ASSESSMENT OF AVAILABILITY AND UTILIZATION OF E-LEARNING TECHNOLOGIES ON ACADEMIC PERFORMANCE OF BUSINESS EDUCATION STUDENTS IN HIGHER INSTITUTIONS IN EDO STATE

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BY

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMEENT OF VOCATIONAL AND TECHNICAL EDUCATION, FACULTY OF EDUCATION, UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF B.ED DEGREE IN BUSINESS EDUCATION (OFFICE TECHNOLOGY AND MANAGEMENT)

OCTOBER, 2023

APPROVAL

I, the undersigned, hereby approve this project as adequate in scope and quality in partial fulfillment of the requirements for the award of Bachelor of Science (Education) degree in Business Education (Office Technology and Management).

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Project Supervisor

CERTIFICATION

We the undersigned certify that this research work carried out by **Efemena Maureen Mamu,** with Matriculations number **EDU1804407** in the Department of Vocational and Technical Education, Faculty of Education, University of Benin, Benin City for the award of Bachelor of Science (Education), Degree in Business Education (Office Technology and Management).

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DEDICATION

This research is dedicated to God Almighty, who gave me knowledge, understanding, good health, strength, guidance and protection during this work.

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ABSTRACT

The research work assessed availability and utilization of e-learning technologies on academic performance of Business Education Students in Higher Institutions in Edo State. Six research questions and two hypotheses were raised and formulated respectively to guide the study. The study adopted a descriptive survey research design. The population of the study comprised of the five hundred and twenty-one (521) Business Education students in 200 level, 300 level and 400 level students in the University of Benin and Igbinedion University, out of which 100 students were used as sample, using the disproportionate stratified random sampling technique. A structured questionnaire containing forty items was the instrument used in obtaining responses from respondents. The reliability of the instrument was ensured by using Cronbach Alpha reliability computation which yielded a co-efficient index of 0.839. Data collected were analyzed using mean and standard deviation for the research question, while t-test and ANOVA were used to test the hypothesis. The findings of the study showed that students had several positive thinking about e-learning technologies enhancing business education programme and these technologies which would cover the gap that exist between theories and practical learning were not effectively available. Arising from the findings, it was recommended that government and other relevant stakeholders in education should provide adequate e-learning technologies for the teaching and learning process of business education courses. The government should make Internet connectivity a priority for higher education by creating free and accessible wifi. And also, the relevant authorities should create an avenue for uninterrupted power supply. In addition, in-service training programmes such as on the job training and retraining programmes such as attending seminars, workshop on the utilization of e-learning technologies should be allowed on a regular basis for serving business educators and students in the University of Benin, Benin City and Igbinedion University, Okada..

Keywords: *academic performance, availability, utilization of e-learning technologies and business education programmes*

CHAPTER ONE

INTRODUCTION

Background of Study

Education is a fundamental key to societal and global advancement. It remains one of the best gifts a nation can bequeath to her citizens, especially the younger generation. This is because the development of any nation or community depends largely on the quality of education of such a nation. Education is the process of facilitating learning or the acquisition of knowledge, skills, values, morals, beliefs, habits and personal development. Education is the general process of acquiring knowledge which brings positive changes in human life and behavior. It is the act of teaching knowledge to others and the act of receiving knowledge from someone.

E-learning is a learning experience delivered electronically. It is referred to as the use of electronic media and Information Communication Technologies (ICT) in education. E-learning is the act of taking course materials from computer, smartphone or other devices. E-learning is an inclusive term that describes

educational technology that electronically or technologically supports learning and teaching. Bermejo (2005) defined e-learning as an education that uses computerized communication system as an environment for communication, the exchange of information and interaction between students and instructors. E-learning centers on the intersection of education, teaching and learning with ICT (Okoro 2000).

In recent times, there have been advanced development in the software technology, particularly in the field of education. The traditional approach of teaching has been the main and most common medium of teaching and learning all around the world. It is teacher-centred. A traditional classroom is where a teacher moderates and regulates the flow of information and knowledge. A traditional classroom is an educational place where the teacher delivers knowledge to the students in person without third party medium. Traditional classrooms have a schedule and the students are expected to follow the same to learn a particular subject or lesson.

The development of e-learning in Nigeria could be traced back to the development of telecommunication which began in the year 1886 when e-cable connections was established by the Colonial Masters between Lagos and the colonial office in London to transmit information and receive feedback. By 1893, all government offices in Lagos were provided with telephone services (Ajadi et al., 2009). They further stressed that in Nigeria schools, the commonest type of e-learning adopted was in form of lecture note on CD-ROM which can be played when the learner desire. The challenge of this method is that number of students per computer was unattractive as compared to when lectures are being received in the classroom.

By the early 90s, several schools have been set up that delivered courses online only. Making the most use of the internet and bringing education to people who would not previously have been able to attend a college due to geographical or time-constraints. Technological advancements reduce the costs of distance learning, a savings that would also be passed on to students, helping to bring education to a wider audience.

E-learning is student-centred. Students who study online can plan their own time schedule, without having to make sacrifices in order to meet the class attendance requirements of teachers and traditional Universities. E-learning is flexible in terms of time and place. Learning content is usually made available in short modules and can be paused at any time, during one's free time at work – the learning materials can be easily made part of one's daily routine. Without physical limitations, anyone with internet access can simultaneously access learning opportunities.

With the emergence of the internet and new technologies, e-learning has become the promising solution for the Universities which care currently in an environment of intense change. Students' uses technologies as an integral part of their every day lives. Of most interest is the fact that they use technology extensively for internet searching, socializing and communication. Students are undergoing a learning process outside the formal environment (the university). Most students study other courses online as an hobby, get informed and gain

knowledge, communicate, share materials, information, training, etc. and get their degree or certificates in other environment than the formal one.

Studies by the National Center for Education Statistics show a growing demand and acceptance of online learning (Watts and Lewis, 2003). While students who have involved in e-learning courses are generally positive about their experiences. Furthermore, studies show that student's performance of e-learning in university education may be influenced by several variables. Keller and Cernerod (2002) have identified variables such as age, gender, previous experience of computers, technology acceptance and individual learning style as major predictive factors when discussing acceptance of technology by students.

Students performance towards using e-learning in their daily live has greatly brought success in the performance of business education students in University of Benin and Igbinedion University, Okada in Edo State. Good experiences of an innovation bring expertise and lead to confirmation. On the other hand, poor experiences lead to poor performance and change of perception.

Technology is a device, material, or sequence of mathematical coded electronic instructions created by a person's mind that is built, assembled or

produced and which is not part of the natural world. Technology can be most broadly defined as the entities; material and immaterial, created by the applications of mental and physical effort in order to achieve some value. Technology refers to tools and machines that may be used to solve real world problems. Some examples of e-learning technologies are computer tablets, smartphone, overhead projectors, interactive white boards, digital textbooks, smartphone, audio enhancement devices, etc.

In view of the benefits of e-learning technologies to students, this study wants to assess availability and utilization of e-learning technologies on the academic performance of Business Education students in University of Benin, Benin City and Igbinedion University, Okada, Edo State.

Statement of the Problem

The world is technologically getting advanced. It is sometimes referred to as a global village. The reason for this attributed to the influence of information and communication technology. E-learning in business education programme in University of Benin and Igbinedion University, Okada will help in producing a

healthy, literate, self-reliant citizen that would create wealth for human development. Technology in e-learning facilitates and necessitates learning. The use of new method promotes learning at a distance and on one's own pace possible. The utilization of e-learning tools and technologies enhance motivation, help recall previous learning and provide new instructional stimulus for the learners.

E-learning technologies are fast becoming popular in business education instructional delivery method, most especially in University of Benin and Igbinedion University, Okada. E-learning is important in the teaching of business education as it is a managerial course. Business Education teaches Office Technology Management (OTM), keyboarding, typewriting and other management courses that train students on the uses of e-learning technologies and the components like computers/laptops, e-mails, CD-ROMs, mode, flash, etc. Unfortunately for the students, only few or none of these technologies or equipment are made available in University of Benin and Igbinedion University, Okada. Business Education Department have computer rooms that is rarely utilized, reason being that only few computers are functioning well, thereby leading or making students to purchase their personal computers and most times,

some students are left because of inability to meet up with their peers which will lead to poor performance on the part of the students.

In addition to the above, is the rising dissatisfaction among employers of labour on the poor performance and competencies, skills of business education graduates in the use of e-learning technologies in the new world of work.

Scope of the Study

The scope of this study was to assess the availability and utilization of e-learning technologies on academic performance of Business Education students in University of Benin and Igbinedion University, Okada. However, it is delimited to 200, 300 and 400 level students of Business Education in University of Benin and Igbinedion University, Okada. .

Purpose of the Study

The purpose of the study was to assess the availability and utilization of e-learning technologies on academic performance of business education students in University of Benin and Igbinedion University, Okada, Edo State.

Specifically, the study sought to:

1. Assess students‘ perception of e-learning technologies in Business Education Programme Higher institution.
2. Assess how overhead projectors can be used to improve the performance of students in Business Education programme.
3. Determine the extent to which Computers are utilized in Business education programmes in Higher Institutions
4. Determine the extent to which projectors are utilized in device are utilized in Business Education programme.
5. Determine the extent to which audio enhancement device are utilized to improve the performance of students in Business Education programme.
6. Determine the extent to which how tablets and smartphone can be used to enhance students’ performance in Business Education programme.

Research Questions

The following research questions were to guide the study:

1. Does the application of computer facilitate the academic performance of Business Education students in University of Benin and Igbinedion University?

2. How can the usage of overhead projectors improve the performance of Business Education students in University of Benin and Igbinedion University?

3. Does the application of audio enhancement improve students' academic performance of Business Education students in University of Benin and Igbinedion University?

4. How can application of tablets and smartphones facilitate the academic performance of Business Education students in University of Benin and Igbinedion University?

Significance of the Study

The purpose of this study will be of great benefit to students in Business Education. The findings of the study will help to encourage Business Education students to develop skills and competencies in e-learning technologies for teaching and learning in business education programme. The study will also provide

improved performance in terms of teaching and learning abilities of business education students of Higher Institutions in Nigeria. It will promote conveniences and flexibility of learners through self-paced and time as well as increased access to instructors of best quality through share of knowledge across borders by utilizing online and internet connectivity.

Educational planners will be made to design curriculum that will encourage, enhance and emphasize technology driven education at the 21st century and beyond in business education courses contents which will improve student's skills and competencies for employability and self-sustainability.

In addition, administrators and managers of business education in higher Institutions will be able to access student's payments, records, admission, evaluation and results, online registration, online assessment and exchange programmes. Conclusively, the general public will be able to access the websites of business education programme in higher institutions for general information, and student's follow-up programmes.

Delimitations of the Study

The scope of this study was on the assessment of student's perception, availability and utilization of e-learning technologies for effective delivery of Business Education programme in Higher Institutions. This research is delimited to some selected higher institutions in Edo State, Nigeria. These institutions includes: University of Benin (UNIBEN) and Igbinedion University, Okada (IOU).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter deals with the review of literature pertaining to the assessment of availability and Utilization of E-Learning Technologies on academic performance of Business Education Students in University of Benin and Igbinedion University, Edo State. The review was carried out under the following sub-headings.

- Theoretical Framework
- Concept of Business Education
- Concept of E-Learning Technologies
- The History of E-Learning
- Importance of E-Learning Technologies to Business Education Students
- Students Performance on the use of E-Learning Technologies
- Problems of E-Learning Technologies on Academic Performance of Business Education Students in University of Benin and Igbinedion University, Edo State
- Review of Related Empirical Studies
- Summary of Literature Reviewed

Theoretical Framework

The theoretical framework of the study is hinged on the cognitive load theory of propounded by John Sweller, Paul Agres and Slava Kalyuga (2005). Cognitive load theory is the amount of mental effort involved task and can be categorized into germane, intrinsic, and extraneous effort. Since the working memory has limited capacity and the brain will suffer from overload if learners are presented with too much information, thereby causing insufficiency learning, it is essential to balance these three types of load to promote learning efficiency.

Therefore, e-learning theory states that the reducing the extraneous cognitive load and managing Germane me and intrinsic load at an appropriate level for users with educational, technologies and students can learn effectively. The three cognitive load as noted previously are intrinsic, germane and extraneous based on the amount of mental effort. Intrinsic load is the mental work imposed by the complexity of the content in your lessons and is primarily determined by your instructional goals. The Germane load is mental work imposed by instructional activities that benefit the instructional goal. The Extraneous load is the mental work that is irrelevant to the learning goal and consequently wastes limited mental resources.

E-Learning theory is also composed of principles that can be integrated into instructional design. They demonstrate how educational technologies can be used to promote effective learning. The eleven principle of model that can promote effective learning

1. Multimedia principle: using two formats of audio
2. Modality principle: explaining visual content with audio narration
3. Continuity principle: aligning relevant information to corresponding pictures concurrently.
4. Coherence principle: avoiding irrelevant videos and audio
5. Segmenting principle: managing complicated content by breaking a lesson into small parts.
6. Signaling principle: offering signals for the narration
7. Learner Control Principle: allowing the learner to control their learning pace
8. Personalization principle: presenting words in a conversational and informal style

9. Pre-training principle: providing descriptions or explanations for key concepts in a lesson before the main procedure of the lesson.
10. Redundancy Principle: presenting visuals with audio
11. Expertise effect: considering that design principles amounts of prior knowledge.

There is no need to use all eleven principles to enhance students learning, specific design principles can be used in different depending on the teacher's instructional objectives and the student's learning objectives. Previous studies relevant to e-learning theory have provided evidence that multimedia design principles can foster effective learning. An example is the work of Mayer (1997) who conduct several reviews of multimedia learning and found out that students who were given a presentation with both verbal and visual explanation had 75% higher median score for creative solution of problem solving transfer tests than students who experience any verbal explanation. This therefore means that multimedia instruction is effective.

Several studies also show that personalization can be effective in learning. Kartal's (2010) study investigate that effectiveness of the design principle of

personalization with 89 college students in an Istanbul University in Turkey by testing computerized instructional content in a personalized informal style. The results showed that the amount of learning increased when the language style was formal and conversational.

Concept of Business Education

Business education was described as education for and about business (Okwamaso and Nwazor, 2000, Nwosu, 2003). Business education teaches knowledge and competencies required in business. Business education is the term that encompasses a number of methods used to teach students the fundamentals of business practices. Business education is a multi-different discipline which incorporate business, typing, shorthand, bookkeeping, office practice etc. these courses teaches students the fundamentals of management, business ethics, marketing, accounting etc. These have been supplemented in recent years with extensive course, offering in e-commerce management, computer skills and other factors in managing a business within the global economy. Students can earn B.ED degree, masters degree and Ph.D (Doctor of Philosophy) in business

administration. The business education programme consist of class work, teaching practice and internship-combine academics with on the job training.

Adam Collins states that there are many reasons why business education is important today. It equips people with knowledge of developing the corporate world. Launching a business or simply being part of it is considered to be a brave move and a key to success. However, without having necessary skills launching a successful company becomes difficult.

Business education helps in developing students on the ability to collaborate effectively with a team, data collection and analysis, problem solving, use of social media as a promotion tool, public speaking and powerful presentation and mostly helps to develop real world skills and have a thinking life in a world that is changing so rapidly.

Concept of E-Learning Technologies

E-Learning has gained recognition and farer in the delivery and distribution of educational resources, and this has been possible with the occurrence of internet and technologies. E–Learning has been defined by various authors according to their personal knowledge and perspective, but they all agree that e-learning

comprises all forms of electronically aided learning and teaching which are procedural in character and aim to affect the construction of knowledge with reference to individual experience, practice and knowledge of the learner.

Edigbe (2004) described e-learning as a group of students assembled in a common virtual classroom to meet an instructor on line. The instructor sends out learning materials by electronic means to each participant. Participants submit their assignment electronically to the instructor and receive corrections later. E – learning is the acquisition of skills and knowledge which take place through electronic technologies and media.

Sarah Guri-Rossort (2005) defined e-learning as electronic media used for various learning purpose ranging from conventional classroom add-on functions to online substitution for face-to-face meetings with on-line substitution (Lark and Mayer, 2016) defines e-learning as instructions derived through digital devices with the intent of supporting learning.

E-Learning involves the use of information and communication Technologies to enhance and support teaching and learning process. E–learning gives students or learners the opportunity to explore and gain wider knowledge in

their course of study. E–learning also involves the use and application of various technologies and tools like computers, projectors, e-mails, (CD-Rom, Modem, flash etc). Andrens (2020) stated that technology enables teachers and students to access specialized materials well beyond textbooks in multiple formats and in ways that bridge time and space. Koohong & Harran (2005) added that e-learning is the delivery of education (all activities relevant to instructing, teaching, and learning) through various electronic media.

E-Learning is the use of new multimedia technologies and the intent to improves the quality of learning by facilitating access to resources and services, as well as remote exchange and collaboration (Alalnso et al, 2005). The process of e-learning is a means of facilitating the achievement of formal and informal learning goals. E-learning is also a natural evolution of distance learning, which has taken advantage of then latest tools to emerge in the context of technologies for structuring education.

E-Learning is developing a widely used concept in universities (University of Benin and Igbinedion University, Edo State). Since the out break of the Covid-19 pandemic, technology has been the major aspect to drive this concept of e-

learning. E-learning is imparting and facilitating knowledge on media, electronics devices like that on the internet, CD-Rom, and DVDs etc. unlike the conventional chalk and board style schooling, which is called the traditional method of teaching. E-learning purely makes giving and receiving simpler, productive and prolific. It is a method of teaching purely through technology. Learning in an electronic environment has great challenge in universities (University of Benin and Igbinedion University, Edo State), due to so many factors which involves Law, Literacy, Inadequate skills, inadequate facilities, difficulties with computers and internets access etc, thereby affecting the performance of a business education students negatively.

Carroll & Swatman 2000; Lee & Baskervile, 2003) review of e-learning dimension stated that e-learning system contains the three main components of information system. These components are people, technologies and services. The people interact with e-learning system. E-Learning technologies enables the direct and indirect interaction of the different groups of users, while E-learning services integrate all the activities corresponding to instructional strategies. The word e-learning is used synonymously with virtual knowledge, web-based knowledge,

online education, computer based training and net worked education. E –learning is taking over the traditional style of teaching and learning psychologist believes that audio – visual method of teaching creates a disciplined learning environment and foster effective students engagement in the class.

The History of E-Learning

The term “e-learning” has only been in existing since 1999 when the word was first utilized at a CBT systems seminar. Other words also began to spring up in search of an accurate description such as “on line learning” and “virtual”.

In 1924, the first testing machine was invented. The devices allowed students to test themselves. Then, in 1954, BF Skinnner, a Harvard Professor invented the “teaching machine”, which enabled schools to administer programmed instruction to their students. It was not until the 1960 however that the first computer based training program was introduced to the world. This was a CBT Programme Logic for Automated Teaching Operations. In the past, course materials were delivered by post and correspondence with tutors via mail. With the use of the internet, the Open University began to offer a wider range of

interactive educational experience as well as faster correspondence with students via emails etc.

With the introduction of computers in the late 20th century, e-learning tools and delivery methods expanded. The first MAC in the 1980's enabled individual individuals to have computers in their homes, making it easier for them to learn about particular subjects and develop certain skill sets.

During the early 90's several schools had been set up that delivered courses online, thereby making the most of the internet and bringing education to people who wouldn't previously have been able to attend a college due to geographical or time constraints, helping bring education to a wider audience. Companies began using e-learning to train employees and advance their operations. New terms such as "mobile learning", "gamification", and "social learning", were also made up to describe the revolution of e-learning.

From 2020 up to the presents, the traditional classroom-based settings have been facing a major blow when the COVID-19 crisis took place. As a result, parents and school were compelled to consider e-learning just to continue student's education while they are in quarantine. Students have been attending

online classes where their teachers use teaching software to teach from home. Clearly, the pandemic has shown the versatility and advantages of e-learning (Keegan, 2020).

E-learning approaches expanded along with the development of the computer and internet in the late 20th century. From merely providing information to students, e-learning has evolved to provide access to large amount of information to learners of all ages wherever and whenever they want.

Importance of E-Learning Technologies to Business Education Students in University of Benin and Igbinedion University, Edo State

Since the advent of e-learning, teaching and learning has become more effective and efficient. It makes information easy to group and absorb, and it also enhanced the ability to learn and implement among the learners. The audio–visual help in remembering knowledge for a longer time.

E-learning is elastic in nature. It helps business education students with modern learners, this keep them up dated with the current trends, when e-learning technologies are available and being utilized in University of Benin and Igbinedion University and Igbinedion University, Edo State, it would give room

for business education students to be conversant with the operation of these technologies which would make them possess very good performance, competences, and skills in the use of e-learning technologies in the new world of works. The implication of this is that graduates of business education would become employable and it either in a paid job or self employment and sustainability. In a time where skills are required to be updated regularly, e-learning can prove to be an immensely helpful tool. Be it students, beginners, experts or mid-career professionals, E-learning enables everyone to up skills themselves at a time and place of their choice with the use of e-learning technologies, they can learn quickly and perform better.

E-learning designs a course in a way that makes it interactive and run through the use of technologies which enhances not only your engagement factor but also the relative timeline of the course material in questions. Review of studies conducted in the field of e-learning suggests that the use of the electronic teaching method in the teaching-learning process of business education students would lead to effectiveness of training. The emergence of new theories of teaching and

learning has made the education to shift from being teacher-centered to being student-centered.

It is true that as individual, we do not respond to one teaching method in the same way. Some learn visually, and then other learns with writing and repetition. E-responds to those different needs of business education students with the use of different needs of business education students with the use of different types of materials and technologies, whether it is audio-visual content or interactive testing on the go. E-learning helps cater to the needs of business education students who would not normally do as well in a traditional learning environment. E-learning in comparison with traditional learning allows business education students far easier access to online resources, database, journals and access materials you would not normally have access easily from a library.

Nevertheless, e-learning has been of great support to the performance of business education students in University of Benin and Igbinedion University, Edo State. E-learning is cost effective as this method is quick and easy.

The process of e-learning is by self-paced. This is to say that e-learning enables students to learn subjects at a time and pace of their convenience. They do

not have to worry about missing out on other opportunity merely to strengthen their academic credentials. Students do not also have to experience the constant peer pressure to learn quickly, students can choose their own pace of understanding using the following device:

1. **Computer**: a computer is an electronic device or machine for receiving, processing, storing and retrieving data. It is a digital programme that can be programmed to carry out sequences of arithmetic or logical operations automatically. The use of computers in the present-day teaching and learning is inevitable because it helps to meet the need of students for greater individualization of instruction and greater relevance of the subject matter. The use of computer in teaching and learning will allow students to learn by doing rather than trying to absorb lines of information from a textbook. It will also give students the opportunity to learn by trail and error which allow them see how things work rather than forcing them to trust what the teachers says. Computers will make it easy for teachers to vary their instructional delivery, record grades, calculate averages, manage attendance and access data on student's performance. Practical courses in business education also require the use of computers, courses

like; keyboarding, typewriting, word processing, office information system, and so on. Enough computers in good working conditions are required to teach these courses successfully.

2. Projector: this is an example of a visual aid. Visual aids help teachers to clarify, establish, and co-odinate precise conceptions in order to make learning more actual, active, motivating, encouraging and significant. The use of chalkboard is almost a thing of the past with the advent of projectors in the classroom in some developed countries. Rather than writing notes across the board, teachers can make use of PowerPoint presentations, images and even film as teaching tools through the use of projectors. Students can listen to lectures given by worldwide experts. Projectors can also display web content to an entire class, rather than each student accessing information on small individual computers. Lastly, students can also use projectors to prepare and presents class projects that they created with the use of PowerPoint or any other electronic medium.

3. **Interactive Whiteboard:** the interactive whiteboard is a set of hardware electronic

induction whiteboard and software operating system which is more advanced than the computers, projectors and any other screen we have used before. It is also called the Digital Interactive Smart Board. The interactive whiteboard (IWB) is a powerful educational technology which not only supports clear and seamless instruction but also raises the level of interactivity in classroom. It provides flexibility in education and allows the teacher to analyses, design and implement functions to achieve a desired and pedagogical result, if any of the students have difficulties, they can benefit from the possibility of increasing the size of texts and images, or student with hearing problems can learn by the use of virtual presentations. The interactivity and easy handling stimulates learning, increase motivation and improves performance in areas that could previously be challenging.

4. Audio Enhancement Device: audio enhancement uses beam forming microphones to output optimal speaking volumes and frequencies. The array detects sounds and interprets the audio signals, and then removes the ones that are interfering with the speech intelligibility and to evenly distribute sound throughout the classroom. Modern audio enhancement solutions can come with a camera,

making it a convenient, all-in-one solution that schools find easier to utilize. Audio enhancement is very important in the teaching and learning process. It helps for sharper pronunciation during lectures and examinations. A course like Shorthand should be taught with audio enhancement in order to get the pronunciation of words clearly to take down dictation and to construct an online correctly. Lack of audio enhancement would make students misinterpret the lesson being presented, distract the students, which makes it harder to pay attention.

Students' academic performance on the use of e-learning Technology

Rasha A. E. (2014) study of student's academic performance of e-learning reviewed that more than 70% of the students believed that the online test had helped them to identify their knowledge gaps in the course, identify areas of strength and weakness in their knowledge, clarify areas of focus while studying the course or module, facilities their understanding of the lectures and teaching materials and increased their awareness of the learning objective/outcome of the course or module.

More than 80% of the students felt that practicing online test would improve their performance in the summative assessment and that it should be

implemented in other course as well. The study findings was similar to other studies were students favoured online and computer based test over paper and pen test because of independence of sitting position, the better image quality, the ability to proceed at their own pace and the fact that they had a neater answer script and better indication of answer length.

According to the study of Ojo D.O and Olakulehin F.K (2006) on the Attitudes and perceptions of students to open and distance learning in Nigeria, the findings revealed that distance learners in Nigeria are favourably disposed to Open and Distance Learning institutions at this point in time. The 120 students who responded to the survey indicated their interest in the unique features that make up ODL institutions, such as the opportunities for flexible learning, the use of multimedia and ICTs, open access provision of quality learning materials, and many more. The findings of this study also made Olugbenga and Olakulehin believe that students currently hold positive opinions and perceptions towards ODL and its potential.

Problems of E-Learning Technologies on Academic Performance of Business Education Students in University of Benin and Igbinedion University, Edo State

Learning in an electronic environment is great challenge in University of Benin and Igbinedion University today because of many factors. Due to many negative factors in the state, University of Benin and Igbinedion University could not afford broad access to all latest achievements available for education, as well as enable new educational technologies and e-learning to be widely used in Universities. E-learning is considered very attractive as a new learning paradigm whose effect will be positive one to the development of education in various universities, especially University of Benin and Igbinedion University, Edo State with all its potentialities, not much effort is taken for its implementation as research shows that even with e-learning on the agenda, University of Benin and Igbinedion University is still facing a lot of problems in the field. Most of the problems are not only technologically but also economically, socially, educationally and culturally sensitive.

While there is growing demand for e-learning, the challenges are many. In tertiary institution in Nigeria, most lecturers and students are not knowledgeable enough in the use of the learning technologies; some do not know how to access their email, while others do not even have an e-mail address. Olakulehin noted that the infrastructures necessary for deploying an effective ICT platform is lacking in Nigeria. There is not enough human skills and knowledge to fully integrate ICT into education.

Below are the factors that affect the adoption of e-learning in University of Benin and Igbinedion University, Edo State.

1. Cost of Devices (Computers, Phones, Tablets, etc.)

Before we even talk about how to use such technologies, we have to consider the cost of them. A lot of these devices are very expensive for the poor or an average Nigeria. This is a very big problem because if you cannot afford a computer, smartphone, tablet, or any other device that can be used in the virtual learning process, you cannot be part of it. There are some cheap device now, all thanks to China and some other Asian countries, but still one would need a very good device for virtual learning, which might still not sit well with an average Nigerian.

2. How to use the Technologies

Getting the device is one thing, knowing how to use them is entirely a different thing. It has been found that low computer literacy level is a critical factor that affects the acceptability of e-learning by teachers and students in educational institutes. Furthermore the lack of ICT training for teachers and lecturers as it's hard for them to provide digital content, even when provided with all necessary infrastructures.

3. Knowledge of the Internet

The internet is a very broad network that novices might find it a little tricky or difficult to grasp. Individuals who want to be part of the electronic learning system must have a very good knowledge on how to use the internet.

4. **Cost of Data**

One would definitely need a data plan to access the internet, and the cost of data in Nigeria is not pocket friendly compared to other countries. Hence, some students find it a challenge to afford. The government should make interest connectivity a priority for higher education by creating free and accessible wifi to enable leverage on the promises and opportunities e-learning present.

5. **Insufficient Power Supply**

This is one of the biggest setbacks to electronic learning in Nigeria. All e-learning technologies require constant and steady power supply to function. However, the irregular and frequent interrupted power supply in Nigeria is a problem affecting almost every aspect of the economy, including education. Most rural area in Nigeria are not even connected to the national grid. The consequence of this is that students residing in such area may find it difficult to use ICT effectively.

Solutions to Problems of E-Learning Technology on Academic Performance of Business Education Students in University of Benin and Igbinedion University, Edo State

One vital need in the present business environment is the staff ability to use computer programs for different purpose. The usage of e-learning technologies by business education students in University of Benin and Igbinedion University will lay a foundation of computer and software utilization in the business environment. But unfor0tunately, most of these technologies are not even available. Basic e-learning technologies such as the computer, projector, printer, internet, interactive white board, etc. which are available are in short supply. Usually, when they are

available, they are underutilized by both students and lecturers. Most lecturers still prefer the traditional style of teaching. While students on the other hand prefer using the e-learning, and hence, a reason for low performance.

Fortunately, for every problem they say, there is always a solution. There are ways in which these problems can be eliminated to make electronic learning a success. They include;

1. **Giving the Device to the Students and Academic Staff:** this could be done in form of grant from government to the students to purchase the device of their choice. The institution could also add the cost of the device to the school fee of all students in the institution, thereby mandating the students to get the device. The lecturers can also be a part of this, just that the device cost could be deducted from their salaries. By doing this, the pressure of saving up to buy these e-learning devices on individual bases would be eliminated. This will also make the basic e-learning technologies available to every school leaving no one behind.
2. **Organizing Computer Literacy Programmes:** Higher institutions should organize more computer literacy programmes to educate the students on

how to make good use of the computer gadgets that can be used for electronic learning. The students can enroll for computer appreciation courses, not just for the case of electronic learning but will also be an added certificate to their curriculum vitae.

3. **Reduction in Data Cost:** The Federal government should find a way to reduce the cost of data; it could be in form of subsidy for students and the academic staff. Also, the institution should also try to create free and accessible wifi around the faculty so that students do not have to spend money on buying data regularly to learn.
4. **Fixing Network Coverage Issues:** telecommunication companies should find a way to have the same spread of their network all around the country. It will enable students both in the rural and urban areas to have uninterrupted and stable network supply to access the internet at any place and time of their choice. This will also make use of e-learning technologies smooth and easy.
5. **Provision of Steady Power Supply:** Finally, the federal government should create an avenue where the entire country would enjoy a 24 hours

uninterrupted power supply. E-learning technologies needs power to function, This is to keep all the devices required for electronic learning up and running, and thus make e-learning a reality.

With all these in place, Nigeria tertiary institutions would be fully ready to convert to the electronic learning like their counterparts in other developed countries, and help make e-learning technologies available and utilized properly in business education programme.

Review of Related Empirical Studies

Kamba M. A (2008) constructed a research on problems, challenges and benefits of implementing e-learning in Nigeria universities. The research tried to examine and discuss the problems, challenges and benefits of implementing e-learning in Nigeria by reviewing the consciousness and willingness of the selected universities. Survey research method was adopted for the study, questionnaire and interview are the instruments used for data collections. Interview was conducted to study respondent's individual learning experience. The finding of the study shows that out of 18 universities selected from different specialized areas, that is, three universities from different specialization areas, three universities from each Geo-

political zone, only 12 responded with usable answers. The response rate was 67% which is an expected rate for such surveys. According to the study, the awareness of e-learning among the universities is very high but investment and commitment to develop an e-learning is very poor and below expectation. The study also found out that some universities have web page and others in trend of creating a web page, which is usually for advertisement and not for e-learning activities. The statistical analysis result showed that there are significant differences across both forms of e-learning activities and type of universities in Nigeria.

Omogun (2019) also conducted a study on assessment of availability and utilization of e-learning technologies in business education programme in tertiary institutions. The major concern of the study was to investigate the assessment of availability and utilization of e-learning technologies in business education programme in tertiary institution in Ekiti State for the teaching of business courses (a case study of Ekiti State University of Ado Ekiti). The study sought to ascertain the assessment of which business education programme in tertiary institution in Ekiti State utilize available hardware and software technologies in teaching business education courses, to determine the assessment to which business

education programme in tertiary institutions in Ekiti State utilize available education programme in tertiary institution in Ekiti State derive in utilizing e-learning technologies for teaching business education courses, to determine the constraints relative to the utilization of e-learning technologies by business education programme in tertiary institution in Ekiti State, and also to determine the differences that may exist in the utilization of e-learning technologies by business education programme in tertiary institutions in Ekiti State as a result of their bio-data profile (gender, types ownership of institutions). The author also formulated five research questions to guide the study which are: to what assessment do business education programme in tertiary institution in Ekiti State utilize available hardware and software technologies in teaching business education courses in their institutions? To what assessment do business education programme in tertiary institution in Ekiti State utilize internet facilities in teaching business education courses in the institutions? What benefit do tertiary institution business education programme in Ekiti State derive in utilizing e-learning technologies for teaching business education courses? What are the constraints relative to the utilization of e-learning technologies by business education

programme in tertiary institutions in Ekiti State? Three hypotheses were formulated and tested at 0.05 level of significance.

Descriptive survey research design was adopted for the study. A total of 173 practicing business education was selected from the university, polytechnic and colleges of education in Ekiti State were used for the study. The data collection instrument was a 56-item questionnaire that was structured on a five point Likert type rating scale. The reliability coefficient of the instrument was further computed using Spearman Brown Prophecy Formula which yielded the score of 0.05, 0.88, 0.73 and 0.86 respectively. The data collected for the study were analyzed using mean and standard deviation for the five research questions, the t-test and one-way Analysis of Variance (ANOVA) were used for testing the null hypothesis.

The major findings that were derived from the study is that business education programme rarely utilize e-learning technologies such as; hardware, software, and internet facilities in teaching business education courses in tertiary institutions in Ekiti State. It was also discovered that gender has no effect on the assessment at which business education programme in tertiary institutions in Ekiti

State utilize internet facilities in teaching business education courses in their various institutions. Finally, the assessment of utilization of e-learning technologies by business education programme inn tertiary institution in Ekiti State has no significant difference on the institution type and ownership.

Bupo and Ndinechi (2005) carried out a research on business education students' utilization of e-learning in Anambra State tertiary institutions. The purpose of this study was to determine how often business education students in tertiary institutions in Anambra State utilize e-learning and to also determine how competent business education students in tertiary institutions in Anambra State are in computer usage. Two research questions were raise, which are, how often do business education students in Anambra State tertiary institutions utilize e-learning facilities in their learning process? And how competent do business education students in Anambra State tertiary institutions consider themselves in the use of computers? A total of 1603 business education students in four tertiary institutions in Anambra State made up the population of the study, out of which 320 students were used as sample. A researcher-developed instrument was used for the data collection. Mean rating and z-test were used for data analysis. The findings of this

study shows that students often searched for educational materials online and checked results online, they fairly often read e-books and e-journals, teleconferenced with classmates during group work, send feedbacks to lecturers via emails and undertake courses on the internet.

All these empirical studies which were briefly discussed above are all related to e-learning in one way or another. They are related to this study because they talked about the availabilities of e-learning technologies and how they are being utilized in business education programme and in Nigeria at large, the problems, challenges and benefits of implementing e-learning in Nigeria tertiary institutions using the case study of different states like Anambra State and Enugu State. This study is not meant to assess the availability and utilization of e-learning technologies in business education programme in Nigeria tertiary institution, but also seeks to assess student's perception of e-learning in the effective and learning of business education in tertiary institution in Edo State, Nigeria.

Summary of Literature Reviewed

This chapter has revealed the academic performance of students on the use of e-learning technologies on which included definition from notable authors and

how electronic learning (e-learning) is replacing the traditional approach of teaching and learning. The cognitive load theory was reviewed as the e-learning theory which was propounded by John Sweller, Paul Ayres and Slava Kalyuga (2015). It is also show the history of e-learning in other country and how to it came into Nigeria, its importance and benefits in the student's performance, student's performance of e-learning problems encountered in the use of e-learning technologies in University of Benin and Igbinedion University, Edo State and possible solutions to the problems and challenges of e-learning in University of Benin and Igbinedion University Edo State. Up to four empirical studies were reviewed which provided the researcher with up-to-data account and discussion of the research findings associated with e-learning.

The study has exposed that business education graduates are deficient in some skills and experience due to exposure needed for employability because of the unavailability and non-utilization of e-learning technologies during the course of their programme. In order words, universities seems not to be preparing these graduates properly for employment as there is existence of a gap in skills acquired in theory and skills required on practice.

Some of the problems which were discussed are the costs of the technologies which are too expensive for an average or poor Nigeria, how these technologies can be used in learning is another problem, no knowledge of the internet, high cost of data and also insufficient power supply. Solution to these problems were stated and explained.

E-learning in business education programmes as reviewed by various scholars locally is poor and seeks quick remedy. E-learning should be a compulsory method of teaching and learning in business education programmes in University of Benin and Igbinedion University to make learning fast, effective and efficient compared to the traditional method of learning.

CHAPTER THREE

METHODOLOGY

This chapter deals with the procedures used for this study and is presented in the following headings;

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

Design of the Study

The descriptive research design was adopted for this study. According to Calderon (2006), descriptive research is a purposive process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practice,

processes, trends and cause effort relationships and then making adequate and accurate interpretation about such data. This design gives the accurate assessment of the characteristics of whole population of the study. The descriptive survey research design is suitable for this study because the instrument will elicit opinion and facts from the students on assessment of E-learning technologies on the academic performance of business education students in University of Benin and Igbinedion University, Edo State.

Population of the Study

The population of the study consisted of 100, 200 and 400 level students of business education, in the University of Benin and Igbinedion University. This summed up to be a total of 521 students. The breakdown of the population is as follows:

S/N	INSTITUTIONS	100 LEVEL	200 LEVEL	400 LEVEL	TOTAL
1	University of Benin (UNIBEN	110	110	102	322
2	Igbinedion University (IUO)	69	72	58	199
	Total	**179**	**182**	**160**	**521**

Sample and Sampling Technique

The Disproportionate Stratified Radom Technique was used to select the sample size of the study. Out of the entire population of Five Hundred and Twenty One (521) business education students in the University of Benin (UNIBEN) and Igbinedion University (IUO), Edo State. 100 students were selected randomly as sample.

Instrumentation

A questionnaire was used for the collection of data this research work titled "Assessment of Availability and Utilization of E-Learning Technologies on Academic Performance of Business Education Students in University of Benin and Igbinedion University, Edo State (QAUETAPBES). The researcher employed the use of structured questions. The questionnaire is divided into (two) section. Section A Demographic Data) and Section B (Survey Statement), which consists of 40 (forty) items that addressed the research questions raised, and with a rating scale of four option as follows: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Validity of the Instrument

To ensure that the questionnaire was valid, it went through validity test by the researcher's supervisor and two other experts on the Department of Vocational and Technical Education (Business Education), University of Benin, Benin City. The various inputs by way of corrections and suggestions were inputted into the final instrument.

Reliability of the Instrument

To determine the reliability of the instrument, copies of draft of the questionnaire were administered once to twenty (20) students of Business education programme from both the University of Benin and Igbinedion University. Their responses were subjected to reliability test using Cronbach alpha and the reliability co-efficient of 0.839 was gotten.

Method of Data Collection

The instrument was distributed by the researcher to the respondents. The respondents were told that their responses will be handled confidentially. The researcher further proceeded by giving them prompt instructions on how to fill the questionnaire by ticking one out of the options displayed. The questionnaires

were collected back from the respondents immediately they completed the exercise of the spot.

Method of Data Analysis

The data gathered from the respondents were analyzed using (x), standard deviation, two sample independent t-test and Analysis of Variance (ANOVA). The mean and standard deviation were used to answer the research question while two sample independent t-test and ANOVA were used to test the hypothesis at 0.05 level of significance. Decision rule was based on mean value of 2.50 such that any calculated mean (x) equal or greater that 2.50 was regarded as high extent while any mean (x) less that 2.50 was regarded as low extent. On the basis of the hypothesis, the probability value (P) was used. If P-value was less than or equal to 0.05, null hypothesis will be rejected but if P-value is higher than 0.05, the null hypothesis will be retained.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter is concerned with the presentation of results and discussions of findings. The results of the analysis are presented in the sequence of the research questions and hypothesis that guided the study. The research questions and hypothesis were answered ujnder the following sub-headings:

- Response to the Research Questions
- Data Analysis for Testing the Hypothesis
- Discussion of Findings

Response to the Research Questions

Data collected to answer the research questions was answered using mean and standard deviation. The result was shown in Table 2-5

Research Question 1

What are student's perception about e-learning technologies in business education programme in University of Benin and Igbinedion University?

Table 2: Mean and standard deviation showing student's perception about e-learning technologies in business education programme in University of Benin and Igbinedion University.

SN	Items	N	Mean	SD	Remark
1.	E-learning technologies facilitates comprehension of Lectures	100	3.76	.553	Agreed
2.	E-learning technologies facilitates comprehension of teaching materials	100	3.59	.6621	Agreed
3.	E-learning would make the teaching and learning of business education courses more interesting	100	3.74	.505	Agreed
4.	E-learning would lead to effective participation On the part of the students.	100	3.67	.620	Agreed
5.	E-learning makes information easy to grapes and and absorb.	100	3.61	.618	Agreed
6.	E-learning gives room for students to be conversant with the operation of modern technologies	100	3.74	.552	Agreed
7.	The Knowledge of e-learning would enable Students to fit into the labour market in the Present world of technology	100	3.78	.484	Agreed
8.	E-learning helps students to be in sync with modern learners	100	3.66	.590	Agreed
9.	Students prefers online and computer based Test over the paper and pen test.	100	3.03	.979	Agreed
10.	E-learning technologies has been of great help to me in gaining access to information from different sources	100	3.65	.730	Agreed
Cluster			**Agreed**		

Note: SD (Standard Deviation), N (Sample Size)

In response to research question one, Table 2, showed that the respondents rated the items from one to ten as agreed with a mean rating ranging from 3.03 to 3.78 while the standard deviation also ranges from .484 to .979. With these results, the above means score shows student's had several positive views about e-learning technologies enhancing business education programme in University of Benin and Igbinedion University.

Research Question 2

Assess the level of availability of e-learning technologies in business education programme in University of Benin and Igbinedion University.

Table 3: Mean and standard deviation showing availability of e-learning technologies in business education programme in University of Benin and Igbinedion University.

SN	Items	N	Mean	SD	Remark
1.	There are enough computers for business Education programme in University of Benin and Igbinedion University	100	2.41	1.261	Disagreed
2.	There are enough overhead projectors for Business education programme in University of Benin and Igbinedion University	100	2.44	1.284	Disagreed
3.	There are enough Printer for Business Education programme in University of Benin and Igbinedion University	100	2.46	1.198	Disagreed
4.	There are enough Photocopier for Business Education programme in University of Benin and Igbinedion University.	100	2.47	1.198	Disagreed
5.	There are enough interactive whiteboard for Business education programme in University of Benin and Igbinedion University	100	2.32	1.141	Disagreed
6.	There are enough audio enhancement for Business education programme in University of Benin and Igbinedion University	100	2.40	1.181	Disagreed
7.	There are enough Scanners for business Education programme in University of Benin and Igbinedion University	100	2.35	1.242	Disagreed
	Cluster				

Disagreed Note: SD (Standard Deviation), N (Sample Size)

The data analysis present in Table 3 implied that the respondents' rated item one to six as disagreed with a mean rating ranging from 2.32 to 2.47 while

the standard deviation also ranges from 1.141 to 1.284. With these results, the above mean score indicates that there is a low level of availability of e-learning technologies in Business education programme in University of Benin and Igbinedion University.

Research Question 3

To what extent are computers utilized in Business Education Programme in University of Benin and Igbinedion University?

Table 4: Mean and standard deviation showing utilization of computers in business education programme in University of Benin and Igbinedion University.

SN	Items	N	Mean	SD	Remark
1.	Students are allowed to use Computers in lab	100	1.88	1.037	Disagreed
2.	Business Education courses are taught with the Use of Computer.	100	1.98	1.146	Disagreed
3.	Computers enable the students to process Information on their own pace and receive Continual evaluation feedback	100	2.46	1.198	Disagreed
4.	Students are not well grounded in the use of Computer software in creating, typing, editing, Formatting and production of office document	100	2.17	1.190	Disagreed
5.	Class works and assignments are not done by Students through the use of computers.	100	1.94	.993	Disagreed
	Cluster				

Disagreed Note: SD (Standard Deviation), N (Sample Size)

Research question three depicted that the respondents rated item one, two, three and five as disagreed with a mean rating ranging from 1.88 to 2.17 while item two was rated as agreed with a mean of 3.17. The standard deviation also ranges from .993 to 1.190. With these results, the above mean score shows that computers are under-utilized in Business Education Programme in University of Benin and Igbinedion University.

Research Question 4

To what extent are Projectors utilized in Business education programme in University of Benin and Igbinedion University?

Table 5: Mean and standard deviation showing the utilization of Projectors in business education programme in University of Benin and Igbinedion University.

SN	Items	N	Mean	SD	Remark
1.	Whiteboards/chalkboards are still being used to Write notes in my school.	100	3.30	.959	Agreed
2.	Projectors are used by Lecturers to facilitate Instructions in my school	100	2.73	1.213	Agreed
3.	Projectors are used only for presentations in my School.	100	2.03	.937	Disagreed
4.	Slides, films and images are used to teach with Projectors in my school.	100	2.59	1.173	Agreed
5.	Students present class projects through the use of Projector in my school	100	2.62	.1.149	Agreed
6.	Lecturers have competencies in the use of Projectors in my school.	100	2.86	1.092	Agreed
	Cluster				**Agreed**

Note: SD (Standard Deviation), N (Sample Size)

In response to research four, Table 5 revealed that the respondents rated item one, two and four to six as agreed with a mean rating ranging from 2.59 to 3.30 while item three was rated as disagreed with a mean of 2.03. The standard deviation also ranges from .937 to 1.213. With these results, the above mean score

shows that projectors are utilized in Business Education Programme in University of Benin and Igbinedion University to a high extent.

Research Question 5

To what extent are interactive whiteboards utilized in business education programme in University of Benin and Igbinedion University?

Table 6: Mean and standard deviation showing the utilization of interactive whiteboard in business education programme in University of Benin and Igbinedion University.

SN	Items	N	Mean	SD	Remark
1.	Whiteboards are used instead of interactive Whiteboards in my school.	100	3.18	.809	Agreed
2.	Interactive whiteboards are used in presentation Of course content during lecture periods	100	2.01	.916	Disagreed
3.	Interactive whiteboards raises the level of Interactivity in the classroom	100	2.80	1.101	Agreed
4.	Interactive whiteboards are used during Practical classes to show simulations in my School.	100	2.67	1.083	Agreed
5.	Interactive Whiteboards are used to display Images and videos related to the topic being taught in my school.	100	2.45	1.067	Disagreed
6.	Interactive whiteboards are used to involve Students in other classroom activities found within the course content in my school.	100	2.56	1.057	Agreed
7.	Interactive whiteboards are used to record and Save class activities during lecture period and To be replayed later for further discussion in my school.	100	2.06	.941	Disagreed
	Cluster				

Agreed Note: SD (Standard Deviation), N (Sample Size)

The data analysis in table 5 revealed that the respondents rated item one, three, four and sis as agreed with a mean rating ranging from 2.56 to 3.18 while

item two, five and seven were rated as disagreed with a mean of 2.01 to 2,45. The standard deviation also ranges from .809 to 1.101. With these results, the above score shows that interactive whiteboards are under-utilized in Business Education programme in higher institutions in Edo State.

Research Question 6

To what extent are audio enhancement utilized in Business Education programme in University of Benin and Igbinedion University?

Table 7: Mean and standard deviation showing utilization of audio enhancement in business education programme in University of Benin and Igbinedion University.

SN	Items	N	Mean	SD	Remark
1.	Audio enhancement are used by my lecturer s During lectures	100	2.93	1.094	Agreed
2.	Audio enhancement are used for sharper Pronunciation	100	3.34	.844	Agreed
3.	Audio enhancement are used during Examination	100	2.98	1.073	Agreed
4.	Audio enhancement are used during shorthand Lectures and examination in my school	100	2.85	1.058	Agreed
5.	Audio enhancement devices reduces distractions During lectures	100	3.28	.986	Agreed
	Cluster				**Agreed**

Note: SD (Standard Deviation), N (Sample Size)

The data output in Table 7 revealed that the respondents rated item one to five as agreed with a mean rating from 2.85 to 3.28 while the standard deviation also ranges from .844 to 1.094. With these results, the above mean score shows that audio enhancement are well utilized in Business Education Programme in University of Benin and Igbinedion University.

Data Analysis for Rating the Hypothesis

The data analysis for testing the hypothesis was carried out using two sample independent t-tests. The results of the hypothesis is presented in Table 8 and 9.

Hypothesis 1

There is no significance difference between male and female students' perception of e-learning technologies in business education programme in Higher Institutions.

Table 8: The t-test analysis showing difference between male and female student's perception of e-learning technologies in Business Education Programme in Higher Institutions

Respondents	N	Mean	SD	df	t-value	p-value
Decision						
Male	37	3.59	.339			
			98	-640	.524	Not
Significant						
Female	62	3.65	.468			

p-value significant at 0.05 level (2-tailed) (Retain Hypothesis)

SD: Standard deviation DF: Degree of Freedom

The test of the hypothesis, as presented in Table 8 revealed mean responses of the difference between difference between male and female student's perception of e-learning technologies in business education programme in higher institutions. Male had a mean of 3.59 and female 3.65 while their corresponding standard deviations are .339 and .468. The t-value of -.640, at degree of freedom of 97, which shows it was not significant at p-value of .534. Testing at an alpha value of .05, the null hypothesis was retained since the p-value is greater than alpha value. Thus, there is no significance difference between male and female

student's perception of e-learning technologies in business education programme in Higher Institution.

Hypothesis 2

There is no significance difference in mean rating of student's perception of e-learning technologies by level.

Table 9: ANOVA showing difference in mean rating of student's perception of e-learning technologies by level

Source of variance	SS	df	MS	F	Sig.
Decision					
Between Groups	1.623	2	.811	4.810	.010
Significant					
Within Groups	16.363	97	.169		
Total	17.986	99			

p-value significant at 0.05 level (2-tailed) (Retain Hypothesis)

SD: Standard deviation DF: Degree of Freedom

The data shows that the F-value of 4.810 with a significance of .010, which is lower than the 0.05 level of which it is tested. Hence, the null hypothesis was rejected. Therefore, the null hypotheses which states that there is no significance differences in mean rating of student's perception of e-learning technologies by level is not retained. Consequently, there is a significance difference in mean

rating of student's perception of e-learning technologies by level. Thus post hoc test of multiple comparisons was carried out in order to determine where the significance lies in the ability level.

Table 10: Post Hoc Test of Multiple Comparisons

(I) Level Interval	(J) Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Lower Bound	Upper Bound
100 level	200 level	.119	.108	.276	-.10	.33
	400 level	.293	.095	.003	.10	.48
200 level	100 level	-.119	.108	.276	-.33	.10
	400 level	.174	.104	.098	-.03	.38
400 level	100 level	-.293	.095	.003	-.48	-.10
	200 level	-.174	.104	.098	-.38	.03

Table 10 shows the post hoc comparison test between the groups based on level of students. The data indicate that the paired comparison between 100 level and 400 level students showed a mean difference of .293 and a significance of 0.003 which is less than the 0.05 level at which it is tested, this therefore indicate that there was a significant difference between 100 level and 400 level students.

This means 100 level students had different perception compared to 400 level students with regards to e-learning technologies.

Discussion of Findings

The findings of research questions one revealed that students has several positive perception about e=learning technologies enhancing business education programme in University of Benin and Igbinedion University and Igbinedion University. This finding agrees with that of Rasha A. E. (2014) study of student's perception of e-learning.

Research question two findings indicated that there is a low level of availability of e-learning technologies in business education programme in University of Benin and Igbinedion University and Igbinedion University. This finding is in line with the Madu and Pam (2011) who found out that only few e-learning facilities were available for teaching and learning in University of Benin and Igbinedion University and Igbinedion University. He further stated that for teaching and learning to be successful in business and management courses, and for students to be able to acquire relevant skills, there is need for adequate provision of all relevant technologies that will enhance the teaching process.

The data output of research question three showed that computers are under utilized in Business Education Programme in Higher Institutions. This findings support that of Ajadi et al (2008) who concluded that there is gross underutilization of e-learning technologies in Nigeria Higher Institutions.

The findings of research questions four depicted that projectors are utilized in Business Education Programme in Higher Institution to a high extent. This findingisinagreement with that Anetu, Uguoke and Moghalu (2020) research on the availability and utilization of e-learning technologies for improving teaching and learning of Business Education Programme in Public Universities.

The findings of research question five indicated that interactive whiteboards are under-utilized in Business Education Programme in Higher Institution. This findings support that of Bannister (2010) and Avril (2013) which stated that, in many universities where the whiteboards are available, they are poorly utilized and more of glorified black boards.

The data output of research question six demonstrated that audio enhancement are well utilized in Business Education Programme in Higher Institutions. This finding is in line with that of Omotayo and Oluwatlola (2019)

who indicated that e-learning facilities were occasionally utilized for teaching and learning activities of business courses.

The findings of hypothesis one revealed that there is no significance difference between male and female student's perception of e-learning technologies in Business Education programme in Higher Institutions. This finding is in consonance with that of Olatunji (2011) who noted that the usage of e-learning resources is not influenced by gender. His study shows that both male and female Business Education students in Higher Institutions in Enugu State did not significantly differ on their perception of e-learning technologies in education.

The findings of Hypothesis two depicted there is a significance difference in mean rating of students' perception of e-learning technologies by level. This finding is on support of that of Longjohn, Okafor and Ajala (2020), who revealed that level of study influences undergraduate student's perception of e-learning slightly.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is concerned with the summary, conclusion and recommendations of the research work.

Summary

The study took a look at student's perception, availability and utilization of e-learning technologies in business education programme in University of Benin and Igbinedion University and Igbinedion University. Six research questions were raised to guide the study and two hypotheses was formulated and tested at 0.05 level of significance. The study employed a descriptive survey research design. The population of this study was made up of 521 Business Education students (100, 200 and 400 level) in the University of Benin and Igbinedion University, Benin City, and Igbinedion University, Okada, Edo State.

100 Business education students from University of Benin and Igbinedion University were randomly selected through disproportionate stratified random technique. The instrument used for the study was structured questionnaire. The

questionnaire was titled “Assessment of E-Learning Technologies on Academic Performance of Business Education Students in University of Benin and Igbinedion University, Edo State (QAELTAPBESUB)”. It was however subjected to face validity by the researcher’s supervisor and two other experts in the Department of Vocational and Technical Education. The reliability was determined by administering the instrument once to twenty (2) students of business education programme from University of Benin and Igbinedion University. However, alpha value 0.839 was obtained. The data collected were analyzed using mean (x), standard deviation (SD), two sample independent t-test, Analysis of Variance (ANOVA) using Statistical Package for the Social Science (SPSS). The major findings of the study were as follows:

1. Student’s had several perceptions about e-learning technologies enhancing business education programme in University of Benin and Igbinedion University and Igbinedion University.

2. There is a low level of availability of e-learning technologies in Business education programme in University of Benin and Igbinedion University.

3. Computers are under-utilized in Business Education Programme in University of Benin and Igbinedion University.

4. Projectors are utilized in Business Education Programme in University of Benin, to a high extent.

5. Interactive whiteboards are under-utilized in Business Education Programme in University of Benin and Igbinedion University.

6. Audio enhancement is well utilized in Business Programme in University of Benin.

7. There is no significance difference between male and female student's perception of e-learning technologies in Business education Programme in University of Benin and Igbinedion University.

8. There is a significance difference in mean rating of student's perception of e-learning technologies by level.

Conclusion

Following the outcome of the study, it was concluded that students had several positive perception about e-learning technologies in enhancing business education programme in University of Benin and Igbinedion University. The work also revealed that e-learning technologies that will improve the academic performance of students and cover the gap that exist between theories and practical were not effectively available for teaching and learning of business education courses in University of Benin. The few available e-learning technologies were not being utilized adequately for teaching business courses in University of Benin, Benin City and Igbinedion University, Okada, Edo State.

Recommendations

The following recommendations were made:

1. The government and other relevant shareholders in education should provide adequate e-learning technologies for the teaching and learning process of business education course in University of Benin. This would enable learners to effectively utilize them in the classroom and also help to

equip students with appropriate skills needed for effective functioning in this modern electronic age.

2. The government should make internet connection/links as a matter of urgent importance by creating free and accessible wifi to enable leverage on the promises and opportunities on e-learning presence.

3. The relevant authorizes authorities should create an avenue for uninterrupted power supply. This is necessary because e-learning technologies cannot be utilized effectively without power supply.

4. In-service training programmes such as on-the-job training and retraining programmes, seminars, workshop on e-learning technologies utilization should be mounted on a regular basis for serving business educators and students in University of Benin. This would help them to learn and update the existing e-learning technologies utilization competencies that are constantly changing.

Suggestion for Further Studies

For further research work the following are suggested for further studies:

1. Challenges of e-learning technologies in Business Education Programme in Nigeria Universities.

2. Extent of Utilization of e-learning technologies in Business Education programme in Nigeria Universities.

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APPENDIX A

A QUESTIONNAIRE ON THE ASSESSMENT OF STUDENT'S PERCEPTION, AVAILABILITY & UTILIZATION OF E-LEARNING TECHNOLOGIES

The purpose of this research is to assess the E-Learning Technologies on Academic Performance of Business Education Students in University of Benin, Benin City and Igbinedion University, Okada, Edo State. Your Response will be treated with utmost confidentiality and used only for academic purpose.

SECTION A:

Level: 100 ( ) 200 ( ) 300 ( ) 400 ( )

Gender: Male ( ) Female ( )

SECTION B:

Kindly indicate the rate to which you agree with or disagree with these statement by ticking either of these options.

Strongly Agree (SA), Agree (A), Disagree (D), Strong Disagree (SD)

Q1	**What are student's perception about e-learning technologies in business education programme in University of Benin** and **Igbinedion University, Okada**	SA	A	D	SD
1.	E-learning technologies facilities comprehension of lectures				
2.	E-learning technologies facilitates comprehension of teaching materials				

3.	E-learning would make the teaching and learning of business education courses more interesting.				
4.	E-learning would result to effective participation on the part of the students				
5.	E-learning makes information easy to access and absorb				
6.	E-learning gives room for students to be aware of the operation of modern technologies				
7.	The knowledge of e-learning would enable students to fit into the labour market in the present world of technology				
8.	E-learning helps students to be in sync with modern learning				
9.	Students prefers online and computer based test over the paper and pen test				
10.	E-learning technologies has been of great help to me in gaining access to information from different sources				
Q2	**What is the level of availability of e-learning technologies in business education programme in University of Benin and Igbinedion University**	**SA**	**A**	**D**	**SD**
11.	There are adequate computers for business education programme in University of Benin and Igbinedion University				
12.	There are adequate overhead projectors for business education programme in University of Benin and Igbinedion University				
13.	There are adequate printers for business education programme in University of Benin and Igbinedion University.				
14.	There are adequate photocopier for business education programme in University of Benin and Igbinedion University.				
15.	There are adequate interactive whiteboard for business education programme in University of Benin and Igbinedion University				
16.	There are adequate audio enhancement for business education programme in University of Benin and Igbinedion University				
17.	There are adequate scanners for business education programme in University of Benin				

Q3	To what extent are computers utilized in Business Education Programme in University of Benin and Igbinedion University?	SA	A	D	SD
18.	Students are not allowed to use computers in the lab				
19.	Business education courses are not taught with the use of computer				
20.	Computers enable the students to process information on their own space and receive continual evaluation feedback				
21.	Students are not well grounded in the use of computer software in creating, typing, editing, formatting and production of office documents				
22.	Class works and assignments are not done by students during through the use of computers				
Q4	**To what extent are projectors utilized in Business Education programme in University of Benin and Igbinedion University?**	**SA**	**A**	**D**	**SD**
23.	Whiteboards/chalkboards are still being used to write notes in University of Benin and Igbinedion University				
24.	Projectors are used by lecturers to facilitate instructions in University of Benin and Igbinedion University and Igbinedion University				
25.	Projectors are used only for presentation in University of Benin and Igbinedion University				
26.	Slides, films and images are used to teach with Projectors in University of Benin and Igbinedion University				
27.	Students present class projects through the use of projector University of Benin and Igbinedion University				
28.	Lecturers have competencies in the use of projects in University of Benin and Igbinedion University				
Q5	**To what extent are interactive white boards utilized in business education programme**	**SA**	**A**	**D**	**SD**
29.	Whiteboards are used instead of interactive whiteboards in University of Benin and Igbinedion University				
30.	Interactive whiteboards are used in presentation of course content during lecture periods				

31.	Interactive whiteboard raises the level of interactivity in the classroom				
32.	Interactive whiteboards are used during practical classes to show simulations in University of Benin and Igbinedion University				
33.	Interactive whiteboards are used to display images and videos related to the topics being taught in University of Benin and Igbinedion University				
34.	Interactive whiteboards are used to involve students in other classroom activities found within the course content in University of Benin and Igbinedion University				
35.	Interactive whiteboards are used to record and save class activities during lecture period and to be replayed later for further discussion in University of Benin and Igbinedion University				
Q6	**To what extent are audio enhancement utilized in business education programme in University of Benin and Igbinedion University**	**SA**	**A**	**D**	**SD**
36.	Audio enhancement are used by my lecturers during lectures				
37.	Audio enhancement are used for sharper pronouncement				
38.	Audio enhancement are used during examinations				
39	Audio enhancement are used during shorthand lectures and examinations in University of Benin and Igbinedion University				
40.	Audio enhancement devices reduces distractions during lectures				

APPENDIX B

OUTPUT OF RELIABILITY OF THE STUDY

SCALE: ALL VARIABLES

Case processing Summary

		N	N
Cases	Valid	20	100
	Excluded	0	0
	Total	20	100

Reliability Statistics

Cronbach Alpha	N of items
.839	40

APPENDIX C

OUTPUT OF RESEARCH QUESTIONS

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	100	1	4	3.78	,553
Q2	100	1	4	3.59	.621
Q3	100	1	4	3.74	.505
Q4	100	1	4	3.57	.620
Q5	100	1	4	3.61	.618
Q6	100	1	4	3.72	.552
Q7	100	1	4	3.78	.484
Q8	100	1	4	3.66	.590
Q9	100	1	4	3.03	.979
Q10	100	1	4	3.65	.730
Valid N (listwise)	100				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q11	100	1	4	2.41	1.261
Q12	100	1	4	2.44	1.284
Q13	100	1	4	2.46	1.198
Q14	100	1	4	2.47	1.186
Q15	100	1	4	2.32	1.141
Q16	100	1	4	2.40	1.181
Q17	100	1	4	2.35	1.242
Valid N (listwise)	100				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q18	100	1	4	1.88	1.037
Q19	100	1	4	1.98	1.146
Q20	100	1	4	3.17	.667
Q21	100	1	4	2.17	1.190
Q22	100	1	4	1.94	.993
Valid N (listwise)	100				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q23	100	1	4	3.30	.959
Q24	100	1	4	2.73	1.213
Q25	100	1	4	2.03	.937
Q26	100	1	4	2.59	1.173
Q27	99	1	4	2.62	1.149
Q28	100	1	4	2.86	1.092
Valid N (listwise)	99				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q29	100	1	4	3.18	.809
Q30	100	1	4	2.01	.916
Q31	100	1	4	2.80	1.101
Q32	100	1	4	2.67	1.083
Q33	100	1	4	2.45	1.067
Q34	100	1	4	2.56	1.057
Q35	100	1	4	2.06	.941
Valid N (listwise)	100				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q36	100	1	4	2.93	1.094
Q37	100	1	4	3.34	.844
Q38	100	1	4	2.98	1.073
Q39	100	1	4	2.85	1.058
Q40	100	1	4	3.28	.986
Valid N (listwise)	100				

APPENDIX D

OUTPUT OF HYPOTHESES

Group Statistics

	Gender	N	Mean	Std. Deviation	Sd. Error Mean
Student Perception	Male	37		.339	.056
Availability, Utilization of		62	3.59	.468	.059
E-Learning			3.65		
Technology	Female				

Independent Sample Test

ANOVA

Student's Perception, Availability, Utilization of E-Learning Technology

	Sum of Squares	Df	Mean Square	F	Sig
Between	1.623	2	-	4.910	.010
Groups	16.383	97	811		
Within Groups	17.986	99	-169		
Total					

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Student Perception, Availability, Utilization of E-Learning Technology
LSD

(I) Level	(J) Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower Bound	Upper Bound
100 Level	200 Level	-119	.108	.276	-.10	.33
	400 Level	.293	.095	.003	.10	.48
200 Level	100 Level	-119	108	276	-.33	.10
	400 Level	.174	.104	.098	.-.03	.38
400 Level	100 Level	-293	.095	.003	-.48	-.10
	200 Level	-174	.104	.098	.-.38	.03

* The mean difference is significant at the 0.05 level