RELATIONSHIP BETWEEN TEACHERS' FACTORS AND USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN TEACHING BUSINESS EDUCATION COURSES IN NIGERIAN UNIVERSITIES

BY

OYEYIOLA, Amos Olatoyosi

BUSINESS EDUCATION SECTION
DEPARTMENT OF VOCATIONAL & TECHNICAL EDUCATION
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY, ZARIA

JANUARY, 2015

RELATIONSHIP BETWEEN TEACHERS' FACTORS AND USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN TEACHING BUSINESS EDUCATION COURSES IN NIGERIAN UNIVERSITIES

BY

OYEYIOLA, Amos Olatoyosi
B. Ed. (1986)
M Ed (1992) ABU
(Ph.D/EDUC/12914/2007-2008)

Department of Vocational and Technical Education
Ahmadu Bello University, Zaria

Ph.D DESSERTATION SUBMITTED TO
BUSINESS EDUCATION SECTION
DEPARTMENT OF VOCATIONAL & TECHNICAL EDUCATION
FACULTY OF EDUCATION
AHMADU BELLO UNIVERSITY, ZARIA

JANUARY, 2015

DECLARATION

I hereby declared that this dissertation entitled "Relationship Between Teachers' Factors and Information and Communication Technology Usage in Teaching Business Education Courses in Nigerian Universities has been written by me. It is a record of my own research work and it has not been presented in any previous work for a higher degree. All sources of information and quotations are fully acknowledged by means of references.

---------- **----------**

OYEYIOLA, Amos Olatoyosi **Date**

CERTIFICATION

This dissertation titled **"Relationship Between Teachers' Factors and usage of Information and Communication Technology in Teaching Business Education Courses in Nigeria Universities"** by Oyeyiola, Amos Olatoyosi meets the requirements of the regulations governing the award of the degree of Doctor of Philosophy (Ph.D) in Business Education of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

…….. ……
Prof. A. A. Udoh Date
Chairman, Supervisory Committee

…… ……
Dr. D. O. Oni Date
Member, Supervisory Committee

…….. ……
Prof D. E. Dikki Date
Member, Supervisory Committee

…… ……
Prof A. A. Udoh Date
Head, Department of Vocational and Technical Education

…… ……
Prof A. Z. Hassan Date
Dean, School of Postgraduate Studies

DEDICATION

This research work is dedicated to the glory of God the Father, the Son and the Holy Spirit for keeping and endowing me with sustaining grace and strength for successful completion.

TABLE OF CONTENTS

Cover Page - - - - - - - -- - - i

Title Page - - - - - - - - - - ii

Declaration - - - - - - - -- - - iii

Certification - - - - - - - - - - iv

Dedication - - - - - - - - - - v

Table of Content - - - - - - - - - - vi

List of Tables - - - - - - - - - - ix

List of Appendices - - - - - - - - - xi

Definition of Terms - - - - - - - - - xii

Abbreviations - - - - - - - - - - xiii

List of Figure - - - -- - - - - - xiv

Acknowledgement - - - - - - - - - xvi

Abstract - - - - - - - - - - xvii

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study - - - - - - - 1

1.2 Statement of the Problem - - - - - - - - - 4

1.3 Objectives of the Study - - - - - - - - 7

1.4 Research Questions - - - - - - - - - 8

1.5 Null Research Hypotheses - - - - - - - - - 9

1.6 Significance of the Study - - - - - - - - 9

1.7 Basic Assumptions of the Study - - - - - - 10

1.8 Delimitation of the Study - -- - - - - - 11

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Theoretical Framework - - - - - - - 12

2.2 Conceptual Framework - - - - - - - 13

2.3 Business Education and National Economic Empowerment in Perspectives - 15

2.4 Information & Communication Technology (ICT) in Education - - - 25

2.5 Teachers' ICT Skills/Competence - - - - - - 42

2.6 Education Policy and ICT Initiatives in Nigeria - - - - 47

2.7 Empirical Studies - - - - - - - - 58

2.8 Summary of the Reviewed Literature - - -- - - 69

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design - - - - - - - - 73

3.2 Population for the Study - - - - - - - 74

3.3 Sample Size and Sampling Procedure - - - - - 76

3.4 Instrument for Data Collection - - -- - - 79

3.4.1 Validity of the Instrument - - - - - - - 79

3.4.2 Pilot Study - - - -- - - - - - 80

3.4.3 Reliability of the Instrument - - - - - - - 80

3.5 Procedure for Data Collection - - - - - - 81

3.6 Procedure for Data Analysis - - - - - - 82

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

4.1.1 Analysis of Demographic Variables of Respondents - - - 83

4.1.2 Analysis of Reponses to Research Questions - -- - - 84

	Research Question One	84
	Research Question Two	86
	Research Question Three	88
	Research Question Four	90
	Research Question Five	91
	Research Question Six	93
4.1.3	Test of Null Hypotheses	95
	Null Hypothesis One	95
	Null Hypothesis Two	96
	Null Hypothesis Three	96
	Null Hypothesis Four	97
	Null of Hypothesis Five	98
	Null Hypothesis Six	98
4.3	Summary of Major Findings	99
4.5	Discussion of Findings	99

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1	Summary	105
5.2	Conclusion	106
5.3	Recommendations	109
5.4	Limitation of the Study	110
5.5	Suggestions for Further Study	111
REFERENCES		112
APPENDICES		133

LIST OF TABLES Page

3.1	Population for the Study - - - - - - -	75
3.2	Sample Size for the Study - - - - - - -	78
4.1	Percentage (%) Distribution of Demographic Profiles of Respondents -	83
4.2	Descriptive Statistics for Research Question One - - - -	85
4.3	Descriptive Statistics for Research Question Two - - - -	87
4.4	Descriptive Statistics for Research Question Three - - - -	89
4.5	Descriptive Statistics for Research Question Four - - -	90
4.6	Descriptive Statistics for Research Question Five - - - -	92
4.7	Descriptive Statistics for Research Question Six - - - -	94
4.8	Test of Null Hypothesis One - - - - - - -	95
4.9	Test of Null Hypothesis Two - - - - - - -	96
4.10	Test of Null Hypothesis Three - - - - - -	96
4.11	Test of Null Hypothesis Four - - - - - - -	97
4.12	Test of Null Hypothesis Five - - - - - - -	98
4.13	Test of Null Hypothesis Six - - - - - - -	98

List of Appendices

Determining of Sample Size - - - - - - - 133

Letter of Introduction - - - - - - - 134

Questionnaire - - - - - - - - - 135

Summary of Mean Scores of Responses to Questionnaire Instrument - 140

DEFINITION OF TERMS

Teachers' factors: These are the characteristics of lecturers in respect to their ICT skills, ICT exposure, working experience, gender, Attitude to ICT and accessibility to ICT tools.

ABBREVIATIONS

S/No.	Abbreviation	Meaning
1.	NPE	National Policy on Education
2.	FRN	Federal Republic of Nigeria
3.	NPE	National Policy on Education
4.	NICTP	National Information and Communication Technology Policy
5.	NPICTE	National Policy on Information and Communication Technology in Education
6.	ICT	Information and Communication Technology
7.	NERDC	Nigerian Educational Research and Development Council
8.	ABU	Ahmadu Bello University, Zaria
9.	MAUT	Moddibo Adama University of Technology, Yola
10.	EMS	Expedited Mail Service

LIST OF FIGURES **Page**

2.1 Relationship of teacher-competence areas to process of instructional decision-making 41

ACKNOWLEDGEMENT

This researcher's academic progress in life has been greatly encouraged by people, too numerous to be acknowledged here. The Supervisory Team comprising Prof A. A. Udoh, Dr D. O. Oni, Prof. D. E. Dikki, and Prof. M. M. Aliyu (on retirement) are hereby acknowledged for their immense contributions by way of thorough scrutiny, encouragement, understanding, and patience at every stage of this research. Throughout the duration of this research they had shown sustained interest and have offered guidance and constructive criticism where necessary. Their contributions and support at the different stages of is well appreciated.

The researcher's profound gratitude also goes to Prof J. S. Aliyu and Dr. Sani Ibrahim whose contributions not only transformed the entire work but provided insights in understanding the dynamics that interplay in the research study. His gratitude is also expressed to other individual personalities in the Department of Vocational and Technical Education, and Department of Education: which include Prof B Ndomi, Prof (Mrs) A. Z Mohammed, Prof (Mrs) E. Ike, Prof (Mrs). T. O. Ojo, Prof. (Mrs) P. E. Onuigbo, Dr. Tunde Adeshina, Dr (Mrs) S. L. Ajayi, Dr. (Mrs) E. E. Adamu, Dr. I. M. Haruna, Dr. B. I. Okeh, Dr. (Mrs) M Ahmed Abubakar, Dr. (Mrs.) R. T. Umar, Dr. Adamu Ibrahim, Dr. Ser V Amoo, and Dr S A Aluwong (late). Dr.Mamman Musa and Dr. Ezra Gbaje are the Internal Examiners and others too numerous to be mentioned for their individual and collective contributions to the successful completion of this dissertation.

He would also cherish for a long time the warmness of Prof Adisa Bello and Prof J. D. Enemali, (both of Abubakar Tafawa Balewa University, Bauchi); Bishop (Dr) Isaac Crown (Oyeyiola) and Engr (Pastor) Stephen Abubakar both of Omega Generation Ministry, Peculiar Peoples' Church Bauchi) for facilitating the face-to-face distribution and

collection of the research instruments at Bauchi and Yola respectively. The team of research assistants made up of Messrs Olanrewaju Olaleye, Benita Adigwe, Emmanuel Jide Olawoyin, Garba Ahmed, and Olusegun Chuks Hallison who all travelled to universities in the different geo-political zones assigned to each of them for the administration of the instrument. Rev. I G. Gbadero (First Baptist Church, Zaria) deserved recognition for providing the spiritual tunic needed for accomplishing the research work.

The cooperation of Engr. A. A. Lugard (Rector, Federal Polytechnic Kaura Namoda), all the HOD's and lecturers from the seventeen universities that participated in supplying the data for this research work are greatly appreciated. The researcher's dear wife Mrs Rachael Bolatito Oyeyiola (wife), and their children: Joseph Oluwafemi, Joshua Adeyemi, and Timothy Temitope, and Madam Maria Oyinlola Oyeyiola (Mother) who have all waited patiently for him to complete this programme deserved special appreciation and warmness. Likewise, his dear father Late Pa Emmanuel Folasayo Anifada Oyeyiola deserved post-humous recognition as the best father and career adviser/counsellor, particularly for the choice of business education as a career and teaching as a profession. Mr. Sam Tope Meyanbe (Skye Bank, Abuja), Mr Peter Tayo Sanusi, and a host of others, had also served as sources of inspiration to me in the course of this research work.

The researcher owes special gratitude to God. To Him belongs all the glory, for His grace that has strengthened and sustained him right from the beginning to the final stage of this work, and without which he could not have reached this height.

ABSTRACT

The research work investigated the relationship between teachers' factors and usage of information and communication technology in teaching business education courses in Nigerian universities. Descriptive survey design was employed in the study. The population for the study was one hundred and sixty three (163) lecturers from seventeen (17) universities offering business education in Nigeria. The purposive technique was adapted to select one hundred and fourty (140) lecturers as sample for the study. Four rating scale structured questionnaire was employed in data collection. The researcher employed face to face method in distributing and retrieving of the questionnaire. One hundred and twenty seven (127) copies of questionnaire representing 91% were properly filled and coded into Statistical Package for Social Science (SPSS) for data analysis and mean scores and for answering research questions at index score of at least 2.5 for agreed. The SPSS was used to run Pearson Product Moment Correlation (PPMC) for the test of the six null hypotheses at significance level of 0.05. The study revealed among others that, availability and accessibility of ICT tools has significant effect on ICT usage in teaching business education courses among universities lecturers in Nigeria. It was recommended among others that universities management should make a commitment by supplying adequate ICT gadgets that will enable lecturers have continuous access to ICTs so that they can effectively integrate its usage for their teaching and research work

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The 21st Century education integrates technique encouraging students in ways not previously possible, creating new learning and teaching possibilities, enhancing achievements, enhancing child centre education, and extending global interactions by way of access to educational information on a larger scale than hitherto known before. No doubt, Information and Communication Technology in education has been influencing changes in techniques of teaching and learning and business education programme in Nigerian universities should not be an exception because of its focus on acquisition of employable skills (Lucas and Milford, 2009; Eghonghon and Ndama, 2012) for self-reliance and productive living. According to National Policy on Education, (NPE), (Federal Republic of Nigeria, 2004), business education is an aspect of the total education programme offered at the secondary and tertiary education levels in Nigeria to prepare students for careers in business. Thus, its aim is providing adequate general education, career specific and technical education needs at specific levels and in addition prepare youths for work (Lambrecht 2012; Udoye and Ndum, 2013; Okolocha and Onyeneke, 2013). In essence, it is that aspect of education that develops occupational skills that are capable of meeting the changing societal needs for self reliance as well as for socio-economic development.

Business education or studies, as reflected in the National Policy on Eeducation (Federal Republic of Nigeria, (2004), has been geared towards achieving the twin goal of

useful living within the society, and preparation for higher education. Business education provides a life-long education. In this context, business education at tertiary educational institutions of learning in Nigeria is expected to ensure that recipients acquire knowledge and skills that enable them to increase their productivity as individuals, for self-fulfillment and optimum service to humanity. In furtherance of the importance of education as an instrument for national development, educational agencies have initiated processes that continue to improve on the educational philosophy and methodology of content delivery (Obioma, Nwagbara, Nneji et al 2009), to match the ideals and challenges of economic and social structure of the knowledge-driven age.

To meet the demand of occupational skills, the national educational goals, which derived from the philosophy of Nigerian education, task the universities to key-in and ensure that learners' acquire appropriate mentally, physically skills, abilities and competencies using modern educational techniques which, should be continuously improved upon for educational delivery. The emphasis on use of information and communication tools for speedy transformation of teaching and learning and administration of education in relation to National Information and Communication Technology Policy (NICTP, 2012). National Policy on Information and Communication Technology in Education (NPICTE, 2010) is a novel idea for the 21st century. The policy emphasized the importance of empowering youths with IT skills and preparing them for global competitiveness.

According to Onu (2012) ICT are diverse technological tools and resources used to communicate, and to create, disseminate, store and manage information. These technologies include computer, the internet, broadcasting technologies (radio and television). In essence, Information and Communication Technology is a term used to describe the items or

equipment (hardware) and computer programmes (software) that allow users to effectively access, retrieve, store, organize, manipulate and present information of different kinds and for different purposes by electronic means. Thus ICT is a product (globally use by organizations), process and tools for training and impartation of knowledge and skills in the education industry.

The current assessment of ICT use in our educational institutions succinctly posited by NPICTE (2010) is that ”teaching/learning process has not embraced current educational paradigm which emphasizes on student-centred instruction with teacher as the facilitator rather than teacher as the source of knowledge.” Therefore, the intention of the policy that teachers and trainer are transformed through using technology from authority-expert to facilitator guiding the student/learners to use technology is not been presently achieved. This suggests that teachers are either lacking in ICT knowledge and skills, or the universities have no ICT infrastructure to implement the goal of ICT in education.

Teachers are expected to be professional in orientation, and possession of ICT skills to effectively deliver as role model in modern society. There is general concern among the academics that the current state of computer laboratory in most department running business education in the universities is such that teachers' are found not versatile in the use information and communication technology tools to teach and inculcate employable skills for the young generation of learners and pre-service teachers. There is the palpable fear among business educators that business education is lagging behind in preparing youths for the challenges of the 21st century information society and cross-border employable skills. This is more so that many of the departments are lacking in internet infrastructure, while lecturer's attitudes and dispositions towards the use of modern technology are not

encouraging enough; besides, institutional leaderships are not forthcoming with investment outlays need for ICT infrastructure and consequently, successful integration of ICT in their institutions.

Further evidence in relations to business education in the universities suggested non-availability/accessibility of ICT tools to most lecturers. It is important that teaching staff have access to ICTs so that they can derive the professional benefits offered by ICT application. From the forgoing, there is need to find out the current state of teachers' ICT skills and whether teachers are implementing the use of ICT tool in teaching business education in Nigerian universities for the fact that as catalyst to integrating the innovation (technology mediated instruction) in the universities, they are required to possess the competencies that they themselves are imparting to learners.

The aim of this research work is to gather relevant data that would provide insights into business education teachers' factors on classroom learning supported by ICT, in Nigerian universities.

1.2 Statement of the Problem

The government is committed to supporting excellence in teaching and learning in higher institutions in Nigeria. One of the government's commitments to continuous improvement of teaching and learning includes a focus on the pedagogical role initiative on the use of modern technology to encourage and increase the effectiveness of teaching, learning and research work. With the development of ICT in the field of education, many countries including Nigeria invested a large amount of money to integrate technology in the field of education by providing teachers' with the good opportunities to develop their skills, knowledge that speedy transformation of teaching, learning and administration of education

(Al-Zaidiyeen, et.al 2008). Peck and Domcott (1994) outlined ten reasons that technologies in education have help:- (1) teachers to individualize instruction, which allows students to learn and develop at their own pace in a non-threatening environment; (2) students to be proficient at accessing, evaluating and communicating information; (3) in increasing the quantity and quality of students' thinking and writing through the use of word processors; (4) to develop students' critical thinking and allowing them to organize, analyze, interpret, develop, and evaluate their own work; (5) to encourage students' artistic expression; (6) students to access resources outside the school; (7) to bring new and exciting learning experiences to students; (8) students to feel comfortable using computer, since they will become an increasingly important part of students' world; (9) creates opportunities for students to do meaningful work, and; (10) increase school productivity and efficiency.

Achieving a meaningful use of computer technology in the field of education is affected by teachers' attitudes towards ICT in teaching and learning process. Achieving the use of modern technology in class is becoming a dream as most of university lecturers have negative computer attitudes, were less skilled in computer use and were therefore less likely to accept and adapt to technology than those with positive attitudes. Kluever, Law, Hoffman, Green & Swearinges (1994) reported that, attitude affects the usage frequency of technology, Albirini (2006) and Baylor & Ritchie (2002) reported that the success of technology use in the educational settings is largely affected by teachers attitudes toward technology use. Thus, their attitudes toward computer can play an important role in the acceptance and actual use of computers.

The key to successful integration of ICT into education is teaching directly relates to teachers knowledge and understanding of the tools. Based on the proficiency of lecturers in

this area, educational institutions still have a long way to go before being able to take full advantage of the opportunities provided by ICT, as research studies showed that in many cases the use of ICT is not that much as many teachers are still not fully ICT literate and do not use it in their teaching and learning activities (Ya'acob et. al., 2005; So and Swatman, 2006; Adamu and Jibril, 2010). This is in line with Barak (2006), who reveals that while teaching staff make use of ICT, they are cautious about integrating advanced ICT. Considering that these challenges increases when trying to convince lecturers who are not familiar with the technology during their early life stages to incorporate ICT into their traditionally face-to-face teaching prompted the researcher to investigate the relationship between teachers' factors and Information and Communication Technology on usage in teaching business education courses in Nigerian Universities.

Although ICTs are the tools for change and innovation and its educational value was confirmed by scholars such as (Williams et al 2000), however one of the most critical issues in developing and maximizing the benefits of ICT in teaching and learning work is its availability and accessibility among universities lecturers. In order to make effective users of ICT as models for teaching, staff must have access to it in the schools and classrooms. Literature has a number of research studies that shows that ICT gadgets are grossly inadequate in most of tertiary institutions in Nigeria (Adamu and Musa 2012). In the same context, Kumar et al. (2008) discovered that, among other factors that affects the use of ICT in teaching and learning is availability and accessibility. This result is supported by a more recent research of Sang et al. (2009).

Thus, despite the expansion of ICT in tertiary institutions in Nigeria, existing research evidence and keen observation by concerned lecturers including the researcher on

the level of ICT in these institutions appear relatively low. Indeed while it can be said that some lecturers in these institutions are very sound in the use of the technology, majority of others appear yet to be really slows on their use particularly when it comes to applying them for instruction in the classroom. This only applies system-wide. However in those dedicated faculties of technologies, reasonable abilities in their fields can be observed among their teachers. On the whole achieving meaningful use of computer system-wide in vocational education, and in particular business education by most business educators still seem to depict attitude of little concern; particularly during teaching of relevant courses.

At this point it can be observed that successful integrating ICT applications in teaching directly relates to the teachers' knowledge and understanding of the relevant ICT tools for instruction. However, based on the researcher's doubts about the level of business educators' competence in the applications and competencies, he is therefore interested in knowing with proven evidence, the teachers' knowledge and related competences needed for effective teaching of business education courses in Nigerian universities.

1.3 Objectives of the Study

Based on the above problem or concern, the objective of this study is meant to establish the business educators' factors (such as knowledge in computer, competences and skills) influences usage of ICT in teaching business education courses in Nigerian universities. The specific objectives are to:

1. determine the relationship between lecturers' possession of ICT skills and its usage in teaching business education courses in Nigerian Universities;
2. determine the relationship between lecturers' exposure to ICT and its usage in teaching business education courses in Nigerian universities;

3. determine relationship between lecturers' accessibility to ICT and its usage in teaching business education courses in Nigerian universities;
4. determine the relationship between lecturers' attitude and motivation towards ICT and its usage in teaching business education courses in Nigerian universities;
5. determine relationship between lecturers' working experience and usage of ICT for teaching business education courses in Nigerian universities;
6. determine the relationship between male and female business education teachers' usage of ICT in teaching business education courses in Nigerian universities.

1.4 Research Questions

In order to effectively achieve the specific objectives enumerated above, the following research questions were answered:

1. What is the relationship between lecturers' ICT skills and its usage in teaching business education courses in Nigerian Universities?
2. What is the relationship between lecturers' exposure to ICT and its usage in teaching business education courses in Nigerian Universities?
3. What is the relationship between lecturers' accessibility to ICT and its usage in teaching business education courses in Nigerian universities?
4. What is the relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian Universities?
5. What is the relationship between lecturers' working experience and the usage of ICT for teaching business education courses in Nigerian Universities?
6. What is the relationship between male and female business education teachers' usage of ICT in teaching business education courses in Nigerian Universities?

1.5 Null Research Hypotheses

The research tested the following null hypotheses with appropriate statistics.

HO_1 There is no significant statistical relationship between lecturers' ICT skills and its usage in teaching business education courses in Nigerian universities.

HO_2 There is no significant statistical relationship between lecturers' exposure to ICT and its usage in teaching business education courses in Nigerian universities.

HO_3 There is no significant statistical relationship between lecturers' accessibility to ICT and its usage in teaching business education courses in Nigerian universities.

HO_4 There is no significant statistical relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian universities.

HO_5 There is no significant statistical relationship between lecturers' working experience and the usage of ICT for teaching business education courses in Nigerian universities.

HO_6 There is no significant statistical relationship between male and female business education teachers' on their ICT skills and their use in teaching business education courses in Nigerian universities.

1.6 Significance of the Study

The findings of this study will be of great benefit to business education teachers in general and pre-service business education students in particular as the outcome will add to existing literature on ways of improving the quality of undergraduate teacher preparations for the job markets in Nigeria. Also it will be of benefit to the training institutions because it will help teachers to explore how ICT might support them in accomplishing the university teaching mission and their own duties in putting the mission into practice. This is because

the additional missions that education is being asked to fulfill, that of innovation, civic and national development, and the training of appropriate workforce to meet the challenges of the 21st century (OECD, 2008).

The outcome of the study will provide answers to relevant issues bordering on ICT usage and teaching methodology for student centred teaching-learning activities in our universities. Furthermore, employers of labour will also benefit in terms of quality manpower production into the job market in the industry, the academics, and particularly the public sector of the economy requiring efficient and effective public service delivery by Ministries, Departments and Government Agencies (MDAs) in Nigeria. The society in general will benefit in terms of production of vibrant youths that are self-reliant and productive in orientation and training.

1.7 Basic Assumptions of the Study

The basic assumptions that guided this study were that:

1. ICT infrastructures are available in Nigerian universities and the institutions are encouraging its usage for teaching business education courses;
2. the teachers are not lacking in ICT competence, and know how the technology works in teaching business education courses in Nigerian universities.
3. the use of ICT for teaching business education courses in Nigerian universities transcend gender factor.;
4. Faculty members make use of ICT most as a means of communication and for searching for information about courses they teach through the Internet, and the least, for publishing their lecture notes

1.8 Delimitation of the study

This study was delimited to all the 11 Federal and 6 State universities that were running Business Education teacher programme as at 2012/2013 academic session and whose programmes as published in JAMB Brochure for (2012/2013) Guidelines for Admissions into Nigerian Universities. Specifically, the study was further lecturers drawn from the Business Education Section of the Department of the Vocational and Technical Education in the Faculty of Education of the respective institutions that were covered by the study. This choice of teachers from the section of the Department was based on the

assumption of the researcher that they had better knowledge on how they applied the skills of ICT in teaching the targeted students.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In this chapter, the researcher reviewed related literature on relationship between perception of business education teachers' and usage of information and communication technology (ICT) in tertiary education teacher preparation programme in Nigeria. This review has been done under following sub-headings:

2.1 Theoretical Framework

2.2 Conceptual Framework

2.3 Business Education and National Economic Empowerment in Perspective

2.4 Teacher Factors and Information and Communication Technology (ICT) Use in Education

2.5 ICT Knowledge and Skills (Competencies) for Teachers

2.6 Challenges of ICT in Education in Nigeria

2.7 Empirical Studies

2.8 Summary of the Reviewed Literature

2.1 Theoretical Framework

This research work is built on educational technology teaching theory (ETTT) of DeCeccom (1964).The theory argues that technology plays a key role in the development of cognitive function and higher order thinking results in teaching and learning. The theory assumed that technology is designed to produce change in teaching and learning. The theory asserts that technology has changed the educational sector. The theory sthat the use of technology is based on psychological processes devised on aptitude, abilities, skills and

interests of teachers. ETTT describes how these variables help teachers on the use of modern technology in the classroom (Oniye and Okoro, 2007).

The advocates of the theory such as Owolabi (2008), Mangal and Mangal (2009), Anandarum (2011) and Udoye & Ndum (2013) establish that the use of modern technology in education produces changes in teachers' skills, critical thinking and research work. Researchers from different parst of the world also acknowledge that the use of modern technology is very important in education. Contemporary Nigerian researchers that reflect on this trend include Akpochafo & Filho (2006), Badau & Sakiyo (2013). They have reported that teacher skills, attitude and understanding of modern technology is very instrumental in teaching profession. They stress that, the use of modern technology such as ICTs promote efficiency of delivery of educational services by supplementing conventional delivery mechanisms that promote revolutionary changes in the educational paradigm. Scholars such as Adeyinka (20139, Alade (2011), Chukwurah (2011), Okebukola (2010), and Ekpenyong and Nwabuisi (2003), opined that use ICTs in teaching have to be enriched in the areas of general teaching method and learning interactions (curriculum delivery) in the university in relation to producing relevant and globally competitive graduates. Considering the importance of technology on education, the National Policy on Education (2004) stressed upon employing educational technology to improve the quality of education. The Policy considers the use of ICT as catalyst that improves access, quality and efficiency in the school system.

2.2 Conceptual Framework

A conceptual framework in this study that represents factors of importance in understanding the business education teachers' factors in usage of ICT has been developed

following a review of existing literature and current research on teachers' factors and ICT use in education. Key stakeholders (senior academic colleagues), recognized experts in educational research and ICT experts were consulted towards investigating business education teachers' factors and ICT use in education.

An attitude or disposition is directed towards an object and a goal. Nevertheless, the strength of a teacher's attitude is his interest. An interest is thus a power, the force an attitude has, and which manifest in a teacher's behaviour. The conceptual framework identified for this research work revolves around the institution, and the teachers' information and communication characteristics (for example lecturers' competence in ICT skills, exposure ICTs, accessibility to ICTs, attitude to ICTs, working experience with ICTs and gender (Afshari, et al, 2009). Since an institution provides the framework upon which ICT infrastructure and human capacity building are anchored, teachers' factors in ICT use can be studied from variables of institutional structure (such as availability of ICT resources and enabling infrastructures).

2.2.1 ICT and Institutional Framework

The institutions are assumed to have ICT structures and resources (platform, hardware, and software). Furthermore, that availability and adequacy of the resources are ensured by the management in each of the universities covered by this research work. According to Adodo (2012), adoption of ICTs in schools could be affected by a number of factors that can be grouped as contextual factors (school) and psycho-sociological factors (teachers'). Afshari, et al (2009) had earlier argued that using up-to-date hardware and software resources is a key feature to diffusion of technology and that this is a school factor (contextual) since schools are expected to be equipped with different kinds of technological

infrastructure and electronic resources to enhance pedagogical delivery (Anderson, 2012, and Babalola, 2012). Therefore, school culture affects whether technology is received with optimism or pessimisms. It is the responsibility of the school to avoid a mismatch of values between school culture and technology adoption (Albirini, 2006).

2.2.2 Business Education Teachers' factors in Use of ICT

The business teachers are professional teachers (Adeniji, 2002) and catalyst in the education delivery in secondary and tertiary institutions in Nigeria. The teachers' ICT related factors (such as lecturers' ICT skills, lecturers' exposure to ICT, lecturers' accessibility to ICT, lecturers' attitude to ICT, lecturers working experiences of ICT experience, and gender) are critical (Pelgrum and Voogt, 2009, Hennessy, Harrison, and Wamako; and Ololube, 2006c) in understanding whether there are significant relationships between teacher related factors and usage of ICT for teaching business education in Nigerian universities. Based on the fact that teachers are aware of Nigeria's educational policy on ICT and the necessity for its use in classroom (Adewale and Dara, 2012) it is important to understand the teacher's evaluation of the accessibility, and adequacy of ICT resources in their institutions because it will help in getting a better understanding of their school environment and the extent of ICT usage in teaching.

2.3 Business Education and National Economic Empowerment in Perspective

The Federal Government of Nigeria has since 1999 been initiating reforms meant to re-position the economy of the nation and accelerate national economic development. Two of the major reforms are on the economy and education sectors. Whereas the National Economic Empowerment and Development Strategy (NEEDS), and the State Economic Empowerment and Development Strategy (SEEDS) are meant to cater for the economic

development, the introduction of basic education programme that ensures children has 9 years (in which 6 years of primary school, and 3 years of junior secondary school education) of schooling was meant to reposition the primary and post-primary school system for quality assurance, access, and equity NPC (2004) stated that "The goals of wealth creation, employment generation, poverty reduction, and value orientation can be effectively pursued, attained, and sustained only through an efficient, relevant and functional education system. Likewise, the higher education reform bill ensures that tertiary educational institutions are equipped to meet global minimum standard for cross border employment. Thus education remains the catalyst for economic emancipation and national development in general. The Nigerian government has adopted education as an instrument for national development (NPE, 2004).

2.3.1 Education and National Development in Perspective

One of the major challenges facing all nations of the world in the 21st century is that of developing human and material resources to bring about improvement on the standard of living of people as well as to gain global competitiveness in the management and utilization of resources. A literate society tends to be very productive in contrast to society with preponderance of illiterate citizens. Thus, education is intrinsically linked to development. According to United Nations Educational, Scientific and Cultural Organization (UNESCO) (2010), Development is a purposeful change in a society that contributes to social and economic well being and advancement of its people ..." Therefore, development processes is meant enlarges peoples' choices, that primarily reflect a desire to lead a long and healthy life, acquire basic knowledge, and have access to resources essential for decent standard of living. Development is dynamic in nature because its processes empowers people, and

promotes important changes in their lives. In which case, development cannot be discussed while isolating the role of higher education in general and the university human capacity building in particular.

The NPE (2004) in Section 8.58 defined tertiary education as "… the education given after secondary education in universities, colleges of education, polytechnics, and monotechnics including those institutions offering correspondence courses." Saint, Harnett, and Strassner (2004) quoting (World Bank, 1999) aptly stated "Education in general and higher education in particular, are fundamental to the construction of a knowledge economy and society in all nations". Today's world could be described as one in which rapid changes occur in virtually all dimensions of life. Therefore, education is vital to human development, productive, peaceful and satisfying lives. In this respect, UNESCO (2008) opine:

> All nations are faced with the challenge of improving their human resources to respond to national development needs, global competition, and to rapidly changing world of work, technology and economy. High quality initial teacher education is needed to improve the technical and vocational education and training (TVET), as well as further training of teachers who are already in service.

The role of education as an instrument for promoting the socio-economic, political and cultural development of a nation can therefore not be over-emphasised. FME (2003) opines "… in the present technological age, a fundamental function of formal education is to produce knowledge-based work-force for national development. The government therefore envisaged to establish three National Higher Education Pedagogue (NHEP) Centres to enhance teaching skills." Since the purpose of education is learning to know, learning to do, learning to be, and learning to live together (Adenipekun, 2010), learning to know and

learning to do is anchored on Section 8.58(d) which placed emphasis on acquiring both physical and mental skills needed by individuals to be self-reliant and useful members of the society. Business education has been designed to rebrand Nigeria through educational process that developing skills for self reliance and productive living (Bolarinwa, 2010), and thereby ensure a better future.

The discipline is greatly providing supplementary support for national developments in the areas such as accounting, marketing, office technology and management (secretaryship), administration and finance, as well as computer studies. The role of tertiary education in the development endeavours was succinctly captured in items (a) and (d) of the NPE (2004) stated the goal of tertiary education among others shall be to:

a) contribute to national development through high level relevant manpower training;
d) acquisition of both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;

While acknowledging the importance of tertiary level of education in a country's developmental pursuit especially as driver of growth, Babatunde and Adefabi, 2005) and Materu (2007) and asserted tertiary education is central to economic and political development and vital to competitiveness in an increasingly globalizing society through impartation of general attitudes and discipline and specific skills necessary for a variety of work places. Thus, tertiary education plays a critical capacity building and professional training role in support of all the Millennium Development Goals (MDGs) through improving health reduction in fertility and possibly by contributing to political stability. The need to build high level human capacity for national development necessitated not only the establishment of special universities (such as those of science and technology) but also

department of vocational and technical education in faculty of education of some of the existing universities and consequently the programme of business teacher education.

2.3.2 Technical and Vocational Business Education Programme in the University

Technical and Vocational Education (TVE) has been recognized as a potential type of education that is capable of accelerating developments in Nigeria. This is because it is the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors and social life. Udoh (2011) however, succinctly opined "It is an education that is designed to develop skills, abilities, attitudes and work habits with the aim of inculcating practical skills for entrepreneurial and or self-reliance and productive living." The Vocational Technical Education (VTE) academic programmes consist of components such as Agricultural Education, Business Education, Computer Education, Home Economics Education, Industrial Technical Education etc. The priorities of VTE programme is skill acquisition (University of Nigeria, 2011) which suggests that VTE programme are intended to prepare people for gainful employment. To meet the mandate requires that VTE programme content and delivery are kept up to date with business and industry standard.

The NPE (2004) prescribed that the goals of TVE shall be to:

(a) provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels;

(b) provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development;

(c) give training and impart the necessary skills to individual who shall be self-reliant economically.

Alkali (2005), Uwaifor and Uwaifor (2010) opined TVE trains students to acquire practical skills and some scientific knowledge aimed at assisting them to become self-reliant (self employed) and ensures their economic sustainability. Business education as an aspect of Vocational Technical/Teacher Education (VTE) programmes teaches knowledge, attitudes and skills. It is an education that enables man to achieve social competence and optimum development in addition to coping with, and deriving satisfaction from living in the world (Udoye and Ndum, 2013; Umar, 2012; Ohiwerei and Azih, 2010). According to Ekpenyong and Nwabuisi (2003), business education did not come about in Nigeria through government, but through the individual initiative of a few Nigerian entrepreneurs who were quick to realize its importance to their business success but also to national economic growth and development. Osuala (2004), and Chukwurah (2013) said two reports, one addressing the issue of a dearth of trained manpower (Ashby Commission, 1960) and the other calling for urgent need for increase in the output of trained manpower in business education personnel (Dike Commission, 1962) to cope with the rapidly expanding economic activities of the country radically altered the status of business education programme in Nigeria

Consequently, business education can be seen as the development of person's head, heart and hands for his self fulfillment and optimum services to humanity. Since the teaching of practical skills would therefore, always require the support of skilled people and a range of tools or equipment, programmes in business teacher education are being taught with the aid of technology such as electronic machines and the computer. Nanassy (1977) in Ogunleye (2003), share the view that business education is vocational in nature and trains for the acquisition of specific job skills, general occupational intelligence and an

understanding of the economic system. The economic system however is not static but dynamic. The intrusion of technology in business and industry suggests constant updating is necessary to keep business teachers abreast of how ICT is impacting on job environment as the technological development usher in changes in work and changes in the organization of work (Igwe, 2005). Thus, competencies required are also changing.

Teaching and learning in vocational and technical education programmes requires a close interactive process between the instructor and the learner, which results in the learner gaining knowledge, technical information and skills (Saran, 2000 in UNESCO, 2008). The reason for training VTE teachers are to make them to be well groomed with enough skills, knowledge and potentials needed for technological advancement. It is therefore necessary to give substantial attention to the mode of preparing teachers for a technological Nigeria (Ibidapo-Obe, 2007; Ohiwerei and Azih (2010) and business teacher preparation is not an exception. Steps are needed for continuous review of teaching methods to make them current and relevant to contemporary needs.

Business education at tertiary education level in the context of Nigerian education system is synonymous to business teacher education. The National Policy on Education (NPE, 2004) Section 5.24: Group B: Pre-Vocational electives for Junior Secondary School (JSS) have business studies among the subject offering at that level. At the Senior Secondary School (SSS) level, the vocational electives in business studies are Book-keeping & Accounting, Commerce, Computer Education, Shorthand and Typewriting. These electives are offered in the university as Accounting Education, Distributive Education (Marketing), and Office Education (Secretarial Studies).

The Faculties of Education in the universities are responsible for training of teachers at undergraduate (e.g. B. Ed, B.A.Ed., and B.Sc Ed.) level, and at postgraduate (M.Ed, and Ph.D) level. The programme of Business Teacher Education at undergraduate and postgraduate levels is available in Federal, State, and Privately owned universities in Nigeria. The Department of Vocational and Technical Education is responsible for training of teachers in Agricultural Education, Business Education, and Home Economic Education respectively. Teacher education is designed to equip prospective teachers with the knowledge, behaviours and skills they will require to perform their tasks effectively in the classroom. By taking Business Education courses, students develop the academic knowledge and technical skills to successfully advance to the fast-paced business world. A major goal of business education is the development of occupational competence for obtaining job in a business career (Sani, 2010). Therefore, programme of business education develop learners for economic sustainability.

2.3.3 Business Education and Economic Sustainability

Human capital development for economic sustainability of the nation is a main priority of business educators in the university. Therefore, business education's primarily aim is that of educating and preparing people for roles in enterprises in the economy (NPE, 2004). According to Aliyu (2005) the appreciation of the relevance of the discipline has led to growth in the number of institutions offering various course options in the programme. The goal of the programme is primarily that of educating for skill acquisition so that the beneficiaries can fit into the work of work having acquired knowledge, attitudes and skills needed by all citizens to effectively manage personal resources and participate effectively in the economic system (Udoh, 2010, Ibrahim, 2009, and Osuala, 2004). Business education

programme produces graduates possessing entrepreneurial and saleable skills for self-reliance (Bawa and Okanga, 2009) and it is within this context that the programme becomes an important element in the economic empowerment and social growth. Udoh (2010), quoting Wilkinson (1998), and Velthouse (1990) opined Economic empowerment increases the economic strengths of individuals and communities, and also equip such individual with vocational skills for self-reliant. Economic sustainability is dependent on quality business education offerings that develop human capital (Odozi, 2010), therefore ICT skills is required for pre-service business teacher education graduate trainees.

Business education's contributions to economic sustainability has been succinctly stated by Ahmadu (2000) cited in Yusuf and Bossa, (2012) thus "… the training of manpower in areas such as production, distributions, banking, insurance, ethical behaviour in personal and business affairs and dignity of labour". The research findings of Daramola, 2012; Udoh, (2010), Oduma, (2010), and Ibrahim, (2009) corroborated the following areas in which business education has created economic sustainability in Nigeria:

i. expose individuals to the study of technologies, related sciences and the acquisition of practical skills, attitudes, understanding and knowledge in relation to occupations in various sectors of economic and social life;

ii. equip individuals with desirable competencies (life-long skills) necessary for self employment;

iii. educate and prepare people for roles in enterprise in an economy through impartation of knowledge and skills that hold prospects of gainful employment either as employee or employers

iv. prepare individuals as entrepreneurs and job-creator in the economy through the acquisition of appropriate skills, and training in leadership, teamwork, problem solving, and interpersonal relationship; and specifically for

v. self-employment by way of establishment of: computer business centres (for document productions/typesetting, reprography: photocopying, spiral bindings, laminating documents etc)

vi. private vocational schools (to train secretaries, computer operators, sales personnel, marketers, account clerks etc);

vii. consultancy outfits (secretaryship, business registration, employment agencies, organization of workshops, seminars etc)

Thus, business education as a sub-field of total education, is contributing in no small measure to the national development aspiration of the nation. Aliyu (2005) cautioned that the office environment and the nature of jobs are changing with the increase adoption of IT in the workplace. Further to this development, it becomes the responsibilities of business teacher educators to be better skilled in relevant aspects of IT, and the discipline must respond to the challenges of developing appropriate skills and competencies in vocational, sub-professional and professional accounting, secretarial, stores, distributive and related manpower for the world of work (Nwaokolo and Ahukannah, 2001).

Oyeyiola (2005) suggested that business education teachers in this age of ICT intrusion into business activities, needs to possess the knowledge, skills and attributes desired of all educated person, the technical competencies required on one or more areas of business education, a knowledge of the principles and methods of teaching and some practical experience in one of the business occupation to enable them teach and develop 21st century entrepreneurs for Nigeria business environment. Gilliver et al (1999) cited in Neal (2005) said, "… advances in technology, particularly ICT will not make current teaching methodologies redundant" as it has been continually linked to higher efficiency, higher productivity, and higher educational outcomes (Adeosun, 2010). Barak (2006), in LeBaron and McDonough (2009) and Olakulehin (2007), strongly advocated for teacher education that embedded replicable models for instructional design and teaching that promotes effectiveness in service delivery.

The role of business education in educational transformation in a technology driven age would be challenging especially in developing positive perception to ICT use in education targeted at equipping students with life skills for self reliance and economic sustenance.

2.4 Information and Communication Technology (ICT) in Education

Technology mediated instruction can be a useful service to education sector. This is because information and communication technology has been useful as solutions, products, services and information in this 21st century world economy (Stephen, 2011). ICT can enhance classroom effectiveness, increase teachers' Informativeness and currency, uplift teachers' professionalism, and contribute to where teachers are literate in computer. Several body of studies conducted revealed that ICT is enhancing classroom effectiveness, however some others (due to their cultural setting) could not establish a strong relationship between ICT enhancing classroom effectiveness.

2.4.1 ICT as Enhancing Classroom Effectiveness

Effective teachers have always been essential to students' success especially in an increasingly competitive global environment. It is therefore imperative that every classroom is led by an effective teacher in order to graduate every student ready to assume positions and function effectively. UNESCO (1990) opined, "A teacher is a person directly engaged in instructing a group of pupils (or students)", and included heads of educational institutions, supervisory and other personnel if only they have regular teaching functions." Therefore, the role of the teacher in the educational industry is very crucial and adequate attention need to be paid towards their proper training and preparation so that they not only have a clear understanding of themselves, their students but equally a true vision of their

mission in the formal school system. This has been put in proper perspectives in the UNESCO report (2008).

> The main duty of TVET teachers is no longer just to teach, but they have to develop and provide learning environments for their students and apprentices in cooperation with industries, targeted at the industries' needs, and with the objective to qualify youths to participate in a civil society.

Teachers thus are central to the process of education and are considered to be the foundation for quality and relevance in education at all levels (FME, 2003, Oniye and Okoro, 2007). Porter (1990) in Saint et al (2003) observed knowledge has become the most important factor for economic development in the 21st Century and that teachers are central to acquisition of knowledge through teaching and learning. The kind of education advocated is the type which is provided by qualified teachers, who apart from the academic qualifications also have amenable personality disposition capable of radiating love, care, understanding and genuine concern not only for themselves but more importantly for their students. This presupposes that effective teaching can only be done by effective and qualified teachers, who understand themselves, their students and the society (Bako and Odewumi, 2012).

Bichi (2012) asserted the teacher is the central point between policy formulation and policy implementation. He noted that after educational policies have been formulated, it is the teacher who in the final analysis translates policies into practice, and programme into action. The opinion of Hogan (1999) was that the new technologies that permeates our society are becoming more of a factor in today's classroom as they offers the potential of individualized instruction for every student as students become actively engaged in and responsible for their own learning. Because of all these demands, UNESCO (2002) in

Ololube (2006b) and Bichi (2012) described teaching as one of the most challenging and crucial professions in the world. Likewise, it opined that the teachers are critical in facilitating learning and in making it more efficient and effective and as such, they will continue to be so in the future. Further, it recognized that modern developments although may have eased some teaching burdens, they have certainly not made life easier for teachers and noted that:

a) The objectives of education have become more complicated.

b) Knowledge is expanding rapidly, which puts an unavoidable burden on teachers to continue updating their knowledge and exposing themselves to modern channels of information.

c) Teachers' authority is challenged.

d) Information and communication technologies have brought new possibilities into the education sector, but, at the same time, they have placed more demands on teachers

It asserted therefore that teachers cannot be prepared for these unfolding challenges at one sitting because one short training, no matter how effective and successful, will not suffice. Thus a new paradigm must emerge that replaces training with lifelong professional preparedness (Adedoyin and Mohammed 2012) and development of teachers, along the following continuum:

a) Initial preparation/training that provides teachers with a solid foundation of knowledge;

b) Structured opportunities for retraining, upgrading and acquisition of new knowledge and skills.

c) Continuous support for teachers as they tackle their day-to-day responsibilities

Their use is also underlined by OECD (2001) in Gulbahar (2008) as necessary for improving quality in teaching and learning. It is envisaged that technology usage is an

important indicator of teacher preparedness to carry out the obligations of daily lesson. It has been found that teacher's attitude towards ICT have a significant influence in its adoption and usage. Furthermore, effective use of ICT in teaching would translate to the use of computers to make teaching and learning more effective, that is, the use of computer by both teachers and students, during teaching learning activities. Researchers opined that both teachers' personal theories and perceptions about teaching and learning play a major role in ho they implement ICT and how they motivate themselves to use ICT tools in the classroom (Gobbo and Girardi 2001; Sime and Prestly, 2005 in Jimoyiannis & Komis, 2007).

There has been much evidence that the use of ICT in education greatly improves student motivation, learning engagement and higher thinking skills. Carmen et al (2003) in Adebiyi and Olutayo (2007); Emmanuel and Unogu (2012) opined that integrating ICT tools in teaching can lead to increase students' learning and increased opportunities for communication. Yusuf (2006)'s view was that ICT are critical for advancing meaningful educational initiates and in training a high skilled labour force. This view was corroborated by Ifinedo (2006, and Ubah, (2012), that higher education institutions across the world have been adopting ICT teaching and learning technologies to create an environment for both students and their instructors to engage collaborative learning and gain access to information.

However, Becta (2002) cited in Kosoko-Oyedeko and Tella (2010), Ibrahim 2010, and Markus (2010) posited that when teachers use their knowledge of both the subject and the way students understood the subject; their use of ICT has a more direct effect on students' attainment. That the effect of attainment is greatest when students are challenged

to think and to question their own understanding, either through their use of topic-focused software on their own, in pairs, or through a wholesale presentation. In essence, what the research finding has revealed is that teachers' pedagogical beliefs and values play an important part in shaping technology-mediated learning opportunities.

Also, British Educational Communications and Technology Agency (Becta, 2002), investigated the role of technology in improving learning in 23 primary schools and 5 colleges, in terms of academic performance, classroom practice and institutional development. The schools/colleges were given funds to install hardware and software, with money also set aside to cover training in the use of the new technology. The results showed that: schools national test outcomes improved beyond expectation as technology became embedded; presentation technology provided greater interaction between teachers and pupils in the classroom; pupils were able to exercise greater choice within the curriculum and learn in more diverse ways according to their individual needs; teachers and pupils were able to work more closely together in setting targets for assessment, with teachers able to give individual feedback; learning platforms aided college students' learning when at home, while management information systems helped managers and teachers work more effectively; and finally, behaviour and attendance improved through the use of behaviour management systems and electronic registration respectively. For education in Nigeria, ICT tools and its use in education endeavour is gaining momentums and becoming indispensable. Ololube (2006b) posited "… the field of education has not been unaffected by its penetrating influence. Unquestionably, ICT has impacted on the quality of and quantity of teaching, learning and research in teacher education". Adebisi (2010) in Oloyo (2010) said what we really need for now is to see that we transform our institutions to ICT-

based institutions so that our curriculum delivery should be ICT-based" which would enable the institutions access e-library, e-books, e-learning and on-line transactions for educational books.

Presently, research findings on use of ICT in teacher training institutions at tertiary level are very scanty and in most cases are concentrated in the areas of Mathematics and Language teaching. There are no researches suggesting that at teacher education level, educator are trained in using ICTs in teaching as a means for educational sustainability. This coupled with other limiting factors attributable to the government lukewarm attitudes towards funding and haphazardness with regards to professional development of teachers has direct consequencies on education generally at the primary, secondary and tertiary education institutional levels.

Adelabu (2005) expressed the opinion that there are fairly widespread concerns about the overall effectiveness of pre-service teacher training in dealing the practical aspects of real life teaching. The most important issue about ICT is its effectiveness in teaching-learning activities especially when compared to face-to-face instructional strategy. Users will want to know specifically, what does ICT enable that would not otherwise have been possible. Therefore, the issue to be address is business teachers' exposure to capacity building for ICT adoption and integration as well as their attitudes towards ICT usage in education for teacher preparation in Nigeria.

2.4.2 ICT as Increasing Teacher Informativeness and Currency

The main purpose of ICT in education is to deploy ICT equipment and tools in teaching learning process both as a media and methodology that enables learners discover their potentials under the guidance of the teacher and acquire basic knowledge, skills,

attitudes and behavior required for a knowledge age. Honey, Culp and Spielvogel (2005) asserted that in an attempt to describe what students' need, different terms have been used, such as digital literacy, technological literacy, and 21st century skills. Much ado, education leaders nationally and internationally, are now beginning to come together around a common definition of what students need to know, Information and Communication Technology (ICT) Literacy. They posited:

> ICT Literacy reflects the need for students to develop learning skills that enable them to think critically, analyze information, communicate, collaborate, and problem-solving, and the essential role that technology plays in realizing these learning skills in today's knowledge-based society.

ICT according to Michiels and Vancrowder (2001), and De Alcanrtara (2001) in Cavas B, and Cavas P et al (2009) are "technologies that facilitate, by electronic means, the acquisition, storage, processing, transmission, and dissemination of information in all forms including voice, text, data, graphics and video." This indicated that ICT allows many people to generate and disseminate information, thus playing an active role in the process of interaction between professionals, learners, policy makers, peers and etc. Jager and Lokman (1999) while defining of ICT in education said four main elements are to be taken into consideration: ICT as an object that refers to learning about ICT, an assisting tool, a medium for teaching and learning and finally a tool for organization and management in schools. Blurton (2007) described ICTs as a "diverse set of tools and resources used to communicate, create, disseminate, store, and manage". It include computers, the Internet, broadcasting technologies (radio and television), and telephony.

Kay and Honey (2005) in Honey et al (2005) identified the following six (ICT literacy skills) areas as critical to students' success in the workplace:

i. communicate effectively: students must have a range of skills to express themselves not only through paper and pencil, but also audio, video, e-mail, Web sites, messages boards, etc;

ii. analyze and interprete data: students must have the ability to crunch, compare, and choose among the glut of data now available Web-based and other electronic formats;

iii. understand computational modeling: students must possess an understanding of the power limitations, and underlying assumptions of various data representation systems, such as computational models and simulations., which are increasingly driving a wide range of disciplines;

iv. manage and prioritize tasks: students must be able to manage the multi-tasking, selection, and prioritizing across technology applications that allow them to move fluidly among teams;

v. engage in problem solving: students must have an understanding of how to apply what they know and can do to new situations;

vi. ensure security and safety: students must know and use strategies to acknowledge, identify, and negotiate 21st century risks.

ICT is thus an influential instrument that has potential for the development of quality teaching and learning in educational systems and also a tool for the preparation of students in meeting the innovations in the global arena. The technology offers powerful learning tools that demand new skills and understanding of students, including Multimedia, and provides new ways to engage students, such as Virtual learning. It is a widely believed concept that ICT tools are important levers with the potential to introduce and sustain education reform efforts.

Genius Newsletter (1997a) cited in Blurton (2007) reported that no comprehensive data on ICT in schools worldwide exists, however, "It is clear from many national examples that schools are also increasingly being equipped with ICT. It is also apparent that ICT equipment and Internet connectivity is still much more abundant in North America schools than elsewhere". Iloanusi and Osuagwu (2009)'s assessment was that ICT is still in the

emerging phase in Nigeria education system. Educators and policy-makers alike agree that ICT is of paramount importance to the future of education and that ICT investment can have an important role to play in raising educational standards (Apanpa and Lawal, 2009; NPICTE, 2010). Furthermore, advocates of ICT believed in the potentials of technology as an instructional tool for pre-service teachers and supports that ICT should be widely used across the whole school curriculum (Jorgenson and Stirol 2000; Ofsted 2001, Machin, McNally and Soilva, 2006).

The fact remains that education worldwide is facing a significant challenge in preparing students and teachers for "our future 'knowledge-based' society during a time when most teachers are not prepared to use ICT and the majority of existing school buildings are not equipped to integrate the new information and communication technologies (UNESCO, 1998a)." This has implications on the key role of education which is empowering students with skills and attitudes that are essential to their success in a knowledge society. Cuttance (2001) in Neal (2005) suggested the need to evolve new ways of thinking and solving problems in supportive classroom learning environments to engage students successfully. ICT is therefore expected to play critical roles in this respect, including motivating teachers to gain necessary knowledge and skills in its use for instructional activities. Pelgrum (2001) in Cavas B, Cavas P et al. (2009) said, "ICT is not only the backbone of the Information Age, but also an important catalyst and tool for inducing educational reforms that change our students into productive workers''.

The central focus of the National Policy on Education (NPE), (2004) is that of equipping individual with the skills and job competencies for gainful employment. The FME (2003) stated "In the present technological age, the fundamental function of formal

education should be to produce a knowledge-based work-force for national development." This can be effectively and efficiently achieved using technology based learning system bearing in mind the realization of the important role of education in national development. NPE (2004) opined "The country's educational goals shall be clearly set out in terms of their relevance to the needs of the individual and those of the society."

Achimugu, Oluwagbemiga, Oluwaranti, and Afolabi (2009) and UNESCO (2003) argued that economic prosperity depends on brains rather than brawn, and that value creation is realized by means of employing 'knowledge' workers. In essence, teaching and learning that improve manpower production would be dependent on IT adoption, integration and diffusion in the education system. Hargreaves (2004) and Barratt (1998) in Neal (2005) suggested that education should ensure that students such as those in the middle-years acquire skills that meet their needs and are appropriate to the knowledge society's demands. The task of achieving this noble idea depends on teachers' effectiveness in handling the ICT tools.

2.4.3 ICT as Uplifting Teacher Professionalism and Currency

Teachers in university-based programmes must provide credible and persuasive evidence of effectiveness of their programmes or else they will continue to have critics in and outside the system. The Federal Government of Nigeria has clearly stated that teacher education will continue to be given major emphasis in all our educational planning because "no education system can rise above the quality of its teachers" (NPE, 2004). In its contribution, UNESCO (1990) described teacher education as "both pre-service and in-service programmes which adopt both formal and/non formal approaches. It is a continuing

process which focuses on teacher career development." The NPE (2004) stated that the purpose of teacher education in Nigeria shall be to

(a) produce highly motivated, conscientious, and efficient classroom teachers at all levels of education system;

(b) encourage further the spirit of inquiry, and creativity in teachers;

(c) help teachers fit into the social life of the community and society at large, and enhance their commitment to the national goals;

(d) provide teachers with the intellectual and professional background for their assignment and make them adaptable to any changing situations; and

(e) enhance commitment to the teaching profession.

Osunde and Omoruyi (2004), and Bichi (2012) were of the view that the need for qualified teachers has gain pre-eminence in Nigeria because teacher education is a medium for producing teachers with the necessary skills and knowledge needed to adequately carry out their teaching jobs. Ololube (2005a) opined teacher education is designed to produce highly motivated, sensitive, conscientious and successful classroom teachers capable of handling students effectively and professionally for a better educational achievement.

The curriculum of teacher education therefore, placed emphasis on subject mastery and pedagogy. In essence, teachers in Nigeria are being provided with both discipline and pedagogical knowledge (including internship) to enable them to perform their duties effectively. Accordingly, the curriculum of teacher education has been structured to enable effective performance of duties of teaching and professional growth (NPE, 2004). Nigeria-Teaching Profession (NTP), (2010) stated that "To teach at Nigerian universities, teachers must have qualifications that are similar to professors at U.S and European universities,

usually a doctorate." This notwithstanding, Allen, Walker and Morehead (1999) in UNESCO (2003) cautioned "Many teachers are limited in the technological skills needed for successful technology integration due to lack of training in the use and professional application of ICTs in education.

Furthermore, schools are known to be resistant to innovation and change (Kearsley, 2004), even when the proliferation of ICT is beginning to affect how teachers teach (Reid, 2002). Presently, the National Policy on Information and Communication Technology (NPICTE), (2010) provide arguments for introducing ICT in school setting, while school administrators expects graduates from teacher education programs seeking employment placement to have a reasonable knowledge of how to use ICT (Montgomerie and Irvine, 2001). Very worrisome is the fact that not only are most current teachers' pre-service preparation and subsequent in-service courses devised in reference traditional educational technology and settings, more practicing teachers are not familiar with the processes, interaction patterns, features and possibilities of techno logy-mediated educational transactions (Orien, Mioduser and Nachmias 2002).

The imperative of quality in teaching and learning for improved manpower production for the 21st century knowledge-driven economy requires serious attention particularly to produce world-class graduates. Therefore as higher education systems grow and diversify, the Nigerian society should have concern about the quality of graduates being produced from the system. Thus, the idea that teachers should be effective in producing student learning outcomes and that they should be available in sufficient quantity has dominated the education policy space. Professional teachers by their training are aware that students learn in different ways, but almost all children will respond to praise. The

realization that students have different ways of absorbing information and of demonstrating their knowledge usually serve as guide on the choice of teaching method; suitable and appropriate for the different level of students to be taught. It is therefore customary to see teachers often, using techniques which cater for multiple learning styles to help students retain information, strengthen skills acquisition and understanding. To effectively perform their professional roles, the teachers, according to Davis (1997) are expected to:

a. know how to employ the most effective teaching and learning strategies to enable children and young people to make progress;
b. be able to assess what their pupils know, understand and can do, and then use this assessment to plan future teaching and learning activities;
c. have high expectations for all their students, of whatever class, race, gender or ability;
d. know how to motivate their students – to do this, they need to be effective role models for the students they teach and
e. know which combination of methods/strategies is most appropriate for subject delivery.

Within the above perspective, teaching become a diverse and complex activity involving interaction of a student and a teacher over a subject, and in which the teacher may be physically present, or may not be physically present as with televised or computer-assisted instruction (Davis (1997). The effectiveness of teaching-learning activities is therefore a function of the method the teacher employed in delivering the subject matter.

Okebukola (2010) cited in Muhammed (2010) suggested that the use of technology in teaching-learning and research should be accorded high priority. However, the study of Faggiano and Fasano (2008) conducted in two universities in Italy revealed that one of the major factors preventing teachers from using computers in the classroom is the lack of personal computers and data projectors, and inadequate teacher training focusing on the

pedagogical use of ICT education. Hegarty (2000) in Ololubi (2007) said that effective teaching draws on a multiplicity of cognitive, affective and interpersonal elements and that to appreciate fully the challenges of teaching excellence, we have to bear in mind not only the extraordinary diversities of these elements but also the many different ways that effective teaching can draw on them to construct effective teaching behavour.

According to Ololubo, Ubogu and Egbezor (2007), effective teaching is an intelligent, knowledge-based activity that takes proper account of the teacher's professionalism. Discussing teachers' professional status, far back four decades ago, the Ashby Commission Report of 1960 said that the professional training of teacher is not the most serious of the problems confronting Nigeria, but the difficulties of securing enough teachers with sufficient education. The Commission lamented the constant migration of teachers away from teaching in a manner that teaching may come to be looked upon as a sort of preparation for position in other sectors of employment. To achieve the goal of producing world-class graduates suitable for global employment opportunity, Nigeria needs place more emphasis on minimum world standard.

2.4.4 ICT as Contributing only to where Teachers are Literate in Computer

The Federal Ministry of Education (FME), (2003) stated that a fundamental function of formal education in the present technological age is to produce a knowledge-based workforce for national development, and teachers are the foundation for quality and relevance at all levels of education. While acknowledging the growing importance of existing and emerging ICTs and their relationship to literacy, Educational Testing Services (2001) said "ICT literacy is the ability to use digital technology, communication tools and/or networks to access, manage, integrate, evaluate and create information in order to function

in a knowledge society." This is suggestive that there are limits which ICT literacy serves as precursor to good teaching and professional leadership.

Pre-service teachers would be required to demonstrate sufficient knowledge in ICT literacy and the application of ICTs into the classroom activities. Since business teacher education majors are taught how to teach business in vocational programme at various grade levels, they would be required to train pre-service teachers adequately to function in economy both as teachers and as professionals in the knowledge age. The knowledge age requires proficiency in the use of ICT tools. Information and Communication Technology tools are phenomenon that is speedily transforming the global landscape. Indeed, ICT revolution has altered workplace demands such that training institutions have had to initiate integrating ICT diffusion into classroom teaching activities purposely to make graduates very relevant. Ololube (2006b) asserted, "ICT has brought about rapid changes in social, political, and global economic transformation of the world." Therefore, technology play a crucial role in the teaching and learning because it enables the use of array of hardware and software which include computer-based training system, multimedia system, electronic performance support systems, telecommunications system, and the Internet with World Wide Web system (www).

NPICTE, (2010) stated that the integration of ICT in education should lead to a speedy transformation of the teaching, learning and administration, and also foster the production of graduates that can survive and compete globally in this contemporary society, and sustain national development. The teacher has a role to play in this regard. The teacher's role as a facilitator is to effectively guide the students in the processes of acquiring knowledge and employable skills and also provide those helping hands needed to achieve

higher standards in knowledge, ability and skills. NPICTE (2010) shared the belief that Nigeria's aspiration is to attain sustainable development and enhance global competitiveness. This status requires innovations in the deployment of technology for human capital training and secondly, in harnessing the energies of the youths maximally for development.

Managers of higher education enterprise in Nigeria would need to encourage the adoption of innovative teaching in the classroom as a measure for improving the quality of teaching and conversely the quality of the graduates. Technology remains a viable option; its integration and adoption into the country's education delivery system will transform the system towards global best practices especially that technology tools are a regular feature of everyone's daily life. Apanpa and Lawal (2009); Emmanuel and Unogu (2012) asserted, "The use of technology and knowing how technology can support student learning have become essential skills for professional teachers in today's world for improved learning achievement in students". Present day schools and classrooms are expected to have teachers who are equipped with technology resources and skills, and who can effectively teach content while incorporating technology concepts and skills in the preparation of manpower needed for national development.

2.4.5 Capacity Building for ICT Integration in Education

The outcome of interactions with academic colleagues from universities, polytechnics and colleges of education during local and national conferences and workshops under the auspices of Educational Trust Fund (ETF) suggested that Nigerian educational planners and higher educational institutions have not accorded ICT its rightful recognition in the educational delivery system. This is because training and retraining of personnel for ICT

integration and usage has been too slow and at the same time poorly funded. A systematic approach is required when integrating ICTs into the education system. This fact is often overlooked by many educational administrators whose planning strategy is that of bulk funding for ICT hardware in contrast to very little fund allocation for teacher training.

Indeed, weaknesses in policymaking often lead to the misallocation of resources; this exacerbates the existing lack of resources. For example, Monahan (2004) posited that there is a tendency to emphasis installation of ICT over the seamless integration of ICT in teaching and learning. The need for trained personnel who will implement technology integration in schools is a key area that policymakers need to pay attention to. As Haddad (2007) puts it, "… appropriate and effective use of technology involves competent, committed interventions by people. The required competence and commitment cannot be inserted into a project as an afterthought, but must be built into conception and design with participation of those concerned." Capacity building for teachers is very crucial for effectiveness in usage.

Hughes (2004) argued "A school-based and classroom-focused approach to teacher training in ICT use takes into account the fact that teachers need to learn about technology … in the context of their subject matter and pedagogy." This view was supported by Otero et al (2005) when they opined "Teachers learn how to use ICTs more effectively when they see the technologies not as generic and de-contextualized tools but as tools for teaching, that is, for motivating, facilitating, enhancing, and evaluating learning." As the UNESCO Bangkok (2004) study puts it, "When teachers perceive ICT as a tool to meet curricular goals, they are more likely to integrate ICT in their lessons.'

Part of fostering an environment that is supportive of learning how to teach effectively with technology is implementing an incentive system and motivational strategies for teachers. In furtherance of this assertion, Charlson and Gadio (2002) cited in Wai-Kong, Miao, and Lee (2010) said:

> While so-called 'champion teachers' ask for and seek out professional development opportunities in the use of technology, the vast majority of teachers do not. Teachers generally are reluctant to change their teaching styles and habits; are cautious of time consuming activities that may take away from other high-priority obligations; have difficult seeing the potential payoff before- hand and may feel so threatened by technology that they want to distance themselves from it rather than embrace it.

UNESCO Bangkok (2004) succinctly stated "Providing teachers with access to technology resources within the school post training is motivational strategy. Having them work with colleagues in technology-supported instructional design projects is another." Time is now ripe for administrators in teacher education to draw up a holistic and systematic policy formulation and strategic planning in ICT integration and usage in the teaching-learning activities. Strategic initiatives on training in the use of ICT tools, its integration and adoption need to be put in place.

2.5 Teacher ICT Skills/Competence

The increasing adoption of information and communication technology tools in the public and private sectors of the Nigeria society and business environment demands for professional who can handle sophisticated electronic means of handling data and communication functions. Such means however requires technological skills and knowledge on computers, telecommunication, micro-electronic facilities, internet surfing and the search engines, networks such as LAN and WAN and skills in using computer applications such as word processing, power point, and desktop publishing. Oloyo

(2010) asserted "What we really need now is to see that we transform our institutions to so that our curriculum delivery is ICT-based. Thus, teachers would need to continuously upgrade their knowledge and skills, particularly to include IT for according to UNESCO (1999), competencies required for teachers include areas of is not limited to professional, general and social knowledge and skills but include technology expertise.

2.5.1 ICT Tools for Teaching Courses in the University

The different range of ICT tools that can be use for teaching courses falls into the classification of audio, and audio-visual. According to Wadatu and Sado (2012), and Ubah (2012), these are telephone, and radio (audio), television, computer, and Internet (audio-visual). The commonest in use is the computer because it offers the following benefits:

a. increase basic skills in understanding business concepts, as well as content areas through drills and practice;
b. the Microsoft power point enhance lecture delivery and provide avenue for explicit explanation of lessons to students (such in the use of diagrams, animations etc) to compare relationship and concepts;
c. the Spreadsheets eases the work of teachings in teaching computing courses (such as accounting), and
d. motivates students through multimedia materials that capture students' interest and increase teacher responsiveness to the different learning styles of students.

Ayeni (2000) cited in Wadatu and Sado (2012) opined "… computer can be used to teach difficult topics and concepts that teacher may find difficult to handle" compared with the use of traditional teacher-centred method). Information and communication technology knowledge and skills are now seen as a key resource and crucial tools for development of any society. It is within this context that teachers teaching business education courses are expected to be model towards acquiring these knowledge and skills. The commonest ICT skills demands by governmental organizations, industries, businesses and not for profit organizations are encapsulated in basic ICT suite.

2.5.2 Basic ICT Suite (Tools and Resources) Application

Teachers in the universities have the duty and the responsibility of modeling future teachers. To meet this challenge and ensure that university graduates meet present day workplace demands, they must themselves be skillful according to Department of Education and Training Western Australia, (DETWA), (2012) in the following teachers ICT skills:

a) Computers/basic computer
b) Word processing (e.g. MS Word)
c) File navigation
d) Spread sheet (e.g. Excel)
e) Internet
f) E-mail
g) Presentation software (e.g. Power Point)
h) Databases (e.g. Access)
i) SIS Curriculum Manager

The skill in which a teacher is expected to be competent varied and includes a mixture of simple mechanical skills such as the management and manipulation of files and documents to esoteric understanding of the usefulness of ICT in education. Hennessy, Harrison and Wamakote (2010) citing UNESCO (2008) posited three approaches: technological literacy, knowledge deepening, and knowledge creation. For a simpler understanding, skills may be grouped into clusters of similar factors that provide a more penetrating analysis and allow a more secure comparison of factors. Intaganek and Gradsarem, (2008) provided a sampler of the clusters as follow:

1. Basic (core) skills
2. Specialized skills in using software applications
3. Knowledge of hardware and software
4. Awareness of significance of technologic in teaching

According to Ikpahindi (1999), and Oyeyiola (2006), skill acquisition requirements are in the basic areas of the knowledge of computer: how it functions, inputting and retrieval of information from it, ability to choose appropriate software, ability to capture and use ICT based resources. It also includes ability to carry out searches on CD-ROMS. Other skills considered very relevant for graduates of our university would also according to Muhammad (2010) quoting Morgan (1998) includes communication skills, database creation and the basic knowledge of how to use Fax, e-mail equipment as well as downloading of mails from the internet. Interestingly, the business environment would require professionals in the electronic age who are capable of utilizing ICT infrastructures to maintain a competitive edge in all spheres of human endeavours. Therefore, Information and Communication Technology has fundamentally affected conduct of business and even the bureaucracy and has also had great impact on the skills and training requirements for graduates aspiring to professional cadre in the global work environment.

2.5.3 School ICT Capacity

The importance of teachers ICT skills lies in the fact that it provides a valid and reliable yardstick for an objective appraisal of the level and nature of ICT knowledge and skills needed by an institution for its ICT knowledge development. However, DETWA (2012) cautioned "There is a close relationship between a school's ICT capacity and the ICT skills and knowledge of its teachers." In other to improve an institution's ICT capacity for knowledge development, DETWA (2012), and Moursund (2011) suggested the following ICT resources ("generic tools") as standard basis of assessing usage, exposure, availability, and competence:

a) Desktop/laptop computer (word processor) for personal use;
b) Notebooks for teachers programme;

c) SIS curriculum manager;
d) Personal e-mail account;
e) School intranet;
f) Internet;
g) Printer;
h) Digital Cameras;
i) Specialist software applications (e.g. CAD, HTML editors etc.,);
j) Technical Support;
k) Digital projectors/interactive whiteboards;
l) Desktop computers (power point) for student use in classroom;
m) Desktop computers (spreadsheet) for student use elsewhere at school (e.g. computer lab);
n) Laptop, and
o) dbase

The Nigerian government has developed several initiatives to encourage ICT enabled education at all levels of education in Nigeria. The recently published National Policy on ICT in Education (NPICTE, 2010) is a coordinated and unified approach of attaining government goals for ICT initiatives in Nigeria.

2.5.4 Area of Teacher Competence

Teacher teaching skills affects the quality of decision-making of the teacher with respect to classroom practice. Of most importance is that teachers' competence has relationship with processes of instruction. Garett (1986) in Cooper, Garett, Lough et al (1986) provided the schema as shown in Diagram 2.1

Figure 2.1 Relationship of teacher-competence areas to process of instructional decision-making

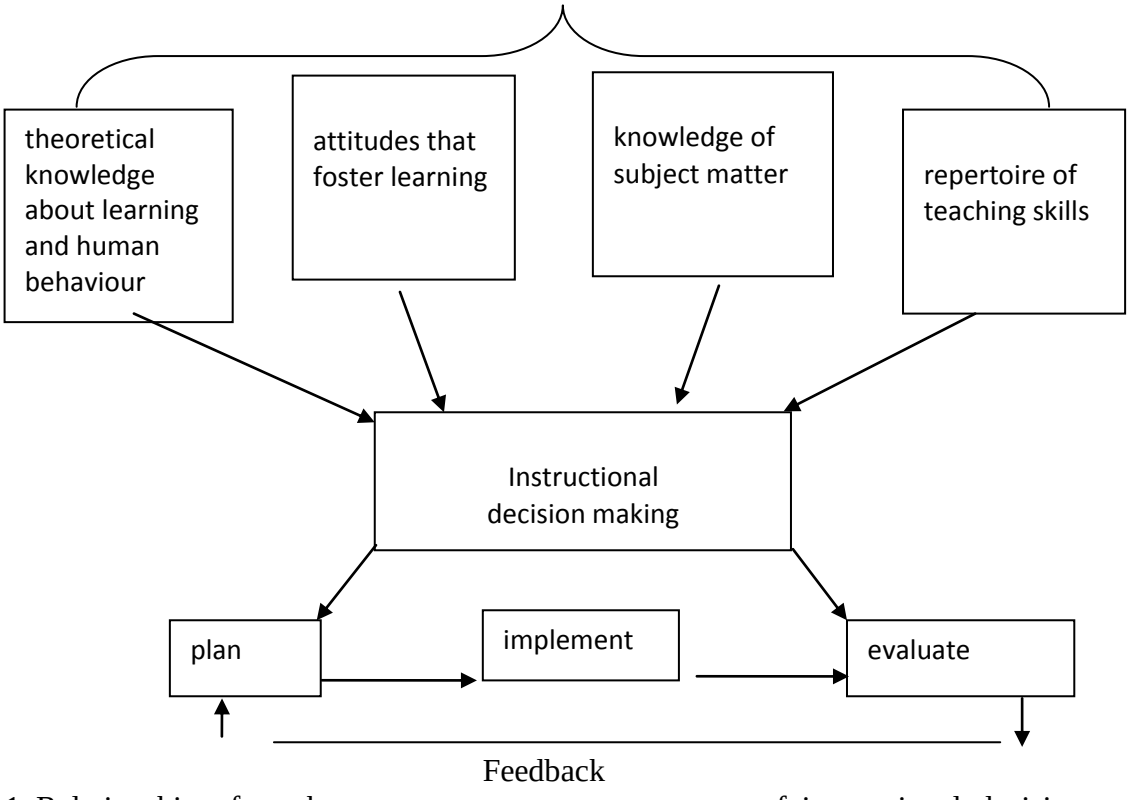


Figure 2.1 Relationship of teacher-competence areas to process of instructional decision-making by Gareth, S. S. (1986) in Cooper, Garett, Lough et al, (1986)

2.6 Education Policy and ICT Initiatives in Nigeria

The acquisition of basic ICT skills and capabilities has recently been made mandatory as part of the national minimum standard for teacher education in Nigeria at Nigeria Certificate in Education (NCE) and first degree in education levels. Some universities both government and private have also made ICT skills a requirement for continuing and graduating students. Adenipekun (2007) said: "In recognition of the indispensability of ICT in the teaching-learning process, relevant authorities have recently made the acquisition of basic ICT and capabilities part of the National Minimum Standards for Teacher Education at both levels of the Nigeria Certificate in Education and the First

Degrees in Education." Globalization of knowledge informed the need for a cross-border competition in a knowledge and technology driven society. This required initiative from government (to give direction), the industries and institutions of learning is come up with the will to investment and develop both the infrastructure and the human capital for ICT enablement.

2.6.1 Major Initiatives

In order to address the relevance of education in contemporary global environment, Rufa'i (2010), explained at a recent roundtable conference that the restructuring of the old curriculum for the senior secondary school was based on global acceptable best practices, which then throw up new content standard within each subject matter and demands that serving teachers are re-skilled in subject matter as well as in pedagogy and that pre-service teacher acquire the teaching experiences compliant with the new Senior School Secondary School Education Curriculum (SSEC), (Adenipekun, 2010). The Minister further stated that the roundtable has initiated the preliminary processes of reviewing the teacher education programmes **of** tertiary institutions to produce teachers with the required skills and competencies to cope with the challenges of the new SSEC. This is more so when the Executive Secretary (ES) of NERDC averred that "In programme specific contexts, the extant teacher education programmes geared toward the production of pre-service teachers for Senior Secondary Education (SSE) level can no longer meet the challenges and demands of the new SSEC."

In pursuit of the above, the ES stated since the re-structure was crafted as a paradigm shift in content standards and pedagogical skills to meet both challenges of local needs and

global competitiveness, there is the need to urgently overhaul the existing teacher education programmes; redefine its context and concepts in terms of philosophy, subject combination, mode of training, length of training and structure of training; renew the pedagogical offerings, update the general standards in the teaching of subject matter and introduce new knowledge and subject matter. The roundtable therefore, charged the universities, polytechnics and colleges of education to come up with a common blue-print for the Nigerian Teacher Education programme.

Also, to increase ICT use within classrooms, the Federal Government according to Okhiria (2007) in Agyeman (2007), said that the National Universities Commission (NUC), the government agency responsible for accreditation of courses, and prescribing the minimum standard for universities), has prescribed PC ownership for universities as follows: (a) One PC to every four students (b) One PC to every two lecturers below grade of Lecturer 1, (c) One PC per Senior Lecturer, and One Notebook per Professor/Reader.

The status report shows that some of the first and second generation universities have achieve leadership in certain aspects as detailed below:

a. The Nnamdi Azikwe University has achieved better ratio for Faculty members in the distribution and training of academic staff on ICT usage;
b. The Obafemi Awolowo University has the best developed ICT system with its own VSAT access to the Internet and a campus-wide area networking on e-learning and course deliveries catering for 6,000 users on more than 1,000 computers distributed in 15 computer laboratories across the campus. Further, the university has embarked on the progressive application of ICT to all its functions and services: academic, research, and administration;
c. University of Jos is currently blazing the trail for content development and e-learning and campus networking. The university in collaboration with development partners: African Virtual Open Initiatives and Resources (AVOIR) and Carnegie Corporation, USA has developed e-learning programmes for several departments. Of particular

note is medicine by e-learning under the collaboration of University of Oxford and Cambridge respectively and which is first of its kind world-wide.

d. The National Open University (NOUN) has created 27 study centre across the country with each study centre equipped with 25 computer-based laboratory/cyber café in Local Area Network (LAN) configuration with the intention of connecting each centre to NOUN'S REPRODAhq (reproduction, distribution and administrative headquarters) through a wide area network (WAN) to achieve the mainstreaming of the following activities: training and learning, assessment and testing, interactive sessions, communication (e-mail, chat, forums), internet access, access to virtual library, and other computer applications

Generally, the increasing awareness and the recognition of the indispensability of ICT in teaching-learning processes by stakeholders in education in Nigeria are yielding positive results. According to Adenipekun (2007), "… relevant authorities such as National Commission for Colleges of Education (NCCE), Teachers Registration Council of Nigeria (TRCN) and National Universities Commission (NUC) have made the acquisition of basic ICT skills and capabilities part of the National Minimum Standards for Teachers in Education at both the Nigerian Certificate in Education (NCE) and First Degree levels." To further enhance the ICT compliance in teaching and learning, the Federal Government launched the NPICTE to provide all the stakeholders guidance on what is expected in the entire process of ICT integration in education. The Minister of Education in her Foreword affirmed, "I endorse and commend this National Policy on ICT in Education for implementation for the attainment of ICT-furthered education (FME 2010).

The National Policy on Information and Communication Technology (ICT) in Education (NPICTE), (2010) in Section 2 stated the vision as ICT-furthered Education-engaging, enriching, empowering and enabling. Section 3 encapsulates the mission statement as "To meet the human resource requirements of the nation for attaining and enhancing sustainable socio-economic development, global competitiveness as well as the

individual's ability to survive in a contemporary environment. Further in Section 4, the objectives of ICT in Education were enunciated as follows:

(i) to facilitate the teaching and learning processes;

(ii) to promote problem-solving, critical thinking and innovative skills;

(iii) to promote life-long learning;

(iv) to enhance the various teaching/learning strategies required to meet the needs of the population;

(v) to foster research and development;

(vi) to support effective and efficient education administration;

(vii) to widen access to education and the range of instructional options and opportunities for any-where, any-time, any-pace any-path learning

The National Information Technology Development Agency (NITDA, 2006) is serving as the hub. It stated that Nigeria started implementing its ICT policy in April 2001 after the Federal Executive Council approved its establishment. The long-term vision of the plan is "To make Nigeria a IT capable country in Africa and a key player in the information society by the year 2005 through using IT as an engine for sustainable development and global competitiveness." The policy empowers NITDA to enter into strategic alliances and joint ventures and to collaborate with the private sector to realize the specifics of the country's vision and which calls for sustained, productivity-driven growth, possible only with a technologically literate, critically thinking workforce, who prepared to participate fully in the global economy of the 21st century. This it is believed will accelerate the actualization of the development of the individual into a sound and effective citizen.

These efforts are laudable ones, however Akinyosoye (2001) in Ayinde, Agbonlahor, Mafimisibe and Adebayo (2004) asserted that the use of ICT has assumed increasing significance, but the operational effectiveness of the application has been far below expectation if not disappointing. This is more so that the introduction of ICTs has

not been in coordination with other efforts such as training and development, which is of relevance to contemporary demands in teacher education preparation in Nigeria. There is need to accelerate and enhance ICT usage in teacher education to actualize the policy objectives of NPICTE (2010) in Nigeria.

2.6.2 ICT in Teacher Education Initiatives

Teacher education may be pre-service teacher education or in-service teacher education. Whereas, pre-service teacher education refers to the formal preparation of individuals to enter the classroom as qualified teachers, in-service teacher education refers to on-going professional development programmes offered to teachers once they have entered the profession. Perraton and Potashnik (1997) cited in Blurton, (2007)'s review of ICT use in teacher education, noted that while most teachers working in schools worldwide have received some preparation, not all have received adequate preparation, while in fact many have received none at all. For instance, the study noted that in India in 1996, there were about 240,000 teachers who were not fully qualified; likewise, there are severe teacher shortages in many other countries particularly in South Asia and Africa, and in USA where there are sufficient numbers of teachers, many who are unqualified or under-qualified to teach especially mathematics and science.

An encouraging development is that ICT is being used in a variety of ways to support both pre-service and in-service teacher education in Africa. For instance UNESCO (1998) cited in Ololube (2007) report revealed that it has developed projects for distance education to help eight countries train teachers and principals unreached by traditional training. Therefore, teacher education has not been unaffected by the penetrating influence of information and communication technology (ICT). ICTs advances have provided a rich

global resource and collaborative environment for dissemination of ICT literacy materials, interactive discussions, research information, and international exchange of ideas which are critical for advancing meaningful educational initiatives, training a high skilled labour force, and understanding issues related to economic development.

UNESCO (2002) in Ololube (2007) opined that educational systems around the world are under increased pressure to use the new ICT to teach students' knowledge and skills they need in the 21st century and "Teacher education institutions are faced with the challenges of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices." Since teacher education and training are means for professional updating which deals with all developmental functions directed at the maintenance and enhancement of teachers' professional competence, ICT in teacher education and training is an important factor in job effectiveness and development. Haddad and Jurich (2002) in Adeosun (2010) asserted "The traditional model of learning emphasis mastery of facts and concepts. ICT diversifies the system of representation through the use of various stimuli (images, sounds and movement) and address the needs of diverse types of learning (visual, psychomotor, and affective).

It is the belief of this researcher that the educational effectiveness of ICTs depends on how they are used and for what purpose. Like any educational tool or mode of delivery, ICTs do not work for everyone, everywhere in the same way because the level of expertise and usage differ as there are varieties in subject areas. A formal policy need to be put in place for training and staff development on ICT acquisition and usage.

2.6.3 Teacher Education and ICT Training

ICT usage pre-supposes that the teachers has had sufficient knowledge in computer and computer skills either formally or informally. The most important consideration therefore is that of ensuring that teachers have access to ICT training to enable them adequately prepare to introduce its usage to teaching-learning activities in the classroom. According to Oyeyiola (2006), "The increased demand to own personal computer by professional and non-professional users of computer in Nigeria is instructive that tertiary educational institutions focused training more on acquisition of practical computer skill, than the theory." Writing on implications of ICT requirements for teachers, Guskin (1996) cited in Neal, (2005) said "The changes being asked of faculty members in restricting their work lives will be extraordinary and will require them to function in ways they never conceived of and for which they were not trained." This inform while in some countries, for example, Great Britain, it is now required to have training in ICT-use to earn teaching credential (The Robert Gordon University, Aberdeen: TSBE, 2004). This policy also makes it mandatory to have refresher training in 'skills with particular application' in place for experienced teachers.

One pertinent issue that needs to be addressed to make ICT mediated instruction a success is the requirements to extend the acquisition of computer literacy to school administrators. In which case, it may not be sufficient to simply provide training for teachers. For instance, Murphy and Gunter (1977) in Murphy (2000) advocated that ICT training be extended to educational administrators. They observed that:

> Lack of teacher technology training has been the failure of most schools trying to grasp technology and harness the power that technology can bring to the classroom. However, successful technology training can be accomplished only through effective

> administrative leadership … These leaders must be knowledgeable in the use of technology and must show support by providing access to the equipment and materials necessary for successful integration. (Murphy and Gunter, 1977, pp.136-137)

Besides, it is the opinion of this researcher that there is the continuing need to educate qualified teachers on the use of e-mails, websites, desktop publishing, desktop presentation, videoconferencing, and other technologies and applications that are playing a role in ICT integration.

ICT training for teachers should have at least two areas of focus- technical training and preparation to integrate ICT use into the curricular. First, teachers need technical training to learn how to use and maintain ICT equipment and software through pre-service university-based courses, in-service workshops, commercial training programmes, and other several outlets that abound in urban areas and in which facilities are available to train individuals in the use of ICT to deliver instructions. Secondly, the integration of technologies into curricular – may take a longer gestation period and would invariably requires changes of huge magnitude. In the opinions of Foa, Schwad and Johnson (1998), training in how to integrate ICT-use into the curriculum is necessary and such instruction should include effective teaching methods with ICT and the use of specific applications. This was complimented by Guernsey (1998), which revealed that

> Most faculty members say they don't' have time or skills to experiment with the Word Wide Web, let alone try complicated courseware, streaming, or on-line message boards. They need sophisticated guidance, which most computer-help desks and student assistants can't provide. And they need more than a computing centre's basic training in how to use Windows or word-processing software. It then follows that pre-service teacher preparation should place emphasis on ICT skill acquisition and integration in teaching learning processes.

2.6.4 Teacher Preparation and ICT Integration in Classrooms Teaching

The introduction of ICT does not guarantee better learning for all students neither is it a panacea to educational problems. Neal (2005)'s studies suggests that the provision of ICT as a learning resource/tool has created challenges for schools. The contemporary scenario in Nigeria clearly confirm that in the first instance, the manner in which ICT can be deployed is determined by an institution's infrastructure, finances, classroom physical space, personnel and technical support. What is on the ground shows that individual institutions adopt different organisational model. There are schools in which you found laboratories; some others you found computer interspersed in classrooms, and yet in some few instances, individual laptops, or pods.

Clearly these decisions impact on pedagogy and therefore the nature of learning and the learning culture. Generally a cursory observatory visit to any of the higher institutions of learning would reveal the following scenario: partial or virtually non-existence technical support; where it does exist, the maintenance laboratories are ill-equipped. In some instances, the technical support staffs are kept idle because maintenance is usually outsourced through contracts award. These serious lapses need to be addressed if our institution of higher learning intends to make a reasonable headway in ICT integration and usage.

The contemporary Nigerian society has witnessed a deeper intrusion of ICT tools in daily activities such as communication, gaming, and the internet. It is therefore instructive that its introduction and use in institutions of learning is ripe as the vital ground to nurture its effective utilization is already available. The children in their teen's years already had familiarity with the use of ICT including iPod, iPhone, in addition to learning introductory

computer in the primary school as a subject. In NPE (2004) the government posit thus: "In recognition of prominent role of information and communication technology in advancing knowledge and skills necessary for effective functioning in the modern world there is urgent need to integrate Information and Communication Technology (ICT) into education in Nigeria".

Professional development in ICT usage is very essential if the goal stated above is to be achieved. This is more so that Graham (2008) study suggested that classroom teachers tend to development strategies that reflect the ways in which they themselves have learned to use technology and asserted "The technology education of preparing teachers should include activities anchored in play and gaming if learning-by-play is to be included in ICT-integrated teaching agenda of novice professionals about to enter the classroom". The studies of Haydn and Buton (2007) and Lin (2008) in LeBaron and McDonough (2009) presented important facts. While the former urge that ICT teacher preparation programmes should focus explicitly on the disciplinary subject areas to be taught, the latter reported from the United States that math teachers-in-training who have incorporated Web-based instruction into their ICT training subsequently demonstrate more positive attitudes about ICT-supported teaching, and that these more positive attitudes correlate to higher levels of instructional competency.

Furthermore, Wu, Chang, and Guo (2008), and Silla and Hobbs (2008) advised that institutions in developing countries need to recognize the specialized support available to special education teachers in the developed world so that they might replicate such practice locally. This aspect form part of the challenges that is to be focused upon by policy makers and training institutions.

2.6.5 Challenges

Despite the keenness by institutions of higher learning to adopt ICT in education initiatives, they are confronted with enormous problems which are currently impeding its successful adoption and usage in teaching and learning activities. These problems ranges from poor financing, unsteady power supply and lack of enabling ICT infrastructure. Similarly, according to UNESCO (1998) cited in Ololube (2007), Igwe (2005); Nwagwu and Ahanihe (2006), efforts to improve access in Africa Sub-Sahara have been hampered by factors such as:

a. prospective ICT users that have the expertise, competence and equipment to benefit from access to electronic information networks are minute in number;
b. the shortage and high cost of equipment, software compared to situations in industrialized nations;
c. the lack of reliable and accessible physical telecommunications infrastructure; telecommunications monopoly, associated with overtly restrictive regulations and high costs; and
d. lack of inter-regional networking and cooperation amongst national universities and institutions.

That Nigeria now has a National Policy on Information and Communication Technology in Education is gladdening. There are still serious challenges ahead in the country's match toward ICT furthered-education; these include but not restricted to total lack of or non-regular power supply, and lack of country-wide telecommunications infrastructure in substantial part of the country. Mobile communications strives, but only 60% of the nation's territory is covered by the providers who powered their own generators. This is another bottleneck to effective countrywide ICT in education deployment. A clearer understanding of issues involved on perception and attitudes towards ICT usage in teaching and learning would required a review of related studies particularly in Nigeria to enable the

researcher have a broader view of the scope of the current studies and learn some basic facts that would improve the quality of the outcome of this current study.

2.7 Empirical Studies

The researcher reviewed nine contemporary empirical studies that were conducted between 2007 and 2013 covering areas such as relationship between teachers competence. impact of ICT on students learning, influence of ICT on students academic performance and on business education programme in the colleges of education, exploration studies on teachers ICT skills, perception and practices, and ICT and age related behaviours of teachers. The review was done to assist the research key-in the fundamentals of empirical research so as to be well informed about previous results and the procedures and processes that were passed through in getting the results so as to improve current study and make additional contributions their experiences and challenges therefore served as peer review guide for accuracy and documentation in the current study. These studies are:

Okon and Okon (2013) conducted a study on ICT utilization and teaching-learning in business education in tertiary institutions in Cross River State. The objective of the study was to determine the utilization of ICT in teaching-learning of business education and whether relationship exists between utilization business education lecturers and teaching of business education. The population of the study was made up of 150 business education lecturers and 835 students from four tertiary institutions; while the sample was 25 lecturers and 75 students respectively. The researcher conducted the study using survey questionnaire and analyzed the data using descriptive statistics, and simple regression analysis to test the hypotheses at 0.05 level of significance.

The findings from the study revealed that ICT utilization by lecturers has a significant positive relationship with teaching and learning of Business Education in tertiary institutions, therefore the challenge to equip schools with ICT facilities. Thus the research work is of significance to the current study examining relationship between teachers' factors and ICT usage in teaching of Business Education in Nigerian universities. In terms of conception, methodology, and data analysis, the current research study benefitted significantly.

Makinde and Makinde (2013) descriptive survey was conducted on ICT literacy characteristics of language teachers and teaching in Lagos State secondary schools. The objective was to assess the extent to which teachers' factors (such as lecturers' ICT skills competence, and lecturers' working experience), influence usage of ICT among language teachers in teaching in Lagos State secondary schools. A sample size of 175 teachers was drawn from teachers in eighteen secondary schools. The research study with was guided by five research objectives, and five research questions, while descriptive statistics was implored for data analysis.

Findings from the study established that aggregately, a large proportion of the teachers possess ICT skills and therefore, made use of ICT resources in teaching. Further outcome revealed high accessibility to ICT resources (such as computer system, internet, multimedia projector, interactive board, printer, and scanner).

The research work is of great benefit to current study in that it was a purposive study on ICT usage and teachers' related ICT factors among secondary school teachers. The focus of current study is on lecturers in Nigerian universities. Therefore, the design, methodology

and findings further exposes the researcher to current knowledge and understanding that explain the relationships of teacher factors to usage of ICT for teaching in institutions.

Adodo (2012) survey study was on teachers' gender, self-concept, interest and attitude towards interactive computer technology (ICTs) in Nigeria universities Faculties of Education. The study examines the combined contribution of computer self-concept, interest/attitude and gender of Nigerian universities pre-service teachers towards interactive computer technology. The questionnaire was used for data collection, while a sample of 240 pre-service teachers from five universities constituted the study. The data collected was tested at 0.05 alpha level using correlation matrix and multiple regression statistics.

The findings from the study revealed a positive relationship between interest/attitude towards ICT, and no relationship between gender and ICT usage. The research work is of benefit to current study with regards to methodology. In the current study, lecturers' attitude, and lecturers' gender (teachers' factors) are among the variables been examined with regards to the extent of their influence on ICT usage in teaching Business Education.

Okeke, Ezenwafor and Umoru (2012) who conducted a survey study on "perception of business educators on the impact of ICTs on teaching and learning in tertiary institutions in Nigeria." The study's objective was to ascertain the perception of business educators on the impact of ICTs on learning in tertiary institutions in Nigeria. The population was 466 while the sample size was 215 respondents across business education teachers in post primary and tertiary institutions in Nigeria. Three research questions and three null hypotheses guided the study. The research used descriptive statistics and t-test data analysis and test of hypothesis.

The findings from the study revealed low extent of ICT utilization on teaching and learning due to low level of ICT literacy among the lecturers, inadequate provision of ICT tools, lack of ICT literacy skills among lecturers, unwillingness to change from traditional teaching method to technology-mediated instructional methods. Five recommendations were proffered, the most important was that lecturers should engage in retraining programme to update and increase their ICT knowledge and competencies in order to effectively utilize the ICT tools/resources in teaching and learning.

The currency of the research work and the level at which it was conducted make the work of interest to this current study as it provided insights on intervene variable such as teachers' perception as it relates to ICT use in higher institution in Nigeria. Sarfo and Buabeng-Andoh (2012) surveyed the relationship between teachers' skills, perceptions, and practices about ICT in second-cycle institutions in Ghana. The main objective of the study was to explore teachers' skills, perceptions, and practices about ICT in second-cycle (secondary schools) institutions in Ghana. A sample size of 231 respondents was selected across fourteen schools that participated in the study. Four research questions was formulated on teachers' perception of the application of ICT in teaching, teachers' perceived skills, the extent of teachers' integration of ICT into teaching and learning, and relationship between teachers' actual use of ICT viz-a-viz their computer perceptions, computer competence, and computer experiences. Descriptive statistics and correlation coefficient was used for data analysis.

The findings in general revealed positive teachers' 'perception of ICT application in teaching and learning environment (although the respondents were more proficient in word processing than other applications); low level of ICT application despite the positive

perception; positive correlation between: teachers' competencies and ICT use; moderate positive relationship between computer experience and ICTs; low positive correlation between perception and ICT use; and inverse correlation between ICT use, age, and teaching experience. The researcher recommended that the need to give teachers' training on how to use ICT in teaching and learning to enable them acquire the requisite knowledge and skills in ICT use.

The study contributed immensely to the current work. It throws more understanding on statistical instrument suitable for a study on relationship between variables. Secondly, it enlightened the researcher on index of teachers' perceived ICT skills as well as index of teachers perceived teaching activities suitable for ICT enablement. It is also of relevance in peer review of teachers ICT skills for cross boarder knowledge sharing on variables such as perception on ICT and usage of ICTs for teaching in tertiary institutions. It also keeps the researcher on tract to establish population and in specific terms, states the instrument for data analysis.

Yusuf and Balogun (2011) study was a survey study on relationship between teachers' competence and attitude, and use of Information and Communication Technology in the Faculty of Education of the University of Ilorin", Nigeria. The main objective of the study was to investigate the attitude and competence of student-teachers towards ICT. The sample size was three hundred and eighty-two (382) undergraduate students who were drawn from seven (7) disciplines in the Faculty. Four research questions (two of which are on teachers perception of application of ICT in teaching, and teachers' perceived skills in ICT) guided the study. Survey instrument was used for data collection from the respondents, while two null hypotheses were tested viz: Ho_1 There is no significant difference between

the attitude of male and that of female student-teachers towards information and communication technology (ICT), and Ho_2 There is no significant difference between the competence of male and that of female student-teachers in ICT use for teaching and learning.

The result of the research study revealed that: majority of the respondents had positive attitude towards the use of information and communication technology (ICT), majority of the respondents affirmed they are competent in ICT use, and possess basic ICT skills (such as in application software, internet, and usage of peripheral equipment, digital projector, web camera, multi-media projector and scanner). With respect to hypotheses, there was no significant difference between male and female student-teachers' attitude and ICT use. The finding from the research study had similarity with the work of Sarfo and Ansong-Gyimah (2010), and has provided more insights and understands on perception studies. That the student-teachers had positive attitude should provide a springboard for ICT use for teaching business education courses.

The benefit of this study is that it provides understanding to the variables such as relationships between teachers' perception of ICT, and ICT usage; and relationships between teachers' ICT competence, and use of ICT in teaching which is currently under investigation by this researcher.

Ubulom, Enyekit, Onuekwa, and Amaehule (2012) study was a survey study on ICT accessibility and utilization in teaching of Business Studies in Secondary Schools in Rivers State. The purpose of the study was to investigate ICT accessibility and establish whether ICT facilities are utilized in the teaching of business studies by business studies teachers. A sample size of 66 business teachers was drawn across 30 secondary schools. Two research

questions and two research hypotheses were formulated for the study while data generated was analyzed using descriptive statistics and t-test at 0.05 level of significance.

The research findings revealed that ICT facilities were not available, and accessible to the teachers. Further, business studies teachers do not have the skills of utilizing ICT for teaching of business studies. Also, the test of statistical difference on male and female teachers' responses on accessibility and utilization shows no significant differences.
The outcome of the research was of benefit to the current work particularly with regards to research design, and methodology.

Onasanya, Shehu, Oduwaiye, and Shehu (2010) conducted a survey study to investigate higher institutions lecturers' attitude towards integration of ICT into teaching and research in Nigeria. The sample consists of one hundred and fifty 150 lecturers drawn from three tertiary institutions in Kwara State. The data generated from the study was analyzed with the use of descriptive statistics, t-test and one-way ANOVA to assess the hypotheses of no significant difference. The findings from the four hypotheses tested revealed that (1) gender has no effect on the attitude of lecturers towards the use of ICTs for teaching and research (2) less experienced lecturers are more exposed to the use of ICTs for teaching and research; (3) lecturers' possession of ICT skills has relationship with ICT use for teaching and research.

The outcome of the research work is of relevance to the current study. The current study benefitted in terms of relationship study on lecturers' attitude to technology and the use of ICTs for teaching in tertiary institutions.

Mbaeze, Ukwandu and Anudu (2010) carried out a relationship study between ICT and students' academic performance. The objective of the study was to measure how the

use of ICT tools in teaching had impacted on students' performance. From a population of 300 students (of department of psychology of Imo State University), a sample size of 120 respondents was selected. A structured questionnaire was used in collecting data while hypothesis of no statistically significant relationship between the teachers' use of computer and students' performance was tested using chi-square statistics. The results from the study revealed that there was no significant relationship between ICT usage and students' academic performance.

Although the study revealed no significant relationship exists between ICT usage and students' academic performance, the researcher benefitted greatly because:

a. The research provided a synopsis of theoretical framework for a study on relationship between perception of ICT, and usage of ICT for teaching. and
b. The reviewed study is related to the current study with regards to exposure to ICT and its use in teaching, and computer experience and computer usage. The researcher has come to understood through the reviewed work that a strong intervening variable in a study of this nature is the influence of prior experience. This study revealed that perception and attitude would make a difference on the effectiveness of technology and its use for teaching and learning in the classroom.

Pelgrum, and Voogt (2009)'s research study explores school and teacher factors that are associated with the frequency of use of ICT by mathematics teachers. The sample size for the study consists of five hundred and fifty (550) teachers by comparing mathematic teachers from countries (HIMA) with a relative high percentage of frequently ICT-use with countries (LOMA) with a relative low percentage of frequently ICT-use. The interpretation of the size of differences between the two groups of countries was done by the researchers

using statistics that is known as Cohen's effect size d^2 thus, the analysis resulted in a list of variables (at school-and-teacher-level) on which the HIMA countries differ positively or negatively from the LOMA countries. Further, factor analysis was carried out to reduce the data set.

The findings suggests that mathematics teachers in HIMA countries, more than in LOMA countries apply a learner-centred approach in their educational practice and have a focus on lifelong learning competencies compared to LOMA countries. In essence, teachers in HIMA countries were found to apply new ways of teaching and learning because they had teachers' technology skills and ICT-supported pedagogical skills.

The finding is of benefit to the current study in that it emphasised that teachers' factor that encourages pedagogical use of technology strives because of the (school-ICT pedagogical) environment. In essence, lecturers' accessibility to ICTs has relationship with availability of ICT resources in tertiary institutions.

Jegede (2009) conducted a relationship study between Age, and ICT-related Behaviours of Higher Education Teachers in Nigeria. The study's objective was to examine the effect of age of educators on time used in interacting with ICT. The sample was 467 teachers from tertiary institutions in Nigeria. Four null hypothesis (of no significant difference) was tested. One-way NOVA (Analysis of Variance), and Chi-square statistics were the major instruments for data analysis.

The findings of study revealed that age is not a factor when considering the attitudes, competence, and use pattern of teacher educators. Furthermore, age and attitudinal factors were found not to have effect on the time used on ICT by higher education teachers across age group. These findings was corroborated hypothesis of no

significant difference by that of Silliam et al (2000) in Scotland which revealed that attitudinal variations do occur across age groups. The differences in the findings notwithstanding, the findings of the study have relevance to the current study and is suggestive some other extraneous factors may interplay and affects the results in social research.

The study is related to the current work. The current work is interested in computer years of experience and ICT usage by teachers in universities. The synopsis from the reviewed work is of importance current student particularly at determining if computer years of experience affect use or non-use of ICT by teachers for teaching courses at universities in Nigeria.

Ibrahim (2009) conducted a relationship study on ICT and its influence on business education programme in the colleges of education in Nigeria. The objective was an assessment of the influence of information and communication technology on business education program in colleges of education in Nigeria. The researcher population was 5,509 (that is 5,311 students and 198 lecturers) and the sample was 598 (400 students and 198 lecturers). The researcher used descriptive statistics for analyzing demographic data, and Pearson Product Moment Correlation Co-efficient to test the null hypothesis of no significant relationship between the use of ICT and effective teaching and learning.

The findings revealed that appropriate use of ICT motivates both the teachers and the students and better prepare them to face the challenges of globalization. It went further to reveal (i) a positive relationship between computer and business education programme, (ii) relationship between computer and business education was positive in promoting creativity and strong sense of self-worth among others. The five hypotheses were positive

and significant in terms of (i) significant relationship between computer and business education programme, (ii) significant relationship between needs of business education and use of computer, and (iii) significant relationship between the use of ICT and quality in teaching of business education courses.

The study was of relevant to current one because it was a relationship study on ICT (computer), and its impact in teaching business education courses in the colleges of education Nigeria. The defect in the delimitation of institutions studies for sake of convenience was a lesson that assisted in the choice of concentrating the current study on all universities offering business education programme in Nigeria and such the generalization of current study is more valid and reliable.

Jegede, Dibu-Ojerinde and Ilori (2007) carried out a relationships study on ICT competence and attitude among some Nigerian tertiary institution lecturers. The main objective of the study was to determine the nature of relationship between ICT competence and attitude among teachers in tertiary institutions in Nigeria. The sample was 476 teachers (from universities, and colleges of education). The resulting data were analyzed using Pearson Product Moment correlation co-efficient and multiple regression statistics to situate attitude construct while predicting competence.

The findings revealed that attitude bears significant relationship with, and predict competence. In the conclusion, the researcher said that if teachers perceived competences to be useful in their pedagogical enterprise, the interest become aroused which in turn help computer skills application. It further revealed that (i) relationship between computer competence and general attitude was significant, and (ii) relationship between dependent

variable (computer competence) and independent variables (perceived usage, and general attitude) were statistically significant.

The study is relevant to the current study because the current study exploring relationship between teachers' competence and usage of ICT for teaching. The finding is of significant because it asserted causal-relationship between perception and ICT use in education in terms of availability, adequacy, exposure, and use level.

2.8 Summary Literature Review

In summary, evidence exists suggesting that potential teacher related factors are defined in various studies as significant variables to explain ICT usage. ICT usage in all practical purposes depends first on whether there are enough ICT facilities. Many of the studies reviewed suggested that accessibility is a function of availability. A major concern however, is that 95% of existing studies in the area of ICT in education in Nigeria, are not in business teacher education. Further, most of the available studies are on perception, so there need to conduct a study to establish potential user related variables on lecturers' ICT skills, exposure to ICTs, accessibility to ICT, attitudes towards usage of ICT, lecturers' ICT working experience, and gender ICT-use in business teacher education programme. Also, attempt to develop instruments for measuring teachers' attitudes toward using computer in general permeates the literature, none of them had focused specifically at examining teachers' attitudes towards usage of ICT in business teacher education programme locally and globally. However, there was evidence that the use of ICT in education greatly improves student motivation, learning engagement and higher thinking skills, and that integrating ICT tools in teaching can lead to increase in students' learning, and also increased opportunities for communication.

It was established in the review that higher education institutions across the world have been adopting ICT teaching and learning technologies to create an environment for both students and their instructors to engage in collaborative learning and gain access to information. Also that when teachers use their knowledge of both the subject and the way students understood the subject, their use of ICT has a more direct effect on students' attainment. Furthermore, that the effect of attainment would be greatest when students are challenged to think and to question their own understanding, either through the use of topic-focused software on their own, in pairs, or through a wholesale presentation.

Previous research findings revealed that teachers' pedagogical beliefs and values play an important part in shaping technology-mediated learning opportunities. In line with the Federal Ministry of Education on-going paradigm shift in content standards and pedagogical skills towards meeting both challenges of local needs and global competitiveness, experts argued for an urgent overhaul of the existing teacher education programmes towards redefining its context and concepts in terms of philosophy, subject combination, mode of training, length of training and structure of training, renewal of the pedagogical offerings, updating of the general standards in the teaching of subject matter and an introduction of new knowledge and subject matter in ICT furthered-education. In this respect, the universities and colleges of education were urged to come up with a common blue-print for the Nigerian Teacher Education programme that can adequately respond to the challenges of the 21st century business and industry needs.

From the contemporary empirical studies reviewed, much attention was devoted to ICT utilization (Okon and Okon, 2013); teahers' ICT literacy (Makinde and Makinde, 2013); teachers' gender and attitude (Adodo, 2012); lecturers' accessibility and utilization of

ICT (Ubulom, Enyekit, Onuekwa, and Amaehule (2011); relationship between teachers competence and attitude (Yusuf and Balogun, 2011; Jegede, Dibu-Ojerinde and Ilori, 2007), impact of ICT on students learning (Okeke and Umoru, 2012), influence of ICT on students academic performance (Kosoko-Oyedeko and Tella 2010, Mbaeze, Ukwandu and Anudu, 2010); lecturers' attitude towards integration of ICT into teaching and research (Onasanya, Shehu, Oduwaiye and Shehu, 2010); and on business education programme in the colleges of eduction (Ibrahim (2009), exploration studies on teachers ICT skills, perception and practices (Saro and Buabeng-Andoh, 2012); school and teacher factors associated with frequency use of ICT(Pelgrum and Voogt, 2009), and ICT and age related behaviours of teachers (Jegede, 2009). It was clearly evident that that there is more work to be done to seek explanations as to why teachers seems not prepared to use ICT in teaching, whether tertiary institutions are lacking in basic ICT infrastructure for effective usage. Furthermore, explore why teachers who are expected to learn and know about technology and its usage have either neglected it, failed to use it or were not even exposed at all to how to use it.

The missing gaps prompted the researcher to seek for further studies focusing on relationship between teachers' factors and ICT usage in teaching business education in Nigerian universities. From a practical viewpoint, a deeper knowledge base on best practices in teacher education would inform better programme development for education's ultimate clients - the emerging leaders of tomorrow.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

In this chapter, the researcher explained the methodology used in conducting the research work under the following sub-headings:

3.1 Research Design;

3.2 Population of 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 Reliability of the Instrument;

3.4.3 Pilot Study;

3.5 Procedure for Data Collection;

3.6 Procedure for Data Analysis

3.1 Research Design

In order to ensure that the evidence obtained enabled the researcher to answer the research questions which were raised for the study, the researcher considered appropriate choice of a design. Isaac and Michael (1997) in Trochim (2006) said a design ensures that the major parts of the research such as sample, measures, treatments and methods work together to address the central research questions. The descriptive survey research design was therefore used for this research study because it avails itself of systematic documentation of current opinions and information on the research work. Francis (2003); Glasow (2005); Isaac and Michael (1997) in Trochim (2006), opined that this design

enables researchers to analyse trends across time, and generally to describe what exists, in what amount, and in what context. In essence, the researcher administered survey questionnaires to the respondents (business education teachers) in the institutions selected for the study so as to be able to quantitatively describe specific aspect of the sample study and examine relationships among variables of the study (Glasgow, 2005).

Further, the survey design was chosen because the random assignment was not feasible in this study, also one of the variables of the study (ICT skills) is in its emerging phase for teaching and learning in Nigerian universities. In addition, the pool of the respondents that participated was too dispersed (Moore, 2008) across seventeen cities in seventeen State's capital in Nigeria.

3.2 Population for the Study

The population for the study comprised all the one hundred and sixty-three (163) teachers of Business Education in the Eleven Federal and Six State owned Nigerian Universities. According to Taylor (2014), population consists of everything or everyone being studied in an inference procedure and can be large in size, although not necessarily large. The population of business education teachers in these seventeen universities, obtained from personnel records of each of the universities during 2012/2013 session as summarizes, shows that 104 were in the Federal Universities and 59 in the State Universities respectively.

The nominal roll of teaching staff in business education programme across the entire seventeen institutions as at 2012/2013 academic session when the study was embarked upon are presented in Table 3.1.

Table 3.1 Population for the Study

S/N	NAMES OF INSTITUTIONS*	STATE	DEPT/ SECTION	NOMINAL STAFF ROLL**		
	North –Central			**Male**	**Female**	**Total**
1	Ahmadu Bello University, and Affiliated Shehu Shagari College of Education, Sokoto (ABU, 2010)	Kaduna	Voc & Tech Educ.	8	3	11
	North –West					
2	Usman Danfodio University, Sokoto	Sokoto	Curriculum Studies & Educational Tech	5	2	7
	North- East					
3	Abubakar Tafawa Balewa University, Bauchi	Bauchi	Voc Technology Education	4	4	8
4	Moddibo Adama University of Technology, Yola	Adamawa	Vocational Education	5	3	8
5	University of Maiduguri, Maiduguri	Borno	Technology Education	5	2	7
	South –East					
6	Ebonyi State University, Abakaliki	Ebonyi	Voc & Tech Education	5	4	9
7	Nnamdi Azikwe University, Awka	Anambra	Business Education	7	5	12
8	University of Nigeria, Nsukka	Enugu	Voc Teacher Education	5	4	9
	South –West					
9	Ekiti State University, Ado Ekiti	Ekiti	Educ. Foundations & Mgmt	6	4	10
10	University of Lagos, Lagos and Affiliate Campus (Akoka)	Lagos	Business Education	7	5	12
11	Tai Solarin University of Education, Ijebu-Ode	Ogun	Applied Educ. & Voc Technology	4	5	9
	South-South					
12	Ambrose Ali University, Ekpoma	Edo	Voc & Tech Education	5	4	9
13	Delta State University, Abraka	Delta	Voc & Tech Education	6	4	10
14	University of Benin, Benin-City	Edo	Voc & Tech Education	6	4	10
15	University of Calabar, Calabar	Cross River	Voc & Special Education	6	4	10
16	University of Science & Technology, Port Harcourt	Rivers	Voc & Technology Education	5	6	11
17	University of Uyo, Uyo	Akwa-Ibom	Vocational Education	6	5	11
	Total			**95**	**68**	**163**

Sources: * National University Commission, Abuja (2012/2013) **Departmental Staff Nominal Rolls of the Universities constituting the study (August, 2012).

3.3 Sample Size and Sampling Procedure

The research used purposive sampling method for this study since all the seventeen (17) universities running the business education programme during the 2012/2013 academic session were selected to constitute the sampled universities.

In determining appropriate sample size, the researcher was guided by Krejcie and Morgan (1970)'s recommended sample size of 118 for population of 170. In order to allow the researcher get reasonable representation for the study, the sample size was increased to 140 for both male and female respondents, and school type. Johnson and Christensen (2014) recommended that if gender variable is important to a study, the researcher can use disproportionate stratified sampling towards ensuring gender balance. Therefore, the researcher increased gender representation for the two types of institutions studied. Table 3.2 contained the sample size according to institution type and gender.

To ensure equitable distribution of the purposively selected sample, the researcher use of the following formula:

$$\text{Sample} = \Sigma \frac{X_1}{\Sigma N} \left[x \frac{TS}{1} + \frac{X_2}{N} x \frac{TS}{1} \text{ etc} \right]$$

Where X_1 - X_{17} refers to staff nominal roll in each of the selected university

ΣN refers to total nominal roll for all the 17 universities, that is, 163

TS refers to Krejcie and Morgan (1970) sample size for a given population, for example, the given sample size for population of 170 is, 140 (see Appendix II

In order to facilitate the selection of the sample, the Nigeria's six geo-political zones of North Central, North-East, North-West, South-East, South-West and South-South were used. In using purposive sampling in determining sample size for each institution, the research used the number on staff list of each institution and divided it by total population,

then multiply by 100 ($x1_{/N}$ x 100). Johnson and Christensen (2014) recommended that a researcher should first divide the sampling frame into sub-populations based on one or more purposive variable. The researcher thus used purposive stratification variables of school types, and also gender and took the sample randomly from each of the strata. The researcher ensured that the sample proportions were made to be the same as the populations on the stratification variables of school types, and genders. The method adopted was that the researcher wrote the names of each university as many times as the population index (See Table 3.1) on pieces of papers (ballot) based on proportionally stratification with distinctive label for males and females (such as ABU M for male and MAUT F for female) respondents for the entire population (163).

Each ballot paper was carefully folded and dropped into a drum. Five persons namely the researcher, and the other four assistant researchers participated in the selection process. The drum was rolled for twenty–eight (28) times and each time the drum was rolled, each person picked a ballot. Therefore, the researcher ensured that each participating university in the population was given equal chances of being part of the sample selected for the study.

Table 3.2: Sample Size for the Study

S/ NO	NAME OF INSTITUTIONS	LOCATIONS	STATE	NOMINAL STAFF ROLL		
	North –Central			**Male**	**Female**	**Total**
1	Ahmadu Bello University	Zaria	Kaduna	7	2	9
	North –West					
2	Usman Danfodio University, Sokoto includes (SSCOE)	Sokoto	Sokoto	4	2	6
	North- East					
3	Abubakar Tafawa Balewa University	Bauchi	Bauchi	4	3	7
4	Moddibo Adama University of Technology	Yola	Adamawa	5	2	7
5	University of Maiduguri	Maiduguri	Borno	4	2	6
	South –East					
6	Ebonyi State University	Abakaliki	Ebonyi	7	1	8
7	Nnamdi Azikwe University	Awka	Anambra	8	3	11
8	University of Nigeria	Nsukka	Enugu	5	3	8
	South –West					
9	Ekiti State University	Ado Ekiti	Ekiti	7	2	9
10	University of Lagos, Lagos and Affiliate Campus at Federal College of Educ. Akoka	Akoka	Lagos	5	6	11
11	Tai Solarin University of Education,	Ijebu Ode	Ogun	4	4	8
	South-South					
12	Ambrose Ali University	Ekpoma	Edo	5	3	8
13	Delta State University	Abraka	Delta	4	4	8
14	University of Benin	Benin-City	Edo	5	3	8
15	University of Calabar	Calabar	Cross River	5	3	8
16	University of Science & Technology	Port-Harcourt	Rivers	4	5	
17	University of Uyo	Uyo	Akwa Ibom	5	4	9
Total				**88**	**52**	**140**

3.4 Instrument for Data Collection

The instrument used for this study is 60 items structured questionnaire developed by the researcher. The instrument had Sections 'A' and 'B' in which Section A has questionnaire items A1-3 focusing on demographic information such as school type, gender, and number of years of computer experience. The Section B was structured based on research questions generated for the study. The distributions are as follow: (a) research question one (questionnaire items 1-10), (b) research question two (questionnaire items 11-20), c) research question three (questionnaire items 21-30), research question four (questionnaire items 31-40), research question five (questionnaire item 41-50), and research question six (questionnaire items 51-60). All the questionnaire items in Sections B were with four-point scale) of 'Strongly Agree' (SA), 'Agree' (A), 'Disagree' (D), and 'Strongly Disagree' (SD) respectively.

3.4.1 Validity of the Instrument

In view of the modification done to the adopted European Commission Survey Instrument (Haywood , 2011), the research subjected the modified version for validity and reliability by four research experts, three from the teaching staff in the university, and one ICT consultant (from the industry) vetted the instrument and effected different corrections. Their comments and suggestions were then incorporated. The instrument was then administered for the pilot study. Further input was made after the conduct of the Pilot Study.

3.4.2 Pilot Study

In order to test the reliability of the instrument, the researcher conducted a pilot study and used academic staff in the Department of Business Education of the Federal College of Education Kano (ABU affiliated programme). The sampled group had similar characteristics with the population sample for the main study. The pilot study was carried out to ascertain both stability and internal consistency of the research instrument. While conducting the study, the researcher followed the procedures enumerated for the questionnaire administration, and the analysis of the data. A total of ten (10) business education teachers out of the thirteen (13) in the College participated in the pilot study.

The method adopted was that the researcher wrote the name of each of the fifteen (15) lecturers in the College pieces of papers (ballot) with each ballot paper carefully folded and dropped into a drum. At intervals, the drum was turn run and a piece of ballot paper taken out until ten (10) pieces of paper was collected. The pilot instrument was then administered on the target respondents during in one of the Departmental Meeting, which was duly completed and collected personally the same day by the researcher.

3.4.3 Reliability of the Instrument

The researcher determined the reliability of the instrument using the data collected through the pilot study. The result obtained from the data analysis of the pilot study showed a correlation co-efficient that yielded an r=0.75 through Cronbach alpha. According to Koshar (2014) , the correlations should be high such as r=.80 (80%) and low as r=.7 (70%) for an instrument. Anatastasia cited in Ibrahim (2009) said a reliable co-efficient of 0.80 and 0.70 implies that the instrument is internally consistent and valid for studies of this nature.

3.5 Procedure for Data Collection

The researcher had a meeting with the research assistants after which each of them was deployed to specific geo-political zone where the institution visited was located. The researcher and each of the research assistants went along to each of the institutions with a photocopy of the letter of introduction obtained by the researcher from the Head, Department of Vocational and Technical Education, Ahmadu Bello University, Zaria (See Appendix II). The letter introduced the researcher and requested each of the institutions to give assistance that may be required to conduct the research work. Therefore on reporting, each of the Heads of Department attached an internal cooperating staff, which assisted and guided the researchers both in locating respondents, and in the administration and retrieval of the research instruments (questionnaire).

The research team (which also included Secretaries to Head of each of the Departments visited) used a face to face delivery method in the administration and collection of the instruments. This is because it afforded the team to obtain a high rate of return of the completed questionnaire instrument. Out of 140 copies of questionnaire administered, 127 (representing 91% of the total sample) were properly completed and these were presented and analyzed in chapter four. Overall, it took a total of two months (eight weeks) of extensive travelling to serve and retrieved back the duly completed questionnaire items from all the institutions earlier visited. Some of the questionnaire instruments were retrieved through Express Mail Service (EMS) within a month after the team returned back from field study.

3.6 Procedure for Data Analysis

In analyzing the data generated from the study, the researcher used descriptive statistics (displayed in Tables of frequencies, mean, and percentages) to summarize bio-data, and also responses to research questions. According to Kessler (2012), it provided avenue to carry out data interpretation and analysis for purposes of making inferences or generalization on the outcome of the study. Data collected from respondents in response to the five research questions of the study were analyzed in Table 4.2 to 4.13. In the course of the analyses, opinions of respondents were categorized into agreed and disagreed in order to facilitate better understanding and clearer interpretation of data. Four rating scales were used for all the computations. Towards facilitating data analysis and better decision, the researcher classified 'Strongly Agreed' and 'Agreed' as 'Agreed', and, on the other hand 'Disagreed' and 'Strongly Disagreed' were classified as 'Disagreed'. Furthermore, a mean score of 2.5 and above was taken as an index of 'Agreement' while scores below 2.50 was taken as an index for 'Disagreement' in the context of the two extremes of the opinions

The null hypotheses one to six formulated for the study were tested using Pearson Product Moment Correlation Co-efficient Statistics. Easton and McColl (2013) recommended that it is useful in measuring linear association or relationship between independent variable(s). In the analysis, when the r-calculated value was equal or greater than r-crit, the null hypothesis was rejected. On the other hand when the r-cal value of any of the hypothesis was less than the r-crit, the null hypothesis was accepted. All the null hypotheses were tested at 0.05 level of significance.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

In this chapter, the researcher presents the collected data for analysis and discussion. The analysis is presented under the following headings:

4.1 Presentation and Analysis of Demographic data

4.2 Answering the research questions

4.3 Hypotheses Testing

4.4 Discussions of the Findings

4.1 Analysis of Demographic Data

To enable the researcher collect demographic information on the respondents, Questionnaire Section A) items 1-2 in Appendix III was used. In analyzing the demographic data of the respondents, frequency distribution and percentages were used. Summary of the analysis of demographic data is presented in Table 4.1.

Table 4.1 Demographic Profile and Percentage Sample Distribution of Respondents

Demographic Profile		Frequency (N = 127)	Percentage (%)
Gender	Male	79	62
	Female	48	38
	1	5	4
	2 -3	15	12
Years of Computer Experience	3 -4	18	11
	Above 4	89	73

Source: Field Study 2013

The table further revealed that 79 (62%) of the respondents were males and 48 (38%) were females across the Federal and State Universities respectively. The implication is that although gender disparity exists, the difference is not significant enough to affect

generalization of the results on gender parity because male and female respondents were fairly represented. Furthermore the general trend shows that location and societal variables affected the population of female respondents generally which however, had not affected the study in any way.

Further information in Table 4.1 revealed the summary of the analysis of respondents according to years of computer experience. The majority of the respondents 89 (73%) has computer experience spanning over 4 years in contrast to 38 (26%) whose computer experience is between 1 – 3 years. By implication, this means that majority of the respondents are not novice in ICT knowledge and understanding and are conscious about a choice of the responses they had indicated while completing the questionnaire. Most of them are experienced enough to know the importance and likely benefits derivable from using technology for teaching and learning, and that their responses not only very accurate but equally reliable if generalized.

4.2 Answering the Research Questions

To determine how the mean and standard deviations were arrived at, the raw scores for each of the variables in research questions one to six were calculated and their results are shown on Tables 4.2-4.7

Research Question One: What is the relationship between lecturers' ICT skills and its usage in teaching business education courses in Nigerian Universities?

Table 4.2: Mean Scores of responses on ICT skills and its usage in teaching business education courses

QI		SA	A	D	SD	T.A	T.D	Mean	Std Dev.	Remark
1	Lack of ICTs skills has no effect on its usage in teaching business education courses	132	105	60	22	237	82	2.9	0.67	Agreed
2	If lecturers acquire ICT skills he will be encourage to use it in teaching	160	78	56	30		86	2.9	0.67	Agreed
3	Lecturer ability to use a tool in teaching depends on its effectiveness on manipulation of the tool	116	117	68	20	233	88	2.9	0.67	Agreed
4	ICT skills is essential on its usage in teaching	112	97	96	20	209	106	2.7	0.62	Agreed
5	Most lecturers hardly used ICT in teaching because they have no requisite skills on its usage	212	144	32	10	356	52	3.5	0.97	Agreed
6	Factors that affects the usage of ICT in teaching include ICT skills	88	126	84	29	214	113	2.6	0.59	Agreed
7	Ability to use ICT for teaching of business education courses depends on lecturers' knowledge of the tools	104	112	84	19	216	93	2.8	0.64	Agreed
8	It is difficult for me to use ICT to teach students because I lack the essential skills	76	117	94	22	193	116	2.5	0.58	Agreed
9	Know what to do with computers determine its usage in teaching	108	147	70	14	255	84	3.0	0.76	Agreed
10	Lecturers competence on ICT encourages him to use it in teaching business education courses in the universities	88	135	90	15	215	105	2.7	0.62	Agreed
Total						**2366**	**925**	**2.9**	**0.69**	**Agreed**

Source: Fieldwork 2013

Analysis of data used to answer research question one presented in Table 4.2 revealed the mean scores of the 10 questionnaire items to be greater than the benchmark score (2.5) for agree, this can also be seen in the cumulative mean score (2.9>2.5) with the standard deviation value of 0.69. Based on this result, the researcher concluded that skills of lecturers on ICTs have significant influence on its usage for teaching of business education courses in Nigerian universities.

Research Question Two: What is the relationship between lecturers' ICT exposure and its usage in teaching business education courses in Nigerian Universities?

Table 4.3: Mean Scores of responses on ICT exposure and its usage in teaching business education courses

QI		SA	A	D	SD	T.A	T.D	Mean	Std Dev.	Remark
11	Lecturers exposure to ICT has effect on its usage in teaching	412	225	172	29	637	201	3.0	0.86	Agreed
12	The knowledge of ICT helps on its usage in teaching business education courses	224	225	172	34	449	206	2.7	0.74	Agreed
13	Ability of lecturer to use ICT for teaching of business education courses depends his initial exposure	464	297	188	15	761	203	3.2	0.89	Agreed
14	Those that do use ICT for teaching are expose to it	288	288	204	19	576	223	2.9	0.82	Agreed
15	Those that have exposure to computer are afraid of using it for teaching	576	459	112	10	1035	122	3.6	1.01	Agreed
16	Lecturers that have ICT exposure find it difficult to use it in class	108	168	196	34	276	230	2.2	0.54	Disagreed
17	My inability to use ICT in class is because I am not expose to it	152	371	160	24	523	184	3.0	0.86	Agreed
18	Lecturers that are not exposure to ICT gadgets are skeptical on its usage	208	297	318	25	505	343	2.4	0.66	Disagreed
19	The technical nature of ICT affects its usage in the class	400	396	144	19	796	163	3.3	0.91	Agreed
20	My knowledge of ICT discourage me from using it when teaching students	496	288	156	22	784	178	3.3	0.91	Agreed
Total						**6342**	**2053**	**3.0**	**0.82**	**Agreed**

Source: Fieldwork 2013

The Descriptive Statistics used to determine relationship between lecturers' exposure to ICT and its usage on teaching of business education courses in Nigerian universities revealed mean score of eight (8) of the questionnaire items to be greater than the index score for agreed with only two (2) below it. The cumulative mean score was greater than the index score for agreed (3.0>2.5) with standard deviation value of 0.82. Based on the analysis, the study shows that ICT exposure has relationship with its usage on teaching business education courses in Nigerian universities.

Research Question Three: What is the relationship between lecturers' accessibility to ICT and its usage in teaching business education courses in Nigerian Universities?

Table 4.4: Mean Scores of responses on accessibility to ICT and its usage in teaching business education courses

QI	Statement	SA	A	D	SD	T.A	T.D	Mean	Std Dev.	Remark
21	We have inadequate ICT gadgets for teaching students	312	117	16	1	429	17	3.4	0.97	Agreed
22	most teachers have no access to ICT gadgets for teaching	296	132	16	1	428	17	3.4	0.97	Agreed
23	It is difficult to have access to ICT facilities for teaching in our institutions	228	144	38	1	372	39	3.6	1.01	Agreed
24	Most lecturers find it difficult to use ICT to teaching because of accessibility	228	135	42	1	363	43	3.6	1.01	Agreed
25	I hardly use ICT for teaching because I have no access to it	280	117	28	3	397	31	3.7	1.03	Agreed
26	Lack of ICT gadgets in our school affects its usage in teaching	260	123	40	0	383	40	3.6	1.01	Agreed
27	Inadequate ICT facilities is one of the problems affecting its usage	180	117	66	7	297	73	3.2	0.89	Agreed
28	Usage of ICT in class depends on its accessibility	176	120	66	8	296	74	3.2	0.89	Agreed
29	Lecturers are skeptical of using ICT to teach because of its accessibility	116	126	98	4	242	102	2.8	0.80	Agreed
30	If I have access to ICT in class, I will use it to teach my students	120	120	84	13	240	97	2.8	0.80	Agreed
Total						***3447***	***533***	***3.3***	**0.94**	**Agreed**

Source: Fieldwork 2013

The descriptive statistics used to answer research questions three presented in Table 4.4 revealed means scores of all the 10 questionnaire items to be above the index scores (2.5) for agree. The cumulative mean scores which stood at 3.3 was found to be greater than the benchmark scores of 2.5 for agreed with standard deviation value of 0.94. Based on the result the study shows that there is a strong relationship between lecturers' accessibility to ICT and its usage in teaching business education courses in Nigerian universities.

Research Question Four: What is the relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian Universities?

Table 4.5: Mean Scores of responses on lecturers' attitude on usage of ICT in teaching business Education courses

QI	Statement	SA	A	D	SD	T.A	T.D	Mean	Std Dev.	Remark
31	Most lecturers in business education appreciate the role to ICT in teaching	232	168	20	0	400	20	3.8	1.05	Agreed
32	I like using ICT to teaching business education courses	244	159	20	1	403	21	3.8	1.05	Agreed
33	Attitude of lecturers towards ICT has impact on its usage in the class	200	171	28	0	371	28	3.7	1.03	Agreed
34	Lecturers who have negative attitude towards ICT are always skeptical to use it in teaching	204	153	36	3	357	39	3.6	0.96	Agreed
35	Most lecturers that have negative attitude towards ICT find it difficult to use ICT in teaching	240	96	28	2	336	30	3.7	1.03	Agreed
36	Those who have positive attitude towards ICT can make use of it in teaching	220	156	24	5	376	29	3.7	1.03	Agreed
37	Ability of lecturer to use ICT for teaching depend on their attitude towards it	152	132	66	7	284	73	3.2	0.89	Agreed
38	My inability to use ICT in class is attributed to my attitude towards it.	148	117	72	11	265	83	3.0	0.86	Agreed
39	Lecturers that have positive attitude towards ICT find it easy to use it in teaching students	128	129	82	7	257	89	2.8	0.80	Agreed
40	Negative attitude on the use of modern equipment in class has relationship on its usage in class	176	105	72	10	281	87	3.1	0.87	Agreed
Total						***3229***	***500***	***3.4***	**0.96**	**Agreed**

Source: Fieldwork 2013

The result of data used to answer research question four presented in Table 4. 5 shows the mean scores of all the 10 items to be greater than the benchmark for agree. This can also be seen in the cumulative mean score which was found to be greater than the mean score for agree (3.4>2.5) with deviation mean value of 0.96. The result of the analysis therefore shows that, there is relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian universities.

Research Question Five: What is the relationship between lecturers' working experience and the usage of ICT in teaching business education courses in Nigerian Universities?

Result of data used to determine the relationship between the variables in research question five is presented in Table 4.6

Table 4.6: Mean Scores of responses on lecturers' working experience on usage of ICT in teaching business Education courses

QI		SA	A	D	SD	T.A	T.D	Mean	Std Dev.	Remark
41	My working experience has significant influence on my ICT skills.	72	129	72	25	201	97	2.7	0.74	Agreed
42	My working experience has help me in acquiring ICT skills	180	183	20	3	363	23	3.8	1.05	Agreed
43	Due to my working experience, I have appreciate the use of ICT in teaching students	304	105	12	3	409	16	3.8	1.05	Agreed
44	My ability to use ICT in teaching is attributed to my working experience	36	165	72	10	201	82	2.8	0.80	Agreed
45	Old lectures find it difficult to use ICT in teaching.	24	75	68	55	99	123	1.8	0.48	disagreed
46	Year of experience has effect on the usage of modern technology in teaching	36	36	62	69	72	131	1.5	0.41	disagreed
47	Lecturers who have ICT exposure are better on its usage of modern technology in teaching and learning	148	183	32	5	331	37	3.6	0.96	Agreed
48	My teaching experience has negative effect on my skills on the use of ICT in class,	260	153	6	1	413	7	3.9	1.15	Agreed
49	New lecturers are more skillful on the use of modern technology in the class	316	114	4	1	430	5	4.0	1.20	Agreed
50	Use of ICT is much appreciated by young lecturers	296	132	4	1	428	5	4.0	1.20	Agreed
Total						***2947***	***526***	***3.2***	**0.9**	**Agreed**

Source: Fieldwork 2013

The analysis of data in Table 4.6 used to answer research question five shows the mean scores of eight (8) of the questionnaire items to be greater than the index score of agree with only two below it. The cumulative mean score was 3.2 and the standard deviation value of 0.9. The mean score was found to be greater than the decision rule value of 2.5. Based on the analysis, the study showed that lecturers' working experience has relationship with their usage of ICT in teaching business education courses in Nigerian universities.

Research Question Six: What is the relationship between Lecturers' gender and the usage of ICT in teaching business education courses in Nigerian Universities?

Analysis of data used to determine the relationship between the two variables in research question six is as presented in Table 4.7

Table 4.7: Mean Scores of responses on lecturers' gender and usage of ICT in teaching business education courses

QI		SA	A	D	SD	T.A	T.D	Mean	Std Dev.	Remark
51	I hardly use ICT because of my gender	64	24	56	33	88	99	1.9	0.58	Disagreed
52	Female lecturers hardly use ICT for their academic work	56	62	8	87	128	96	2.3	0.69	Disagreed
53	Only male lecturers in business education are ICT compliance.	84	54	100	28	138	128	2.1	0.62	Disagreed
54	Gender sensitive affects the usage of ICT among male lecturers	116	12	146	2	128	148	1.9	0.57	Disagreed
55	There is wide gap between male and female lecturers in business education on ICT usage	16	81	58	42	97	100	2.4	0.80	Disagreed
56	Only female lecturers in business education find it difficult to use ICT facilities	20	99	54	102	119	156	1.7	0.52	Disagreed
57	Only male lecturers in business education do make use of ICT for teaching	32	90	70	17	122	87	2.3	0.69	Disagreed
58	Gender is one of the factors that affects the using of ICT in teaching students	60	105	92	24	165	116	2.3	0.69	Disagreed
59	Female are better when it comes to ICT skills and usage in classroom	192	56	54	24	138	138	2.0	0.60	Disagreed
60	Both male and female lecturers can use ICT facilities to teach students	188	180	14	4	389	16	3.8	1.05	Agreed
Total						**3130**	**505**	***2.3***	**0.68**	**Agreed**

Source: Fieldwork 2013

The result of data presented in Table 4. revealed mean score of only one (1) of the questionnaire items used to answer the research question to be greater than index score of 2.5 for agree with nine (9) below the score. The cumulative mean score value of 2.3 was found to be less than the index score with standard deviation value of 0.68. From the result, the study indicated that, lecturers' gender has no influence on ICT usage in teaching business education courses in Nigerian universities

4.3 Hypotheses Testing

The six null hypotheses of the study, as stated in chapter one, were tested and the analyzed data were presented in Tables 4.8 to 4.13. The Pearson Product Moment Correlation Coefficient was employed in testing the six null hypotheses.

HO_1: *There is no statistically significant relationship between lecturers' ICT skills and its usage in teaching business education courses in Nigerian Universities*

Result of test of null hypothesis one is presented in Table 4.8

Table 4.8: Test of relationship between ICT skills and usage in teaching business education

Variables	Mean	Std. Dev	Df	r-cal	r-crit	Sig. (2-tailed)
ICT skills	2.89	0.86	116	.211**	. .195	0.002
Usage of ICTs for teaching	2.39	0.85				

Result of the Pearson Product Moment Correlation Coefficient (PPMC) statistics revealed a statistically significant relationship between ICT skills and its usage for teaching was confirmed by the calculated P value of 0.002 to be less than the 0.05 level of significant. This can also been seen in the calculated correlation value which is greater than the critical table (0.211>0.195) at 5% level of significance. Hence, the null hypothesis which stated that ICT skills have no statistically significant relationship with ICT usage for teaching business education courses was rejected.

HO_2: *There is no statistically significant relationship between lecturers' ICT exposure and its usage in teaching business education courses in Nigerian Universities*

The result of test of null hypothesis two is presented in Table 4.9

Table 4.9: Test of relationship between ICT exposure and its usage in teaching business education

Variables	Mean	Std. Dev	df	r-cal	r-crit	Sig. (2-tailed)
ICT exposure	3.02	1.02	116	.313**	.195	0.000
Usage of ICTs for teaching	2.39	0.85				

In Table 4.11 the result revealed mean scores of 3.02 and 2.39 for lecturers' ICT exposure and usage of ICTs for teaching with standard deviations of 1.02 and 0.85 respectively. The r-cal value was greater than the r-critic (.313>.195). The analysis showed a statistically significant relationship between lecturers' ICT exposure and its usage in teaching business education courses in Nigerian universities. Hence, the null hypothesis which stated that there is no statistically significant relationship between lecturers' ICTs exposure and its usage for teaching business education courses in Nigerian universities was not retained.

HO_3: *There is no statistically significant relationship between lecturers' accessibility to ICT and its usage in teaching business education courses in Nigerian Universities*

Result of test of null hypothesis one is presented in Table 4.10

The result of test of null hypothesis three is presented in Table 4.12.

Table 4.10: Test of relationship between ICT accessibility and its usage in teaching business education

Variables	Mean	Std. Dev	Df	r-cal	r-crit	Sig. (2-tailed)
ICT Accessibility	2.78	0.98	116	.203*	.195	0.001
Usage of ICTs for teaching	2.39	0.85				

From the Table 4.10, the result of the analysis showed that there is a significant statistically relationship between ICT accessibility and its usage for teaching. The calculated value was greater than the Table value (.203>.195), this was also in the probability value where 0.001<0.05. Based on the outcome of the analysis, lecturers' accessibility to ICTs has statistically significant relationship with its usage for teaching, hence the null hypothesis which stated no statistically significant relationship exist between ICT accessibility and its usage on teaching on business education was not retained.

HO_4: There is no statistically significant relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian Universities

Result of test of null hypothesis one is presented in Table 4.11

Table 4.11: Test of Relationship between lecturers' attitude to ICT and its usage in teaching business education

Variables	Mean	Std. Dev	df	r-cal	r-crit	Sig. (2-tailed)
Attitude towards ICT	2..59	0.88	116	.218**	. .195	0.000
Usage of ICTs for teaching	2.39	0.85				

The outcome of the result in Table 4.11 of Pearson Moment Correlation (PPMC) statistics revealed that lecturers' attitude has a statistically significant relationship on usage of ICTs for teaching business education courses in Nigerian universities. This is because the calculated alpha level of 0.000 is less than the 0.05 level of significant. The correlation Coefficient index r level of is higher than the critical value (0.218>0.195) at 5% level of significance. Hence, the null hypothesis which stated that lecturers' attitude to ICT has no statistically significant relationship with its usage in teaching business education courses in Nigerian Universities was not retained.

HO_5: *There is no statistically significant relationship between lecturers' working experience and the usage of ICT in teaching business education courses in Nigerian Universities*

Result of test of null hypothesis one is presented in Table 4.12

Table 4.12: Test of Relationship between lecturers' experience and ICT usage in teaching business education

Variables	Mean	Std. Dev	df	r-cal	r-crit	Sig. (2-tailed)
Working experience	3.01	0.95	116	0.90**	. .195	0.001
Usage of ICTs for teaching	2.39	0.85				

From Table 4.12 was the result of the analysis which showed that there is no statistically significant relationship between lecturers' working experience and ICT usage for teaching business education courses at universities. The calculated value was greater than table value (0.90>195), while the P<0.05. The result of the analysis therefore shows that working experience has significant relationship with usage of ICTs for teaching business education courses in Nigerian universities; hence null hypothesis was not retained.

HO_6: *There is no statistically significant relationship between Lecturers' gender and the usage of ICT in teaching business education courses in Nigerian Universities*
Result of test of null hypothesis one is presented in Table 4.13

Table 4.13: Test of Relationship between lecturers' gender and usage of ICT in teaching

Variables	Mean	Std. Dev	df	r-cal	r-crit	Sig. (2-tailed)
Gender	2.91	0.99	116	.109**	. .195	0.061
Usage of ICTs for teaching	2.39	0.85				

Analysis of data in Table 4.13 used to determine null hypothesis six showed a mean score of 2.91 and 2.39 for gender and usage of ICTs for teaching with standard deviation of 0.99 and 0.85 respectively. The correlation coefficient value was less than the calculated value (.109<.195). The resultant effect is P>0.05 confidence level. This analysis shows no

statistically significant relationship between teachers 'gender and usage of ICTs for teaching business education courses in Nigerian universities, the null hypothesis is therefore retained.

4.3 Summary of Major Findings

Based on the outcome of the study, the summary of findings was as follow:-

1. ICT skills has statistically significant relationship with its usage in teaching business education courses among lecturers in Nigerian Universities
2. ICT exposures influence has relationship with its usage in teaching business education courses among business education lecturers in Nigerian Universities
3. accessibility to ICT gadgets influences its usage among business education lecturers in teaching in Nigerian Universities
4. there is a statistically significant relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian universities
5. working experience of business education lecturers in Nigerian universities has a statistically significant relationship with the use of ICT in business education courses.
6. gender has no statistically significant relationship on the use of ICT in teaching business education courses among lecturers in Nigerian Universities

4.3 Discussions of the Findings

The finding of null hypothesis one showed that ICT skills has a significant relationship with its usage in teaching business education courses among lecturers in Nigerian Universities. The finding of the study collaborate that o f Latif, Bahroom, and San (2009) who asserted that ICT use and ICT index are two significant factors that influences a teacher on whether to use ICTs in teaching. Teachers who have positive perception on

ICTs and its use for teaching were also found to be generally competent in ICT skills, and in addition recognized the relevance of ICTs especially in the 21st century (Sim and Theng, 2007; Adebayo and Fagbohun, 2011). Teachers considered themselves to be competent in the use of ICT (word processing, and PowerPoint) applications. Research findings corroborated that the more teachers use ICTs the more the affection and feelings of competence increased (Jegede 2008). This finding was consistent with related researches that asserted teachers competence in ICT Skills was a result of teachers' frequent use of word processing, PowerPoint, and related courseware (such as Internet browsing) in preparing teaching materials and presenting lessons (Cuckle, Clark and Jenkins, 2004; Jegede, Ojerinde, and Ilori, 2007; Slaouti and Barton, 2007; and Tasir, Abour, Halim et al, 2012). Therefore, teachers with positive perception of competence in ICT skills and knowledge, used a broader range of generic packages such as word processing and spreadsheet in teaching and communication (TGUA 2004; and Sarfo Ansong-Gyimah, 2010). However, this is in contrast to Badau and Sakiyo (2013) finding that reported a low level of teachers' competence in ICT skills. This further confirms Aniebonam's (2008) finding who postulated that lack of computer skills exists among faculty in Nigerian universities hinders lecturers from making effective utilization of ICT facilities to improve the quality of their instructional service delivery. This is a positive development for ICT use for performance based teaching and learning activities (Okorotifa, 2013; Omosewo and Akanmu, 2013; and Ojerinde, 2014).

The finding of study further revealed that, ICT exposures has relationship with its usage in teaching business education courses among business education lecturers in Nigerian Universities. The result is in line with that of Sim & Theng (2007), Tella, Tella et

al, (2007), Jegede (2008) and Cavas, et al. (2009) who earlier reported that, teachers who were exposed to ICTs employed teaching practices that put students at the centre of learning. Similarly, Delen & Bulut (2011) maintained that, teachers' level of exposure to computer is one of the important factors affecting the use of computers for instructional purposes

The test of null hypothesis three indicated that accessibility to ICT has impact on its usage by business education lecturers in teaching in Nigerian Universities. The finding of this study is similar with that of Cavas et al (2009) and Jude (2012) who opined that, accessibility of ICTs is one of the factors affecting its usage among teachers as non-accessibility decreases the opportunity of usage by teachers. Jegede (2008) and Tella et al (2010) also reported that strong relationship exists between accessibility of ICT and its usage in teaching and learning. Okebukola (2006) reported that, quality is judgment which determines the extent of preparation and efficiency of teachers, adequacy and accessibility of materials and facilities needed for effective teaching and learning, and how the teachers can cope with the challenges has significant impact on the usage of ICT in classroom. Aginam (2006) maintained that most Nigerian universities have little or no infrastructure for cyber centres, computer equipped classrooms or high speed internet and do not even have the funds to implement such infrastructures on their own. In addition to these are the problems of no regular power supply, dysfunctional telephone lines, lack of accessibility affects the usage of ICT in teaching. When teaching and learning process is assessed critically in tertiary institutions in Nigeria, it could be observed that the challenge for lecturers in tertiary institutions is no longer in covering the course contents or in adopting appropriate teaching pedagogy, but it is in having access to ICT and using it to embrace

teaching and learning (Olaofe, 2005). Olaofe (2005) argued that such a grasp of ICT should be within the capabilities of most people, regardless of age, area of discipline, gender, or educational experience.

The finding of null hypothesis four showed that, there is significant relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian universities. This finding is consistent with research findings of Summers (1990), Demetriads, (2013(, and Cox et al, (1999) that teachers' existing attitudes, skills, and working habits will have great influence on their acceptance, style of implementation, and outcome of using computers for teaching. The quantitative results for this question definitively indicated that the majority of the teachers have a positive attitude towards the use of ICT in teaching and learning process. Kluever, Lam, Hoffman, Green & Swearingers (1994) earlier reported that the successful utilization fo technologies in the classroom depends mainly on the teachers attitude towards these tools. The study of Albirin (2004), Abdullah, et.al (2006), and Abu-samak (2006) shows the importance of teachers' attitudes as a crucial factor related toICT use. Developing teachers' favorable attitudes toward the use of ICT for educational purposes might be a result of the usefulness of ICT in the field of education. Baylor & Ritchie (2002) and Albirni (2006) reported that achieving a meaningful use of computer technology in the field of education can be influence by many factors. They pointed out that, one of these factors is teachers' attitudes towards the use of technology in teaching and learning process. Albirni (2006) reported that attitudes of teachers towards computer can play an important role in the acceptance and actual use of computers.

The fifth hypothesis showed that computer working experience of business education lecturers in Nigerian universities has significant relationship with the use of ICT

in business education courses. This result disagreed with that of Bingimals (2009) in Sarfo and Buabeng-Ando (2012) who opined that inverse correlation between perception on usage of ICTs and teachers' years of computer experience in teaching courses and opined that a moderating variables 'generational gap' was found responsible for this phenomenon (that is, veterans teachers were found to have been limited in the use of ICTs due to limited computer experience in contrast to the younger teachers' openness to the use of ICTs due to their having experienced ICT during their school years likewise, Sahin and Thompson (2006) reports that working experience is important factors that influences the use of ICTs in teaching among business educators in Nigeria. Cavas et al, (2009) also reported that positive relationship exists between teachers working experience and the use of ICT in teaching. Agbatogun (2006) discovered that younger teachers are more amiable to new challenges than the older teachers. He concluded that with global technological wave that is affecting every sector and every aspect of teachers' life weather male or female, experienced or inexperienced, humanities, science or vocationally oriented, there is need to struggle zealously to be computer literate in order to face the present educational challenges.

The study showed that gender has no significant relationship on the use of ICT in teaching business education courses among lecturers in Nigerian universities. The result affirmed that of TGUA (2004), Gay, Devonish, Alleyne, Alleyne (2006), Odogu and Nyala (2010), and Sarfo & Ansong-Gyimah (2010) reported that male and female teachers have preferences for use of ICTs and it might not be easy to conclude that male teachers were more positive about ICTs than female teachers. Hogarty and Kramer (2000) and Agbatogun (2006) found that sex and academic qualifications of teachers do not affect teachers' attitude towards the teaching and learning of computer science in schools. However, both male and

female teachers normally exercise fear of failure in implementing any new idea or phenomenon.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, the researcher presents the summary and conclusion of the study and proffer recommendations based on the results obtained from analysis of the data.

5.1 Summary

5.2 Conclusions

5.3 Recommendation

5.4 Limitations of the Study

5.5 Suggestions for further Research Studies

5.1 Summary

The study was conducted to explore teacher factors on ICT and its usage in teaching business education courses in Nigerian universities. The study had six objectives, six research questions and six null hypotheses. Descriptive survey design was adopted for the study with population of one hundred and sixty three (163) business education lecturers in Nigerian universities in 2012/2013 academic session. One hundred and forty (140) respondents were randomly selected as sample for the study. Four rating scale structured question was used to elicit information from the targeted respondents. Face to face method was adopted in distribution of the questionnaire in which 127 were retrieved and coded into Statistic Package of Social and Science (SPSS). In the analysis, 2.5 was used as index for answering research questions while Pearson Product Moment Correlation (PPMC) was

employed in testing the six null hypotheses at significant level of 0.05. The findings of the study revealed that:-

1. significant relationship exists between lecturers with ICT skills and its usage in teaching business education courses among lecturers in Nigerian Universities
2. level of ICT exposures influence its usage in teaching business education courses among business education lecturers in Nigerian Universities
3. have access to ICT gadgets has influences on its usage among business education lecturers in teaching in Nigerian Universities
4. there is significant relationship between lecturers' attitude to ICT and its usage in teaching business education courses in Nigerian Universities
5. working experience of business education lecturers in Nigerian universities has significant relationship with the use of ICT in business education courses.
6. gender has no significant relationship on the use of ICT in teaching business education courses among lecturers in Nigerian Universities

5.2 Conclusions

Based on the findings as revealed by analysis of the data collected for the study the following were concluded:

The study revealed that basic ICT tools/resources (such as computers and application software for word processor, spreadsheets, PowerPoint, Database, e-mail and Internet) were in use for teaching business education courses in Nigerian universities. The test of null hypotheses also supported these major findings. The implication is that this development is an encouragement and attestation that students have access to quality education in business education programme in Nigerian universities. However, the issue of epileptic power

supply from the national grid and the attendant high overhead cost in running alternative energy sources may constitute a great hindrance to regular usage of ICT facilities in the institutions' laboratories.

Usage of ICT tools/resources for teaching business education courses in the universities was determined by lecturers' possession of ICT skills and competence. This was further confirmed by the result of the tested null hypothesis one that showed that there was a significant relationship. ICT skill competence needs to be sustained by institutions through computer loan support to teachers, outright give of a computer each or computer at subsidized loan to encourage access and usage. But where this is not done, teachers will continue to use traditional methods for teaching their courses.

Teachers' exposure to the use of basic ICT and computers resources determined the usage of ICTs for teaching business education courses in the universities in Nigeria. This outcome was further confirmed through null hypothesis two that showed a significant relationship existed between the independent and the dependent variables. Exposure and access were complimentary to one another. Teachers' exposure and role model status motivates learners as they would want to learn via ICT provided both have access to the use of the facilities in their institution's laboratory. But when access is denied, restricted or hindered, motivation to learn will reduce and the capital outlay on the facilities will tend to be a waste.

Usage of ICT tools/resources for teaching business education courses in the universities was determined by availability and accessibility to instructional resources (such as multimedia/ desktop/laptop/notebook computers, digital/slide/opaque/ projectors and interactive whiteboards, printers, and Internet protocol); ICT instructional software (such as

word processor, spreadsheet, PowerPoint, Database, web browser, and electronic mail); and ICT professional support (such as technical support for repairs and maintenance of computer) were available in majority of the universities for teaching business courses. The null hypothesis three supported this outcome. Availability and accessibility has to be sustainable for un-interrupted usage thereby enhancing and improving the quality in teaching and learning. However, availability can only be sustained in terms of adequacy and functionality. Where this is not the case, the laboratory will be in comatose.

The study has established that lecturers' working experience directly has significant relationship with use of ICTs for teaching business education courses in Nigerian universities. This finding was supported by the outcome of the analysis of research null hypothesis five that confirmed that use of PowerPoint and other computer peripherals usage for teaching has direct relationship with lecturers' years of working experience. However since the use of computer/ICT revolve around team efforts, the teachers and the technical expert (computer laboratory assistant/technician) has major roles at ensuring a balance between the curriculum specification and availability of the appropriate hardware and software that support effectiveness in lecture delivery. When Computer/ICT laboratory is equipped with essential gadgets and technical support, teaching and learning is enhanced. Otherwise if the technical staff is not available or properly situated to manage the laboratory in ICT usage may be a mirage.

The usage of ICTs for teaching business education courses in the university had no bearing with whether the teacher is either a male or female lecturer. Thus, gender factor has not influenced the ICT use Nigerian universities. The tested null hypothesis six lend credence as it showed that there was no statistically significant relationship between gender

and ICT usage for teaching business education in the universities. The implication is that use of ICT for teaching transcend gender factor as male and female teachers' are motivated to used the gadgets/resources.

5.3 Recommendations

Based on the major findings of the study and as supported by the test of null hypothesis, the following recommendations were hereby made:

1. There is need for the universities to ensure that ICT instructional tools/ resources (such as the hardware and the software) that are available in the department/section:

a) are in sufficient quantity to cater for the carrying capacity of the section;

b) are regularly updated and or maintained by qualified professional technician;

c) are supported with adequate quantity of consumables for the hardware and the software to function efficiently and effectively;

d) are supported by alternate source(s) of electricity power supply to ensure continuous use of the resources.

2. In line with continuous changes that are taking place in IT/ICT world, teachers should be provided with regular training/re-training for professional development and capacity building to improve and or upgrade the teachers' competence in ICT Skills use. For those individual teachers that are at the primary level of ICT literacy, it is recommended that Department of Mathematics in each of the universities should have a programme of ICT skill training (9 weeks for professional training in ICT Skills (such as word processing, spreadsheet, PowerPoint, use of multimedia/digital/slide projectors, (including routine maintenance of computer systems).

3. Institutions lacking in provision of ICT tools/resources (such as instructional tools/materials, instructional application software, and technical support services) are encouraged to make adequate planning to put these facilities in place to enrich the quality of graduates of business education programme in the respective universities.
4. Staff members should be further motivated with provision of personal computers (such as Notebooks for teachers' programme) either at full or partial absorption price.
5. Universities should give priority to acquisition of ICT infrastructure and the provision of Internet Services (to include intranet and extranet) for global competitiveness and cross boarder exchange of ideas and research work by both staff and students.

5.4 Limitations of the Study

The main limitations to this study are that

1. The study being a survey research design with the use questionnaire instrument could not empirically measure the variables (such as exposure to ICTs, competence in ICT skills, and use of ICTs in teaching courses), with use of proficiency test in ICT .
2. The researcher was unable observe the respondents during actual teaching sessions. Also, the researcher did not conduct physically assessment of teaching with ICTs.
3. Teachers' use level and proficiency in usage was found to have been affected by irregular electricity supply to enable full utilization of ICT resources. However, all departments visited have alternative source of power supply (mostly either in idle state or made available on rationing basis) and which place restrain on regular usage

5.5. Suggestions for Further Research Studies

The researcher recommends further study in the following areas:

1. An Evaluation of relationship between Students' and Teachers' Perception on Availability of ICTs and Actual Usage of ICTs in Teaching Business Education Courses in the Universities in Nigeria.
2 An Assessment of relationship between Teachers' and Students' Perception on ICTs and its Usage in Teaching Business Education Courses in the Universities in Nigeria.
3. A Survey of Availability and Usage of ICTs in Teaching Business Education Courses in the Universities in Nigeria.

REFERENCES

Abdullah, N., Zainol Abidin, M., Luan, W., Majid, O. & Atan, H. (2006). The attitude and motivation of English language teachers towards the use of computers. Malaysian Online Journal of Instructional Technology, 3(1),

Achimugu, P., Oluwagbemiga, O., Oluwaranti, A and Afolabi, B (2009). Adoption of information & communication technologies in developing countries. *Journal of Information & Communication Technology Impact*, Vol.9 (1), 37-46. Retrieved November 18, 2010 from http://www.jiti.net/v09/j.i.t.i.v9n1.037-046.pdf

Adamu, I., and Musa, M. (2012). Perception of university lecturers on the influence of the internet usage on education in Nigeria. *Journal of Science, Technology and Education Vol. 1(2).*. A Publication of School of Technology Education Abubakar Tafawa Balewa University, Bauchi Vol. 1(2), 1-5

Adamu, I., and Jibril, Alh, H. (2010). A correlation between computer technology and business education programme in federal colleges of education in North Central Geopolitical Zone in Nigeria. *Journal of Business Educational Research and Development (JOBERD) Vol. 1(2), September.*

Adebayo, O., and Fagbohun, M. (2011). An assessment of computer and ict skills among secondary school teachers in Ota, Ogun State. *e-Journal: Library Philosophy and Practice*, 846-852. Library of the University of Nebraska, Lincoln. Retrieved March 2013 from http://digital.commons.unl.edu/libphilprac

Adebiyi, M. E., and Olutayo, O. (2007). The perception of English language lecturers' on the knowledge, use, relevance and efficacy of information and communication technology (ICT) on the teaching of English language in tertiary institutions of learning. *Journal of Women in Colleges of Education (JOWICE)*. Vol. II (1), 98. Published by Women in Colleges of Education Nigeria, November, p 98

Adebowale, O. F., and Dare, N. O. (2012). Teachers awareness of Nigeria's educational policy on ICT and the use of ICT n Oyo State secondary schools. *International Journal of Computing and ICT Research Vol. 6, Issue 1*, 84-93.

Adedoyin, A., and Mohammed, A. I. (2012). Roles of information and communication technology in human resource development. *Vocational Business Educator, Vol. 1. No. 2*, 194-1980.

Adelabu, M. A. (2005). *Teacher motivation and incentives in Nigeria*, 18. Retrieved November 18, 2010 from http://www.eldis.org/vfile/upload/1/document/0709/Teacher motivation_ Nigeria.pdf

Adeniji, A. A (2002). Professionalization of business education. *Business Education Journal III*,72-77.

Adenipekun, O (2010). Nigeria: Government drives tertiary institutions to develop new teacher education programmes, *VANGUARD,* 1-3. Retrieved 8/11/2010 from allAfrican.com: Nigeria

Adenipekun, O. (2009). Stakeholders brainstorm on education standards, quality assurance at NESCN Summit. *Vanguard*, 1-4. Retrieved December 13, 2010 from http://allafrica.com/stories/200912170058.html)

Adenipekun, O. (2007). Nigeria: Education authorities task teachers on ICT skill application. *VANGUARD*, 1-2. Retrieved November from allAfricam.com, January 11.

Adeosun, O. (2010).Quality basic education development in Nigeria: Imperative for use of ICT. CICE Hiroshima University, *Journal of International Cooperation in Education*, Vol. 13(2), 193-211. Retrieved December 25, 2010 from http://home.hiroshima-u.ac.jp/cice/e-publications/13...

Adeyinka, A. A. (2013). Major trends in curriculum development in Nigeria, *Journal of Education of University of Ilorin Vol. 8*, 1-10. Retrieved March 2013 from http://unilorin.edu.ng/journals/education/ije/sept1988/MAJOR%2520TRENDS%2520IN%2520CURRICU...

Adodo, S. O. (2012). A predictive study of pre-service teachers' gender, self-concept-interest and attitude towards interactive computer technology (ICTS) in Nigerian universities faculties of education. *Journal of Educational and Social Research, Vol. 2(3),* September

Afshari, M., Abu Bakar, K., Luan, W. S., Abu Samah, B., and Fooi, F. S. (2009). Factors affecting teachers' use of information and communication technology. *Internatio9nal Journal of Instruction, Vol. 2(1).* Retrieved December 10, 2014 from www.e.iji.net.

Agbatogun, O.A., 2006. Attitude of teachers towards the integration of computer education into secondary school curriculum. J. Res. Curriculum Teaching, 1: 1-20.

Aginam, E. (2006, October 18). *Nigerian higher education has less 5% ICT applications*. Retrieved from file http://www.vanguardngr.com/articles/html on 11/2/2007.

Agyeman, O. T. (2007). ICT for education in Nigeria. Survey of ICT and education in Africa: *Nigeria Country Report, 1-17.* World Bank. Retrieved October 20, 2010 from Nigeria-1 www.infordev.org

Akpochafo, W. P., and Filho, W. L. (2006). An overview of the barriers to curriculum implementation in Nigerian universities. *International Journal of Continuing Engineering Education and Long-Life Learning Vol. 16 No. 56,* 493-501.

Alade, I. A. (2011). Trends and issues on curriculum review in Nigeria and the need for paradigm shift in educational practice. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 2(5)*, 325-333. Scholarlink Research Institute Journals, jeteraps.Scholarlinkteacher.org.

Albirini, A. A. (2004). An exploration of the factors associated with the attitudes of high school EFL teachers in Syria toward information and communication technology. Unpublished thesis The Ohio State University.

Albirini, A. A. (2006). Teacher's attitudes toward information and communication technologies: the case of Syrian EFL teachers. Journal of Computers and Education, 47, 373-398.

Aliyu, M. M. (2005). Business teacher education in an information and technology era. *Zaria Journal of Educational Studies, &(1&2),* 164-171.

Alkali, R. T. (2005). Using vocational education as tools for economic recovery in the 21st century Nigeria. In Knowledge Review Published, National Association for the Advancement of Knowledge, *A Multidisciplinary Journal Vol. 11(5),* 97-101 November.

Al-Zaidiyeen, N., Mei, L and Fook, F. (2010). Teachers' attitudes and levels of technology use in classrooms: The case of Jordan School, *International Education Studies Vol. 3(2).*

Anandarum, K. (2011). *Educational technology: Theories of teaching*, 1-15. Retrieved April 12, 2014 from http://anandkab.blogspot.com/2011/03/theories-of-teaching-html.

Anderson, N. (2012). Design thinking: Employing an effective and multidisciplinary pedagogical framework to foster creativity in rural and remote education. *Australian and International Journal of Rural Education, 22(2),* 43.

Aniebonam, M. (2008, May 22). *UNIBEN AfriHUB centre opens, students praise VC*. Retrieved from file *http://www.ngrguardiannews.com* on 10/3/2010

Anyikwa, B. E., Amadi, M. N., aand Ememe, P. (2012). Globalization and the context of future of higher education in Nigeria. *Humanity and Social Science Journal 7(1),* 67-76

Apanpa, O. S., and Lawal, O. O. (2009). ICT – Competencies of teachers of ESL in Nigerian secondary schools, 1-3. Retrieved on February 28, 2011 from html: file://G:/ICT – *Competencies of Teachers of ESL in Nigerian Secondary Schools.mht, 1-13*

Ayinde, I. A., Agbonlahor, M.U., Mafimisebi, T.E., and Adebayo, A. O. (2004). Assessment of the use of Information and Communication Technologies (ICT) on the economic performance of agro-based food industries in South-West Nigeria. Paper presented at the *Farm Management Association of Nigeria Conference,* 20-26. Abuja Nigeria Oct 19-24.

Babalola, A., Osho, S., Tijjani, H., Akinwunmi, F., Olowolafe, O ., Akindutire, O., and Adefolaju, F. (2012). Report of 2-day workshop on improved teaching methods in Nigerian universities. *Proceedings of Workshop on Improved Teaching Methods in Tertiary Institutions, Afe Babalola University (ABUAB), Ado Ekiti*, 2-11. Friday 6th and Saturday 7th January 2012. Retrieved April 11, 2014 from http://www.abuad.edu.ng/en/news/220-workshop -on-improved-teaching-methods-in-tertiary-institutions,

Babatunde, M. A., and Adefabi, R. A., (2005). Long run relationship between education and economic growth in Nigeria: Evidence from the Johansen's co-integration approach. Paper presented at the *Regional Conference on Education in West Africa: Constraints and Opportunities*, 1-21. Dakar, Senegal, Nov 1st-2nd. Cornell University/CREA/Ministerede l'Education du Senegal.

Badau, K. M., and Sakiyo, J. (2013). Assessment of ICT teachers' competence to implement the new ICT curriculum in North Eastern Nigeria. *Journal of Education and Practice Vol. 1(27),* 1-11. www.iiste.org.

Bako, D. H., and Odewumi, A. (2012). Information and communication technologies: An indispensable tool for effective teaching and learning of business education. *Vocational Business Educator, Vol. 1. No. 2*, 135-142.

Barak, M. (2006). Instructional principles for fostering learning with ICT: Teachers' perspectives as learners and instructors. *Education and Information Technologies,11*(2), 121–135.

Bawa, D.A., and Okonga, O. M. (2009). The role of UBE in poverty reduction: The national economic empowerment and development strategy (NEEDS) and millennium development goals (MDGs) perspectives. *The Voice of Teachers Vol. 1(2),* 19-25.

Baylor, A. & Ritchie, D. (2002). What factors facilitate teacher skill, teacher morale, and perceived student learning in technology-using classrooms? Journal of Computers & Education, 39(1), 395-414.

Bichi, S. S. (2010). Teachers in nation building: Challenges of the 21st century. *Journal of Business Education Research and Development (JOBERD), Vol. 1No.2*, 96-104.

Blurton, C., (2007). *"New directions of ICT-Use in Education"*, 1-51. Retrieved December 25, 2010 from http://www.unesco.org/educcatoion/educprog/lwf/edict.pdf;

Bolarinwa, K. O., Adeola, L. K., and Ojetunde, S.A. (2010). Rebranding Nigeria through educational process for a better future: A call for policy review and development for creating standards in business education. A*cademic Leadership On-line Journal, Vol. 9,*

Butler, D. L., and Sellbon, M. (2002). Barriers to adopting technology. *Education Quarterly, 2*, 22-28

Cavas, B., Cavas, P., Karaoglan, B., and Kisla, T. (2009). A study on science teachers' attitudes towards information and communication technologies in education. *The Turkish Online Journal of Education Technology: TOJET Vol 8(2)* , 20-32. Retrieved December 15, 2010 from http://www.tojet.nert/articles/822.pdf

Chukwurah, C. C. (2012). Strategies for global reform in business teacher education towards self-reliance in Nigeria. *International Journal of Vocational and Technical Education Vol. 3(4)*, 45-48. Available on-line at http://www.acadmicjournals.org IIJVFE

Chukwurah, C. C. (2013). Trends in business teacher education in Nigeria. *Scholarly Journal of Education Vol. 2(5)*, 58-62. Available at http://www.scholarly-journals.com/SJE.

Cooper, J. M., Garett, S. S., Lough, T., Maitorella, P., Morin-Dershmer, G., Pfeifer, J., and Weber, W. A. (1986). *Classroom teaching skills*. D. C. Heath and Company, Lexington, Massachusetts, pp. 1-18.

Cox, M., Preston, C. & Cox, K. (1999). What factors support or prevent teachers from using ICT in their classroom, paper presented at the *British Educational Research Association Annual Conference*, University of Sussex at Brighton. Retrieved May 7, 2011 from http://www.leeds.ac.uk/educol/documents/00001304.htm

Daramola, R. (2012). Role of ICT in sustainable quality business education programme. *Vocational Business Education Vol. 1. No. 1*, 99-108. A Publication of Business Educators Association in Vocational Education (BEAVE), February.

Davis, J. R. (1997). Better teaching, more learning. Phoenix: *American Council on Education/Oryx Press Series on Higher Education*, 1-9. Retrieved November 17, 2010 from http://www.ntlf.com/htm1/lib/btml_xrpt.,htm.

Delen, E., and Bulut, O (2011). The relationship between students' exposure to technology and their achievement in science and mathematics. TOJET: *The Turkish Online Journal of Education Technology Vol. 10(3)*, 311-317. July

Demetriadis, S. (2003).Culture in negotiation: Teachers' acceptance/resistance attitudes considering the infusion of technology intoschools. *Computers & Education, 41, 19-37.*

DETWA, Department of Education and Training Western Australia (2006). *Teacher ICT skills: An evaluation of the ICT knowledge and skills levels of WA Government School Teachers, 16-48.* Retrieved 5th May 2012 from http//www.aes.asn.au/Conferences/2006/paper/012%20Karen%20Trimmer.pdf

Easton, V. J., and McColl, J. H. (2013a). Paired data, correlation and regression: Pearson product-moment correlation coefficient. *Statistics Glossary Vol. 1 STEPS*. Retrieved 20th March 2013 from http://www.stats.gla.ac.uk/steps/glossary

Easton, V.J. and McColl, J. H. (2013b). Sampling. STEPS Matched Samples, *Statistics Glossary Vol. 1, 1-2.* Retrieved November 27, 2010 from http://www.stats.gla.ac.uk/steps/glossary/sampling.html

Eghonghon, J. M. , and Ndaman, Y. I. (2012). Information and communication technology and business education programme. *Vocational Business Educator, Vol. 1. No. 1*, 183-190.

Ekpenyong, L., and Nwabuisi, J. (2003). Business teacher education in Nigeria: Projecting a new direction. *Journal of Vocational Education and Training*, Vol 45(1), 33.

Emmanuel, S. T. (2012). Information and communication technology as a viable concept towards improvement o accounting education. *Vocational Business Educator, Vol. 1. No. 1*, 140-151.

ETS, Education Testing Services (2001). Digital transformation: A framework for ICT literacy. *A report of the International Literacy Panel*. Education Testing Services, Princeton NJ. Retrieved March 20th 2011 from http://www.ets.org/../ictreport.pdf

Federal Government of Nigeria, (2012). National ICT policy. *Ministerial Committee on ICT Policy Harmonization*

Federal Ministry of Education (2003). *Education sector status report,* Abuja, May p. 139

Foa, L., Schwab, R., & Johnson, M. (1998). Introducing technologies into the schools: Triumph or train wreck? *NEA Technology Brief No. 13-1998* [On-Line]. Retrieved August 11, 2010 from URL http://.www.nea.org/cet/BRIEFS/brief13.html

Francis, I. E. (2003). *Research methodology and statistics in education.* Madol Press Ltd p. 156

Cooper, J. M., Garett, S. S., Lough, T., Maitorella, P., Morin-Dershmer, G., Pfeifer, J., and Weber, W. A. (1986). *Classroom teaching skills*. D. C Heath and Company, Lexington, Massachusetts, pp. 1-18

Gay, G., Mahon, S., Devonish, D., Alleyne, P., and Alleyne, P. G. (2006). Perception of ICT among undergraduate teachers in Barbados. *International Journal of Education and Development Using ICT (IJEDICT) Vol. 2, Issue 4*, 6-17.

Glasow, P. A. (2005). *Fundamentals of survey research methodology*. MITRE PRODUCT Washington C3 Centre McLean, Virginia, pp 1-1-3-1. April

Gobbo, C., & Girardi, M. (2001). Teachers' beliefs and integration of information and communication technology in Italian schools, *Journal of Information Technology for Teacher Education,* 10(1&2), 63-85.

Graham, L.(2008). Teachers are digikids too: The digital histories and digital lives of young teachers in English primary schools, *Literacy,* 42(1), 10-18.

Gray, D. S., and Souter, N. (2003). Secondary science teachers' use of, and attitude towards ICT in Scotland. *A report,* University of Straathclyde, Glasgow, U.K

Guernsey, L. (1998). A new career track combines teaching and academic computing. Chronicles of higher education: *Information technology*, Section A35, December 11

Gulbahar, Y., and Guven, I. (2008). A survey on ICT usage and the perceptions of social studies teachers in Turkey. *Educational Technology & Society,* 11(3), 37-51. Turkey.

Haddad, W.D. (2007). Part 2: Analytical reviews. ICTs for education: *A reference handbook.* IC education toolkit for decision makers, planners and practitioners Version 2.0, 60. Washington *infor* Dev/World Bank.

Haywood, J., (2001). Survey of European universities – ICT skills for students and staff. SEUSISS. http://www.intermedia.uib.no/seusiss. *In Survey report: Students' perceptions of the use of ICT in university learning and teaching*. A project partially funded in the framework of the SOCRATES Programme MINERVA Action of the Directorate General for Education and Culture of the European Commission, 1-30. Retrieved December 25, 2010 from http://www.ifets.infor/journals/113_/4.pdf

Hennessy, S., Harrison, D., and Wamakote, L (2010). Teacher factors influencing classroom use of ICT in sub-Saharan Africa. *Itupale Online Journal of African Studies,* 2(2010), 39-54.

Hogan, K., (1999). Professional development: Effectiveness between technology and teacher. *Milken Exchange on Education Technology*, California, 1-27. http://web.mff.org/pubform.taf. Retrieved December 18 2010 from http://www.articlesforfun.com/Article/Professional-Development--Effectiveness-Between...

Hogarty, K.Y. and J.D. Kramer, 2000. The nature of technology use in classrooms: The development and validation of an instrument too measure teachers perceptions. Retrieved on 2nd September, 2006.

Honey, M., Culp, K. M., and Spielvogel, R. (2005). Critical issue: Using technology to improve student achievement. *Learning Point Association*, North Central Regional Educational Laboratory, USA. Retrieved December 18, 2010 from http://www.ncrel.org/sdrs/areas/issues/methods/technology/te800.htm.

Hughes, J (2004). Technology learning principles for pre-service and in-service teacher education. *Contemporary Issues in Technology and Teacher Education*, 4(3), 345-62.

Ibidapo-Obe, O. (2007). The challenges of teacher education in Nigeria: The university of Lagos experience. Paper presented at the *Second Regional Research Seminar for Africa,* 1-11. organized by the UNESCO Forum on Higher Education, Research and Knowledge, Accra Ghana, March 22-24

Ibrahim, A. (2009). The influence of information and communication technology on business education programme in colleges of education in Nigeria. *A dissertation* presented in partial fulfillment of the requirements for the award of an M.Ed (Business Education) to the Department of Vocational & Technical Education, Ahmadu Bello University, Zaria, pp 56-111.

Ibrahim, A. (2010). The influence of teacher's methodology on performance of accounting students in Nigerian universities. *Journal of Business Educational Research and Development (JOBERD) Vol. 1 No. 1*, 103-108.

Ifinedo, P. (2006). Acceptance and continuance intention of Web-Based learning technologies(WLT) among university students in a Baltic Country. *The Journal of Information Systems in Developing Countries*, 23(6), 1-20.

Igwe, U. O., (2005). Harnessing information technology for the 21st Century: Library education in Nigeria. *Library Philosophy and Practice*, Vol. 7(2), 677

Ikpahindi, L N. (1999). Essential knowledge-base for information science technology libraries in a democratic culture. Information for the Sustenance of Democratic Culture: Paper *NLA Annual National Conference and AGM*

Iloanusi, N. O., and Osuagwu, C. C. (2009). ICT in education: Achievement so far in Nigeria. Published in *Research Reflections and Innovation in Integrating ICT in Education, 1331-1335*. Retrieved December 25, 2010 from http://www.formatex.org/micte2009/book/1331-1335.pdf

Intaganek, W., Gradsarem, H (2008). Skill cluster for ICT initiatives. *EJISDC Vol. 33(3)*, 1-14.

Ishaku, K. (2012). The implementation of business education programmes in senior secondary schools in Nigeria. *Vocational Business Educator, Vol. 1. No. 1*, 1160-167.

Jager, A.K., ands Lokman, A. H. (1999). Impactof ICT in education. The role of the teacher and teacher training. *European Conference on Educational Research*, Lahti, Finland, September.

Jegede, P O., Dibu-Ojerinde, O. O., and Ilori, M. O. (2007). Relationship between ICT competence and attitude among some Nigerian tertiary institution lecturers. *Educational Research and Review Vol. 2(7)* pp 172-175, July Retrieved 28th May 2012 from http://www.academicjournals.org/ERR

Jegede, P. O. (2008). ICT attitudinal characteristics and use level of Nigerian teachers. *Issues in Information Science and Information Technology Vol. 5*, 261-266.

Jegede, P.O., (2009). Age and ICT-related behaviours of higher education teachers in Nigeria. Issues in *Informing Science and Information Technology, Vol. 6,* 771-777

Jimoyiannis, A, and Komis, V. (2007). Examining teachers beliefs about ICT in education: implications of a teacher preparation programme. *Teacher Development* Vol. 11(2), 149-173. July

Johnson, B., and Christensen, L (2014). *Sampling in quantitative, qualitative, and mixed research.* Sage Publications. Retrieved 28th February 2014 from http://www.sagepub.com/bjohnsonstudr/09/objectives.htm

Joint Admissions and Matriculation Board (2011/2012): *Guidelines for admissions to first degree, national diploma (ND), national innovation diploma (NID) and Nigeria certificate in education (NCE) courses and programmes* in universities and other degree awarding institutions, monotechnics, polytechnics, innovation enterprise institutes and colleges of education in Nigeria, pp. 1-290.

Jorgenson, D., and Stiroh, K. (2000). "Raising the speed limit: US economic growth in the information age", *Brookings Paper on Economics Activity*, 1, 125-211.

Jude, W. I. (2012). ICT resource utilization, availability and accessibility by teacher educators for instructional development in college of education Katsina Ala. *New Media and Mass Communication On-line Journal Vol. 3*, 1-6. Available at www.iiste.org

Kearsley, G. (2004). Commentary: Clark, K., Parsia, B Hendler, J. (2004). Will the Semantic Web change education? *Journal of Interactive Media in Education, 3,* Retrieved May 30, 2011 from http://www-jime.open.ac.uk/2004/3/kearsley-2004-3.pdf.

Kessler, F. C (2012). *Understanding descriptive statistics.* Retrieved 20/20/2013 from http://nationalatlas.gov/articles/mapping/a_statistics.html.

Kluever, C., Lam, T. & Hoffman, R. (1994). The computer attitude scale: Assessing changes in teachers' attitudes toward computers. Journal of Educational Computing Research, 11(3), 251-256.

Koshar, J (2014). *Instrument reliability: what are we trying to accomplish, how is it determined*. Retrieved 1st March 1, 2014 from Documents and Settings/USER.USER-8D994E82B2/Des…

Kosoko-Oyedeko, G. A., and Tella, A. (2010). Teachers' perception of the contribution of ICT to pupils performance in Christian religious education. *Journal of Social Sciences, Vol. 22(1),* 7-14. Retrieved December 25, 2010 from http://www.krepublishers.com/02-Journals/JSS-22-0-000-10 ...

Krejcie, R V., and Morgan, D W. (1970). Determining sample size for research activities. In *Educational and Psychological Measurement* (1970), 30,607-610

Kumar, N., Rose, R.C. and D'SIiva, J.L. 2008. Predictors of Technology Deployment among Malaysian Teachers. *American Journal of Applied Sciences. 5(9)*, pp. 1127-1134.

Lambrecht, J. L. (2012). Business education: Preparation of teachers, *Journal of Vocational Education & Training Vol. 1 55(1)*, 1-13.

Latif, L. A., Bahroom, R., and San, Ng. M. (2009). Skills, usage and perception of ICT and their impact on e-learning in an open and distance learning institution. *ASEAN Journal of Open and distance learning Vol. 1(1)*, 69-82.

Lau, B. T., and Sim, C. H. (2008). Explaining the extent of ICT adoption among secondary school teachers in Malaysia. *International Journal of Computing and ICT Research, Vol. 2(2)*, 19-36. December

LeBaron, J and McDonough, E (2009). Research report for GeSCI meta-review of ICT in education, *Global e-School and Communities Initiative*, Retrieve from GeSCI – http://www.gesci.org.p. 3

Lucas, U., and Milford, P. (2009). Key aspects of teaching and learning in accounting, business and management. In Heather F., Ketteridge, S, and Marshall, S (ed). *A handbook for teaching and learning in higher academic practice* (Third Edition). Routledge Taylor & Francis Group, p. 382.

Machin, S., McNally, S., and Silva, O. (2006). New technology in schools: Is there a payoff? *DISCUSSION PAPER SERIES IZA DP No. 2234*, 1-37. Institute for Study of Labor. Retrieved October 26, 2010 from http://www.Edu1@primer-educ.getfile.3214613

Makinde, S. O., and Makinde, O. O. (2013). ICT literacy of language teachers in selected lagos state secondary schools in Nigeria. *African Journal of Teacher Education Vol. 3(3).* Retrieved December 24, 2014 from file:///C:/DocumentsandSettings/USER.USER-8D994E82B2/Desktop/3256ictliteracyoflanguageteachers...

Mangal, S.K., and Mangal, U (2009). Essentials of educational technology. Phi Learning Private Ltd., New Delhi, pp133-145, 173-194

Markus, L. B. (2010). Information and communication technology as an instrument for effective teaching and learning of business education in tertiary institutions. Journal of Business Educational Research and Development (JOBERD) Vol. 1 No. 1, 77-83

Materu, P. (2007). Higher education quality assurance in Sub-Saharan Africa: Status, challenges, opportunities, and promising practices. *World Bank Working Paper No. 124, African Regional Human Development Department*, THE WORLD BANK, Washington, D.C, pp xiii, xv, and 7. Retrieved December 14, 2010 from http://siteresources.worldbank.org/INTAFRREGTOPTEIA/Resources/WP124-Web.pdf

Mbaeze, C., Ukwandu, E., and Amudu, C. (2010). The influence of information and communication technologies on students' academic performance. *Journal of Information Technology Impact, Vol. 10(3),* 129-136. Retrieved from December 25, 2010 from http://www.jiti.net/v10/jiti.v10n3.129-136.pdf

Mohammed, B. (2010). New universities good for Nigeria – Okebukola: As *Crawford University* graduates 160, Honours Akinkugbe, 1-3. Retrieved December 2, 2010 from http://www.tribune.com.ng/index.php/education/13885-new-universities-good-for-nigeria-Okebukola-crawford-university-gra

Monohan, T.(2008). Picturing technological change: The materiality of information infrastructure in public education. *Technology Pedagogy and Education, 17(2)*, 89-101.

Montgomerie, C., and Irvine, V. (2001). Computer skill requirements for new and existing teachers: Implications for policy and practice. *Journal of Teaching and Learning*, 1(1),

Moore, K. A. (2008). Brief research-to-results. TRENDS: quasi-experimental evaluations part 6 in a series on practical evaluation methods, 1-4. *Oregon Technology in Educational Journal*, 1-11. The Stlantic Philanthropies, Washington. Retrieved 23rd May, 2011 from www.childtrends.org

Moursund, D (2011). *Brief overview of ICT in education. Oregon Technology in Education Council*, 1-11. Retrieved March 29, 2011 from http://pages.uoregon.edu/moursund/ICT-planning/ict-in-education.htm

Muhammad, K. A. (2010). ICT knowledge and skills among students of library and information science in Umaru Musa Yar'adua University in Nigeria. The *Information Manager Vol. 10(1&2).* Retrieved July 12th 2012 from http://www.ajol.infor/index.php/tim/article/view/75695

Murray, D. (2007). Creating a technological-rich English language learning environment. *Springer International Handbook on Education, 15,* 747-762

Murphy, C. (2000). Effective use of ICT by student-teachers: Is it improving? Society for Information Technology & Teacher Education *International Conference*, 1656-1661. Proceedings of SITE 2000, San Diego, Ca, USA.

National Information Technology Development Agency (2003). *Nigerian national policy for information technology (IT) 'Use It'*, 1-59. Federal Ministry of Science & Technology. [Retrieved November 16, 2010 from http://www.nitda.gov.ng/document/nigeriapolicy.pdf.

National Planning Commission (2004). *National economic empowerment and development strategy*, (NEEDS), Abuja

National Policy on Education (2004). Nigerian Educational Research and Development Council, Lagos, pp 11-18; 24-37.

Nadzarah Abu Bakar & Peter Mickan, (2004). Students'experience in computer-based English language classroom, Proceedings of The 2003 ASIACALL *International Conference on IT and Language Education,1-7*. Korea.

Neal, G. (2005). Students' reflections on the effectiveness of ICT as a learning resource. A paper presented at the *AARE Annual Conference Parramatta*, 1-22. NEA05582 Nov/Dec

Ng W. K., Miao, F., and Lee, M. (2010). *Capacity-building for ICT integration in education*, 1-15. Retrieved March 11, 2012 from file://C:/DocumentsandSetting/USER.USER-8D994E82B2/Desktop/Capacity-building/idrc.caHome>Publications>IDRC BOOKS>Digital Review of ASIA PACIFIC 2009-2010 .

Nigeria-Teaching Profession (NTP, 2010). *Teaching Profession*, 1-3 Retrieved November 18, 2010 from http://education.stateuniversities.com/pages/1108/Nigeria-TEACHING PROFESSION.html

NITDA, National Information Technology Development Agency (2003). *Use IT:*, 1-59. Abuja Nigeria. http://www.nitda.gov.ng/use it.htm.

NPICTE, National Policy on Information and Communication Technologies (2010). *(ICT) in education.* Federal Ministry of Education, April, pp iii, xiii-xiv, and 1.

Nwagwu, W.& Ahanihe, I. I.(2006). Emerging trends and setbacks in e-Learning newtworks in Africa. *Journal of Information Technology Impact*, 6(2), 8-100

Nwaokolo, P. O., and Ahukannah, L. I. (2001). The implication of information and communication technology on business education. *Business Education Journal,* Vol. III(4), 16-26. October.

Obioma, G, Nwagbara, C., Nneji, G. N., Okon, E. J., Nwachukwu, V.C., David, N. A., and Ogbuanya, T.C (2009). *Basic technology for junior secondary schools*. Nigerian Educational Research and Development Council (NERDC), Learn Africa, Ikeja Lagos p.v.

Odogwu, H. N., and Nyala, J. I. (2010). Female students' competence in the use of ICT and their future career. *European Journal of Scientific Research Vol. 43, No. 4,* 554-562.

Odozi, V. (2010). Managing post-petroleum Nigeria: The strategic imperatives. *Journal of Management in Nigeria Vol. 46(1),* 7-18. A Journal Published by Nigerian Institute of Management, January-March.

Oduma, C. A. (2010). A survey of employees expectations of work competencies needed by business education graduates for gainful employment in organizations. *Journal of Business Education Research and Development (JOBERD) Vol. 1(1),* 8-22. March 2010 pp. 8-15

OECD, Organization for Economic Co-operation and Development (2008). Education at a glance. *Review of Quarterly Teaching in Higher Education.* Retrieved March 3, 2011 from http://www.oecd.org/dataoesd/52/23/440508332.pdf

Ofsted, Office for Standards in Education (2004), *"ICT in schools: The impact of government initiatives five years on*. Ofsted, London, April.

Ogunleye, I. O. (2003). The relevance of business education programme in fostering national integration and cohesion. Vocational Renaissance, *A Journal of Vocational and Technical Education, Vol. 2(1),* 63-69. Ganasul Prints & Publishing Co., Kano

Ohiwerei, F. O., and Azih, N. (2010). Comparative programmes of business education in Nigeria universities (A case study of Ambrose Alli University, Ekpoma and Delta State University, Abraka). *Current Research Journal of Social Sciences*, 2(2), 58-64. Maxwell Scientific Organization,.

Ojerinde, D. (2014). Computer based test (CTB) here to stay. Press Pass, *Annual Newsletter for candidates of the unified tertiary matriculation examinations Vol. 2/UTME,* 1-2

Okebukola, P. (2006, June 8). *Quality control in Nigerian university system*. Paper presented at the annual seminar of the Association of Vice Chancellors of Nigerian Universities (AVCNU) at Cross River State University of Technology, Calabar.

Okebukola, P. (2010). Fifty years of higher education in Nigeria: Trends in quality assurance. A paper presented at the *International Conference* on the Contributions of Nigerian Universities to the 50th Independence Anniversary of Nigeria, 25. Abuja, September 27-29th

Okeke, A. U., Ezenwafor, J., and Umoru, T A (2012). Perception of business educators on the impact of ICTs on student learning in tertiary institutions in Nigeria. *Global Awareness Society International 21st Annual Conference,* 1-12 – New York City, May.

Okolocha, C.C., and Onyeneke, E. N (2013). Secondary school principals' perception of business studies teachers' teaching effectiveness in Anambra State, Nigeria. *Journal of Education and Practice, Vol. 4 No. 2*. 1-10. Retrieved December 3, 2013 from www.iiste.org

Okon, E.E., and Okon, F. I. (2013). ICT utilization and teaching-learning in business education in tertiary institutions in cross river state. *Mediterranean Journal of Social Sciences, Vol. 4 No. 5 (online)*. Published by MCSER-CEMAS-Sapienza University of Rome.

Okunrotifa, P. O. (2013). *Towards a higher standard of secondary education in Nigeria*, 1-8. Retrieved March 10, 2013 from http://www.unilorin.educ.ng/journals/education/ije/feb1981/TOWARDS%2520a%2520HIGHER%2520STAN.

Olakulehin, F.K.(2007). Information and communication technologies in teacher training and professional development in Nigeria. *Turkish Online Journal of Distance Education*, 8(1), 133-142.

Olaofe, I.A., 2005. Nigerian educational emancipation: Roadmap from crisis to resurgence. *Faculty of Education Seminar Series, No. 1*. Ahmadu Bello University, Zaria.

Ololube, N. P. (2006a). Appraising the relationship between ICT usage and integration and the standard of teacher education programmes in a developing economy. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), Vol. 2, Issue 3,* 70-85.

Ololube, N. P. (2006b). The impact of professional and non-professional teachers' ICT competencies in secondary schools in *Nigeria. Journal of Information Technology Impact, Vol. 6(2),* 110.

Ololube, N. P. (2006c). Benchmarking the motivational competencies of academically qualified teachers and professionally qualified teachers in Nigerian Secondary schools. *The African Symposium, Vol. 5(3),* 17-37

Ololube, N. P. (2005)."Teachers instructional material utilization competencies in secondary schools in Sub-Saharan Africa: Professional and non-professional teachers' perspective". In *Conference Proceedings of the 6th International Educational Technology Conference EMU,* 19-21, North Cyprus, April

Ololube, N. P. (2007a). The relationship between funding, ICT, selection processes, administration and planning and the standard of science teacher education in Nigeria, Asia-Pacific *Forum on Science Learning and Teaching, Volume 8, Issue 1, Article 4,* 1-13. June. Retrieved November 3,2010 from file://C:/Documents and Settings/USER.USER-8D994E82B2/Desktop/The relationship bet...

Ololubo, N. P., Ubogu, A. E., and Egbezor, D. E. (2007b). ICT and distance education programs in a sub-Saharan African Country: A theoretical perspectives. *Journal of Information Technology Impact Vol. 7, No. 3,* 181-194.

Oloyo, R. A (2010). Nigeria: Why education must be ICT-based. *allAfrican.com.* Daily Independent (Lagos) May. Retrieved 11th August 2010 from file://C:\Documentys and Settings\USER-8D994E82B2\Desktop\allAfrica.com.Nigeria Why Education Must Be ICT-Bas…

Omosewo, O. E., and Akanmu, M. A. (2013). Evolution of functional basic and senior secondary eduation curriculum in Nigeria: Implications for effective implementation. *Journal of Education and Practice, Vol. 4(22).* 1-8.

Onasanya, S.A., Shehu, R.A., Oduwaiye, R.O., and Shehu, L.A. (2010). Higher institutions lecturers' attitude towards integration of ict into teaching and research in Nigeria. *Research Journal of Information Technology 2(1)*: 1-10

Oniye, M. I., and Okoro, N. P (2007). Adoption of pragmatic approach: A major avenue for innovation in teaching courses in tertiary institutions in Nigeria. *African Journal of Historical Sciences in Education, Vol.G 3(1),* May. Retrieved November 30, 2011 from http://www.ischnigeria.org/journals.html

Onu, A. J. C. (2012). Business education and emerging information and communication technology. *Vocational Business Educators Vol. 1(2),* 11. A Publication of Business Educators in Vocational Education (BEAVE). August

Orien, A., Mioduser, D., & Nachmias, R. (2002). The development of social climate in virtual learning discussion groups. *International Review of Research in Open and Distance Learning, 3(1).* Retrieved May 30, 2011 from http://www.irrodi.org/index.php/irrodi/zrticle/view/80/155

Osuala, E. C. (2004). *Principles and methods of business and computer education*, Enugu. Creston Books, Nigeria, p. 1

Osunde, A.U., and Omoruyi, F. E. O. (2004). An evaluation of the National Teachers Institute's manpower training programme for teaching personnel in mid-western Nigeria. *International Education Journal, Vol. 5(3).* 405-409

Otero, V. D., Peressini, K. A., Meymaris, P., Ford,T., Garvin, D., Harlow, M., Reidel, B., and Waite, M. (2005). Integrating technology into teacher education: A critical framework for implementing reform. *Journal of Teacher Education, 56(1),* 8-13.

Owolabi, H. O. (2008). The challenge of critical thinking for curriculum development and evaluation in Nigeria. *Journal of Education of University of Ilorin Vol. 8,* 1-10. Retrieved March 2013 from http://unilorin.edu.ng/journals/education/ije/sept1988/MAJOR%2520TRENDS%2520IN%2520CURRICU...

Oyeyiola, A. O. (2005). *Office management today: An introductory text for office professionals and students in tertiary institutions,* Published by Kaura Namoda Educational Associates, Kaura Namoda, p. 150.

Oyeyiola, A. O. (2006). Professional and non-professional computer users' perception of keyboarding skill and its implication on business education in the 21st century. *Kaura Namoda Journal of General Education, Vol. 7(2),* 1963-1972. July-December

Peck, K. L., and Domcott, D. (1994). Why use technology? *Journal of Educational Leadership, 51(7),* 11-14

Pelgrum, W.J., Voogt, J. (2009). School and teacher factors associated with frequency of ICT use by mathematics teachers: country comparison. *Educ Inf Technol 14*:293-308

Reid, S. (2002). The integration of ICT into classroom teaching. Research in Ontario Secondary Schools, &(1). Retrieved May 30, 2011 from http://www.oise.utoronto.ca/field-centres/TVC/RossReports/vol7no.1htm

Rufa'i, R. A. (2010). The new national education roadmap: Towards reinventing the higher education sector. A keynote address by Minister of Education at the *25th Annual Conference of Association of Vice-Chancellors of Nigerian Universities (AVCNU),* 3-13. Prince Olagunsoye Oyinlola Auditorium, Osun State University, Main Campus, Osogbo, April 2010.

Russell, M.., Bebell, D., O'Dwyer, L. & O'Connor, K. (2003). Examining teacher technology use: Implications for pre-service and in-service teacher preparation, *Journal of Teacher Education,* 54(4).

Sahin, I., and Thompson, A. (2006). Using Roger's theory to interprete instructional computer use by COE acultyu. *Journal of Research on Technology in Education 38(1),* 86-113.

Saint, W, Harnett, T A and Strassner, E (2003). Higher education in Nigeria*: A status report,* 1-14. Published in *Higher Education Policy 2003, 16,* 259-281. The World Bank, Washington.

Sang, G., Valcke, M., Van Braak, J. and Tondeur, J. 2009. Factors support or prevent teachers from integrating ICT into classroom teaching: A Chinese perspective. *Proceedings of the 17th International Conference on Computers in Education. Hong Kong*: Asia-Pacific Society for Computers in Education, pp. 808-815.

Sani, A. (2010). Office technology education and its application to secretarial skills. *Journal of Business Education Research and Development (JOBERD) Vol. 1. No. 2*, 27-32.

Sarfo, F. K. , and Ansong-Gyimah, K. (2010). The perceptions of students, teachers, and educational officers in Ghana on the role of computer and the teacher in promoting the first five principles of instruction. *TOJET: The Turkish Online Journal of Educational Technology, Vol. 9 Issue 3,* 85-94. July

Silla, V., and Hobbs, T. (2008). Culturally accessible e-Learning materials for international special educators. International Conference on Learning, (Chicago: 15th, University of Chicago, June 3-6, 2008).

Sim, J. CH., and Theng, L. B. (2007). *Teachers perceptions of the use of ICT as an instructional tool in mathematics and science,* 1-8. Retrieved 20th March 2014 from http://wwww.ICtl.edu.my/ICtl/2007/procee

Smith, B. O. (1963). "Towards a theory of teaching", in . A. Bellack, (Ed.)., T*heory and research in teaching, New York:* Teachers College Press, Columbia University.

So, T. and Swatman, P. M.C. (2006). e-Learning Readiness of Hong Kong Teachers. University of South Australia.

Stefani, L. (2000). Planning teaching and learning curriculum design and development. In Heather F., Ketteridge, S, and Marshall, S (ed). *A handbook for teaching and learning in higher academic practice*. (Third Edition). Routledge Taylor & Francis Group. Pp. 40-56

Stephen, D. (2011). Nigerian government and IT. *New Nigerian Newspaper, Vol. ( )*. June 21

Summers, M. (1990). New student teachers and computers: An investigation of experiences and feelings. Educational Review, 42(3), 261–271.

Tasir, Z., Abour, K. M. El. A., Halim, N. D. A., and Harun, J. (2012). Relationship between teachers' ict competence, confidence, level and satisfaction toward ict training programmes: A case study among post-graduate students. TOJET. *The Turkish Online Journal of Educational Technology, Vol. II, Issue 1*, 1-7. January.

Taylor, C. (2014a). What is a statistical population? *Education Statistics About.Com.*, 1-2. Retrieved February 23, 2004 from http://statistics.about.com/od/Glossary/a/What - Is-A-Statistical-Population.html.

Taylor, C. (2014b). Differences in descriptive and inferential statistics. *Education Statistics About.Com.*, 1-2. Retrieved February 23, 2014 from http://statistics.about.com/od/Descriptive-Statistics/a/Differences-In-Descriptive - And-Inferential...

Tella, Adeyinka., Tella, AAdedeji., Toyobo, O. M., Adika, L. O. , and Adeyinka, A. A. (2007). An assessment of secondary school teachers uses of ict's: Implications for further development of ict's use in Nigerian secondary schools. *The Turkish Online Journal of Education Technology. 6(3),* 5-17. Retrieved March 20th 2013 from http://www.tojet.net.

The Robert Gordon University Aberdeen (2004). Teachers ICT skills and knowledge needs. *Final Report to SOEID* Section Three. Retrieved 20th March 2013 from http://www.rguedu.org.

TRCN, Teachers' Registration Council of Nigeria (2010). *Teacher Education in Nigeria*, 1-10. Retrieved November 18, 2010 from infor@trcn.gov.ng.

Trochim, W. W. K. (2006). *The research methods knowledge base*, 1-8. Retrieved 27th November, 2010 from http://www.socialresearchmethodsa.net/Ub/design.php)

Ubah, M. C. (2012). Achieving effective teaching and learning in Nigerian universities through information and communication technology. *Vocational Business Educator, Vol. 1. No. 1*, 124-130.

Ubulom, W.J., Enyekit, E.O., Onuekwa, F.A., and Amaehule, S. (2011). Analysis of information and communication technology (ict) accessibility and utilization in teaching of business studies in econdary schools in rivers state, Nigeria. *Proceedings of the 211 International Conference on Teaching, Learning and Change; International Association for Teaching and Learning (IATEL).*

Udoh, A. A. (2010). Business education as a tool for economic empowerment and investment opportunities. J*ournal of Business Education Research and Development(JOBERD) Vol. 1(1)*, 23-27. March

Udoh, A. A (2011). Challenges of vocational and technical education in a depressed economy. A lead paper presented at the 9th Annual National Conference organized by the Nigerian *Association of Vocational & Technical Educators (NAVTED)*, 1-12. Federal College of Education, Kano, July 5th – 8th

Udoye, N. R., and Ndum, V. E. (2013). Reinvigorating business teacher education towards self-reliance in Nigeria. *Journal of Educational and Social Research, Vol. 3 No. 9*, 119-126. MCSER Publishing, Rome Italy, November

Umar, R. T. (2012). Attitudes of business education students towards teaching profession. *Vocational Business Educator Vol. 1. No. 1*, 74-81.

UNESCO (1990). Innovations and initiatives in teacher education in Asia and the Pacific Region: Comparative Overview of Fifteen Countries. *APEID*, Vol 1(1), i-ii. Bangkok.

UNESCO (1999). Final report. *Second International Congress on Technical and Vocational Education*, 42. Seoul, Republic of Korea, April

UNESCO (2003). Analytical survey: The use of ICTs in technical and vocational education and training. In Chinien C. (2003 ed.), *UNESCO Institute for Information Technologies in Education*, 17-18. Moscow.

UNESCO Bangkok (2004). *Integrating ICTs into education: Lessons learned*. Retrieved November 13, 2010 from http://www.unescobkk.org/index.php?id=1793

UNESCO (2008). Shaping TVET-teacher education for changing world of work. First Word Congress on Teacher Education for Technical and Vocational Education and ?Training (TVET), 1-58. Bandung, Indonesia, July.

UNESCO (2010). Relationship between literacy, education and development. Retrieved from www2.unescobkk.org/elib/publications/…/*Module 1.PDF, November 12*.

University of Nigeria Nsukka (2011). *Welcome to vocational teacher education department*, Main menu page. University of Nigeria Nsukka. Retrieved May 4, 2011 from http://voceu-unn.com

Uwaifo, V. O., and Uwaifor, I. U (2010). Training technology and vocational education teachers for the new 9-3-4 education system in Nigeria: Its problems and prospects. *International NGO Journal*, *Vol. 4(4),* 160-166. Retrieved May 6, 2011 from http://www.academicjournals.org/ingoj

Wadatu, S., and Sado, M. S. (2012). The importance of information and communication technology in teaching and learning of integrated science in junior secondary schools in Nigeria. Namoda Techscope, *A Journal of Applied Science and Technology Vol 9(1),* 111- 112. June

Williams, D., Coles, L., Wisoon, K., Richardon, A & Tuson, J. (2000). Teachers and ICT: current use and future needs, *British Journal of Educational Technology, 31(4),* 307-320.

Wu, W., Chang, H., and Guo, C. (2008). An empirical assessment of science teachers' intentions toward technology integration. *Journal of Computers in Mathematics and Science Teaching, 27(4),* 499-520

Ya'acob, A. et al., (2005). Implementation of the Malaysian Smart School: An Investigation of Teaching-Learning Practices and Teacher-Student Readiness. *Internet Journal of e-Language Learning & Teaching, 2(2),* pp. 16-25.

Yusuf, I. M., and Bossa, D. R. (2012) Business education and national development. *Journal of Business Educational Research and Development (JOBERD) Vol. 1 No. 2,* 140-143.

Yusuf, M. O. (2006). Problems and prospects of open and distance education in Nigeria. *Turkish Online Journal of Distance Education,* (1), 22-29.

Yusuf, M. O., Balogun, M. R., (2011). Student-Teachers competence and attitude towards information and communication technology: A case study in a Nigerian University. *Contemporary Educational Technology, 2(1),* 18-36.

APPENDIX I

DETERMINING SAMPLE SIZE FOR RESEARCH, ACTIVITIES

ROBERT V. KREJCIE & DARYLE W. MORGAN

TABLE 1: *Table for Determining Sample Size from a Given Population*

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.
S is sample size.

Appendix II

DEPARTMENT OF VOCATIONAL & TECHNICAL EDUCATION

AHMADU BELLO UNIVERSITY, ZARIA NIGERIA

FACULTY OF EDUCATION

Telephone: 069-51755, 506692
Vice Chancellor: Professor. Abdullahi Mustapha B.Sc. (Hons) Pharm(ABU), Ph.D (London) FPSN
Head of .Department: Dr. I.M Haruna PGDE, (ABU), MSc (Bulgaria) Ph.D (ATBU)

25th July, 2012

Your Ref: PH.D/EDUC/12914/2007-2008

*Our Ref:*_____ *Date:*_____

LETTER OF IDENTIFICATION
AMOS OLATOYOSI OYEYIOLA - PH.D/EDUC/12914/2007-08

This is to certify that the above mentioned name is a postgraduate student {Ph.D Business Education) in the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria, carrying out a research topic: **Relationship Between the Perception of Business Education and Usage of Information and Communication Technology. Implication on Business Education Programme in Universities in Nigeria,**

Please, kindly give him every assistance he may require.

DEPT. OF VOC. & TECH. EDUCA. Dr. Iliya M. Haruna HEAD OF DEPARTMENT A.B.U. ZARIA

Appendix III

Researcher's Introductory Letter and Questionnaire

Department of Vocational & Technical Education
Faculty of Education,
Ahmadu Bello University,
Zaria.

Dear Sir,

REQUEST TO FILL QUESTIONNAIRE

I am a PhD (Business Education) Student in the above mentioned Department, conducting a research study on "Assessment of Teachers' factors on the usage Information and Communication Technology (ICT) in Teaching Business Education Courses Nigerian Universities" This questionnaire is designed to obtain data for the research work. Please, fill the questionnaire as objectively as possible. All the information supplied will be treated as confidential, and used only for the purpose of this study. Hence, the researcher counts on your cooperation**.**

Thank you.

Yours faithfully**,**

OYEYIOLA, Amos Olatoyosi
(PhD/Educ/12914/2007-2008)

SECTION A

Instructions for Data Collection: Please, tick ( ).

Staff Personal Data;

1. Gender:
Male ( )
Female ( )

2. No. of Years of Computer Experience
0 - 1 year ( )
1 - 2 years ( )
2 – 3 years ( )
4 years and above ( )

SECTION B

Respondent, are required to respond to the following statement by ticking as applicable. Note; the responses are rated from four to one as follows;-

S/NO	Option	Abbreviation
1	Strongly Agreed	SA (4 points)
2	Agreed	A (3 points)
3	Disagreed	D (2 points)
4	Strongly disagreed	SD (1 point)

QI	Statement	SA	A	D	SD
1	Lack of ICTs skills has no effect on its usage in teaching business education courses				
2	If lecturers acquire ICT skills he will be encourage to use it in teaching				
3	Lecturer ability to use a tool in teaching depends on is effectiveness on manipulation of the tool				
4	ICT skills is essential on its usage in teaching				
5	Most lecturers hardly used ICT in teaching because they have no requisite skills on its usage				
6	Factors that affects the usage of ICT in teaching include				

7	Ability to use ICT for teaching of business education courses depends lecturers' knowledge of the tools				
8	It is difficult for me to use ICT to teach students because I like the essential skills				
9	Know what to do with computers determine its usage in teaching				
10	Lecturers competence on ICT encourages him to use it in teaching business education courses in the universities				
11	Lecturers exposure to ICT has effect on his usage in teaching				
12	The knowledge of ICT helps on its usage in teaching business education courses				
13	Ability of lecturer to use ICT for teaching of business education courses depends his initial exposure				
14	Those that do use ICT for teaching are expose to it				
15	Those that have exposure to computer are afraid of using it for teaching				
16	Lecturers that have ICT exposure find it difficult to use it in class				
17	My inability to use ICT in class is because I am not expose to it				
18	Lecturers that are not exposure to ICT gadgets are skeptical on its usage				
19	The technical nature of ICT affects its usage in the class				
20	My knowledge of ICT discourage me from using it when teaching students				
21	We have inadequate ICT gadgets for teaching students				
22	most teachers have no access to ICT gadgets for teaching				
23	It is difficult to have access to ICT facilities for teaching in our institutions				
24	Most lecturers find it difficult to use ICT to teaching because of accessibility				
25	I hardly use ICT for teaching because I have no access to it				

26	Lack of ICT gadgets in our school affects its usage in teaching				
27	Inadequate ICT facilities is one of the problems affecting its usage				
28	Usage of ICT in class depends on its accessibility				
29	Lecturers are skeptical of using ICT to teach because of its accessibility				
30	If I have access to ICT in class, I will use it to teach my students				
31	Most lecturers in business education appreciate the role to ICT in teaching				
32	I like using ICT to teaching business education courses				
33	Attitude of lecturers towards ICT has impact on its usage in the class				
34	Lecturers who have negative attitude towards ICT are always skeptical to use it in teaching				
35	Most lecturers that have negative attitude towards ICT find it difficult to use ICT to teaching				
36	Those who have positive attitude towards ICT can Smake use of it in teaching				
37	Ability of lecturer to use ICT for teaching depend on their attitude towards it				
38	My inability to use ICT in class is attributes my attitude towards it.				
39	Lecturers that have positive attitude towards ICT find it easy to use it in teaching students				
40	Negative attitude on the use of modern equipment in class has relationship on its usage in class				
41	My working experience has significant influence on my ICT skills.				
42	My working experience has help me in acquiring ICT skills				
43	Due to my working experience, I have appreciate the use of ICT in teaching students				
44	My ability to use ICT in teaching is attributed to my working experience				

45	Old lectures find it difficult to use ICT in teaching.				
46	Year of experience has effect on the usage of modern technology in teaching				
47	Lecturers who have ICT exposure are better on its usage of modern technology in teaching and learning				
48	My teaching experience has negative effect on my skills on the use of ICT in class,				
49	New lecturers are more skillful on the use of modern technology in the class				
50	Use of ICT is much appreciated by young lecturers				
51	I hardly use ICT because of my gender				
52	Female lecturers hardly use ICT for their academic work				
53	Only male lecturers in business education are ICT compliance.				
54	Gender sensitive affects the usage of ICT among male lecturers				
55	There is wide gap between male and female lecturers in business education on ICT usage				
56	Only female lecturers in business education find it difficult to use ICT facilities				
57	Only male lecturers in business education do make use of ICT for teaching				
58	Gender is one of the factors that affects the using of ICT in teaching students				
59	Female a better when it comes to ICT skills and usage in classroom				
60	Both male and female lecturers can use ICTs facilities to teaching students				

PPENDIX IV

SUMMARY OF RESPONSES TO QUESTIONNAIRE INSTRUMENT (SECTION B S/NOS. 1-60)

S/n	Item	Agree	Disagree	Mean	Std Dev.	Remark
1	Lack of ICTs skills has no effect on its usage in teaching business education courses	237	82	1.9	0.58	Disagreed
2	If lecturers acquire ICT skills he will be encourage to use it in teaching		86	2.3	0.69	Disagreed
3	Lecturer ability to use a tool in teaching depends on its effectiveness on manipulation of the tool	233	88	2.1	0.62	Disagreed
4	ICT skills is essential on its usage in teaching	209	106	1.9	0.57	Disagreed
5	Most lecturers hardly used ICT in teaching because they have no requisite skills on its usage	356	52	2.4	0.80	Disagreed
6	Factors that affects the usage of ICT in teaching include ICT skills	214	113	1.7	0.52	Disagreed
7	Ability to use ICT for teaching of business education courses depends on lecturers' knowledge of the tools	216	93	2.3	0.69	Disagreed
8	It is difficult for me to use ICT to teach students because I lack the essential skills	193	116	2.3	0.69	Disagreed
9	Know what to do with computers determine its usage in teaching	255	84	2.0	0.60	Disagreed
10	Lecturers competence on ICT encourages him to use it in teaching business education courses in the universities	215	105	3.8	1.05	Agreed
11	Lecturers exposure to ICT has effect on its usage in teaching	637	201	3.0	0.86	Agreed
12	The knowledge of ICT helps on its usage in teaching business education courses	449	206	2.7	0.74	Agreed
13	Ability of lecturer to use ICT for teaching of business education courses depends his initial exposure	761	203	3.2	0.89	Agreed
14	Those that do use ICT for teaching are expose to it	576	223	2.9	0.82	Agreed

15	Those that have exposure to computer are afraid of using it for teaching	1035	122	3.6	1.01	Agreed
16	Lecturers that have ICT exposure find it difficult to use it in class	276	230	2.2	0.54	Disagreed
17	My inability to use ICT in class is because I am not expose to it	523	184	3.0	0.86	Agreed
18	Lecturers that are not exposure to ICT gadgets are skeptical on its usage	505	343	2.4	0.66	Disagreed
19	The technical nature of ICT affects its usage in the class	796	163	3.3	0.91	Agreed
20	My knowledge of ICT discourage me from using it when teaching students	784	178	3.3	0.91	Agreed
21	We have inadequate ICT gadgets for teaching students	429	17	3.4	0.97	Agreed
22	most teachers have no access to ICT gadgets for teaching	428	17	3.4	0.97	Agreed
23	It is difficult to have access to ICT facilities for teaching in our institutions	372	39	3.6	1.01	Agreed
24	Most lecturers find it difficult to use ICT to teaching because of accessibility	363	43	3.6	1.01	Agreed
25	I hardly use ICT for teaching because I have no access to it	397	31	3.7	1.03	Agreed
26	Lack of ICT gadgets in our school affects its usage in teaching	383	40	3.6	1.01	Agreed
27	Inadequate ICT facilities is one of the problems affecting its usage	297	73	3.2	0.89	Agreed
28	Usage of ICT in class depends on its accessibility	296	74	3.2	0.89	Agreed
29	Lecturers are skeptical of using ICT to teach because of its accessibility	242	102	2.8	0.80	Agreed
30	If I have access to ICT in class, I will use it to teach my students	240	97	2.8	0.80	Agreed
31	Most lecturers in business education appreciate the role to ICT in teaching	400	20	3.8	1.05	Agreed
32	I like using ICT to teaching business education courses	403	21	3.8	1.05	Agreed
33	Attitude of lecturers towards ICT	371	28	3.7	1.03	Agreed

	has impact on its usage in the class					
34	Lecturers who have negative attitude towards ICT are always skeptical to use it in teaching	357	39	3.6	0.96	Agreed
35	Most lecturers that have negative attitude towards ICT find it difficult to use ICT in teaching	336	30	3.7	1.03	Agreed
36	Those who have positive attitude towards ICT can make use of it in teaching	376	29	3.7	1.03	Agreed
37	Ability of lecturer to use ICT for teaching depend on their attitude towards it	284	73	3.2	0.89	Agreed
38	My inability to use ICT in class is attributed to my attitude towards it.	265	83	3.0	0.86	Agreed
39	Lecturers that have positive attitude towards ICT find it easy to use it in teaching students	257	89	2.8	0.80	Agreed
40	Negative attitude on the use of modern equipment in class has relationship on its usage in class	281	87	3.1	0.87	Agreed
41	My working experience has significant influence on my ICT skills.	201	97	2.7	0.74	Agreed
42	My working experience has help me in acquiring ICT skills	363	23	3.8	1.05	Agreed
43	Due to my working experience, I have appreciate the use of ICT in teaching students	409	16	3.8	1.05	Agreed
44	My ability to use ICT in teaching is attributed to my working experience	201	82	2.8	0.80	Agreed
45	Old lectures find it difficult to use ICT in teaching.	99	123	1.8	0.48	disagreed
46	Year of experience has effect on the usage of modern technology in teaching	72	131	1.5	0.41	disagreed
47	Lecturers who have ICT exposure are better on its usage of modern technology in teaching and learning	331	37	3.6	0.96	Agreed
48	My teaching experience has negative effect on my skills on the use of ICT in class,	413	7	3.9	1.15	Agreed
49	New lecturers are more skillful on	430	5	4.0	1.20	Agreed

	the use of modern technology in the class					
50	Use of ICT is much appreciated by young lecturers	428	5	4.0	1.20	Agreed
51	I hardly use ICT because of my gender	88	99	1.9	0.58	Disagreed
52	Female lecturers hardly use ICT for their academic work	128	96	2.3	0.69	Disagreed
53	Only male lecturers in business education are ICT compliance.	138	128	2.1	0.62	Disagreed
54	Gender sensitive affects the usage of ICT among male lecturers	128	148	1.9	0.57	Disagreed
55	There is wide gap between male and female lecturers in business education on ICT usage	97	100	2.4	0.80	Disagreed
56	Only female lecturers in business education find it difficult to use ICT facilities	119	156	1.7	0.52	Disagreed
57	Only male lecturers in business education do make use of ICT for teaching	122	87	2.3	0.69	Disagreed
58	Gender is one of the factors that affects the using of ICT in teaching students	165	116	2.3	0.69	Disagreed
59	Female are better when it comes to ICT skills and usage in classroom	138	138	2.0	0.60	Disagreed
60	Both male and female lecturers can use ICT facilities to teach students	389	16	3.8	1.05	Agreed