AVAILABILITY AND UTILISATION OF INFORMATION AND COMMUNICATION TECHNOLOGY RESOURCES FOR TEACHING BUSINESS EDUCATION COURSES IN COLLEGES OF EDUCATION, NIGERIA

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A PROJECT PROPOSAL SUBMITTED TO THE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION, FACULTY OF EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR DEGREE (B.Sc) IN BUSINESS EDUCATION (ACCOUNTING) OF THE UNIVERSITY OF BENIN, BENIN CITY

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CERTIFICATION

We the undersigned, certify that this study was carried out by Kudi Ali MUSA with matriculation number EDU2110654 in the Department of Vocational and Technical Education, Faculty of Education, University of Benin, Benin City.

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EXTERNAL EXAMINER **Date**

DEDICATION

This study is dedicated to my Heavenly Father for His grace and infinite mercies.

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ABSTRACT

This study was on the availability and utilization of information and communication technology resources for teaching business education courses in colleges of education Nigeria. Four research questions guided the study and three hypotheses were formulated and tested at 0.05 level of significance.

The study employed descriptive survey research design. The population of this study comprised 133 business educators in colleges of education in Delta and River States. As a result of the manageable size, the entire population was used as sample, hence, census. The research instruments used for data collection was a checklist and a well-structured questionnaire titled "Availability and Utilisation of ICT Resources in Business Education Programme Questionnaire" (AUICTRBEPQ). The instrument for data collection was subjected to face validity by the researcher's supervisor and two other experts from the Department of Vocational and Technical Education, University of Benin, Benin City. To determine the reliability of the instruments for the study, the internal consistency of the items were measured using Cronbach alpha statistic. The instrument yielded a coefficient of 0.88. Data collected were analysed using simple percentage (%) mean ($\bar{x}$), standard deviation (SD) and two sample independent t-test.

The findings revealed that schools did not meet up to the standard set by the National Commission of Colleges of Education with regards to the required ICT facilities needed for teaching business education courses in colleges of education. There was a low utilisation of ICT resources in teaching business education courses in colleges of

education in Delta and River States. There was no significant difference between the utilisation of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and River States; there was a significant difference between business educators in federal and state colleges of education in Delta and River States on the utilisation of ICT resources in teaching business education courses and there was a significant difference between office technology management option and accounting option on educators' utilisation of ICT resources in teaching business education courses. It was concluded that the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States was low and the low availability of ICT facilities contributed negatively to effective utilization of ICT resources in colleges of education in Delta and Rivers States. Based on the findings of the study, it was recommended among others that there should be collaboration between Government, management of the colleges of education and non-governmental agencies for the purchase of various ICT facilities in order to foster effective utilisation of these resources.

CHAPTER ONE

INTRODUCTION

Background to the Study

Business education is an aspect of vocational technical education, concerned with exposing its recipients to the internal and external foundation and functioning of the workplace. Business education is a comprehensive discipline, which instructional programme encompasses the knowledge, attitude and skills needed by all persons in order to effectively manage their personal businesses and economic system. These skills help the recipients gain entry into employment and advancement in a broad range of careers. As stated by Ezenwafor and Onokpaunu (2017), the programme is built on making its recipients become job creators, wealth providers, workplace information providers, communication and technology consultants, enterprenuers of small and medium enterprises and managers of business entities. This means that business education embraces basic education for teaching career, enterpreneurship, business understanding, office management and vocational practices. Abdulkadri (2012) stated that, one remarkable characteristics of business education is that, its products can function independently as self-employed or as employers of labour. The programme encompasses a wide range of courses which includes; office technology and management education, accounting education, general business management education, distributive and marketing education.

Business education is a programme of study designed for the actualization of self-employment and industrialization. It is that aspect of education that provides the knowledge, skills, understanding and attitudes needed to perform in the business world either as producers or consumers of goods and services. Being a practical course, it prepares students for the world of work equipping students with practical business skills which will enable them to participate meaningfully in production in future. The development of adequate quality and functional skill is of paramount importance in business education programme. This is because, the quality of training given to students of business education, should be such that can give adequate skills and information needed in the real world of work.

The National Commission for Colleges of Education (NCCE) (2012) stated that the general aim of business education is to provide students with saleable skills and competencies needed to enhance the productive capacity of the citizens and to produce better consumers of goods and services. Towards the attainment of this objective, availability and utilization of ICT resources in teaching and learning of business education programme cannot be ignored. The availability and proper utilisation of information, communication technology in business education programme, will go a long way to enhance the academic training of business education students, expand access to quality knowledge and create opportunity for revolutionalisation of office automation which is already ongoing.

One of the theories of vocational and technical education (business education inclusive), is that the tools, equipment and facilities with which learners are trained, must be a replica of the tools, equipment and facilities found in the workplace (Akpan, 2012). With the rapid global changes and technological transformation in educational system, office automation and democratization, is inevitable for business educators to ignore the utilization of information and communication technology resources in teaching of business education courses. This will enable graduates to be able to meet the competitive and challenging commercial world of office automation. With this, there is need for business educators to be up-to-date in their knowledge and skills in information and communication technology and its utilization in order to incorporate it into teaching and learning process.

Information Communication Technology is the features of technology which deals with the handling and processing of information, utilizing a wide variety of electronic gadgets in facilitating communication and learning. Onwagboke (2012) referred to ICT as a systematic process of gathering, processing, storing, sending and receiving of information through the printed broadcast, computing and telecommunication media. The emergence of ICT has totally revolutionized the way one accesses, processes, stores, retrieves and disseminates information within organization or across the globe. This has changed the business operation and dealing, communication and information processes, educational system and general human activity at large.

Agbamu (2014) saw ICT as the use of computer and software to convert, store, process and transmit vocal, pictorial, textural and numerical data into useful information which aid teaching and learning processes. ICT in educational system is the integration of computer technology in the form of internet and information management system into educational activities. It has the potential to accelerate, enrich and deepen skills, motivate and engage students in learning, relate school experiences to workplace, contribute to radical changes in school, strengthen teaching and provides opportunity for connection between the school and the world (Kirschner & Woperies, 2013). Hence, business educators will need to use ICT resources in teaching business education courses so as to equip tomorrow's employers, employees and consumers (workforce) with the requisite competence and knowledge of the use of these resources within their workplace. The use of these resources has impacted on the quality and quantity of teaching through its dynamic interactive and engaging activities. It has simplified education through the application of electronic media, internet and many more.

Resources are the different instructional tools available in classrooms that aid and facilitate effective teaching and learning. Therefore, the teaching of business courses could be simplified and made more effective with the use of ICT resources. These teaching resources have been found to effectively aid instructions in the areas of tutorial, drill and practice, test administration, test question banking, management of instruction and simulation (Nikky, 2013). Some ICT resources that can be used for teaching business education courses are multimedia devices which include: computer (computer-aided

instruction), projector, interactive whiteboard, printer, scanning machine, teleconferencing device, photocopier, public address system, power point, electronic learning facilities, computer-assisted learning, database and Excel, computer-assisted design, word processor, computer-assisted testing, electronic library, internet facilities, world wide web, microfilms, Computer Aided Instruction (Miller & Akume, 2014). However, the variables that will be looked into for the purpose of this study are computer and multimedia.

Computer is an electronic device that accepts data from an input device, manipulates data in accordance with predefined instructions and produces output (Eriki, 2013). It includes computer aided instruction (CAI) or computer-based training (CBT) which is the use of computer for teaching. It depicts a situation where the computer is programmed to assist students in learning some courses (Aja, 2013). With the advent of multimedia system, CAL offers both visual display and audio functions during learning. This provides active participation and hands-on experience students need to construct meaningful learning, making them able to visualize abstract ideas and relate it to what is expected in the real world of work. Moreover, it helps to facilitate the work of business education lecturers by enabling students to move at the same pace without stress.

Multimedia is another important ICT resource that business educators are expected to utilize. Chien, Wu and Hsu (2014) described multimedia devices as being concerned with the use of digital and technological device to transfer and convey information to a larger number of people and it includes the use of interactive whiteboard,

video conferencing, projector, public-address system, and so on for effective instructional delivery. With the use of multimedia devices such as teleconferencing device, business education lecturers can have an interactive session of group discussion and seminar even without being physically present. Multimedia devices improve instruction for business education students because it helps to capture students' attention as learning becomes interactive with immediate feedback, leading to increased performance. Through the use of public address system which is also a multimedia device, a large population or audience can easily be reached during learning.

Projector is a device used to project rays of light with a system of lenses for projecting slides, notes, videos or films on to a screen (Shanker, 2016). It is an audio-visual device that appeals to the sense of hearing and sight simultaneously and it is effective for large classes. Once a phenomenon is visualized and can be heard, the picture and knowledge become very clear and permanent. In other words, when business education lecturers use projectors during teaching and learning process, students can see, hear and visualize what they are taught and easily relate it to real life situations, this will not only stimulate their interest but may enhance their academic performance.

Interactive whiteboard is also known as smartboard. Shanker (2016) saw it as an interactive display in the format of a whiteboard that reacts to user input either directly or through other devices. It has the ability to connect to the internet and instantly digitize tasks and operations. By combining class response with interactive whiteboard system, business education lecturers can present materials and receive feedback from students in

order to direct instruction more effectively or to carry out formal assessment. This promotes collaboration among students, group discussion and participation. With it, business educators can easily take notes, save and distribute to students later. It is a valuable tool for teaching and learning business education courses because it permits users to annotate documents, images and other content in real time.

The World Wide Web (www) and internet usage has become indispensable to the teaching and research roles of business educators and students in higher institutions. Internet provides access to e-library and vast educational resources that can be explored to enhance teaching-learning of business education courses. Internet usage and www includes searching for information on the internet, browsing websites, accessing e-books, using internet resources and media, sending and receiving emails and so on. Apart from access to quality educational materials, internet and www enhance instructional delivery of business educators and help to realign teaching from teacher-centred to student-centred.

Computer-based tools are designed to make complex tasks easier and faster like word processor for writing, database management, statistics programs, spreadsheet for analyzing data, communication and artistic words that combine sounds, teleconferencing and many more. ICT resources have become critical tools for professional training. Wheeler (2013) reported that it improves efficiency in educational processes and effect changes in teaching methodology, assessment of learning, student tracking, communication and evaluation. The primary function of ICT resources in education is to make teaching faster, easier and more effective. This means that there is need for

adequate availability of ICT resources in tertiary institutions if it must be effectively utilized to make learning and teaching of business education courses efficient.

Availability is to be available, find or get in abundance. Necessary ICT resources for teaching-learning purposes should be handy and readily available when needed. Availability is a state or quality of being enough, handy, ready and reachable, easily obtainable and ready for use, being available at hand when needed. Harold (2012) opined that availability is having sufficient instructional resources to meet the educational needs of students, readily available whenever needed to enable students perform better academically. Okoli (2019) observed that the non-availability of ICT resources in schools act as constraints to business educators in the utilization of ICT resources in teaching business education courses. For effective teaching of business education courses, ICT resources must be readily available and also functional or utilises in the sense of being able to serve the purpose it is meant to serve.

Utilization means ability to use something for practical purpose. It is the act of putting things or resources that are tangible or intangible to proper use (Nikky, 2013). Utilization of ICT resources in education refers to the use of computer-based communication that is incorporated into instructional processes. When properly utilized, ICT resources are concrete tools for facilitating instructional advancements and reforms in business education program. The sooner students learn how to use ICT resources, the easier and well-grounded they become with this rapid growth in technology.

Business education lecturers play an important role in using ICT resources in teaching in order to prepare students for the current digital era making them capable of facing the challenges of current globalization. It increases the quality, accessibility and cost efficiency of delivering instructions to students. Okolocha and Nwadiani (2015) observed that it is common to see business education graduates enrolling in computer centers to equip themselves with ICT skills and technologies to make them employable in this modern automated environment. This is what they ought to have mastered while they were still in school. Anokhe (2018) observed that there have been complaints from stakeholders and employers of labour, regarding business education graduates not being able to manipulate basic ICT resources which are fundamental tools of operation in virtually every organization. This shows that there is a big gap in the practical skills as regard the utilization of ICT resources in teaching of business education courses. Bolaji and Fakomogbo (2017) asserted that ICT application in tertiary institutions in Nigeria falls below expectation. This may be in connection with the observation that ICT resources are not available and utilized in teaching business education courses in institutions (Okolocha & Nwadiani, 2015).

The utilization of ICT resources in teaching business education courses in colleges of education may facilitate the acquisition of knowledge and circulation of students within and between various fields, with better and more effective performance. There are two important reasons for the utilization of ICT resources in teaching-learning of business education courses; Firstly, students would become familiar with the use of

ICT, since many jobs in the society today are dependent on ICT. Secondly, teaching of business education courses using ICT resources will improve the quality of business education graduates, thereby making them more effective and efficient (Okolocha & Nwadiani, 2015). Some lecturers seem reluctant in adopting new technologies into teaching process and they continue to stick to the conventional methods of teaching, thereby making them have low familiarity with ICT usage. This may be due to the lecturers' attitude towards technology, educational level, age, gender and experience with the computer for educational purpose.

Buabeng-Andoh (2012) argued that personal characteristics like gender plays an important role in effective use of ICT in the classroom. The author further stated that male teachers are more confident than female teachers in using ICT in teaching; that female teachers are less likely to use ICT than male because of low level of confidence. Tondeur, Valcke and Van (2018) further agreed that male teachers have got more positive attitudes towards ICTs and their using of ICTs in education process is more frequent in comparison with female teachers.

Some researchers also argued that ownership of colleges of education (whether Federal or State) may determine the funding provision of resources and quality of services rendered. Bassey, Akpawa and Umoren (2012), noted that the academic staff in Federal institutions fared better than staff in State institutions in their job performance including the use of ICT. Supporting this, Akuegwu, Ntukidem and Jaja (2014) found

that Federal institutions utilises ICT facilities more than State institutions due to better funding.

In comparing the utilization of ICT resources in options of business education courses Office Technology Management (OTM) and Accounting Education, Buabeng-Andoh (2012), revealed that majority of OTM lecturers cannot use the emerging ICT resources required for teaching-learning of OTM courses. Leka (2012) observed that lecturers were pulled from computer science department to teach OTM students, ICT resources are not fully incorporated into OTM teaching and learning process. Okeke (2018) also argued that ICT resources are rarely utilized in teaching accounting courses in colleges of education.

Computers and technologies are not replacement tools for quality teachers, but they are supplements needed for better teaching-learning process. The availability and utilization of ICT resources in business education, will in no doubt, enhance effective teaching-learning of business education courses (NCCE, 2012). Availability and supply of infrastructures and facilities of ICT are needed for the utilization of ICT resources in teaching in tertiary institutions. Although empirical works on ICT abounds, however, comprehensive study determining availability and utilization of information and communication technology resources in teaching business education courses in colleges of education in Nigeria appear not to have been given adequate attention. This study seeks to fill the gap being that the minimum certificate business education graduates can obtain is the Nigeria Certificate in Education (NCE), which can be obtained in colleges of

education. This is why it is important to pay attention to the availability and utilization of ICT resources in colleges of education being the least qualification any business education graduates can obtain.

Statement of the Problem

The world is technologically getting advanced due to the influence of information and communication technology (ICT). In the educational sector its usage as a means of delivering instruction is fast becoming popular around the globe. As regards what is obtainable in other parts of the globe, the utilization of ICTs in Nigerian institutions needs to be emphasized. The implementation of ICT in school curriculum requires the acquisition and deployment of ICT infrastructure. These ICT resources are normally capital-intensive in initial outlay and maintenance with the absence of national framework or blueprint for collaborative implementation that will stipulate ICT standards expected in institutions. There is need for enough resources in form of people, hardware, software and network. These resources appear not to be available in most institutions. Even when some of these ICT resources are provided, some persons do not easily yield to change, even though such changes will greatly facilitate their activities.

Sadly, many lecturers and students appear not to have the required skills and competency in the utilization of ICT resources, perhaps, due to the slow pace of embracing the ICT resources for improving the quality of teaching-learning. Federal Ministry of Education (2014) observed that there is low ICT literacy level among teachers and students in Nigeria, of which business education is inclusive. There is rising

dissatisfaction of employers of labour on the poor performance and competencies, skills of business education graduates in the use of ICT resources in the world of work, making them unemployable or unfit for the job. This of course has been and is still a problem which a good percentage of past graduates are facing and present graduate and those to come will face, if nothing is done to incorporate and improve the utilization of ICT resources in teaching-learning of business education courses. What could be responsible for this? Are the ICT resources for teaching-learning business education courses available? If available, are they modern or outdated? Are they enough? If yes, are they utilized? Do business educators have the skills for utilizing ICT resources? This is the worry of the researcher.

Purpose of the Study

This study main purpose of this study was to assess the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States, Nigeria. Specifically, the study determined

1. the availability of ICT resources for teaching business education courses in colleges of education in Delta and Rivers States;
2. the extent of utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States;
3. the extent to which computer is utilized in the teaching of business education courses in colleges of education in Delta and Rivers States;

4. the extent to which multimedia is utilized in the teaching of business education courses in colleges of education in Delta and Rivers States;
5. the extent male and female business educators utilise ICT resources in teaching;
6. the extent state and federal colleges of education utilise ICT resources in teaching; and
7. the extent Office Technology Management and Accounting educators utilise ICT resources in teaching

Research Questions

The following research question guided the study:

1. What are the ICT resources available for teaching business education courses in colleges of education in Delta and Rivers States?
2. What is the extent of utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States?
3. To what extent is computer utilized in teaching business education courses in colleges of education in Delta and Rivers States?
4. To what extent is multimedia utilized in teaching business education courses in colleges of education in Delta and Rivers States?
5. To what extent do male and female business educators utilise ICT resources in teaching?
6. To what extent do business educators in state and federal colleges of education utilises ICT resources in teaching?

7. To what extent do Office Technology Management and Accounting educators utilise ICT resources in teaching?

Research Hypotheses

Research questions 5 - 7 were hypothesized and tested at 0.05 level of significance.

1. There is no significant difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and Rivers States.
2. There is no significant difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses.
3. There is no significant difference between Office Technology Management option and Accounting option on business educators' utilisation of ICT resources in teaching business education courses.

Significance of the Study

The study would be of immense benefit to stake holders in business education such as lecturers, students, parents, curriculum planners, government and tertiary institution management, when it is published in reputable journal, conference proceedings, textbooks and so on.

The findings of the study will enlighten business education lecturers to different areas where ICT resources are applied as instructional aids for better understanding of concepts by the student. When these future teachers learn with understanding, they can

impact correct knowledge to their would-be students and learning which is a continuous process will then continue to grow.

Students will be aware of the benefits that ICT resources can give them in terms of information and its usage. This will help to improve their learning of business education courses, increase their motivation, active learning, providing efficient resources and better access to information through linking learners to information sources, gaining adequate knowledge in the course of training and pedagogical information, that may improve their learning in business education courses and as well increase their interest.

The findings of the study will enable parents to be aware of the necessary ICT resources that are needed for teaching and learning of business education courses in tertiary institution and assist the school in purchasing these resources as the case may be.

Curriculum planners will be able to identify the areas of emphasis while executing their functions. It will also make provisions on the areas of sending lecturers for workshop and seminars for knowledge updates as it concerns ICT resources and the teaching of business education courses.

To the government and philanthropist, it will enable them to be aware of the problems facing the utilization of ICT resources in teaching business education courses in tertiary institution, so as to proffer lasting solutions to them. And for government to be able to supply more of ICT resources to tertiary institutions for teaching and learning purposes.

Scope of the Study

The study focused on the availability and utilization of information and communication technology resources in teaching business education courses in colleges of education in Nigeria. The geographical scope of this study was colleges of education in Delta and Rivers States, Nigeria. The content scope of this study included computer, multimedia, male and female business educators, federal and state colleges of education, as well as availability and utilization of ICT resources in teaching.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The literature related to this study are reviewed under the following sub-headings:

- Theoretical Framework
- Concept of Business Education
- Concept of Information and Communication Technology
- Information and Communication Technology Resources Available for Teaching Business Education Courses
- Level of Utilization of Information Communication Technology Resources in Teaching Business Education Courses
- The Availability and Utilization of Computer in Teaching of Business Education Programme
- The Availability and Utilization of Multimedia in Teaching of Business Education Programme
- Review of Related Empirical Studies
- Summary of Reviewed Literature

Theoretical Framework

The theoretical framework of this study is hinged on Technology Acceptance Model (TAM) propounded by Davis (1989). Technology Acceptance Model (TAM) is basically an information systems theory developed by Davis (1989) that models how

users come to accept and use a given technology. This theory deals more specifically with the prediction of the acceptability of an information system. In recent times, TAM has come to be recognized as one of the most frequently employed models for research into new information technology acceptance and use. This theory proposes a relationship between users' acceptance of a new technology and the users' perceptions of the ease of use and usefulness of the technology. This brings to the fore, the two guiding principles of the theory, that is, the perceived usefulness and the perceived ease of use of the new technology which determine users' attitudes towards adopting it.

According to Davis (1989), perceived usefulness is defined as being the degree to which a person believes that the use of a technology will improve his performance while perceived ease of use refers to the degree to which a person believes that the use of a system will be effortless. Davis (1989) believes TAM is based on the theory of reasoned action, and as demonstrated in the Theory of Reasoned Action, TAM postulates that the use of an information system is determined by the behavioral intention of the user, but on the other hand, that the behavioral intention of the user is determined by the persons' attitude towards the use of the system and also by his perception of its utility. According to Davis, the use of a system is not only determined by the attitude of an individual, but also by the impact which it may have on his or her performance. To this end, even if an individual does not have a positive attitude towards a particular technology, there is still a strong probability that the individual will use the technology if he perceives that the technology will improve his or her performance at work. Given that the Technology

Acceptance Model hypothesizes a direct link between perceived usefulness and perceived ease of use, it follows therefore that when two systems offer the same features, a user will find more useful the one that he finds easier to use.

In Davis's (1989) theory, perceived ease of use also substantially influences the attitude of an individual through two main mechanisms: self-efficacy and instrumentality. The concept of self-efficacy wherein, the more a system is easy to use, the greater should be the user's sense of efficacy. Furthermore, a tool that is easy to use will make the user feel that he has a control over what he is doing. Perceived ease of use can also contribute in an instrumental way in improving a person's performance. Due to the fact that the user will have to deploy less efforts with a tool that is easy to use, he will be able to spare efforts to accomplish other tasks (Davis, 1989).

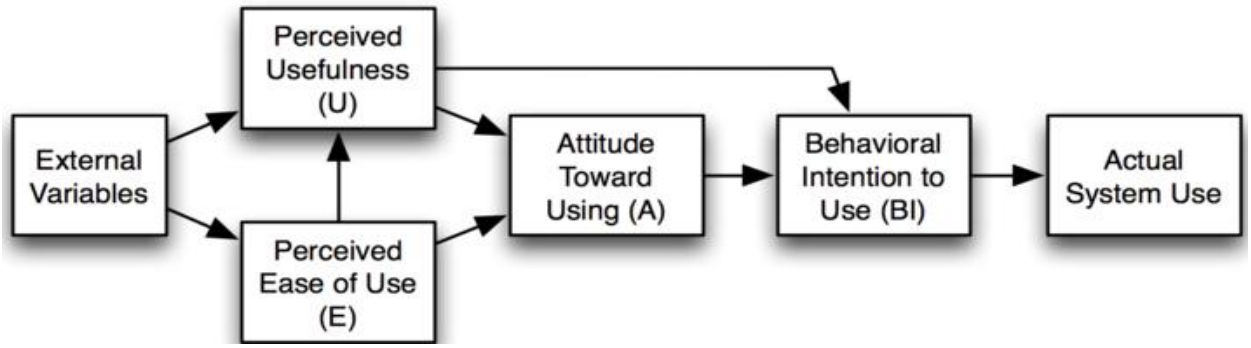

Figure 1: **Adopted Davis 1989**

As depicted in figure 1, TAM posits that acceptance of a new system can be predicted based on users' behavioural intention (BI), attitude towards use (A), and two other internal beliefs: perceived usefulness (U) and perceived ease of use (E). Here, perceived usefulness is defined as the prospective user's subjective probability that using

a specific application system will increase his or her job performance within an organizational context and perceived ease of use as the degree to which the prospective user expects the target system to be free of effort. According to TAM, behavioural intention (BI) defines the actual use of a given system and therefore determines technology acceptance. Attitude towards use (A) and perceived usefulness (U) jointly influence BI (A). BI is also indirectly affected by perceived ease of use (E). A is directly affected by both U and E, while U is directly influenced by E. Furthermore, TAM theorizes that perceived usefulness and perceived ease of use are affected by external variables. Thus, U and E mediate the effect of external variables on user's attitude and behavioural intention, and therefore the actual system use.

This theory is relevant to the study, such that the more business education lecturers and students utilise ICT in teaching and learning, the more they become conversant with the 21st century gadgets, which invariably help to enhance the teaching prowess of lecturers thereby facilitating effective learning outcome of students. Technology Acceptance Model facilitates learning by doing which is better than passive instruction. Learning by seeing, saying, touching and doing promotes understanding. When one understands skills, they promote functionality which will be acquired. With this theory, students will no longer have phobia for external or internal examination and unemployment among graduates of business education will be reduced the bearest minimum if ICT resources is properly accepted and utilized for teaching business education courses in colleges. More so, based on this theory, availability and proper

utilization of ICT resources by business education lecturers as well as students will make teaching-learning to be more meaningful and purposeful. In that, practice exposes an individual to the possibilities of learning, by providing learning opportunities and emphasizing the importance of repetition.

Concept of Business Education

Business education is a sub-field of vocational and technical education, which prepares the recipients for gainful employment as an employee or self-employed through the acquisition of skills, values, competencies and knowledge needed to operate in business world. The programme is also for entrepreneurship development. Anene (2012) opined that business education prepares people for enterprises as employees, employers or enterpreneurs. Meaning, it's one of the valuable tools for curbing unemployment problems in our economy. It is a program for business and about business. The Federal Government of Nigeria, introduced the programme, with a delivery system that relies on the extensive acquisition of vocational skills and competencies, with the extensive use of equipment and relevant tools (Emeka, 2015). Business education is a program of study, designed for the actualization of self-employment and industrialisation (Oluwasina, Onokpaunu & Durojaye, 2018). It’s a branch of vocational and technical education concerned with exposing it's recipients to the internal and external foundation and functioning of the workplace. As put by (Otamiri (2014), it involves the study of technology and related sciences and the acquisition of practical skills including teaching

skills, attitude, understanding and knowledge related to occupation in various sectors of our economy and social life.

Business education is broad and comprehensive and encompasses all business-related disciplines. It is divided into three parts, namely;

1. Accounting Education
2. Office Technology
3. Management and Distributive Education.

Upon the stipulations of the policy commission for business and the provisions of National Policy on Education, Azubuike (2013) enunciated the basic goals and objectives of business education include:

1. To give training and impact the necessary skills to individuals who shall be self-reliant economically.
2. To provide occupational instruction for students to design careers in business so as to prepare them for the roles in business enterprises, education industry as employees, employers of labour or self-employed.
3. To help develop consumer, economic understanding and competencies of students at all grand levels.
4. To prepare effective management, secretarial, marketing, accounting and banking executive.
5. To equip students with the necessary competencies so as to qualify them for further studies or training in business education.

6. To produce business teachers who will be able to inculcate the vocational aspect of business education into the society.
7. To produce well qualified and competent graduates who will handle business and related courses in schools, tertiary institutions and other related educational institutions.

Business education course is an aspect of education courses which prepares individuals for gainful employment through the acquisition of skills and knowledge that affects the business world (Emeka, 2015). The National Commission for Colleges of Education (NCCE, 2012), states that the adequacy and functionality of information and communication technology (ICT) resources in business education programme, will go a long way to enhance effective teaching and learning of business education courses.

We live in an era in which everything we do revolves around lots of ICT resources. Most offices are being equipped with modern day gadgets like fax machine, computer system, internet facilities and among others. Agamu (2015) emphasized that employers of labour are eager to work with people who have received adequate training and are more competent to execute their work with little or no supervision. Anoke (2018) observed from complaint by stakeholders and employers of labour, that business education graduates could not manipulate basic ICT resources which are the fundamental tools of operation in the world of work. It is obvious that there is a big gap between the practical skills especially as regards the use of ICT in the world of work and in teaching and learning of business education courses in tertiary institutions. If present day students are

surrounded by ICT resources environment and interact with them in everyday life, one can reasonably expect such students to have a significant performance in their education and also fit into the world of work upon graduation (Olumide & Olaitan, 2017). This implies the need for the programme to be equipped with infrastructures and ICT resources in other for effective utilisation to take place.

Onasanya (2012) revealed that most lecturers do not have enough knowledge for the effective utilisation of ICT resources for or not at all use Technological tool in their instructional delivery. They still stick to the traditional method of teaching which is gradually becoming obsolete

Concept of Information Communication Technology

Information technology is the use of electronic process for gathering and storing information and making it available using computer. It is specifically, the use of systems such as computers and telecommunications for storing, retrieving and sending information (Bamidele, 2016). Communication technology, connotes the use of scientific and industrial methods to aid transfer and exchange of information. Information and communication technology means computers, ancillary equipment, software, hardware, services and resources interconnected together to form networks that is used in the automatic acquisition, storage manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information (Omotoso, 2016). Yusuf (2019) sees information and communication technology (ICT) as an electronic technology used for assessing, processing, gathering and manipulating, presenting and

communicating information. Sukanta (2012) described ICT as the varied collection of technological gear and resources that is used for the purpose of communication. ICT allows people to store, process and transmit information faster and up-to-date data. ICTs are the technologies used to provide fast communication and huge amounts of information from all over the world at once and in real time. They are used to generate distributes collect and administer information. It is any electronic machine that lets people manipulate information such as words, images, numbers or sounds.

Resources are tools needed within a given environment for something to be done. ICT resources are computer-based tools needed within a given environment, which lecturers require in order to achieve their goals for effective teaching and learning to take place (Omoniya, 2013). ICT resources refers to equipment or interconnected system or sub-system of equipment that is used in the management, movement, control, display, switching, interchange, transmission or reception of data (Eze & Okoroafor, 2013). Resources as stated by Nikky (2012) are the different instructional tools available in classroom that aids and facilitates effective teaching and learning. Examples of ICT resources that are available for teaching of business education courses in tertiary institutions includes; internet facilities, email, computer system (personal computer, tablet PC and laptop) teleconferencing devices, mobile/cellular phone, bulletin board system, dictating machine, photocopier, scanner, printer, microfilms, spiral binding machine, calculator, electronic fund transfer (EFT), telecommunication device, networking machine (LAN, WAN), audio and video teleconferencing device, micrograph,

software packages like Computer-Assisted Learning (CAL), Computer Aided Instruction (CAI), Computer Managed Learning (CML), Computer-Assisted Testing (CAT), Computer-Aided Design (CAD), drill and practice, simulation and many more. According to Aja (2013), there is a great need to teach students to acquire the skills of using these devices. And the acquisition of the diverse business skills, call for the usage of the above-mentioned ICT resources in teaching business education courses.

Rapid growth and improvements in ICTs have led to the diffusion of technology in education. Educational systems around the world are becoming increasingly pressured to apply the new ICT resources to their curriculum, to provide students with the knowledge and skills that they need in the 21st century. It's use is also underlined by many scholars, as a necessity for improving quality in teaching and learning. ICT provides learners with global innovative opportunities suitable for the current industrial resolution which is surrounded by the development of technology. ICT has been regarded as a priority in global education. The Federal Government of Nigeria in the National Policy of Education (FRN, Revised 2014), acknowledged ICT as products of technological change and as an innovation in education. This is a new development with tremendous potentials in tertiary institutions in Nigeria and business education in particular. ICT has currently become an important platform and tool for teaching-learning in business education programme. There is a growing demand on educational institutions to use ICTs to teach the skills and knowledge students' needs.

Information Communication Technology Resources Available for Teaching Business Education Courses

Information and communication technology (ICT) resources refers to equipment or interconnected system or sub-system of equipment that is used in the management, movement, control, display, switching, interchange, transmission or reception of data (Eze & Okafor, 2013). ICTs in business education are designed to prepare students for a variety of careers in technical business offices. It has become an important platform for teaching and learning in business education programme across all different types of tertiary institutions. When applied appropriately, it becomes powerful enabling tool for facilitating instructional advancement and reforms in business education programme. ICT resources that can be used in teaching and learning business education courses can be grouped into:

1. Software packages like simulation software, computer managed learning, computer aided learning, drill and practice, stimulation, computer aided design, spreadsheet, microprocessor, excel, among others (Ezenwafor, 2012).
2. Hardware resources like computer system, teleconferences device, mobile phones, photocopier, scanner, printer, microfilms, spiral binding machine, PowerPoint, micrographics, shredding machine, electronic notice board, adding or accounting machine, collator or interpolator, internet facilities, audio video retrieve systems, video tape recorder, telex, sorters, among others (Igbinoba, 2015; Samuel, 2014)

.**Computer:** Eriki (2013) defines computer as any machine that does three things: accepts structured input, process the input according to prescribed rules and produces the results as an output simultaneously. The computer is a flexible and general-purpose tool, because their functions are controlled by the various application software installed in it. Oguzor (2012) argued that the use of computer, help students gain computer literacy, develop the ability to collect, analyse, process information, solve problems analytically. And this is of high demand in the world of work.

The use of computer by business education lecturers, create room for interactive teaching and learning process with incorporating of various software packages which aids learning of course contents and with this, students are taught skills needed to perform specific jobs. There are software applications for all the areas of specialization in business education programme which business education lecturers can use where necessary in teaching, and by so doing, building the computer literacy skills and knowledge of students. The computer has been found to effectively aid instructions in area of tutorial, drill and practice, test administration, test question banking, management instruction and simulation.

Multimedia: Rajesh (2020), describes multimedia as an advanced technology that facilitates integration of text, data, images, graphics, audio, video animation in digital form. It provides new ways to enhance the delivery of information and its impact on the users. In other words, multimedia combines different media in one computer application. With the use of multimedia, business education lecturers can present large volumes of

information within a limited time with less effort and also stimulates the students' interest in learning. Business education students can easily visualize concepts and turn abstract concepts into concrete contents.

Projector: This is a machine capable of projecting image of both transparent and small opaque objects through a prism and lens on a screen behind the lecturer. This type of projection gives a lecturer the opportunity of facing the learners during projection. It is constructed in a way that the lecturers' performance in terms of writing, drawing, takes place in front of the class without disturbing the learners from seeing the screen. This technology can be used for a large group of students. It can be prepared either at home or in front of the class. And the user can produce it in black or coloured. When business education lecturers use projectors as one of the ICT resources in teaching, it contributes to the clarity of the information presented by allowing students to visualize what is learnt.

Interactive whiteboard: An interactive whiteboard is also known as electronic whiteboard. It's a classroom tool that allows images from a computer screen to be displayed, it reacts to user input either directly or through other devices. Akin and Cecen (2015) stated that interactive whiteboard has the ability to connect to the internet and instantly digitize tasks and operations, usually includes easy-to-use chats, polls and graphs, including virtual version of tools in the classroom. Interactive whiteboard equips business education lecturers with new innovative ways to teach business education courses, turning standard lessons into interactive activities. This makes business

education students more attentive, easily comprehend what's been taught with retentive memory.

Information storage/retrieval technology resources (flash drive, hard disk etc): These are external storage devices. Due to their practicality, ability to store huge amounts of information, small size and innovative designs, USB devices are becoming more and more popular. External storage devices can be very useful to both business education lecturers and students. It's easy to carry around, it's a convenient storage place for course content, presentation, research papers. It's an alternative way of providing relevant lesson and materials to students, useful for sharing large information and ideal for transferring files of any format from laptop, desktop or network computers. They serve as alternative storage to save space on computer and acts as a means to save backup files in case of accident or emergency. Business educators can maintain and access students' files on disk, flash drives, magnetic tape and others.

Printer: In this era of rapid adoption of digital technologies, printers are an important part of educational process. It helps institutions ease into the digital transition while keeping students' learning high. Printer is one of the tools that helps students get the most from their educational experience. A considerable volume of activities carried out using the computer, internet, search engines, it's output are channeled via the printer to produce hardcopy. Students get a greater feeling of satisfaction from printed materials. They can easily print their work done with their personal devices like phones instantly via mobile print to a printer. Reading from prints increases learning compression. A recent study

showed that reading comprehension increases when information is read from paper rather than a computer.

Lecturers regularly create their own resources tailored to a particular group of students or use those shared by their colleagues either within the school or online. These resources need to be reproduced so that every student has access to the work. With the printer, students learn to have the ability to publish training, while lecturers publish lesson contents, evaluations and so on. Printer can be bought separately or together with a computer set. They are available in different brands with models and features.

Photocopy machine: Photocopier is a machine used to reproduce replica of an original documents and other visual images onto paper or plastic film quickly and cheaply. And it can be used to reproduce large volumes or quantities. It can enlarge and reduce copy (Amusa, 2013). The photocopier is increasingly becoming more innovative with vast array of functions to help speed up work. It's almost a multifunctional device offering printing, scanning and photocopying as standard. With the improved features of photocopier, business education lecturers having prepared work in their USB or SD card can make the desired copies of it without the need for a print driver on laptop or computer system. Photocopier have collated option, in which, business education lecturers and students can use to slightly shift each bundle of documents, so one can easily see where one copy ends and the next one begins when dealing with multiple documents. And in the process, business education students become conversant with the operation of the device thereby developing needed skills.

Scanning Machine: Scanner is an input device that uses beam of light to scan codes, text, graphic or images directly into the computer. Business education lecturers and students can use scanner to replicate learning materials, documents, images and in the process, the students learn how to use the scanner. It enables lecturers get more resources while teaching the students new skills. This helps develop and generate new ideas in business education students. For example, a business education lecturer can use a scanner to digitalize students' work. Once the lecturer digitalizes such works, students can continue to use it in number of ways, like edit it, improve it and graphically manipulate information and reproduce documents that are more appealing and creative.

Videotape Recorder: Videotape recorder makes it possible to record activities or programme for future or later use. It is a useful device in in-service learning as well as within the classroom. Students can refer back to a recording for error correction, this solves the interrupting-to-correct problem. Business educators can make effective use of this system based on their resourcefulness, creativity and ingenuity.

Internet: Internet consist of thousands of connected computer network around the world that connects millions of computers and tens of millions of people. With internet one can access the world in a sport and interact with as many people. Educational materials and other important literatures can easily be read and printed with the help of the internet. Olamide and Olaitan (2017) stated that the internet is a delivery mechanism through which digitised information travels. They further explained that sites on the world wide web (www) and email are pervasive without being launched on the internet. The internet

is a global computer network that allows millions of computers around the world communicate through devices and it is the web and the digital information superhighway. Warschaver (2013) states that the main features of the internet is the enormous amount of information it contains, the speed at which these information can be accessed and published. Rosa (2012) opined that through internet, lecturers, students and other users share information, transfer files, lecture notes, download files of interest, sending and receiving of messages and so on. Internet is of great use in the teaching and learning of business education courses when it comes to information gathering and updating facts about the world of knowledge.

The internet provides students the opportunity to engage in more challenging and life-like activities. According to Olumide and Olaitan (2017), the internet has for practical applications in the business curriculum: an independent subject, a teaching assistant, a means of transforming the process of learning, a research vehicle. Using the internet requires and improve verbal, written, critical thinking, computer, telecommunications skills and it makes learning more active and interacting. Business education lecturers should be willing to adapt and be able to design, develop, implement and evaluate internet activities. Students can be allowed access to new information, points of view and experiences that they would otherwise not have been able to encounter. It improves students' ability to locate information independently via WebQuest and promote independent learning which help students develop problem-solving skills. The

internet is full of useful sites that feature videos of topics relevant to lessons business education lecturers can use in their teaching.

To be connected to the internet, a telephone line, a modem, a computer and an account with an internet provider is needed. Ross (2012) asserted that the use of internet by business education lecturers, leads to delivering effective teaching, which involves active constructs of knowledge, interactive activities, scaffolding to support construction of knowledge, development of cognitive abilities, providing mechanism for publishing self and peer reflections and providing a simple communication tool for teachers and students. Business educators and students can also use the internet to share information, transfer files, lecture notes, assignment, examination results, send messages among users.

E-mail: Electronic mail is a way of communicating from one person to another via computer of mobile phones. It is one of the most widely used services on the internet. It acts like the surface mail, with the computer/phone acting as the post office (Blundell, Lee & Shaun, 2015). Because the e-mail system provides each user with electronic mail box from where they can search for their mails using their device. E-mail makes it possible for lecturers to teach, monitor, evaluate and guide students not minding their locations. It aids submission of assignments and also aids individualized method of teaching. And if the users need the received information in hard copy, it can be printed immediately with the aid of a printer. In the teaching and learning of business education courses, e-mail has made a great impact on the amount of information around the globe (Owate, I., Williams, C., & Nnanna, L. 2014). It is very convenient, fast and inexpensive

way of sending and receiving of messages and information, with no need for stamps, envelope, writing-pad or a postman and post office.

Teleconferencing Device: Oyerinde (2014) sees teleconferencing as a meeting of geographically separated participant connected via a telecommunication system using two-way voice or video communication. Dauda (2012) describes teleconferencing as a process whereby people living in different locations, far from each other are simultaneously connected with the aid of telephone extension, for the purpose of meeting or discussion. With teleconferencing, Business educators can make themselves available even when they are not at the school. This means they can lecture students who might need their help outside office hours or collaborate with other experts and specialists without them having to be in the same classroom. This extends educational openings to distant locations, accommodate a diversity of classes, stimulate interaction and collaboration between students' and lecturers which makes students more motivated and engaged in learning (Eruanga, 2016).

Computer Assisted Instruction (CAI): CAI is an interactive instructional technique whereby a computer is used to present the instructional materials and monitor the learning that takes place. It uses a combination of text, graphics, sounds and video in enhancing learning process. CAI refers to computer as a tool to facilitate and improve instructions. It uses tutorials, drill and practice, simulation and problem-solving approaches to present topics and test the students' understanding. Business educators can use CAI to help students understand difficult concepts through multi-sensory approach,

get instantaneous response to the answers elicited, learn more rapidly, engage in self-directed learning giving them the opportunity to experiment with different options.

The likes of CAI are computer managed instruction (CMI) where students' achievements and progress are recorded upon completion of each task assigned, Computer Assisted Testing (CAT), which consists of test grading and test question banking, Computer Managed Learning (CML), it records what learners has achieved and direct learners to the next unit of study.

Spreadsheet: Spreadsheet is a software program made of rows and columns that helps sort, organise and arrange data efficiently and calculate numerical data. that enables the computer to enter data in rows and columns and be manipulated on the screen. It helps students manage working with complex sets of numbers and it saves time by allowing quick calculations. Business educators can use spreadsheet software as a pedagogical and educational tool for teaching calculation courses like accounting, statistics, and among others. Spreadsheet based teaching-learning equip students with computer literacy and spreadsheets application skills in areas of management accounting and finance.

Power-point: PowerPoint presentation can have audio and visual effects. It involves a collection of data or information in a slides like frame. During presentation, the slides are displayed one after the other containing the content of interest. When this is used by business educators, it captures students' attention, makes them interactive and engage in competitiveness to increase their performance. The use of PowerPoint can help business education lecturers refine their materials to salient points and content. Class lectures can

be typed in outline format, which can be refined as slides. And the use of images, audio and video helps the Lecturer to be more improvisational and interactive with the audience. Making them to be able to explain certain topic in an easier and effective manner, thereby enhancing instruction.

The above analyzed items, are to mention but a few ICT resources that can aid effective teaching and learning of business education courses which business education Lecturers and tertiary institutions can acquire for the purpose of equipping learners with the needed knowledge and skills as regards the technological era we found ourselves. Everest and Laura (2012) observed that, though some of these facilities are present in some institutions, but they are inadequate and students' access to these facilities is very negligible. ICTs in tertiary institutions are still inadequate and this hinders the actual utilization of ICT resources in schools. Availability of ICT resources makes distinctive difference in learning environment. It enhances lecturers and students' knowledge to become more self-sufficient, but the absence of ICTs in learning environment, destabilizes students and make them not current in aspects of ICTs.

Level of Utilization of Information Communication Technology in Teaching Business Education Courses

Observation shows that most lecturers and students are losing out on better education and well-paying ICT jobs. That is why it's becoming increasingly important for tertiary institutions to seize this opportunity to exploit the benefits of ICT for the purpose of teaching-learning. And their efforts are informed by the understanding that ICTs in

education is a significant key driver for students' achievement through enhanced production of information and knowledge.

It is practically impossible to improve or develop the teaching of business education courses without adequate application of ICT resources, because business education programme, is a programme for acquisition of practical and applied skills as well as basic scientific knowledge (Uchendu, 2012). Graduates of business education are to be employed in commerce and industry or any enterprises which involves the use of ICT resources or tools in carrying out their services. Sadly, most tertiary institutions lecturers in Nigeria lack adequate pedagogical knowledge for effective utilization of ICT resources for teaching (Onasanya, 2012). To back this up, Okolocha and Nwadiani (2015) agreed that it is common to see Nigerian business education graduates enrolling in roadside computer centers to acquire ICT skills which ought to have been mastered in their colleges of education and university days. This shows that there actually is a big gap in the practical skills as regards the utilization of ICT resources competencies in teaching business education courses. Bolaji and Fakomogbon (2017) in Okolocha and Nwadiani (2015) revealed that the utilization of ICT resources in teaching-learning in tertiary institutions, falls below expectation. This may be because of non-availability or inadequate ICT resources which can stand as a barrier for utilization of ICT resources in teaching. And the poor utilization of ICT resources in teaching business education courses in colleges of education will likely result to continuous production of poor quality business education graduates, making it difficult for them to be gainfully

employed like their mates and also inability to break-even as both public and self-employed individuals.

The findings of Okolocha and Nwadiani (2015), shows that business educators rarely utilise ICT resources in teaching-learning of business education courses. Which is in agreement with previous studies that ICT resources utilisation in Nigeria falls below expectation and there is little or no utilisation of ICT resources in teaching business education courses in tertiary institutions in Nigeria. Business education is a programme that requires effective utilisation of ICT resources in teaching-learning of its courses in other to achieve its stated objectives. Lecturers are charged with the responsibility of the effective implementation of ICTs in teaching-learning processes. Hence, it becomes of paramount importance that they have unconditional access to ICT resources.

The Availability and Utilization of Computer in Teaching of Business Education Programme

Computer is a flexible and general-purpose tool, because their functions are controlled by the various application software installed in it (Eriki, 2013). This means computer can be used in teaching virtually all courses in all sectors and departments in an organization. Computer provide a wide range of sensory stimuli that appears to the sense of sight, touch and hearing simultaneously. The animations, stimulations, software packages to teach various courses, create virtual realities and experience for students which helps in making learning more direct, useful and enjoyable. Computer aids

Computer-Based Learning (CBL), computer assisted instruction or learning (CAL/CAI) and its likes.

CAL is an interactive instructional technique whereby a computer is used to present the instructional materials and monitor learning. It uses a combination of text, graphics, sounds and video in enhancing the learning process through drill and practice, simulation, discovery, tutorial and problem solving. It improves instruction students receive with immediate feedback, because the programmes are interactive and it moves at the students' pace, which provides opportunities for students to develop creativity (Tezci, 2018). Oguzor (2012) argued that, the use of computer helps students gain computer literacy and it's of high demand in the world of work. As to the objectives of the educational use of computer in business education, priority was placed on understanding the computer itself, followed by training the students and ability to collect, analyze and process information, developing their ability to solve problems analytically (Oguzor, 2012).

Business education programme like other programmes need the extensive use of modern classroom technologies in the process of preparing her students towards their potential workplace and computer is one of such facilities needed. Everest and Laura (2012) in their study revealed that e-learning facilities (include computer) were inadequate and students' access to them is very negligible. And the non-availability of computers in schools hinders it's utilization in the school system (Anumnu, 2018). Gambari and Chike (2014) revealed in their findings that there are inadequate computer

and equipment for teaching and research work in all levels of tertiary institutions and that the few available ones were not effectively used for learning, research nor information services in the institutions.

The use of computer in teaching of business education courses offers innumerable benefits in enhancing the quality of teaching and learning in tertiary institutions. It creates room for interactive teaching-learning processes because business education lecturers and students and business education students are taught skills needed to perform specific jobs. The inadequacy of computer for instructional purpose, invariably affects the effective use of the few available ones. Uchendu (2012) stated that the level of utilisation of computers in teaching and learning in Nigerian institutions is less than five percent. Computers is still not fully reflected in the teaching and learning of business education courses in tertiary institutions. Because of lack of such facility, lecturers do not seem to be using them in teaching and learning. Students are not also exposed to their use where they can apply their knowledge. Arhueremu and Naeleen (2020) observed that the number of computers as stipulated by NCCE for business education programmes are not adequate in colleges of education. Ademiluyi (2012) reported Nigerian students are not experiencing modern instructional delivery due to inadequate provision of ICT resources in tertiary institutions. It is clearly seen that computer as one of the ICT resources needed for teaching business education courses is very slowly utilized for instructional delivery in most tertiary institutions in Nigeria.

The Availability and Utilization of Multimedia in Teaching of Business Education Programme

Multimedia assist learners to get on well with mental representations, with the use of different multimedia elements like interactive whiteboard, projector, public address system and among others, which supports information processing with the combination of text, images, video and audio (Eady & Lockyer, 2013). Multimedia takes advantage of the brain's ability to make connections between verbal and visual representative of content, leading to a deeper understanding because a large percentage of the brain dedicates itself to visual processing (Aja, 2013). With this, lecturers can engage students by increasing positive emotions in them, making them more involved with deeper understanding, improved problem-solving skills, access to a vast variety of information and retain more information from instruction. Business education lecturers can use multimedia applications in instructional delivery to turn abstract concepts into concrete contents, present large volumes of information within a limited time with less effort and stimulate business education students' interest in learning course content.

The use of interactive whiteboard (a multimedia device), allows business educators to take standard lessons and turn them into interactive activities. Enabling them integrate various learning styles into one experience. Natoli (2012) opined that, multimedia devices and applications are rich opportunities for students to develop communication skills while actively engage in solving meaningful problems. The use of projector in teaching business education courses allows learners to interact with lecturers

better and it poses a multimodal method of teaching like turn taking during dialogues, questions and answers, which helps to equip learners with skills in analysis, interpretation skills, listening skills and problem solving. Akin and Cecen (2015) in their study on the use of multimedia in the classroom, observed that student's motivation increased after the implementation of multimedia in the study.

Tabansi and Asuquo (2012) observed that, the traditional method of dictating lecture notes is still a dominant method of lecture delivery in most institutions. Although other methods such as the use of public address system and projector are used to enhance learning, but not frequent enough. In the same vein, Aja (2013) assert that multimedia facilities are not sufficiently available and that the few available ones, are not in good working condition, hence they are not sufficiently utilized. Which is in support of Ikechukwu (2013) observation, that multimedia in Nigeria institutions has remained a mirage due to its slow pace of utilization. The low utilization of ICT resources like various multimedia devices among business educators, maybe as a result of non-availability of such resources. While lecturers' level of awareness as to the use of multimedia is high, the level of utilization is however low.

On the availability and use of ICT resources for instruction and learning of business education programme in Yobe, Apagu and Bala (2015) observed that internet, interactive whiteboard and projector were completely not available and therefore, not utilised in teaching. And the level of exposure to such devices by lecturers was low. Also, the result from the study of Agbagbue (2018) on the utilisation of multimedia in teaching

business education courses in River State, indicated that multimedia are important resources for teaching and learning skilled subjects like business education courses, but they were poorly available for teaching

Review of Related Empirical Studies

Murtala and Norazrena (2019) examined the perception of teachers on the use of technology in teaching and learning in Zamfara State. The study was guided by two research questions. Descriptive survey design was used for the study. Out of a population of 87 teachers from Teachers Development Programme Associate Schools, a sample of 40 teachers was drawn using stratified random sampling method. A self-developed close ended questionnaire with a total of 20 items was used to collect data. Data collected were analyzed using Statistical Package for Social Sciences (SPSS). The research findings revealed that the teachers had positive perception on the integration of technology in instructional delivery, but there was little or no use of technological resources because of lack of access to technological materials and that a greater percentage of teachers are still not trained or not using it due to low level of competency and accessibility. This study is related to the present study in that both studied ICT. Nevertheless, this study focused on perception on the use of ICT in teaching and learning, while the current study focused on the availability and utilization of ICT resources in teaching business education courses.

Amesi and Yellowe (2018) investigated the availability and utilization of information communication technology gadgets in faculties of education in Rivers State universities. Two research questions guided the study and two hypotheses were tested.

The study adopted descriptive survey design with a sample size of 168 lecturers and 232 students. Data were collected using questionnaire. Mean and standard deviation were used to answer the research questions, while z-test was used to test the hypotheses. The findings revealed that ICT gadgets for teaching were inadequate and that there was a poor level of utilisation of the available gadgets for teaching-learning purposes. This study is similar to the present study in that it investigated the availability and utilization of ICT gadgets, but it differs from the present study in that it was carried out in Rivers State universities and focused on faculties of education in universities, while the current study looked at colleges of education in Delta and Rivers States, with specific focus on business education courses.

Okeke and Iheonacho (2017) examined the extent of utilization of e-learning resources in business education programme in South-East Nigerian universities. Two research questions guided the study and two hypotheses were tested. The study adopted descriptive survey design. A sample of 50 business education lecturers from universities offering business education in South-East Nigeria was drawn. A structured questionnaire was used to collect data for the study. Data collected were analyzed using mean and standard deviation. t-test statistic was used to test the null hypotheses at 0.05 level of significance. The findings revealed that e-learning resources for instructional delivery and evaluation process in business education programme in South-East Nigerian universities were utilized to a very low extent. The study has relevance to the present study in that it assessed the utilization of e-learning resources in business education

programme. The study is however different from the current study, because it focused on one aspect, which is extent of utilization of e-learning resources in business education in Southern East. The current study focused on availability and utilization of ICT resources in teaching business education courses.

Neji (2016) examined information communication technology utilization and implementation on adult education programmes in Cross River State. Five research questions guided the study and three hypotheses tested and descriptive survey was used. A sample of 140 lecturers from various institutions in Cross River State were used, using stratified random sampling method. Data were collected using a well-structured questionnaire. The data were analyzed using chi-square and one-way analysis of variance (ANOVA) statistical technique. t-test statistic was used to test the null hypotheses at 0.05 level of significance. The study showed available ICT facilities to include internet, computers, radios, mobile phones and among others. The study revealed that ICTs will aid in the utilization and implementation of adult education programmes in Cross River State. The study also highlighted the extent of ICT utilization in adult education programmes which is to a very large extent low. The constraints were said to include absence of internet facilities, lack of funds to procure computer, high cost of linking computers to the internet and among others. The identified strategies to mitigate the constraints were training of staff, encouraging the participation and seminars, conferences and workshops, establishing cyber cafes that allows easy usage of the internet. However, this study, is different from the present study because it focused on one aspect of ICT

resources which is the use of internet. More so, it is only related to adult education in Cross River State. The present study focused on the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States, and covered most aspects of ICT resources.

Okoro (2015) studied information technology and job prospects of business education graduates in Port Harcourt metropolis. Three research questions guided the study, two hypotheses were tested at 0.05 level of significance. Cross-sectional survey research design was used for the study. The population for the study comprised 98 business education graduates, (36 employed and 62 unemployed), selected through random sampling technique. A well-structured questionnaire was used to derive data for analysis. Frequency counts, percentages, mean and standard deviation statistical tools were used to analyze the collected data and answer the research questions. The findings showed that, graduates of business education considered lack skills in ICT as a challenge to their job prospects. And the challenge is manifested in diverse ways, such as the need for retraining, limitations to employment opportunities, possible rejections at the job market and insecurity and apprehension on the job. This study is related to the present study in that, they both looked at ICTs in business education programmes. However, while this study focused on ICT and job prospects of business education graduates, the current study focused on the availability and utilization of ICT resources in teaching business education courses.

Rilwan (2014) investigated the influence of information and communication technology on teaching of business education courses in colleges of education in Northwest zone, Nigeria. Five research questions guided the study and five null hypotheses were tested. The study was conducted using 11 colleges of education in North-west zone, with a population of 1392, using descriptive survey design. Data were collected using questionnaire. Data collected were analyzed using percentages. The study revealed that ICT had not made significant positive change on teaching and learning of business education due to non-availability of ICT facilities, cost of acquiring ICT facilities and poor network. The researcher concluded that most business education lecturers and students lacked ICT skills, which made it difficult for them to compete in the world of work. This study related to the present study in that both studied ICT. Nevertheless, it is different from the present study, in that, it looked into influence of ICT in teaching business education courses in colleges of education in North-west region while the present study focused on the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta State and Rivers State.

Oliver and Bernard (2012) studied the availability and adequacy of ICT resources in business training education courses in Nigeria. Six research questions guided the study and two hypotheses were tested at 0.05 level of significance. Descriptive research design was adopted by the researcher. The population for the study was made up of 42 business educators, three (3) information technology managers and three (3) Heads of

Departments of Business Education in Federal University of Technology Yola, Federal College of Education Yola and Federal Polytechnic Mubi Adamawa State. A global approach was adopted as the population, so there was no sample. An inventory questionnaire was used to collect data and the data were analyzed through tabular presentation of the frequency distribution of responses using ANOVA to test the difference among the respondent groups and institutions. The findings showed that lack of required ICT resources in business education programme, the state of ICT resources showed gross absence or short of supply. The study is related to the present in that they both focused on ICT but different, because while the former study focused on ICT availability and adequacy, the current study focused on ICT availability and utilization.

Summary of Reviewed Literature

The study made use of Technology Acceptance Model (TAM) with emphasis on the relationship between users' acceptance of a new technology, the users' perception of the ease of use and usefulness of the technology. The theory highlighted that learning should involve practice and the use of appropriate teaching aids such as ICT resources so as make learning appealing to the motor skills of learners. It encourages learning by exercise or doing which promotes functionality instead of passive instruction.

The literature review explored the concept of business education programme, its courses areas, importance of the programme and its objectives. It went on to reveal the concept of ICT and the usefulness of ICT resources to business educators. It also discussed the level of utilization of ICT resources in teaching-learning of business

education courses in tertiary institutions in Nigeria. It went further to consider ICT resources that can be used for instructional delivery of business education courses and the benefits of these resources in teaching business education courses. The study also revealed that ICTs are highly evolving technologies, hence educators are urged to constantly upgrade their ICT skills and competencies so as to keep abreast with the latest development and performance. The study also discussed the availability and utilization of computer and multimedia devices as part of ICT resources in teaching-learning of business education courses.

Research works that supported the availability and utilization of ICT resources in business education programmes were also reviewed in the study, showing that the utilization of ICTs in business education programme has changed the approaches with which teaching is being delivered and also increased student's self-discovery and problem-solving skills making them fit and competent as employees or entrepreneurs.

The empirical aspect of the review explored the various studies on the availability and utilization of ICT resources in teaching of business education courses. It was revealed that the extent of ICT utilization for instructional delivery is very low in tertiary institutions in Nigeria. Studies reviewed indicated that, Lecturer’s perception towards ICT determines the extent or level of it's utilization. It was discovered that graduates of business education considered lack of skills in ICT as a challenge to their job prospects. Despite theoretical and empirical studies reviewed from both national and international publications, not much have been done on the availability and utilization of computers

and multimedia particularly in colleges of education in Delta State and Rivers. This is obviously the gap the present study is designed to fill.

CHAPTER THREE

METHODOLOGY

This chapter describes the procedure used in the study under the following sub-headings:

- Design of the Study
- Population of the Study
- Sample and Sampling Technique
- Instrumentation
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis.

Design of the Study

The study employed descriptive survey research design. Descriptive research design aims at exploring opinions of a given population on existing practices and conditions and it includes survey, case study and casual comparative (Rilwan, 2014). Descriptive survey design was used to assess the characteristics or behaviour of a particular population in a systematic and accurate manner. This design was therefore suitable for this study because it was primarily meant to describe the extent to which the independent variables (availability and utilization of ICT resources) influence the

dependent variable (teaching of business education courses) using questionnaire from a representative of the total population.

Population of the Study

The population of this study comprised one hundred thirty-three (133) business educators in colleges of education in Delta and Rivers States. This was made up of 13 business educators in College of Education Mosogar, 14 business educators in College of Education Warri, 59 business educators in Federal College of Education (Technical) Asaba and 47 business educators in Federal College of Education (Technical) Omoku, Rivers State.

Table 1: Population distribution of business education lecturers in Colleges of Education in Delta and Rivers State Nigeria

S/N	Name of College	Number of Business Educators
1	College of Education, Warri, Delta State.	14
2	Delta State College of Education, Mosogar	13
3	Federal College of Education (Technical) Asaba, Delta State	59
4	Federal College of Education (Technical) Omoku, Rivers State	47
	Total	**133**

Head of Department (2023)

Sample and Sampling Technique

The sample size of the study consisted of one hundred thirty-three (133) business education lecturers in colleges of education in Delta and Rivers States. As a result of the manageable size, the entire population was used as sample, hence census.

Instrumentation

Two instruments were used for data collection. A check-list and a well-structured questionnaire. The questionnaire was titled Availability and Utilization of ICT Resources in Business Education Programme Questionnaire (AUICTRBEPQ). The questionnaire was segmented into two sections: Section A and B. Section A measured the demographic variables of the respondents such as gender, institution ownership and area of specialization, while section B was segmented into two subsections. The first subsection was a 14-item checklist measuring availability of ICT resources. The second subsection comprised 23 items where six (6) items measured level of ICT resources utilization, eight (8) items measured computer utilization of ICT as well as nine (9) items measured multimedia utilization of ICT. Each addressed the research questions. The level of availability of ICT facilities measured on a two-point rating scale ranging from available (2) and not available (1). Utilization of ICT of ICT resources was measured on a four-point rating scale of from very high extent (VHE - 4), high extent (HE - 3), low extent (LE - 2) and very low extent (VLE - 1).

Validity of the Instrument

To establish the validity of the instrument, it was subjected to face validity by the researcher's supervisor and two other experts in the Department of Vocational and Technical Education, Faculty of Education, University of Benin. Each validate was given a copy of the questionnaire and requested to identify ambiguities and make suggestions for improving the instrument towards meeting the objectives of the study. The suggestions of the experts were taken into consideration in the final draft of the questionnaires. Like, using N.C.C.E checklist of the required facilities and equipment needed for teaching of business education courses, separating availability of ICT resources questionnaire from utilization of ICT resources questionnaire and among others.

Reliability of the Instrument

To establish the reliability of the instrument, the internal consistency method was used and this was done using Cronbach alpha statistics. Copies of the instrument was administered to 20 business education lecturers once in Adeyemi Federal College of Education, Ondo State who were not part of the study population. The responses of the respondents were analyzed and a coefficient of 0.88 was obtained.

Method of Data Collection

Copies of the instrument was administered on respondents with the help of four research assistants. The assistants helped in the distribution and retrieval of the questionnaire. The research assistants were briefed on the purpose of the study, questionnaire distribution, and collection. Completed copies of the questionnaire were

checked at the point of retrieval in order to ensure a high level of completeness by the participants.

Method of Data Analysis

Data collected from the respondents were analyzed using simple percentage (%), Mean ($\bar{x}$), standard deviation (SD) and two sample independent t-test. Simple percentage, mean and standard deviation were used to answer the research questions, while t-test of two independent samples was used to analyze the hypotheses at 0.05 level of significance. The decision rule was based on any calculated mean ($\bar{x}$) equal to or greater than 2.50 was regarded as high extent, while any mean ($\bar{x}$) less than 2.50 was regarded as low extent. On the basis of hypotheses, the probability value (p) was used. If p-value is less than or equal to 0.05, the null hypotheses was rejected, but if the p-value is greater than 0.05, the null hypotheses was retained.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter deals with the presentation of results and discussion of the findings. The results of the analysis are presented in the order of the research questions and hypotheses that guided the study. The results are presented under the following sub-headings:

- Presentation of results
    - Data analysis for the research questions
    - Hypotheses Testing.
- Discussion of findings

Presentation of Results

Data collected to answer the research questions are analyzed using the simple percentage, mean and standard deviation and the results are shown in Tables 1 to 4.

Research Question One

What are the ICT resources available for teaching business education courses in colleges of education in Delta and Rivers States?

Table 2: Simple percentage analysis showing ICT resources available for teaching business education courses in colleges of education

S/N	Availability of ICT facilities	Yes	No	Decision
1.	Computers	18.1	81.9	Available
2.	Computer laboratory	34.7	65.3	Available
3.	Electronic Typewriter	-	100	Not Available
4.	Swivel typing chairs	100	-	Available
5.	Photocopier	58.4	42.6	Not Available
6.	Drop desk. Typist desk or convertible desk	29.2	70.8	Available
7.	Radio	29.2	70.8	Available
8.	Stapling machine	25.0	75.0	Available
9.	Stop watch	95.8	4.2	Available
10.	Filing cabinet	11.1	88.9	Available
11.	Slide projector	72.0	-	Available
12.	Scanner	95.8	4.2	Available
13.	Colour T. V	18.1	81.9	Available
14.	Video Machine	----	100	Not Available
15.	Tape recorder Consoles	-	100	Not Available
16.	Wall clock	100	---	Available
17.	Perforator	100	---	Available
18.	Digital Camera	29.2	70.8	Available
19.	Stapling remover	29.2	70.8	Available
20.	Overhead projector	25.0	75.0	Available
21.	Microfilm	95.8	4.2	Available
22.	Computer Printer	11.1	88.9	Available
23.	Adding and listing machine	70.0	30.0	Available
24.	Fax machine	95.8	4.2	Available

Key: NR:

In response to research question one, Table 1 shows that items three, fourteen and fifteen are not available while items one, two, four, six to thirteen, sixteen to twenty-four are available. Hence, ICT resources are relatively not available ICT resources for teaching business education courses in colleges of education in Delta and Rivers States.

This implies that majority of the schools under study do not meet up to the standard set by the National Commission of colleges of education with regards to the required ICT resources needed for teaching business education courses in Colleges of Education in Delta and Rivers States.

Research Question Two

What is the extent of utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States?

Table 3: Mean and standard deviation showing utilization of ICT resources in teaching business education courses in colleges of education

S/N	Item Statement	N	Mean	SD	Remarks
1	I use the following ICT resources in my instructional delivery.	133	2.43	1.100	Low extent
2	I often give assignment that involves the use of ICT resources.	133	2.19	.725	Low extent
3	Use email to send and receive messages e.g. assignment, research work etc.	133	2.35	.790	Low extent
4	Use various search engines with other hyperlinks to surf the internet for information and download materials for content delivery.	133	2.46	.941	Low extent
5	Participate in on-line forum/conferencing discussion	133	3.08	.727	High extent
6	I integrate application software to course content during instruction.	133	2.43	.954	Low extent
	Cluster		**3.01**	**0.15**	**High extent**

Table 2 depicts that the respondents rated items one to four as well as item six as low extent with mean rating ranging 2.53 to 3.35 while item five is rated as high extent with a mean of 3.08. The standard deviations range from .73 to 1.10. With these results, the cluster mean score shows that utilization of ICT resources in teaching business education courses in ccolleges of eeducation is low. The implication therefore, is that there is a low

utilization of ICT resources in teaching business education courses in ccolleges of eeducation in Delta and Rivers States.

Research Question Three

To what extent is computer utilized in teaching business education courses in colleges of education in Delta and Rivers States?

Table 4: Mean and standard deviation showing the utilization of computer in teaching business education courses in colleges of education

S/N	Item Statement	N	Mean	SD	Remarks
1	I engage students in the use of spreadsheet during class activity	133	3.29	.813	High extent
2	Computer is utilized in teaching and learning of business education courses	133	2.34	.792	Low extent
3	I am proficient in the use of a computer system which makes learning interesting	133	2.45	.931	Low extent
4	I usually describe and demonstrate the basic features of computer application software packages while teaching	133	3.01	.864	High extent
5	There is a computer laboratory in the department for teaching and learning business education courses	133	2.26	.872	Low extent
6	I do engage students in the use of computer for the acquisition of basic skills through drills and practice	133	2.18	.793	Low extent
7	I use computer simulation while teaching	133	2.10	.808	Low extent
8	I use the computer to demonstrate mastery of subject matter	133	2.36	.827	Low extent
	Cluster		**2.49**	**0.05**	**Low extent**

Table 3 shows that the respondents rated items two, three as well as items five to eight as low extent with mean ratings ranging from 2.10 to 2.45 while items one and four are rated as high extent with mean score of 3.01 to 3.29. The standard deviation also ranges from .79 to .93. With these results, the cluster mean score shows that the

utilization of computer in teaching business education courses in colleges of education in Delta and Rivers States is low. The implication therefore, is that there is a low utilization of computer in teaching business education courses in colleges of education in Delta and Rivers States.

Research Question Four

To what extent is multimedia utilized in teaching business education courses in colleges of education in Delta and Rivers States?

Table 5: Mean and standard deviation showing the utilization of multimedia in teaching business education courses in colleges of education

S/N	Item Statement	N	Mean	SD	Remarks
1	I use overhead projector to teach my students for better understanding	133	2.07	.909	Low extent
2	The use of public address system enables me to lecture large number of students conveniently	133	3.00	.919	High extent
3	Multimedia devices like interactive whiteboard and projector are always utilized by business education lecturers	133	2.48	.934	Low extent
4	I use interactive whiteboard during instruction	133	2.41	1.075	Low extent
5	I use multimedia for class management and control	133	2.31	.959	Low extent
6	I use video conferencing in networking to other computers while teaching	133	2.44	.967	Low extent
7	I use Multimedia to present educational ideas and materials in a more artistic, inspired and engaging way	133	2.39	.779	Low extent
8	I combine books, audio-visual aids and electronic media during classroom instruction	133	3.28	.791	High extent
9	I engage students in participation in multimedia activities, so they can learn real-time skills related to technology		2.54	.886	High extent
	Cluster		**2.49**	**0.09**	**Low extent**

Data in Table 4 shows that the respondents rated items one, as well as three to seven as low extent with mean ratings ranging from 2.07 to 2.48 while items two, eight and nine are rated as high extent with means between 3.00 to 3.54. The standard deviation also ranges from .78 to 1.08 With these results, the cluster mean score shows that the utilization of multimedia in teaching business education courses in colleges of education in Delta and Rivers States is low. Consequently, there is a low utilization of multimedia in teaching business education courses in colleges of education in Delta and Rivers States.

Hypothesis One

There is no significant difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and Rivers States.

Table 6: t-test analysis showing the mean difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education

Gender	N	Mean	SD	df	t-value	p-value	Decision
Male	57	3.03	0.38	131	-.318	.752	**Not Significant**
Female	76	3.05	0.36				

P-Value Not Significant at 0.05 level (2-tailed) (Retain Hypothesis) SD: Standard deviation

DF: Degree of freedom

Testing hypothesis, one as presented in Table 5, reveals mean responses on the difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and Rivers States. The Table reveals a mean of 3.03 for male and 3.05 for female. The corresponding standard deviations are 0.38 and 0.36 for male and female respectively. The t-value of -.318, at degree of freedom of 131, which show not significant at p-value of .75. Testing at an alpha value of .05, the null hypothesis is retained since the p-value is higher than alpha value. Thus, there is no significant difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and Rivers States.

Hypothesis 2

There is no significant difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses.

Table 7: t-test analysis showing mean difference between business educators in federal and state colleges of education in the utilization of ICT resources in teaching business education courses.

School type	N	Mean	SD	df	t-value	p-value	Decision
Federal	86	3.74	0.60	131	-4.717	0.001	**Significant**
State	47	2.87	0.13				

P-Value Not Significant at 0.05 level (2-tailed) (Reject Hypothesis) SD: Standard deviation
DF: Degree of freedom

Table 6 shows the mean difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses. The Table reveals a mean score of 3.74 and 2.87 for male and female respectively while their corresponding standard deviations are 0.60 and 0.13. The degree of freedom is 131 with a calculated t-val of -4.717. The t-value not significant at p-value of 0.001, because it is less than alpha value of 0.05. Therefore, null hypothesis which states that there is no significant difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses is rejected. Consequently, there is a significant difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses.

Hypothesis Three

There is no significant difference between Office Technology Management option and Accounting option on educators' utilization of ICT resources in teaching business education courses.

Table 8: t-test analysis showing the mean difference between office technology management option and accounting option on educators' utilization of ICT resources in teaching business education courses.

Respondents	N	Mean	SD	df	t-value	p-value	Decision
OTM	81	3.54	0.47				
				131	7.122	.000	**Significant**
Accounting	52	2.93	0.22				

P-Value Not Significant at 0.05 level (2-tailed) (Reject Hypothesis) SD: Standard deviation

DF: Degree of freedom

Testing hypothesis three as presented in Table 7, reveals mean responses on the difference between Office Technology Management option and Accounting option on educators' utilization of ICT resources in teaching business education courses. The Table reveals a mean of 3.54 for OTM and 2.93 for accounting. The corresponding standard deviations are 0.47 and 0.22 for OTM and accounting respectively. The t-value of .7.122, at degree of freedom of 131, which shows significant at p-value of .000. Testing at an alpha value of .05, the null hypothesis is rejected since the p-value is less than alpha value. Thus, there is a significant difference between Office Technology Management option and Accounting option on educators' utilization of ICT resources in teaching business education courses.

Discussion of Findings

The findings of research question one revealed that majority of the schools under study did not meet up to the standard set by the National Commission of colleges of education with regards to the required ICT resources needed for teaching business education courses in Colleges of Education. These lecturers rarely have access to ICT resources to improve teaching and facilitate learning due to non-availability of indigenous computer packages; which are also categorized under ICT facilities. This finding is in line with that of Jack (2021) whose study revealed that the mean available values of ICT resources in colleges of education in Jalingo Metropolis, in Taraba State is low. The finding also agreed with the research carried out by Amuchie (2015) which showed that the seventeen ICT resources listed were available to a very poor extent. Other findings indicated that there is low availability of ICT (Bello, 2017; Ifeakor, 2018; Imogie, 2018; Itighise & Babayemi, 2018, Nwana et al.2017; Okoli & Osuafor, 2018; Onyegegbu, 2016; Osadolar, 2018). On the contrary, the findings of Ezeuwa (2015) showed that 11 out of 15 items were available which indicates that ICT facilities are available in Ebonyi state college of education. Similarly, Okoro (2009) maintained that tertiary institutions in south Eastern Nigeria had fared well in terms of access to ICT facilities.

Research question two findings indicated that there was low utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States. In other words, low utilization of ICT facilities will hinder achievement of

educational objectives. It also means that there would be no effective management of education in educational institutions where ICT facilities are not effectively utilized. The poor use of ICT facilities contributes negatively to effective utilization of ICT resources teaching-learning process in colleges of education. It is clearly shown that many lecturers were able to open and shut down the computer but could not use the computer applications effectively. The worse of all is the poor use of e-mail to give instructions to students and replying mail on time. 'However, the poor use of ICT resources may probably be as a result of low availability and adequacy of these facilities. This is similar to the opinion of Amuko et al. (2015), that effective utilization of ICT resources in colleges of education is largely dependent upon the availability and adequacy/accessibility of ICT resources (such as, hardware, software and communications infrastructure). More so, the findings corroborate that of Jack (2021), that the utilization values of ICT resources in tertiary institutions in Jalingo Metropolis, in Taraba State is low. This indicates that the utilization of ICT resources is low, and very poor which equally shows that poor availability and adequacy or accessibility of ICT resources contributes negatively to effective utilization of ICT resources in colleges of education. This finding is also in agreement with that Amuchie (2015) whose study showed very poor extent of utilization of ICT resources in teaching in tertiary institutions in the area. The author further asserted that this is because, utilization is directly linked with availability hence the resources can only be utilized in teaching and learning if they are available. But on a contrary, the findings of Jonathan and Ngozi (2011) revealed that

computer educators utilize ICT effectively as a tool in their teaching and learning basically in instructional delivery and individualized learning process.

The findings of research questions three depicted that there was low utilization of computer in teaching business education courses in colleges of education in Delta and Rivers States. This may be as a result of insufficient computers due to poor fundings. Being in an office automation era, it is only essential that students are equipped with the basic computer knowledge and skills so as to fit in. This finding corroborates that of Dateba (2015), whose finding revealed that the adequacy and use of computers for instruction in colleges of education was below average. It also aligned with the study of Imeh and Ufot (2012), that business education department in some colleges of education lack adequate computer as a result, the institutions continue with the use of traditional methods in teaching.

Data output of research question four showed that there was low utilization of multimedia in teaching business education courses in colleges of education in Delta and Rivers States. Limited ICT facilities such as multimedia projectors, interactive whiteboard, e-learning facilities, broadband internet access, and so forth are inadequate in teacher education institutions and this inadequacy might result to lack of access by most teacher educators. Despite a considerable adequacy of application software like Ms. Word, Ms. Excel, Ms. Power-point per computer system; the adequacy of computer system per educational administrator is low. The worst of all are low adequacy of blog platform, projectors and interactive white board, and internet services (e-mail, chatting

among others.) with LAN or WAN. This finding supports the research carried out by Jack (2021) which revealed that the adequacy of ICT resources is very low which equally shows that low adequacy of ICT resources contributes negatively to effective utilization of ICT resources in tertiary institutions since lecturers rarely have access to the ICT tools. Similarly, the work of Jack and Songo (2020), revealed that school related challenges include inadequate provision of ICT resources such as infrastructural facilities like desktop/laptop, projectors, interactive white board, internet services among others.

The findings of hypothesis one showed that there was no significant difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and Rivers States. In other words, male and female educational administrators possess similar level of awareness with regards to usage of information and communication technology. The findings support that of Alagu and Thanuskudi (2018) whose study showed that there is no significant difference between male and female undergraduate students and awareness of information and communication technology.

The findings of hypothesis two revealed that there was a significant difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses. This is in contrast with Okeke (2017), whose study revealed that there is no difference in the extent of utilisation of ICT facilities in delivery business education programme in state and federal institutions. But the study is in agreement with Soneye (2017) who's

study revealed that respondents differed significantly in mean rating on the extent of ICT resources were available for quality assurance in business education programme of institutions based on institutional ownership federal or state. This could be based on the fact that federal colleges are more funded in terms of finance and supply of equipment including ICT facilities than state owned colleges of education.

The result of hypothesis three indicated that, there was a significant difference between Office Technology Management option and Accounting option on educators' utilization of ICT resources in teaching business education courses. The result of the finding is quite in consonance with the investigations carried out by earlier researchers which reveal that OTM graduates possessed high competencies in use of ICT resources. OTM students are more exposed to modern ICT equipments than students in accounting option (Siddiquah & Salim, 2017; Duktur, 2019; Okolocha & Olaniye 2015; Mawutorwu, Ebenezer, Frank & Robert, 2016). Thus, it could be extrapolated that the competency of the students resulted from the level of competency possessed by OTM educators who imparted the skills. In contrast, Nwaokolo (2014) laments that only the theoretical aspects of office application are taught leaving out the practical aspect, a situation that leaves students half-baked and incompetent in ICT skills.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with the summary, conclusion and recommendations arising from this study.

Summary

This study assessed the assess the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States Nigeria. Six research questions guided the study and three were hypotheses were formulated and tested at 0.05 level of significance. The study employed a descriptive survey research design. The population of this study comprised one hundred thirty-three (133) business education lecturers in colleges of education in Delta and Rivers States. Sample size of the study consisted of one hundred thirty-three (133) business education lecturers in colleges of education in Delta and Rivers States. As a result of the manageable size, the entire population was used as sample, hence census. Two instruments were used for data collection. A check-list and a structured questionnaire. The questionnaire was titled “Availability and Utilization of ICT Resources in Business Education Programme Questionnaire (AUICTRBEPQ)”. To establish the validity of the instrument, it was subjected to validation by researcher’s supervisor and two other experts in the Department of Vocational and Technical Education, Faculty of Education, University of Benin. To establish the reliability of the instrument, the internal consistency method was used and this was done using Cronbach alpha statistics. The instrument was

administered to 20 business education lecturers once in Adeyemi Federal College of Education, Ondo State who were not part of the study population. The responses of the respondents were analyzed and a coefficient of 0.88 was obtained. Data collected from the respondents were analyzed using simple percentage, Mean ($\bar{x}$), standard deviation (SD) and two sample independent t-test using Statistical Packages for the Social Science (SPSS). The findings generally showed that availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States, Nigeria was low. The major findings of the study are as follows:

1. Majority of the schools under study do not meet up to the standard set by the National Commission of colleges of education with regards to the required ICT resources needed for teaching business education courses in Colleges of Education in Delta and Rivers States.
2. There is a low utilization of ICT resources in teaching business education courses in ccollege of education in Delta and Rivers States.
3. There is a low utilization of computer in teaching business education courses in colleges of education in Delta and Rivers States.
4. There is a low utilization of multimedia in teaching business education courses in colleges of education in Delta and Rivers States.
5. There is no significant difference between the utilization of ICT resources for teaching business education courses by male and female business educators in colleges of education in Delta and Rivers States.

6. There is a significant difference between business educators in Federal and State colleges of education in Delta and Rivers States in the utilization of ICT resources in teaching business education courses.
7. There is a significant difference between Office Technology Management option and Accounting option on educators' utilization of ICT resources in teaching business education courses.

Conclusion

Based on the findings of the study, it is concluded that the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States, Nigeria. is low. Therefore, the low availability of ICT facilities contributed negatively to effective utilization of ICT resources in colleges of education in Delta and Rivers States. This simply means that, for students to experience better learning outcome as well as promote effective and conducive learning environment, they must themselves be abreast with the use ICT particularly in a technological driven world where most office and administrative work are done through various ICT gadgets.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Government should ensure that funds are made available for the purchase of information and communication technology facilities and also ensure that the

purchased facilities are evenly distributed for effective management of colleges of education.

2. There should be collaboration between Government, management of the colleges of education and non-governmental agencies for the purchase of various ICT facilities in order to foster effective utilisation of these resources during teaching and learning processes.
3. Management should ensure that the required number of computers needed by the business education department according to the NCCE standard is met. This is to increase the level of utilisation to ensure effective teaching and learning.
4. School management should organize in-service training for their staff especially business education lecturers in the usage of modern equipment so that the essence of purchasing this equipment will not be jeopardize.

Suggestions for Further Studies

This study examined the availability and utilization of ICT resources in teaching business education courses in colleges of education in Delta and Rivers States, Nigeria. The following suggestions for further research are outlined:

1. The availability of school facilities and their effects on the quality of education in colleges of education in Delta and River state.
2. Management of business education facilities, equipment and supplies in colleges of education in Nigeria: issues and challenges

3. Utilization of instructional resources as it affects the academic performance of business education students in colleges of education in Delta and River state.

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APPENDIX A

Department of Vocational and Technical Education,
Faculty of Education,
University of Benin,
Benin-City,
Edo State.
31st July, 2024.

Dear Sir/Ma,

REQUEST TO COMPLETE A QUESTIONNAIRE

I am a postgraduate student of the above-named institution. I am conducting research on availability and utilization of ICT resources in teaching business education courses in colleges of education in Nigeria. The attached questionnaire is designed to collect data for the study.

Your kind assistance is hereby solicited in completing the questionnaire with the assurance that your responses will be treated confidentially and use for academic purposes only.

Thank you immensely for your anticipated cooperation.

Yours faithfully,

Kudi Ali MUSA

APPENDIX B

AVAILABILITY AND UTILISATION OF ICT RESOURCES IN BUSINESS EDUCATION PROGRAMME QUESTIONNAIRE (AUICTRBEPQ)

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION, FACULTY OF EDUCATION UNIVERSITY OF BENIN, BENIN CITY, NIGERIA.

Dear Respondents,

This questionnaire is aimed at eliciting information from the respondents on "Availability and Utilization of ICT Resources in Teaching Business Education Courses Questionnaire" (AUICTRTBECQ)". Please kindly provide honest responses to respective items in the questionnaire by ticking (√) the appropriate column. You are assured that your responses will be kept in the strictest confidence possible. Thanks in anticipation for your cooperation.

Researcher

SECTION A (DEMOGRAPHIC DATA)

Instruction: Please, kindly provide the following information in this part by ticking the appropriate boxes ( )

Name of Institution: .....,.....

Gender: Male ( ) Female ( )

Institution ownership: Federal ( ) State ( )

Area of Study: Accounting ( ) office technology and management ( )

SUB SECTION B1

AVAILABILITY OF ICT RESOURCES IN BUSINESS EDUCATION PROGRAMME QUESTIONNAIRE (AUICTRBEPQ)

Checklist of the required facilities and equipment needed for the teaching of business studies.

S/N	FACILITIES AND EQUIPMENTS	N.C.C.E. RECOMMENDATIONS	AVAILABLE
1	Computers	30	
2	Computer laboratory	1	
3	Electronic Typewriter	30	
4	Swivel typing chairs	30	
5	Photocopier	1	
6	Drop desk. Typist desk or convertible desk	30	
7	Radio	1	
8	Stapling machine	4	
9	Stop watch	1	
10	Filing cabinet	2	
11	Slide projector	1	
12	Scanner	1	
13	Colour T. V	1	
14	Video Machine	1	
15	Tape recorder Consoles	1	
16	Wall clock	1	
17	Perforator	2	
18	Digital Camera	1	
19	Stapling remover	4	
20	Overhead projector	1	
21	Microfilm	1	
22	Computer Printer	1	
23	Adding and listing machine	1	
24	Fax machine	1	

(Source: Adapted from National Commission for Colleges of Education Business Education Curriculum, 2016).

QUESTIONNAIRE ON UTILISATION OF ICT RESOURCES IN BUSINESS EDUCATION PROGRAMME

	Level of ICT Resources Utilisation	**VHE**	**HE**	**LE**	**VLE**
1	I use the following ICT resources in my instructional delivery:				
	• Computer system				
	8. Tape recorder				
	1. Photocopier				
	1. Internet facility				
	4. Printer				
	8. Scanning machine				
	• Projector: slides with text and images				
	3. Smart phone				
	• Smart board				
	• Storage devices e.g. flash drive, diskette				
	• Electronic library				
	• Public address system				
	• Application software package e.g. MS word, Excel, Sage 50				
2	I often give assignment that involves the use of ICT resources				
3	Use email to send and receive messages e.g. assignment, research work etc				
4	Use various search engines with other hyperlinks to surf the internet for information and download materials for content delivery				
5	Participate in on-line forum/conferencing discussion				
6	I integrate application software to course content during instruction				
	Extent of computer utilisation in teaching business education courses	**VHE**	**HE**	**LE**	**VLE**
7	I engage students in the use of spreadsheet during class activity				
8	Computer is utilised in teaching and learning of business education courses				
9	I am proficient in the use of a computer system which makes learning interesting				
10	I usually describe and demonstrate the basic features of computer application software packages while teaching				
11	There is a computer laboratory in the department for				

	teaching and learning business education courses				
12	I do engage students in the use of computer for the acquisition of basic skills through drills and practice				
13	I use computer simulation while teaching				
14	I use the computer to demonstrate mastery of subject matter				
	Extent of multimedia utilisation in teaching business education courses	**VHE**	**HE**	**LE**	**VLE**
15	I use overhead projector to teach my students for better understanding				
16	The use of public address system enables me to lecture large number of students conveniently				
17	Multimedia devices like interactive whiteboard and projector are always utilised by business education lecturers				
18	I use interactive whiteboard during instruction				
19	I use multimedia for class management and control				
20	I use video conferencing in networking to other computers while teaching				
21	I use Multimedia to present educational ideas and materials in a more artistic, inspired and engaging way				
22	I combine books, audio-visual aids and electronic media during classroom instruction				
23	I engage students in participation in multimedia activities, so they can learn real-time skills related to technology				

APPENDIX C
DATA ANALYSIS FOR THE RELIABILITY OF THE STUDY USING CRONBACH'S ALPHA

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded[a]	0	.0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.881	23

APPENDIX D

DATA OUTPUT OF RESEARCH QUESTIONS

Statistics

		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24
N	Valid	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	71
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Frequency Table

A1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	39	54.2	54.2	54.2
	2	33	45.8	45.8	100.0
	Total	72	100.0	100.0	

A2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	22.2	22.2	22.2
	2	56	77.8	77.8	100.0
	Total	72	100.0	100.0	

A3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	51.4	51.4	51.4
	2	35	48.6	48.6	100.0
	Total	72	100.0	100.0	

A4

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	20	27.8	27.8	27.8
	2	52	72.2	72.2	100.0
	Total	72	100.0	100.0	

A5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	47	65.3	65.3	65.3
	2	25	34.7	34.7	100.0
	Total	72	100.0	100.0	

A6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	25.0	25.0	25.0
	2	53	73.6	73.6	98.6
	4	1	1.4	1.4	100.0
	Total	72	100.0	100.0	

A7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	33.3	33.3	33.3
	2	48	66.7	66.7	100.0
	Total	72	100.0	100.0	

A8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	25.0	25.0	25.0
	2	53	73.6	73.6	98.6
	4	1	1.4	1.4	100.0
	Total	72	100.0	100.0	

A9

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	21	29.2	29.2	29.2
	2	51	70.8	70.8	100.0
	Total	72	100.0	100.0	

A10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	46	63.9	63.9	63.9
	2	25	34.7	34.7	98.6
	3	1	1.4	1.4	100.0
	Total	72	100.0	100.0	

A11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	33.3	33.3	33.3
	2	48	66.7	66.7	100.0
	Total	72	100.0	100.0	

A12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	33.3	33.3	33.3
	2	48	66.7	66.7	100.0
	Total	72	100.0	100.0	

A13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	61.1	61.1	61.1
	2	28	38.9	38.9	100.0
	Total	72	100.0	100.0	

A14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	23.6	23.6	23.6
	2	55	76.4	76.4	100.0
	Total	72	100.0	100.0	

A15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	51.4	51.4	51.4
	2	35	48.6	48.6	100.0
	Total	72	100.0	100.0	

A16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	33.3	33.3	33.3
	2	48	66.7	66.7	100.0
	Total	72	100.0	100.0	

A17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	61.1	61.1	61.1
	2	28	38.9	38.9	100.0
	Total	72	100.0	100.0	

A18

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	61.1	61.1	61.1
	2	28	38.9	38.9	100.0
	Total	72	100.0	100.0	

A19

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	26	36.1	36.1	36.1
	2	46	63.9	63.9	100.0
	Total	72	100.0	100.0	

A20

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	50	69.4	69.4	69.4
	2	22	30.6	30.6	100.0
	Total	72	100.0	100.0	

A21

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	61.1	61.1	61.1
	2	28	38.9	38.9	100.0
	Total	72	100.0	100.0	

A22

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	45.8	45.8	45.8
	2	39	54.2	54.2	100.0
	Total	72	100.0	100.0	

A23

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	39	54.2	54.2	54.2
	2	33	45.8	45.8	100.0
	Total	72	100.0	100.0	

A24

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	51.4	52.1	52.1
	2	34	47.2	47.9	100.0
	Total	71	98.6	100.0	
Missing	System	1	1.4		
Total		72	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	72	1	4	2.43	1.100
Q2	72	2	4	2.19	.725
Q3	72	1	4	2.35	.790
Q4	72	1	4	2.46	.941
Q5	72	2	4	3.08	.727
Q6	72	1	4	2.43	.954
Valid N (listwise)	72				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q7	72	1	4	3.29	.813
Q8	71	1	4	2.34	.792
Q9	72	1	4	2.45	.931
Q10	72	1	4	3.01	.864
Q11	72	1	4	2.26	.872
Q12	72	1	4	2.18	.793
Q13	72	1	4	2.10	.808
Q14	72	1	4	2.36	.827
Valid N (listwise)	71				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q15	72	1	4	2.07	.909
Q16	72	1	4	3.00	.919
Q17	72	1	4	2.48	.934
Q18	72	1	4	2.41	1.075
Q19	72	1	4	2.31	.959
Q20	72	1	4	2.44	.967
Q21	72	1	4	2.39	.779
Q22	72	1	4	3.28	.791
Q23	72	1	4	2.54	.886
Valid N (listwise)	72				

APPENDIX E
DATA OUTPUT OF HYPOTHESES

Group Statistics

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
UTILIZATION OF ICT	MALE	37	3.03	.376	.062
	FEMALE	35	3.05	.359	.061

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
UTILIZATION OF ICT	Equal variances assumed	.026	.872	-.318	70	.752	-.028	.087	-.201	.145
	Equal variances not assumed			-.318	69.994	.751	-.028	.087	-.200	.145

Group Statistics

	AREA OF SPECIALIZATION	N	Mean	Std. Deviation	Std. Error Mean
UTILIZATION OF ICT	OFFICE TECHNOLOGY MANAGEMENT	3	2.87	.598	.345
	ACCOUNTING	10	3.74	.132	.042

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
UTILIZATION OF ICT	Equal variances assumed	13.890	.003	-4.717	11	.001	-.874	.185	-1.282	-.466
	Equal variances not assumed			-2.514	2.059	.125	-.874	.348	-2.329	.582

Group Statistics

	INSTUTITION TYPE	N	Mean	Std. Deviation	Std. Error Mean
UTILIZATION OF ICT	FEDERAL	13	3.54	.468	.130
	STATE	59	2.93	.222	.029

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
UTILIZATION OF ICT	Equal variances assumed	6.566	.013	7.122	70	.000	.612	.086	.441	.783
	Equal variances not assumed			4.596	13.215	.000	.612	.133	.325	.899