifelong learning. Computers and internet technologies enable new ways of learning which include active learning, collaborative learning, creative learning, evaluative learning and integrative learning. Information and Communication Technology allow a shift from a teacher centered pedagogy and enable learners to explore and discover rather than merely listen and remember. Gaible (2009) reiterated this fact by stating that Information and Communication Technology ensures that students have adequate literacy numeracy and other basic skills. Information and Communication Technology is also presented as enabling teachers and students to engage with learning in new ways, ways that transform their relationship.
5. **Potentially Equalizing Strategy for Developing Countries:** Information and Communication Technology have the potential for increasing access to and improving the relevance and quality of education in developing countries. World bank (1998) reports:

   Information and Communication Technology greatly facilitate the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formulation and execution and wide the range of opportunities for business and the poor. One of the greatest hardships endured by the poor, and by many others who lives in the poorest countries, is their sense of isolation. The new communications technologies promise to reduce that sense of isolation and to open access to knowledge in ways imaginable not long ago.

Information and Communication technology offer new opportunities to develop some of the critical early literacy skills, the development of which is fundamental if the large number of low literate learners (especially in rural areas) are to take advantage of educational opportunities presented to them through expanding access to formal education. Information and Communication Technology permeates the business environment, it underpins the success of modern corporations and it provides governments with an efficient infrastructures.

**2.6 Empirical Studies**

The researcher was able to go through some relevant past work such as those of clever (2009) who conducted a research on issues of Information and Communication Technology assessment in teaching and learning of Business Education courses. The study was conducted to investigate issues of Information and Communication Technology in the teaching and learning business education courses in Delta State. The researcher employed survey research design which consisted of one thousand three hundred and thirty seven (1337) respondents which are made fifty (50) business education lecturers and one thousand two hundred and eight seven (1287) students in four tertiary institutions in Delta state.

The researcher developed an instrument for the study titled "Information Communication Technology Assessment Questionnaire (I.C.T AQ)". The instrument is a 25 item questionnaire. Item 1-13 are modified two point likert scales while items 14-25 modified four point likertscale. The instrument was designed in line with the research questions and null hypothesis.

The descriptive statistical tool of percentage frequency and mean was used to answer the research questions while t-test was used for null hypothesis 2.50 and above was regarded as an acceptable mean for the research questions.

The findings of this study revealed that there was a serious problem in the availability and utilization of I.C.T facilities for teaching business education courses. Also business educators do not have most skill competencies in I.C.T packages. In conclusion, it was recommended that business educator should engage themselves in continuous training in I.C.T facilities package to enable them deliver a more effective instruction.

The researcher work is of enormous benefit to the work under study since the topics are related in nature. However, the shortcoming of the researcher work is that he was not specific in the area of coverage; otherwise a better result would have resulted from his work.

In another study carried out by Okute (2009) titled "Business Teachers Perception of the Technological Competencies required for the Adoption of E-learning (ELECTRONIC LEARNING) in Teaching business courses in Tertiary institutions in cross River state and Akwa Ibom state". The study set out to measure the technological competencies required by business teachers in teaching business courses in tertiary institutions.

The population of the study comprised one hundred and twenty (120) respondents drawn from six tertiary institutions in Cross River and Akwa Ibom states. The entire population was used. The instrument for data collection was validated structured questionnaire on a 5 point likert scale with reliability co-efficient of 0.89 using Crombach's Alpha reliability test. Data collected were analyzed using mean and standard deviation for the research-questions while the null hypotheses were tested at 0.05 level of significance using students't-test statistics. A mean score of 3.00 and above was accepted. Where the calculated t-test value was less than the critical value of t at 0.05 level of significance for a given (df) degree of freedom the null hypotheses was upheld.

The findings of the study revealed that a number of challenges hinder effective adoption of e-learning in teaching business courses include, lack of access to the internet, lack of access to e-learning hardware and software facilities, such as computer, multimedia projectors e.t.c. it was equally recommended that business education curriculum at all tertiary levels should be reviewed to incorporate e-learning technologies to facilitate delivery and knowledge/skill acquisition by the recipients.

The study revealed some interesting correlation among the critical variables. The study is related to this present study because of it emphasize on technological competencies required in teaching business courses.

The work is a greater motivation to the researcher in that it shed more light on the need to encourage IT competency development in undergraduate Accounting Education programme in the universities and this can take effect from curriculum development. However, the researcher

used a small population and too sophisticated statistics for a simple study if not there would have be a better result.

Oliver (2010) carried out a study titled "Availability and Adequacy of I.C.T Resources in Business Teacher education Programme of Nigeria". The study was designed to investigate the availability and adequacy of I.C.T resources in business teacher education programme of Nigeria. The population was made of forty-eight respondents (lecturers and instructors). There was no sample. The study was delimited to three tertiary institution offering business teacher education programme. The finding of the study show gross absence or short supply of I.C.T resources. In conclusion, it was recommended that government should provide more fund for acquisition of I.C.T resources.

The research study has been relevant to this work because it emphasized the availability and adequacy of ICT resources in Business Teacher's Education programme in Nigeria. However, the researcher used a small population and no statistical tool was used for the work, if not there would have been a better result.

A related research study was conducted by Okafor (2010) on the Evaluation of Information and Communication technology skills needed by accounting lecturers in Nigeria. The design for the study was survey research. The population of the study consisted of fifty five (55) tertiary institutions accounting lecturers in South East geo-political zone of Nigeria.

The finding revealed that competencies required by business teachers include ability to use different operating system, ability to use power point presentation for online delivery and ability to create online syllabus. Based on the conclusion, it was recommended that business education curriculum at all tertiary level to be reviewed to incorporate E-learning. Also accreditation agents such as NUC, NCCE should ensure that tertiary institution acquired the necessary E-learning resources as well as ICT qualified staff in business education before granting accreditation.

The research study is helpful to this work because it drew the attention of the researcher to the skills needed by accounting lecturers in tertiary institutions. However, the population of the study is too small and data collected are not subjected to proper statistical analysis, otherwise a better result would have resulted from his work.

In the study carried out by Ugeh (2010) titled "perceived factors influencing Information Technology (IT) competency development in undergraduate Accounting education programme". This study investigated the factor affecting IT competency development in undergraduate of Accounting Education.

The population of study was one hundred and twenty (120). There was no sample as the population was large enough for the study. The instrument for collecting data for the study was a structured 26 items questionnaire. A 4 point likert type response was used. The instrument was face validated by two experts and correction effected. The data were analyzed using mean (x) and standard deviation (SD) statistical tools. A mean score equal to and greater than 2.5 were considered to be highly needed while mean rating of less than 2.5 was regarded as not needed. The findings of the study revealed that educator and employers have influence in determining IT competencies. Employers expects graduates with IT competencies based in their observations and perceptions on modern IT based working environment of today. Educators equally believed that those basic competencies such as word processors, spread sheets use common competencies relevant to accounting education graduates. In conclusion, it was recommended that facilities, equipment and material should be made available for teaching and learning to take place.

However, the researcher will have increased the population and his scope to be wider so that it could help the generalization of the finding. The researcher equally have not made used of any research design, otherwise a better result would have resulted from his work.

**2.7 Summary of Reviewed Literature**

The researcher summarized engagement theory as the theoretical frame work that inform this study. It emphasize that students must be meaningfully engaged in learning activities through interaction with others and worthwhile task.

Also, this chapter looked at various definitions of information and communication technology. It also discussed the concept and objectives of business education programme.The benefit of I.C.T, in teaching business education courses were equally noted.

Finally, the five empirical studies revealed there was a serious problem in the use of ICT in teaching in business courses. However, the empirical studies did not look at the opinion of

lecturers and students, on utilization of ICT, the challenges in the use of ICT in teaching business education courses in colleges of education, all these are the gap that the current study as closed.

# CHAPTER THREE

# RESEARCH DESIGN AND METHODOLOGY

This chapter focuses on the step by step procedural activities taking by the researcher in this study. They were discussed under the following sub-headings:

3.1 Research Design

3.2 Population for the Study

3.3 Sample Size and Sampling Procedure

3.4 Instrument for Data Collection

3.4.1 Validity of the Instrument

3.4.2 Pilot Study

3.4.3 Reliability of the Instrument

3.5 Procedure for Data Collection

3.6 Procedure for Data Analysis

## 3.1 Research Design

The researcher adopted a descriptive research design. This was because descriptive research design was aims at exploring opinion of a given population on existing practices and conditions. They include survey, case study, and casual comparative. In this study the survey method was selected as suggested by Abiola (2002). This enabled the researcher to administer questionnaire to many respondents at the same time.

## 3.2 Population of the Study

The population of this study consisted of all the Business Education lecturers and the NCE III students of all Colleges of Education in North West part of the country, where business education programme was run. The population consisted of one hundred and eighty nine (189)

Business Education lecturers and one thousand two hundred and three (1203) students for NCE III from eleven Colleges of Education. The breakdown is contained in table 3.1

**Table 3.1: Population for the study**

| Name of Colleges of Education | Business Education Lecturers | NCE III | Population |
|---|---|---|---|
| Federal College of Educ.(T)Bichi Kano | 32 | 220 | 252 |
| Federal College of Educ.(T) Gusau | 19 | 102 | 121 |
| Federal College of Educ., Kano | 17 | 145 | 162 |
| Federal College of Educ., Katsina | 10 | 25 | 35 |
| Federal College of Educ., Zaria | 37 | 84 | 121 |
| Isah Kaita College of Educ, Dutse-ma | 8 | 35 | 43 |
| Jigawa State College of Educ. | 8 | 49 | 57 |
| Kaduna State College of Educ. | 9 | 52 | 61 |
| Kebbi State College of Educ. | 11 | 198 | 209 |
| Sa'adatu Rimi College of Educ., Kano | 31 | 250 | 281 |
| Shehu Shagari College of Educ., Sokoto | 7 | 43 | 50 |
| **Total** | **189** | **1203** | **1392** |

**Source:** Record office of respective Colleges of Education . (2013)

### 3.3 Sample Size and Sampling Procedures

The sample size consisted of three hundred and nine (309) respondents which was 189 lecturers and 120 NCE III students. The 189 lecturers in the population was retained, while ten percent (10%) of the NCE III students was used. This sample selection agreed with the view of Osuala (2004) who recommended either a fixed number or a fixed percentage is ideal for a sample size of any kind, rather it's the circumstances of the study that will determine what number or what percentage to be used.

**Table 3.2: Sample of the study**

| Name of Colleges of Education | Business Education Lecturers | NCE III | Population |
|---|---|---|---|
| Federal College of Educ.(T)Bichi Kano | 32 | 22 | 54 |
| Federal College of Educ.(T) Gusau | 19 | 10 | 29 |
| Federal College of Educ., Kano | 17 | 15 | 32 |
| Federal College of Educ., Katsina | 10 | 3 | 13 |
| Federal College of Educ., Zaria | 37 | 8 | 45 |
| Isah Kaita College of Educ, Dutse-ma | 8 | 4 | 12 |
| Jigawa State College of Educ. | 8 | 5 | 13 |
| Kaduna State College of Educ. | 9 | 5 | 14 |
| Kebbi State College of Educ. | 11 | 19 | 30 |
| Sa'adatu Rimi College of Educ., Kano | 31 | 25 | 56 |
| Shehu Shagari College of Educ., Sokoto | 7 | 4 | 11 |
| **Total** | **189** | **120** | **309** |

In selecting the sample, simple random sampling technique was used. All one hundred and eighty nine (189) lecturers was retained which formed part of the sample automatically, while one hundred and twenty (120) students was selected using hat 'drawn' technique. Piece of paper containing 'Yes' and 'No' was be wrapped, papers containing 'Yes' was one hundred and twenty (120) and one thousand and eighty three(1083) 'No'. Students who picked 'Yes' formed the sample for the study. This procedure was used to select students from each of the Colleges of Education.

The sample procedure was carried out by picking of folded paper in an urn thrown at random, the number in accordance with the number of the sample of each Colleges of Education. Carrying "Yes" and the remaining carrying "No" in accordance to each college population and sample.

### 3.4 Instrument for Data Collection

A structured questionnaire was used to collect data for this study. Section A of the instrument contain personal information of the respondents, while section B contain thirty (30) items aim at enquiring about different issues on the research questions.

The breakdown of the items is shown in Table 3.3

**Table 3.3: Breakdown of Questionnaire Items**

| Statement of Research Questions | No. of Questionnaire | Questionnaire Items |
|---|---|---|
| 1 | 1 – 6 | ICT skill use in Teaching Business Education courses |
| 2 | 7 – 12 | Availability of ICT facilities in Teaching Business Education courses |
| 3 | 13 – 18 | ICT facilities utilized in Teaching Business Education Courses |
| 4 | 19 – 24 | Challenges in the use of ICT facilities. |
| 5 | 25 – 30 | Available ICT facilities has help students in learning Business Education courses. |

he items were closed ended. They are placed in 4-point rating scale of Strongly Agreed (SA), Agreed (A). Disagreed (D) and Strongly Disagreed (SD) respectively which was scored as follows: SA=4, A=3, D=2, SD=1.

### 3.4.1 Validity of the Instrument

The researcher submitted the drafted questionnaire items to two senior lecturers of Business Education section, Department of Vocational and Technical Education, Ahmadu Bello University, Zaria. The questionnaire items were subjected to thorough scrutiny and proof reading by these experts to ensure that its contents were in line with the research questions. This supported the view of Berge (1995) who stated that any research instrument to ascertain its validity should be given to a panel of experts to determine if its (contents) can elicit the desired data they are intended to elicit and this in essence is to ensure its content validity and necessary adjustment made.

### 3.4.2 Pilot Study

In order to ascertain the reliability of the questionnaire, a pilot study was conducted. The main purpose of this pilot study according to Kerlinger, Fred and Howard (2000) is to confirm the suitability of the questionnaire for its adequacy and effectiveness of the instrument.

A pilot study was carried out with five (5) lecturers and twenty (20) NCE III students of Business Education Department, Federal Capital Territory, Zuba, Abuja. The researcher decided to used this institution because its shared similar characteristic with the sample of the interest of the study. The data collected were subjected to statistics analysis using Pearson's Correlation. All the ambiguous items in the questionnaire were detected and corrected through the pilot study.

### 3.4.3 Reliability of the Instrument

The test re-test reliability was conducted at federal capital territory college of education Zuba by administering 22 copies of the questionnaire. The result was analyze using Pearson's correlation coefficient statistical instrument and the coefficient was 0.86 with a norm score of 19.10. This reliability coefficient was positive and hence, the instrument was adjudged reliable and stable. This was in line with the view of Olayiwola (2002).

## 3.5 Procedure for Data Collection

The researcher collected data through the administration of questionnaire from the sampled lecturers and students. The collection of data was done through personal administration and employment of research assistance in each respective college. The researchers used four weeks for collecting the data from respective colleges. Out of the three hundred and nine copies

of questionnaire distributed (309), only two hundred and sixty eight (268) copies were returned representing 86.73 %, while forty one (41) copies was not returned representing 13.27%.

### 3.6 Procedure for Data Analysis

The data analysis was collected in respect of the bio-data using percentage and the research questions using mean ratings (descriptive statistics). All the five hypotheses was tested using independent t-test at 0.05 level of significance and this is because according to Osuala (2004) it is a form of the t-test that is used where there is no association between the two sets of scores or values that are being compared. For the statistical analysis, all the Strongly Agreed and Agreed was taken as "Agreed". Similarly, all the Disagreed and Strongly Disagreed was taken as "Disagreed".

**Decision Rule:** A weighted mean score of 2.50 and above was considered as agreed, while a weighted mean score of 2.49 and below was considered as disagreed with respect to research questions. This was because the mean rating of 4+3+2+1 = 10/4 = 2.5. If the t-calculated is less than the t-value the null hypothesis will be retained, otherwise, it will be rejected.

## CHAPTER FOUR

## PRESENTATION AND ANALYSIS OF DATA

This chapter presents the results of the findings under the following order:

4.1 Demographic Data

4.2 Answering of Research Questions

4.3 Hypotheses Testing

4.4 Discussion of Findings

### 4.1 Demographic Data

A total of 1392 respondents both lecturers and students from the eleven (11) colleges of education in North West Nigeria, from department of business education were involved in the study. 268 respondents representing 86.73% of the total respondents filled the questionnaire and returned. The demographic variable used were: respondents by Colleges of education, rank, gender, highest qualification, area of discipline and working experience. These variable are tabulated in frequencies and percentages respectively in Tables 4.1 – 4.9.

**Table 4.1 Analysis of Respondents by Colleges of Education**

| Name of Colleges of Education | No of Respondents | percentage % |
|---|---|---|
| Federal College of Educ.(T)Bichi Kano | 25 | 15 |
| Federal College of Educ.(T) Gusau | 16 | 9.5 |
| Federal College of Educ., Kano | 15 | 9 |
| Federal College of Educ., Katsina | 10 | 6 |
| Federal College of Educ., Zaria | 32 | 19 |
| Isah Kaita College of Educ, Dutse-ma | 8 | 4.8 |
| Jigawa State College of Educ. | 5 | 2.9 |
| Kaduna State College of Educ. | 12 | 7.1 |
| Kebbi State College of Educ. | 11 | 6.5 |
| Sa'adatu Rimi College of Educ., Kano | 27 | 16 |
| Shehu Shagari College of Educ., Sokoto | 7 | 4.2 |
| **Total** | **168** | **100** |

**Source: Field Study, 2013**

The Table 4.1 revealed that most of the respondents were from Federal College of Education Zaria as thirty-two (32) lecturers responded, which stand for the 19% of the total lecturers respondents. The next was 27 lecturers from Sa'adatu Rimi College of Education which was 16 % of the total respondents. The next was 25 lecturers from Federal College of Education (T) Bichi which was 15 % of the total respondents. The next was 16 lecturers Federal College of Education (T) Gashua which was 9.5 % of the total respondents. The next was 15 lecturers from Federal College of Education, Kano which was 9% of the respondents. The next was 12 lecturers from Kaduna State College of Education which was 7.1% of the respondents. The next was Kebbi State College of Education, 11 lecturers which was 6.5% of the respondents. This followed by 10 lecturers from Federal College of Education, Katsina which was 6% of the respondents. The next was 8 lecturers from Isah Kaita College of Education Duste-ma which was 4.8% of the respondents. This was followed by 7 lecturers from Shehu Shagari College of Education which represented 4.2% of the respondents. This was lastly followed by 5 lecturers from Jigawa State College of Education which represented 2.9% of the respondents.

The information showed that the researcher has been objective by picking respondents from different colleges of education. Hence, different views were put together.

**Table 4.2 Analysis of Respondent by Rank**

| Rank | No of Respondents | percentage % |
|---|---|---|
| Assistant Lecturer | 23 | 14 |
| Lecturer III | 20 | 11 |
| Lecturer II | 25 | 15 |
| Lecturer I | 30 | 18 |
| Senior Lecturer | 23 | 14 |
| Principal Lecturer | 20 | 12 |
| Chief Lecturer | 27 | 16 |
| **Total** | **168** | **100** |

**Source: Field Study, 2013**

The table 4.2 showed the different ranks of the respondents. From the table, thirty (30) lecturers representing 18% of the total respondents were lecturers I. followed by rank of chief lecturer, which were twenty seven (27) lecturers i.e. 16% of the total respondents. The next were that of lecturer II who are twenty five (25) respondents with 15 % of the total respondents. This

was followed by the ranks of senior lecturers and assistant lecturers who are 23 respondents respectively with 14% each of the total respondents. The category of lecturers that has least responses was that of principal lecturers and lecturer III which were 20 in number and represent 11.5% each of the respondents (lecturers).

The information revealed that most of those that responded were those that have been in the system and hence, they have something to say about ICT in teaching and learning Business Education and it showed that those with less years of experience have less number of responses.

**Table 4.3 Analysis of Lecturers by Gender**

| **Gender** | **No of Respondents** | **Percentage %** |
|---|---|---|
| Male | 108 | 64.3 |
| Female | 60 | 35.7 |
| **Total** | **168** | **100** |

**Source: Field Study, 2013**

The table 4.3 revealed that one hundred and eight (108) respondents i.e 64.3 % were males and sixty (60) respondents i.e 35.7% were female. This showed that there was consideration for gender by the researcher

**Table 4.4 Analysis of Respondents Highest Qualifications**

| **Qualification** | **No of Respondents** | **percentage %** |
|---|---|---|
| Doctorate Degree | 7 | 4.2 |
| Master Degree | 63 | 37.5 |
| Degree or Equivalent | 98 | 58.3 |
| **Total** | **168** | **100** |

**Source: Field Study, 2013**

The Table 4.4 showed the different qualifications of the respondents. The highest percentage of 58.3% comprised of ninety eight (98) lecturers with degree or equivalent followed by those with master, who were sixty three (63) i.e. 37.5% of the respondents and the least

number was that of those with doctorate degree who were seven (7) lecturers i.e. 4.2% of the total respondents. This implies that most respondents are First Degree holders.

**Table 4.5 Analysis of Area of Discipline**

| Discipline | No of Respondents | percentage % |
|---|---|---|
| Accounting Education | 100 | 59.5 |
| Secretariat Education | 68 | 40.5 |
| **Total** | **168** | **100** |

**Source: Field Study, 2013**

The Table 4.5 showed that one hundred (100) respondents i.e 59.5% are accounting education lecturers while sixty eight (68) respondents i.e 40.5% are secretariat education lecturers. This implies that most of the respondents were accounting education lecturers.

**Table 4.6 Analysis of Working Experience**

| Working experience | No of Respondents | percentage % |
|---|---|---|
| 0 – 5 | 23 | 14 |
| 6 – 10 | 45 | 27 |
| 11 – 15 | 53 | 32 |
| 16 – 20 | 20 | 11 |
| 21 and Above | 27 | 16 |
| **Total** | **168** | **100** |

**Source: Field Study, 2013**

The table 4.6 showed that twenty three (23) respondents have 0 – 5 years of working experience i.e. 14% of the total respondents. This was followed by forty five (45) respondents

with 6 – 10 years of working experience i.e 27 % of the total respondents. The next was fifty three (53) respondents i.e 32 % which represent from 11 – 15 years working experience. This was followed by twenty (20) respondents i.e 11% which represent from 16 – 20 years of working experience. The highest was twenty seven (27) respondents i.e 16% which represent from 21 years and above working experience of the total respondents. This implies that the most experience respondents (lecturers) were the chief lecturers who have worked for 21 years and above in colleges of education.

**Bio Data for Students**

The following tables 4.7 – 4.9 provide information on bio-data of students.

**Table 4.7 Analysis of Respondents by Colleges of Education.**

| Name of Colleges of Education | No of Respondents | percentage % |
|---|---|---|
| Federal College of Educ.(T)Bichi Kano | 22 | 22 |
| Federal College of Educ.(T) Gusau | 8 | 8 |
| Federal College of Educ., Kano | 12 | 12 |
| Federal College of Educ., Katsina | 3 | 3 |
| Federal College of Educ., Zaria | 8 | 8 |
| Isah Kaita College of Educ, Dutse-ma | 4 | 4 |
| Jigawa State College of Educ. | 5 | 5 |
| Kaduna State College of Educ. | 5 | 5 |
| Kebbi State College of Educ. | 13 | 13 |
| Sa'adatu Rimi College of Educ., Kano | 17 | 17 |
| Shehu Shagari College of Educ., Sokoto | 3 | 3 |
| **Total** | **100** | **100** |

**Source: Field Study, 20136**

The Table 4.7 showed information on the response to students respondent in respect of eleven colleges of education. Twenty two (22) which was the 22% of the total number of students' responses were Federal College of Education (T), Bichi. The next College of Education was Sa'adatu Rimi with seventeen (17) i.e representing 17% of the total responses. This was

followed by Kebbi State College of Education with thirteen (13) responses i.e representing 13% of the total responses. The next was Federal College of Education, Kano with twelve (12) responses i.e representing 12% of the total responses. Followed by Federal College of Education, Zaria and F.C.E(T) Gashua with eight (8) responses respectively i.e representing 8% each of the total responses. This was followed by Jigawa and Kaduna State College of Education with five (5) respondents respectively i.e representing 5% each of the total responses. The next was Federal College of Education, Katsina and Shehu Shagari College of Education with three (3) responses respectively i.e representing 3 % each of the total responses.

**Table 4.8 Analysis of Respondent by Gender**

| **Gender** | **No of Respondents** | **percentage %** |
|---|---|---|
| Male | 60 | 60 |
| Female | 40 | 40 |
| **Total** | **100** | **100** |

**Source: Field Study, 2013**

Table 4.8 revealed information on the gender of the respondents. The information contained showed that sixty (60) respondents i.e 60 % were males and forty (40) respondent representing 40% were females. This however showed that both sexes had representing in the responses.

**Table 4.9 Analysis of Area of Discipline**

| Discipline | No of Respondents | percentage % |
|---|---|---|
| Accounting Education | 65 | 65 |
| Secretariat Education | 35 | 35 |
| **Total** | **100** | **100** |

**Source: Field Study, 2013**

The information in the Table 4.9 showed that greater percentage of the students are offering Accounting Education that is sixty five (65) respondents i.e. 65% while those offering Secretariat Education were thirty six (35) respondents i.e. 35% of the total number of the respondents.

### 4.2 Answering of Research Questions

Five (5) research questions were formulated for the study as: details in Appendix B

#### 4.2.1 Research Question (1)

**Are business education lecturers and students skilled in the used of ICT facilities in teaching business education courses in Colleges of Education in North-West geo-political Nigeria?**

To answer this research question items 1—6 of the questionnaire were given to elicit responses from lecturers and students. The summary of the responses is as presented in Table 4.10.

**Table 4.10: Mean rating responses of Business Education Lecturers on ICT Skills**

| S/N | Items | Mean | SD | Remark |
|---|---|---|---|---|
| 1 | Browser for materials on internet | 2.61 | 0.52 | Agreed |
| 2 | Use of PowerPoint | 1.81 | 0.85 | Disagreed |
| 3 | Use of overhead projector | 2.27 | 0.89 | Disagreed |
| 4 | Use of Microsoft Word | 1.86 | 0.72 | Disagreed |
| 5 | Use of Microsoft Excel | 2.03 | 0.41 | Disagreed |
| 6 | Use of Teleconferencing Gadgets | 1.81 | 0.45 | Disagreed |

**Source: Field Survey Data, 2013**

Table 4.10 shows that the respondents to item 1 had mean score above 2.50 (cut off mean) which is the level of acceptance while item 2, 3, 4, 5 and 6 had a scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed on business education lecturers ICT skills in teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.

### 4.2.2 Research Question Two (2)

**Are ICT facilities available for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria?**

To answer this question, item 7—12 of the questionnaire were given elicit responses from the respondents. The summary of the responses is as presented in Table 4.11.

**Table 4.11: Mean rating responses on ICT facilities available for teaching business Education courses**

| S/N | Items | Mean | SD | Remark |
|---|---|---|---|---|
| 7 | Digital library | 1.80 | 1.03 | Disagreed |
| 8 | ICT laboratory | 1.83 | 0.99 | Disagreed |
| 9 | Electronic copy board | 2.13 | 0.94 | Disagreed |
| 10 | Personal computer | 2.77 | 0.01 | Agreed |
| 11 | Multimedia projector | 2.00 | 0.91 | Disagreed |
| 12 | Data projector | 1.87 | 0.86 | Disagreed |

**Source: Field Survey Data, 2013**

Table 4.11 shows that the response to item 10 had mean score above 2.50 (cut off mean) which is the level of acceptance, while item 7, 8, 9, 11 and 12 had a scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed on the ICT facilities available for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.

### 4.2.3 Research Question Three (3)

**To what extent are ICT facilities utilized for teaching of business education courses in Colleges of Education in North-West geo-political zone, Nigeria?**

To answer this question, item 13 – 18 of the questionnaire were given elicit responses from the respondents. The summary of the response is as presented in table 4.12.

**Table 4.12: Mean rating of responses ICT facilities utilized for teaching Business Education courses**

| S/N | Items | Mean | SD | Remark |
|---|---|---|---|---|
| 13 | Local Area Network (LAN) | 1.96 | 0.96 | Disagreed |
| 14 | Wide Area Network (WAN) | 2.00 | 0.95 | Disagreed |
| 15 | Intranet | 2.33 | 1.02 | Disagreed |
| 16 | Extranet | 1.97 | 0.76 | Disagreed |
| 17 | E-Journal | 2.27 | 0.94 | Disagreed |
| 18 | Video tape | 2.60 | 1.03 | Agreed |

**Source: Field Survey Data, 2013**

Table 4.12 shows that the responses to item 18 had mean score above 2.50 (cut off mean) which is the level of acceptance while items 13, 14, 15, 16 and 17 had a scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed that ICT facilities are utilized in teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.

### 4.2.4 Research Question Four (4)

**What are the challenges in the use of ICT facilities in the teaching of business education courses in Colleges of Education in North-West geo-political zone, Nigeria?**

To answer this question items 19 –- 24 of the questionnaire were given to respondents for their responses. The summary of the responses is as presented on table 4.13

**Table 4.13: Mean rating responses on the challenges in the use of ICT facilities in teaching business education courses.**

| S/N | Items | Mean | SD | Remark |
|---|---|---|---|---|
| 19 | High cost of procurement and installation of ICT facilities | 2.70 | 0.52 | Agreed |
| 20 | Shortage of skilled power | 2.80 | 0.79 | Agreed |
| 21 | Lack of specialize ICT centres | 2.20 | 0.82 | Disagreed |
| 22 | Poor maintenance of existing telecommunication facilities | 2.80 | 1.89 | Agreed |
| 23 | High cost of information in Nigeria | 2.93 | 1.09 | Agreed |
| 24 | Poor power supply | 2.62 | 1.06 | Agreed |

**Score: Field Survey Data, 2013**

Table 4.13 shows that the responses to items 19, 20, 22, 23 and 24 had mean scores above 2.50 (cut off mean) which is the level of acceptance while item 21 had a score below 2.50 which is the level of rejection. This result shows that majority of the respondents agreed on the challenges in the use of ICT facilities in teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.

### 4.2.5 Research Question Five (5)

**To what extent do available ICT facilities help Business education students in learning business education courses in Colleges of Education in North-West geo-political, Nigeria?**

To answer this question, items 25 – 30 of the questionnaire were given to elicit responses. The summary of responses is presented in table 4.14.

**Table 4.14: Mean rating responses of available ICT facilities help business education students in learning business education courses**

| S/N | Items | Mean | SD | Remark |
|---|---|---|---|---|
| 25 | ICT motivate students to learn business education courses | 1.80 | 1.03 | Agreed |
| 26 | ICT made learning of business education easier | 2.00 | 0.95 | Disagreed |
| 27 | With ICT student need little assistance to learn | 2.77 | 0.10 | Agreed |
| 28 | ICT improved academic performance of students | 2.20 | 0.82 | Disagreed |
| 29 | Learning with ICT create awareness in students | 1.97 | 0.76 | Disagreed |
| 30 | With ICT business education are more interesting | 2.33 | 1.02 | Disagreed |

**Source: Field Survey Data, 2013**

Table 4.14 shows that the responses to item 27 had mean score above 2.50 (cut off mean) which is the level of acceptance while items 25, 26, 28, 29 and 30 had a mean scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed that the available ICT facilities help business education students in learning business education courses in colleges of education in north-west geo-political zone, Nigeria.

## 4.3 Hypotheses Testing

Five null hypotheses were raised to give statistical validation to findings from research questions of the study. These hypotheses are as follows:

**Hypothesis I:** ***There is no significant difference in the opinion of business education lecturers in the use of ICT facilities for teaching business education courses in colleges of education in North-West, geo-political, Nigeria***

The analysis of this null hypothesis can be seen as summarized in table 4.15

**Table 4.15: t-test Analysis of Business Education lecturers and students on the use of ICT facilities**

| Variables | N | Mean | Std Deviation | Std Error mean | t-value | Df | p |
|---|---|---|---|---|---|---|---|
| Lectures | 168 | 11.8988 | 1.35204 | .10431 | 4.855 | 266 | 0.000 |
| Students | 100 | 12.9900 | 2.32898 | .23290 | | | |

**Sources: Field Survey Data, 2013**

The test was conducted using t-test statistics and the mean of the lecturers is 11.8988 and that of the students 12.9900, the standard deviation for the lecturers is 1.35204 and for the students is 2.32898: the standard error mean for the lecturers is .10431 while that of the students is .23290. The observed t-value is 4.855, the p-value is 0.000 ($p<0.005$), table value is 1.97. The null hypothesis is thus rejected because there is a significant difference in the opinion of business education lecturers and students in the use of ICT facilities for teaching and learning business education courses. By implication, the test revealed that the respondents disagreed that ICT facilities is use for teaching and learning business education courses.

***Hypothesis II:*** ***There is no significant difference in the opinion of business education lecturers and students on the availability of ICT facilities for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.***

The analysis of this null hypothesis can be seen as summarized in table 4.16

**Table 4.16: t-test analysis of business lecturers and students on the availability of ICT facilities**

| Variables | N | Mean | Std Deviation | Std Error mean | t-value | Df | p |
|---|---|---|---|---|---|---|---|
| Lectures | 168 | 12.1845 | 1.51890 | .11719 | 4.065 | 266 | 0.000 |
| Students | 100 | 13.0500 | 1.93519 | .19352 | | | |

**Sources: Field Survey Data, 2013**

In table 4.16 the result indicated a mean of 12.1845 for lecturers and 13.0500 for students, with a standard deviation of 1.51890 for lecturers and 1.93519 for students. A standard error mean of .11719 for lecturers and .19352 for students. The observed t-value is 4.065 and the probability level of significance for the test is 0.000 ($p<0.05$), table value of 1.97. This means that the null hypothesis which stated that there is a significant difference in the opinion of business education lecturers and students on the availability of ICT facilities for teaching and learning business education courses in colleges of education in North-West Nigeria is rejected. By implication, the test revealed that the respondents disagreed that ICT facilities are available for teaching and learning business education courses.

***Hypothesis III:*** ***There is no significant difference on the opinion of business education lecturers and students on the utilization of ICT facilities provided for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria***

The analysis of this null hypothesis can be seen as summarized in table 4.17

**Table 4.17: t-test analysis of Business Education Lecturers and Students on the utilization of ICT facilities**

| Variables | N | Mean | Std Deviation | Std Error mean | t-value | Df | p |
|---|---|---|---|---|---|---|---|
| Lectures | 168 | 12.1190 | 1.86300 | .14373 | 2.942 | 266 | 0.004 |
| Students | 100 | 11.5300 | .94767 | .09477 | | | |

**Sources: Field Survey Data, 2013**

From the statistics presented in table 4.17, it revealed that the lecturers mean is 12.1190 while for the students was 11.5300 and the standard deviation for lecturers is 1.86300 and for students is .94767. The standard error mean for lecturers is .14373 and for students is .09477. The observed t-value is 2.942 and the probability level of significance for the test is 0.004 (p<0,05), table value 1.97. This means that the null hypothesis which stated that there is a significant difference in the opinion of business education lecturers and students on the utilization of ICT facilities for teaching and learning business education courses in colleges of education in north-west Nigeria is rejected. By implication, the test revealed that the respondents disagreed on the utilization of ICT facilities for teaching and learning business education courses.

***Hypothesis IV:*** ***There is no significant difference in the opinion of Business education lecturers and students on the challenges in the use of ICT facilities for teaching business education courses in colleges of education in north-west geo=-political zone, Nigeria.***

The analysis of this null hypothesis can be seen as summarized in table 4.18

**Table 4.18: t-test analysis on the challenges in the used of ICT facilities**

| Variables | N | Mean | Std Deviation | Std Error mean | t-value | Df | p |
|---|---|---|---|---|---|---|---|
| Lectures | 168 | 20.3512 | 3.16065 | .24385 | 0.277 | 266 | 0.782 |
| Students | 100 | 20.4600 | 3.02988 | .30299 | | | |

**Sources: Field Survey Data, 2013**

From table 4.18, it revealed that the lecturers mean is 20.3512 while for the students was 20.4600 and the standard deviation of 3.16065 and 3.02988 for lecturers and students responses respectively, while a standard error mean was .24385 for lecturers and .30299 for students and df value of 266 and p-value of 0.782 and the observed t-call of 0.277 (p>0.005), t-value 1.97. Thus means that the null hypothesis which stated there is no significant difference in the opinion of business education lecturers and students on the challenges in the use of ICT facilities for teaching and learning business education courses in colleges of education in north-west Nigeria is accepted. By implication, the test revealed that the respondents agreed on the challenges in the use of ICT facilities for ICT business education courses.

***Hypothesis V:*** ***There is no significant difference in the opinion of business education lecturers and students on the help of available ICT facilities in learning business education courses in colleges of education in north-west geo-political, Nigeria***

The analysis of this null hypothesis can be seen as summarized in table 4.19

**Table 4.19: t-test analysis on the help of available ICT facilities in learning business education courses.**

| Variables | N | Mean | Std Deviation | Std Error mean | t-value | Df | p |
|---|---|---|---|---|---|---|---|
| Lectures | 168 | 12.3751 | 1.83343 | .14145 | 3.280 | 266 | 0.001 |
| Students | 100 | 13.1600 | 1.99352 | .19935 | | | |

**Sources: Field Survey Data, 2013**

The table 4.19 result indicated a mean of 12.3751 for lecturers and 13.1600 for students, with a standard deviation of 1.83343 for lecturers and 1.99352 for students. A standard error mean of .14145 for lecturers and .19935 for students. The observed t-value is 3.280 and the probability level of significance for the test is 0.001 ($p<0.05$), t-value of 1.97. This means that the null hypothesis which stated that there is a significant difference in the opinion of business lecturers and students on the helped of ICT facilities in learning business education courses is rejected. This implies that the respondents disagreed that ICT facilities help students in learning business education courses.

### 4.4 Discussion of Major Findings

Based on the analysis of research question one and null hypothesis one in table 4.10 and 4.15 respectively, one can deduced that business education lecturers do not used ICT facilities in teaching business education courses. Item 1 had mean score above 2.50 (cut off mean) which is the level of acceptance while item 2, 3, 4, 5 and 6 had a scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed on business education lecturers ICT skills in teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.

Similarly, table 4.15 showed the result of statistical analysis of hypothesis one, where t-test was used. The result shown a significant difference in the opinion of business education lecturers and students as the t-cal 4.855 was greater than t-crit: 1.97. The implication is that both lecturers and students do not used ICT facilities in teaching and learning business education courses in colleges of education under study. This is also in line with the findings by Okute and Agomuo (2009) carried out on competencies required for the adoption of e-learning in teaching and learning business education courses, their findings revealed that business education lecturers and students do not used ICT facilities in teaching and learning business education courses, their findings also confirms with the findings of the present study which revealed that ICT facilities are not used in teaching and learning business education courses.

The result of the analysis of research question two and the test of null hypothesis two in table 4.11 and 4.16 showed that ICT facilities are not available for teaching business education courses. Item 10 had mean score above 2.50 (cut off mean) which is the level of acceptance, while item 7, 8, 9, 11 and 12 had a scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed on the ICT facilities available for teaching business education courses in colleges of education in North-West geo-political zone, Nigeria.

Similarly, table 4.16 showed the statistical result of hypothesis two that there is a significant difference in the opinion of business education lecturers and students on the availability of ICT facilities for teaching business education courses as the t-cal 4.065 is greater than the t-crit 1.97. This made the second hypothesis to be rejected, it implies ICT facilities are not available for teaching business education courses. This mean that lecturers and students used the traditional method of chalkboard in teaching. This is in line with the findings by Abdulkarim and Fiberesima (2010 carried out on availability of ICT facilities in colleges of education, their findings revealed that ICT facilities are not available for teaching business education courses, their finding confirms with the present finding of the study.

The third objectives of this study was to ascertain the extent of utilization of ICT facilities for teaching business education courses. The result of the analyzed of research question three and test of null hypothesis three in table 4.12 and 4.17 showed that ICT facilities was utilized in teaching business education courses. Item 18 had mean score above 2.50 (cut off mean) which is the level of acceptance while items 13, 14, 15, 16 and 17 had a scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed that

ICT facilities are utilized in teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.

Similarly, table 4.17 showed the statistical result of hypothesis three that there is a significant difference in the opinion of business education lecturers and students on the utilization of ICT facilities for teaching business education courses, as the t-cal 2.942 is greater than the t-crit 1.97. This made the third hypothesis to be rejected. This means that available facilities are utilized beyond the installed capacity. This is contrary to the view of Robert (2005) carried out on the utilization of ICT facilities in Federal College of Education in North-West Nigeria. The finding pointed out that proper utilization of ICT facilities enhance business teacher acquisition knowledge of technical skills required in one or more areas of business education, thus providing enough practical experience in one or all business occupation, the study confirm with the present study.

The fourth research question was on challenges in the use of ICT facilities in teaching business education courses in colleges of education in North-West Nigeria. The challenges include cost of acquiring and installation, poor power supply and networking problem. Items 19, 20, 22, 23 and 24 had mean scores above 2.50 (cut off mean) which is the level of acceptance while item 21 had a score below 2.50 which is the level of rejection. This result shows that majority of the respondents agreed on the challenges in the use of ICT facilities in teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.

The fourth hypothesis tested difference in opinion of business education lecturers and students regarding the challenges in the use of ICT facilities in teaching business education courses. The result of test showed there is no significant difference in the opinion of business education lecturers and students on the challenges in the use of ICT facilities as the observed t-value (0.277) is lower than the critical value (1.97) and the observed probability level of significance (p) is greater than the fixed level of 0.05 ($p>0.05$) the result therefore, necessitated the null hypothesis to be accepted.

The fifth research question was to find out to what extent do available ICT facilities help business education students in learning business education courses in colleges of education in North-West geo-political zone, Nigeria. Item 27 had mean score above 2.50 (cut off mean) which is the level of acceptance while items 25, 26, 28, 29 and 30 had a mean scores below 2.50 which is the level of rejection. This result shows that majority of the respondents disagreed that

the available ICT facilities help business education students in learning business education courses in colleges of education in north-west geo-political zone, Nigeria.

The hypothesis VI tested differences in opinion of business education lecturers and students on available ICT facilities help in learning business education courses in colleges of education in North-West Nigeria: The result of the test showed significant difference between the opinion of respondents because the observed t-value (3.280) is greater than the critical value (1.97) and the observed probability level of significance (p) is lower than the fixed level 0.05 ($p<0.05$) and the null hypothesis rejected.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATION

## 5.1 Summary

This study was to investigate the influence of Information and Communication Technology (ICT) on teaching business education courses in colleges of education in north-west geo-political zone, Nigeria. The research work in chapter one cover background of the study, statement of the problem, five specific objectives, five research questions and five hypotheses. The chapter two reviewed some related literature while chapter three discussed the research design and methodology. Chapter four contained the analysis of research questions and test of hypotheses as well as the summary of discussion of the findings

Based on the study, the researcher came up with the following findings:

1. Business education lecturers are not skilled in the use of ICT facilities in teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.
2. Relevant information and communication technology facilities are not available for teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.
3. ICT facilities are not utilized in teaching business education courses in colleges of education in north-west Nigeria.
4. There are a lot challenges in the use of ICT facilities in teaching business education courses in colleges of education in north-west geo-political zone, Nigeria.
5. Available ICT facilities do not help students in learning business education in college of education in north-west geo-political zone, Nigeria.

## 5.2 Conclusion

On the basis of the findings, the researcher concluded that business education students will not be able to acquire ICT skills that will give them competitive advantage in the world of work since business education lecturers are not skilled in using relevant ICT facilities in teaching business education courses in colleges of education in north-west Geo-political zone, Nigeria.

## 5.3 Recommendations

For solution to the problem as identified from findings and conclusion drawn from the study, the researcher made the following recommendations:

1. Business education lecturers should engage themselves in continuous training in ICT facilities.
2. Colleges of education should fully equip business education department with ICT facilities.
3. Adequate use and management of facilities should be ensured by the heads of department as well as lecturers.
4. Government should provide adequate fund for business education programme to enable it procure necessary relevant ICT facilities.
5. Business students should have easy access to ICT facilities without paying for additional cost.

## 5.4 Limitation of the Study

The limitation of the study was lack of cooperation from the respondents as to filling and returning of the questionnaire. Another limitation was the issue of administrative "bottleneck" in obtaining permission from the college authorities where the study was conducted. However, these limitations were minimized through follow-up by the researcher and the assistants not minding the time consumed and also ensure punctuality of every time given by each respondent.

## 5.5 Suggestion for Further Study

A study of this nature cannot cover every area hence; there is the need for further studies. It is on this basis that the researcher suggested that further research can be conducted as:

a. Extension of similar studies to others zones of the country.
b. Determine the influence of ICT in teaching and learning business education in the Nigeria universities.

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## APPENDIX A

Business Education Section,
Department of Voc/Tech Education,
Faculty of Education
Ahmadu Bello University,
Zaria.
10th May, 2013

Dear Respondents,

**REQUEST TO FILL QUESTIONNAIRE**

The researcher is a post-graduate student of the above department carrying out research work titled: "Influence of ICT in teaching and learning Business Education in Colleges of Education in North-West Nigeria". The attached questionnaire is to solicit your assistance in providing the required information by ticking the items provided accordingly. It is purely an academic exercise for the award of Masters in Business Education. Your responses shall be kept strictly confidential and used for academic purpose only.

Thanks for your cooperation.

Yours faithfully

Rilwan DARAMOLA

## APPENDIX B

## LECTURERS AND STUDENTS QUESTIONNAIRE

**SECTION A**

**PERSONAL DATA**

**INSTRUCTION: Please, kindly tick appropriate box as it applies to you**

1. **Name of Institution: _____**

**2. Gender:**

(a) Male [ ]

(b) Female [ ]

**3. Highest Qualification:**

(a) NCE [ ]

(b) HND [ ]

(c) Bachelor Degree [ ]

(d) Masters Degree [ ]

(e) Ph.D [ ]

**4. Working experience:**

(a) 0 – 5 [ ]

(b) 6 – 10 [ ]

(c) 11 – 15 [ ]

(d) 16 – 20 [ ]

(e) 21 and above [ ]

**5. Area of discipline:**

(a) Accounting Education [ ]

(b) Secretariat Education [ ]

**6. Rank**

| **Academic:** | | **Students:** | |
|---|---|---|---|
| (a) Chief Lecturer | [ ] | NCE III | [ ] |
| (b) Assistant Chief Lecturer | [ ] | | |
| (c) Principal Lecturer | [ ] | | |

(d) Senior Lecturer [ ]

(e) Lecturer I [ ]

(f) Lecturer II [ ]

(g) Lecturer III [ ]

(h) Assistant Lecturer [ ]

**7. Literacy in computer**

(a) Computer literate [ ]

(b) Computer illiterate [ ]

## SECTION B

**INSTRUCTION: Please tick the appropriate response column as it applies to you.**

**SA = Strongly Agreed**

**A = Agreed**

**D = Disagreed**

**SD = Strongly Disagreed**

**ICT Skills needed in Teaching and Learning Business Education Courses**

| S/N | ITEMS | SA | A | D | SD |
|---|---|---|---|---|---|
| 1 | Business Education lecturers and students browsed for materials on internet to improve their teaching and learning. | | | | |
| 2 | Business Education lecturers and students exercise high level of competency in the use of power point in teaching and learning Business Education courses. | | | | |
| 3 | Practical courses in Business Education are taught with overhead projector by lecturers. | | | | |
| 4 | Business Education lecturers and students use Microsoft word in the classroom while teaching and learning. | | | | |
| 5 | Assignments are given to students by lecturers using Microsoft Excel. | | | | |
| 6 | Business Education lecturers use teleconferencing gadgets for lecturers | | | | |
| | **Availability of ICT facilities in Colleges of Education in North – West Nigeria** | | | | |
| 7 | Lecturers and students have access to digital library | | | | |
| 8 | Department have ICT laboratory | | | | |
| 9 | The department have enough ICT support personnel | | | | |
| 10 | Lecturers and students do not have personal computer | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 11 | Lecturers and students do not have access to multimedia projector | | | | |
| 12 | Lecturers and students have access to data projector | | | | |
| | **ICT facilities utilized for teaching and learning Business Education courses** | | | | |
| 13 | Local Area Network (LAN) | | | | |
| 14 | Wide Area Network (WAN) | | | | |
| 15 | Intranet | | | | |
| 16 | Extranet | | | | |
| 17 | E-journals | | | | |
| 18 | Video tape | | | | |
| | **Challenges in the use of ICT facilities** | | | | |
| 19 | High cost of procurement and installation of ICT facilities | | | | |
| 20 | Shortage of skilled manpower | | | | |
| 21 | Lack of specialize ICT learning center | | | | |
| 22 | Poor maintenance of existing telecommunication facilities | | | | |
| 23 | High cost of remission of information in Nigeria | | | | |
| 24 | Poor power supply | | | | |
| | **Extent to which ICT has helped students in learning Business Education Courses** | | | | |
| 25 | The introduction of ICT has motivated students to learn Business Education courses | | | | |
| 26 | ICT has made the learning of Business Education courses easier for students | | | | |
| 27 | With ICT, students need little assistance from lecturers in learning Business Education Courses | | | | |
| 28 | Learning with ICT has improved academic performance of the students | | | | |
| 29 | Learning with ICT has created awareness in students | | | | |
| 30 | With ICT, Business Education Courses is more interesting to students | | | | |