

**THE USE OF E-LEARNING TOOLS AMONG UNDERGRADUATE
STUDENTS IN THE UNIVERSITY OF BENIN.**

BY

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CERTIFICATION

We, the undersigned, certify that this research work was carried out by Idehen Osarumwense Willinton in the Department of Curriculum and Instructional Technology, Faculty of Education, University of Benin, Benin City in partial fulfilment of the fulfillment of the award of the Bachelor of Science (ed) degree in Computer Science.

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DEDICATION

This thesis is dedicated to the all-knowing God.

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Abstract

This study was carried out to identify the use of E-learning tools among undergraduate students in the University of Benin. The research was carried out as a survey research using relevant literature from journals, magazines, books and the internet. Four research questions were raised and analyzed for the purpose of the study. A random sampling technique was used in selection of two hundred and fifty (250) undergraduate students from 100 level to 600 level which would be randomly selected faculty of Law, Education, Life science, Management Science, and Physical science, 50 students from each of the above-mentioned faculties. The data were collected with questionnaire instrument and analyzed using simple percentage.

The result revealed that; computers, smartphones, digital libraries, and multimedia projectors were predominantly used by University of Benin students for learning, also the University of Benin students had a positive perception of the use of E-learning tools for learning, challenges of E-learning identified were no proper orientation on the use of e-learning in Uniben, poor internet signal in the university, and unstable power supply

pose a huge challenge to the use of e-learning tools, the cost of e-learning tools is expensive and e-learning facilities are always difficult to maintain were also identified as a problem and the work identified that there were slight gender difference in the perception of the use of e-learning tools for learning

Based on the results, it was recommended that tertiary institution management should make a concerted effort to provide e-learning environments that would enhance student learning in schools and also facilitate their self-development efforts, also, in order to maximize this potential of e-learning, its implementations should endeavor to satisfy the needs and concerns of all stakeholder groups as much as possible, government should be proactive in ameliorating the challenges identified in this study and build on the opportunities e-learning offers educational institutions and for e-learning to be effective, appropriate measure should be given to maintenances, provision of stable internet provider to support easy and fast learning and teaching and Electricity is one of the driven force and backbone of computer and computer tools, so Government should finance and make provision for alternative power supplies.

CHAPTER ONE

INTRODUCTION

Background to the Study

Academic institutions must provide interesting learning opportunities and collaborate with industry to bring new ideas to a changing environment. Students studying in tertiary institutions around the world have experienced dramatic changes, especially with the advent of information and communication technology (ICT) (Ekabua, 2010). There is a change from the traditional teacher's approach to the modern approach where computer technology plays an important role. ICT is seen to have enhanced learning and made it more useful, as students can stay at home or in their classrooms and learn lessons without seeing the teacher. The ICT sector that has led to this change in student learning is e-learning. Online learning in its broadest sense can be considered as any electronically assisted learning.

E-learning (EL) involves the use and application of information and communication technology (ICT) on websites, personal computers (PC), tablet PCs, mobile phones, learning management systems (LMS), television (TV), radio and other means. to improve the teaching and learning process.

E-learning is actually a unifying term to describe areas related to the Internet, online education, and technology orientation. In this regard, e-learning is becoming a significant learning strategy in the field of education for learning, training and skill development in many business activities, as shown by the great development of web technology.

E-learning is the electronic delivery and management of learning opportunities and support through computer networks and web-based technologies (Adu, 2013). It covers a variety of ways, from students using email to accessing online courses. Online learning can be of different types: web-based, web-based, and blended modes. E-learning tools and methods include web-based learning, computer-based learning, virtual classrooms, video conferencing and digital collaboration where content is delivered via the Internet, intranet/extranet, audio/video tapes, satellite TV, CD - Rom. Online learning creates a personalized approach to learning by relaxing across time and space, improving the learning experience, and improving access to information resources.

However, many educational institutions and training institutions today are making great strides in using e-learning systems to effectively improve

the performance of their students and staff. In many developed economies, many educational institutions use e-learning extensively which improves student performance (Soleymanpour, Khalkhali & Reayatkoonandeh, 2010). Recently, technology has become a tool to eliminate physical barriers and enable students to learn anytime and anywhere without physical contact with the teacher or teacher. In this case, e-learning makes it easier to access effective teaching and learning, and thus improves the academic performance of students.

Since the success of e-learning in improving student learning depends on the quality of information and communication technology (ICT), the impact of e-learning on student learning cannot be separated. with the nature of ICT infrastructure (Niyazazari). & Hosseini, 2012). In today's highly globalized world, the use and application of information and communication technology (ICT) in teaching for learning has led to significant progress and better academic performance of students in many educational systems and capacities (Zameni, Nasimi, Rezayirad & Ghanbarpoor, 2011).

Despite all these and other challenges facing e-Learning in Nigerian educational institutions, institutions such as the University of Benin, Obafemi Awolowo University, University of Ibadan, University of Abuja, University of Lagos, National Open University of Nigeria, and others. have resources for e-learning. The number is small (compared to other parts of the world and the benefits of e-learning and economic development) due to the location of many companies, the problem of bandwidth and especially the challenge of electricity. Therefore, it is important to know if students are seeing the online learning process in schools where it is available.

Statement of the Problem

E-learning still faces many challenges in Nigerian universities, especially during the last global pandemic, as it is the only way of learning available. One such challenge could be the power outage in Nigeria, especially in rural areas, because it is not guaranteed to provide electricity for at least two hours in length. Inexhaustible electricity supply in Nigeria is considered as an old problem that affects almost every sector of the Nigerian economy except in the education sector. Unpaid electricity has caused a major setback for the technological progress of many universities in Nigeria.

Most of the rural areas of Nigeria where some students live are not even connected to the national grid and such, and the student will find it difficult to use the e-learning platform effectively. In addition, the lack of electricity has created difficulties in supplying educational equipment such as smartphones, laptops and desktop computers required for learning. Considering this, most e-learning facilities are functional at most Nigerian universities, but inadequate because of the high population of students in our federal and state universities but most of the private universities have managed to implement e-learning to an adequate level which is commendable with the Nigerian education management.

Obviously, with the e-learning technology and other things that are now available even on the Internet, it is possible that some students at the University of Benin and other higher institutions have not had good access to E-learning? What can cause it? Therefore, the study will focus on the use of E-learning tools among undergraduate students in the University of Benin.

Research Questions

The following research questions were raised to guide this study;

1. What are the E-learning tools used by students for learning?

2. What are students' perceptions of the use of E-learning tools for learning?
3. What are the challenges that hinder students' use of E-learning tools?
4. Is there a gender difference in the perception of the use of e-learning tools for learning?

Research Hypothesis

H₁: there is no significant gender difference in the perception of the use of e-learning for learning

Purpose of the Study

The main purpose of the study is to the use of E-learning tools among undergraduate students in the University of Benin. Specifically, the study will seek to answer the above research question as follows;

1. To determine the e-learning tools used by students for learning.
2. To determine students' perception towards the use of e-learning tools for learning.
3. To determine the challenges that hinder students' use of e-learning tools.

4. To determine if there is a gender difference in the perception of the use of e-learning tools for learning

Significance of the Study

The study will invariably be of tremendous importance to students, lecturers, and researchers in science accordingly.

The work will enable students to read and understand various e-learning aids that facilitate the teaching-learning process, particularly their mobile phones.

The Study will serve as a reference for lecturers who wish to find out the impact of e-learning on students' academic achievement, particularly in tertiary institutions. It will also highlight the appropriate materials of teaching which will bring about students' interest and active participation in the courses.

The work will enable teachers to understand that the success of any teaching activity is what students can learn or get from the lesson. This objective can be achieved through the use of appropriate teaching tools, methods, and E-learning materials.

The finding/recommendation of this study will thereby make the government/education policymakers to develop appropriate strategies in solving the problem in the use of E-learning tools for learning in our tertiary institutions.

Scope and Delimitation

The scope of the study is to carry out the use of E-learning tools among undergraduate students in the University of Benin. The study is therefore Delimited to undergraduate students in the University of Benin.

Operational Definition of Terms

The following terms are defined as operationally used in this study

E-learning: an abbreviation of electronic learning, it involves the use of electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online.

Computer Application: the use of a programmable usually electronic device that can store, retrieve, and process data to solve related problems.

Distance Education: Distance education refers to a method of studying in which lectures are broadcasted or classes are conducted by correspondence

or over the internet, without the students needing to attend a school or college.

Internet: an electronic communications network that connects computer networks and organizational computer facilities around the world.

Learning management system (LMS): This a software application for the administration, documentation, tracking, reporting and delivery of educational courses or training programs.

Perceived Usefulness of E-Learning: this is the degree to which a person believes that using a particular system would enhance his or her academic achievement.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

INTRODUCTION

This chapter reviews various studies which have shown the inter-relationships among the measures of the use of E-learning tools among undergraduate students in. This chapter will deal with the review of related and relevant literature on this study. It shall be discussed under the following sub-headings.

- Concept of e-learning
- Students' perceptions of the use of E-learning tools for learning
- Challenges of e-learning in Nigeria
- The Impacts of E-learning in learning when compared to classroom conventional learning.
- E-learning skills among undergraduate students.
- Strategies in improving e-learning in Universities.
- Summary of Reviewed Literature

Concept of E-learning

The Internet has become one of the important ways to make resources available for research and learning, both teachers and students to share and

obtain information. Technology-based e-learning involves the use of the Internet and other relevant technologies to create learning materials, teach learners, and organize lectures and meetings (Fry, 2011). There has been a great deal of debate about the common definition of the term e-learning. Existing definitions such as Dublin (2013) often reflect the specialization and interest of researchers. E-learning as a concept covers a range of applications, learning methods and processes (Rossi, 2009). It is therefore difficult to find a commonly accepted definition for the term e-learning, and according to Oblinger and Hawkins (2005) and Dublin (2003), there is even no common definition for the term. Holmes and Gardner (2006) also made a comment on these inconsistencies by saying that there may be as many definitions of the term e-learning as there are academic papers on the subject. Dublin (2003) in trying to find a common meaning of the term e-learning went on to ask the following questions: Is e-learning an on-line coursework for students at a distance? Does it mean using a virtual learning environment to support the provision of campus based education? Does it refer to an on-line tool to enrich, extend and enhance collaboration? OR is it a totally on-line learning or part of blended learning? (Dublin, 2005). Some of the

definitions of the term e-learning as given by different researchers and institutions are reviewed below.

E-learning refers to the use of information and communication technology to enable access to learning/teaching resources online. In its broadest sense, Abbad et al (2016), defined e-learning as meaning any learning facilitated electronically. However, they reduced this definition to enhanced learning using digital technology. Technology has made the world a global society and has more impact than traditional classroom learning. E-learning has the capacity to play a pivotal role in improving the state of education in Nigeria. Therefore, Nigerians should see the urgent need to use electronic learning of the 21st century as a solution to the falling standard of education. Schools across the country should adopt e-learning as a role model in reviving educational standard in the country. The new innovation enhances teaching and learning through the applications of ICT tools. Teachers as an agent of change, guidance, innovators, creative thinkers, experimenters and researchers should focus more on e-learning method to expose their students on new learning trends. The curriculum planners

should also develop content on software with e-learning platform to help in sustaining them with e-teaching and e-learning respectively.

With the growing trends of ICT being a tool for teaching and learning in Nigeria, it will pave way for educational reform. It will be recalled that in Nigerian, Governments formulated and launched an ICT policy in 1987. The policy was titled “The National Policy on Computer Literacy and Education”. This is geared on equipping Nigerians at all levels of education with the preliminary ICT tools.

According to section 11, sub-section 102 (a & b) of the National Policy on Education (FRN, 2004) stipulates thus:

1. A network of educational service centers in Nigeria (NESCO) shall be set up to provide a forum for exchange of ideas on the development and use of innovative materials for improvement of education.
2. All states, teachers, resource centres, institutes of education of Universities and other professional bodies, shall belong to the network of ICT.

3. That government shall provide facilities and necessary infrastructure for the promotion of ICT at all levels of education (p. 54).

These remarkable objectives of the government indicates that plans have to be made on the proper integration of ICT into the Nigerians educational curricula. Teachers and students have to prepare to use ICT facilities in their teaching and learning. In agreement with the above assertion, UNESCO (2003) stated that teachers and teacher educators are of central importance in tapping the potentials offered by ICT, to enhance the quality of education. As a chief actor in teaching and learning, UNESCO guidelines states:

1. Understanding the regional guideline for ICT integration in teaching and learning.
2. Comprehending the analytical framework of competency standards for ICT-integration.
3. Integrating productivity-enhancing ICT tools, in the teaching-learning context.
4. Enhancing teaching and facilitating learning using multi-model courseware shareware.

5. Integrating ICT using pedagogical innovations, to develop higher order thinking skill among learners.

There are diverse ways of classifying the types of e-learning. According to Algahtani (2011), there have been some classifications based on the extent of their engagement in education. Some classifications are also based on the timing of interaction. Algahtani (2011) divided e-learning into two basic types, consisting of computer-based and the internet based e-learning.

According to Algahtani (2011), computer-based learning involves the use of sufficient hardware and software for the use of information and communication technology in any area and can use two methods: computer-controlled teaching and computer-assisted learning. In computer education, therefore, computers are used instead of traditional methods by providing interactive software as a support tool in the classroom or as a tool for self-learning outside the classroom. In this course, computers are used, however, computers are used for storing and retrieving information to help in the management of education.

In some definitions e-Learning encompasses more than just the offering of wholly on-line courses. For instance Oblinger & Hawkins (2005)

noted that e-Learning has transformed from a fully-online course to using technology to deliver part or all of a course independent of permanent time and place. Also the European Commission (2001) describes, e-Learning as the use of new multimedia technologies and the Internet to increase learning quality by easing access to facilities and services as well as distant exchanges and collaboration. The following are also different definitions of e-learning.

The development of e-learning in Nigeria could be traced back to the development of telecommunication which began in 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 service for easy communication, feedback and easy access and later all other parts of the country were provided with telephone services.

A lot of changes have been witnessed in the telecommunication industry since 1886. The provision of telecommunication services was initially monopolized by the Nigeria Telecommunication (NITEL) until sometimes in 90's when the federal government of Nigeria commenced the

liberalization policy of telecommunication industry. Four (4) private telephone service providers (Mtel – NITEL, Econet Now Vmobile, MTN and Communication Investment Limited – CIL) were initially licensed to provide General System for Mobile Services. CIL license was later revoked for inability to pay the license fee before the prescribed which was later given to Globacom (Glo) Nigeria.

Students' perceptions of the use of E-learning tools for learning

E-learning is learning that is not limited to the walls of the classroom, but increasingly the prospect of using Internet resources, platforms, satellite links and related systems to acquire, analyze, create, transform, and use data, information, and knowledge. a way that until recently was almost unimaginable (Lokie, 2011). E-learning includes learning achieved through interaction with digital content, network-based services and teaching support in all types of applications and online media, including the Internet, intranets, extranets, simulations and games, virtual worlds, the cloud , satellite and web broadcasting. platforms (Pelet & Lecarte, 2012; Schutt & Linegar, 2013). E-learning is carried out through the use and integration of electronic medium, such as email, portal, downloadable-executable-file,

social networking sites, web platforms, electronic dissertations and e-portfolios, among others (Wells, de Lange & Fieger, 2008; Weller, 2010; Bouchard, 2011). Mobile learning which is the ability to obtain or provide educational content on personal pocket devices such as PDAs, smart phones and mobile phones, is also a form of e-learning (Kharbach, 2013).

It is widely believed that ICT promotes collaborative learning, provides more information and, through simulation, strengthens the understanding of the learning experience. Therefore, teachers or students cannot ignore the use of ICT. This is clearly shown by Van der Westhuizen (2004) that in terms of using ICT for learning, technology holds the promise of access to information and interaction and to increase communication between teachers and students them. Information and Communication Technology (ICT) involves the use of effective tools and programs to acquire, retrieve, transform, store, process, manage and display data and information (Gay & Blads, 2005). E-learning, which is described as the use of ICT to enhance or support learning and teaching in education, has become increasingly important in tertiary education (Adedeji, 2010).

E-learning is an important tool for tertiary institutions' lecturers and students. Ekesionye and Okolo (2011) outlined the benefits of e-learning for tertiary institutions to include enabling students to have equal access to quality education with the rest of the world, developing interesting and variety of instructional materials like lecture notes, diagrams, pictures and textbooks, entrenching lecturers and students to the global village, exposing them to international best practices in information technology, inculcating skills for on-line information sourcing for effective teaching, learning and research as well as facilitating knowledge creation and dissemination of information to a wider community. Nwokike (2011) asserted that e-learning makes the teacher's job easier by improving efficiency, allowing teachers and students to learn at the same time of their own, reducing the pressure on 'doing the classroom work of teachers and students, makes access to knowledge and skills available now. and saves time and energy for teachers and learners. In line with the above, Olojo, Adewumi and Ajisola (2012) listed the benefits of e-learning for teachers and students in secondary schools, including:

- a. Improving the quality of learning experiences and extends the reach of every lecturer.
- b. Helping to remove barriers to achievement by providing new and creative ways of motivating, inspiring and engaging learners of different ability levels to attain their potential.
- c. Differentiating learning to assist those with special needs the areas of literacy, numeracy and ICT.
- d. Providing a wide range of tools to enable lecturers become innovative, creative and resourceful in their activities.
- e. Creating online communities of specialists, experts, practitioners, teachers, learners and interest groups together to share ideas and good practice.
- f. Individualizing learning to cater for all types of learners irrespective of their locations.
- g. Providing online contents to help learners locate courses of their interest and register for them.
- h. Creating a virtual learning world where learners can creatively and actively participate through simulations, role play, remote

control of real world tools and devices as well as online master classes or collaboration with education providers.

Students' perception towards e-learning have been identified as important factors for the success of online learning. Bhuasiri, Xaymoungkhoun, Zo, Rho and Ciganek (2012) found that in developing countries the most important factors related to increased awareness of technology and positive attitudes towards e-learning, improve basic knowledge and technology, improve educational content, require computer training, encourage employees to use e-Learning systems, and require higher support from universities. In addition, the characteristics used to evaluate the attitudes towards ICT of students, teachers and principals were divided into two groups: demographics (age and gender) and computer experience (training, years of use computer use, computer ownership, computer access, computer power). used) (Jimoy-iannis & Komis, 2007; Wen & Shih, 2008; Papaioannou & Charalambous, 2011). Students' level of access to technology represents the first factor that will shape their attitudes toward online learning and their willingness to use it. The availability of reliable ICTs and the quality of access to these technologies reflect students'

attitudes towards online learning. Access to the necessary ICT infrastructure is one of the most important factors that come into play when assessing the progress of developing countries in the area of e-learning.

Challenges of e-learning in Nigeria

In this technological era, the active educational system made by information and communication technology will be a good tool for improving the efficiency and general level of the educational system. The integration of information and communication technology (ICT) into the learning process and refers to the adoption of e-learning as a teaching method is currently a trend in the education sector. Nigerian education and even worldwide.

The transition from the traditional education system to the teaching and learning of ICT is quickly becoming one of the most debated issues in contemporary education policy (Theorer 2010). According to Groff, Howells and Grammar (2012), many experts in the education industry agree that when used correctly, information and communication technology has great promise for the improvement of teaching and learning. Through the use of audio, text, multicolored images, graphics, movement and others, ICT

provides students with ample and unique opportunities to develop advanced learning and communication skills. It provides a powerful tool for improving the traditional learning environment in a system or structure without changing the programming element.

E-learning in Nigerian tertiary institutions is still a dream due to poor ICT infrastructure and other socio-economic factors. Due to the high initial cost of infrastructure development and increasing public access to the Internet and other ICTs, developing countries still benefit from e-learning. Despite the bright prospects of e-learning in the country, it is worrying that there are barriers and obstacles to the effective use of e-learning in Nigeria. Some of the barriers identified by Falana (2015) are as follows; High cost of hardware such as bigger bandwidth and other internal gadgets like smart boards.

1. Less price competition and high import tariffs
2. Transmission cost is also high.
3. Internet access is mainly through foreign ISPs due to unreliable local ISPs.
4. Dearth in skilled manpower for implementation and management

5. Inadequate training of staff in institutions especially related to educational technology
6. Poor condition of telecommunication infrastructure
7. Low literacy level in computer technology among personnel
8. Cost of acquiring and installation of the gadgets required for e-learning
9. Ceaseless interruption of power supply all over
10. Deficit in having well furnish/equipped e-learning centers
11. Cybercrime, Faithlessness/ trustworthiness.

In addition, university students often have the problem of learning new software to adapt to the introduction of new e-learning systems. In addition, the first technical limitations on the part of the learners and the teaching part of the learning process are the same so that teaching technology can be incorporated into the curriculum. A learner cannot be remembered in someone else's space. It is a very iterative process, based on trial and error with lots of sampling and sketches. Perhaps, the most frequently cited problem of e-learning was the amount of time required to develop and maintain an e-learning course, additional time is needed by the teacher to communicate with the students via the internet, mailing system or via

education course forum that relate to the course. Students on the other hand need adequate time to search relevant information, gather data in a well orderly manner; balancing the time is a real problem facing the Nigerian students.

Furthermore, the problem relating to online group work, assignments, and effective evaluation are also bottlenecks towards e-learning. For example, when a student faced the challenge of writing equation that can be easily writing using book and biro; he / she face the of how to do so using the keyboard since almost the student make use of PC (Personal Computer) with limited hardware support device. Other cited problem are lack of technology proficiency (majorly with operating software), lack of awareness when the server crashes and unreliable technology to maintain student activities. (Ukoha, 2017).

The impacts of E-learning when learning compared to classroom conventional learning

Concisely, it is true that the purpose of learning is to acquire intellectual knowledge for professional use. However, the mode of knowledge acquisition may determine the usefulness of the acquired

knowledge, especially with regard to its transformation into technological innovation. In other words, reproducibility of intellectual knowledge into useful ideas appears to be influenced by the mode of knowledge acquisition. This is attributable to the diverse characteristics manifested by online and traditional classroom education.

E-learning is praised for its flexibility because; it allows learners to decide on time to complete their coursework. It allows them to engage in other commitments, rather than learning alone. For instance, students can study as they are working in their interested career fields (Hart, 2018). Students can also undertake studies while playing family responsibilities, especially ladies who are able to rear their children concurrently with studies. Flexibility also applies on exams, whereby students are free to choose the most convenient time to take their tests. Moreover, lecture sessions can also be adjusted to suit both the student and the instructor. On the other hand, traditional education offers a synchronized coursework, in which all students converge for different learning lessons. As a result, learners are required to engage themselves in studies and abandon other commitments.

In regard to communication, learners in traditional education system experience face-to-face conversation, which is believed to create a serene learning atmosphere in the classroom. Traditional education offers learners opportunity to express their ideas and perception on course lessons; an aspect, which is believed to enhance students' satisfaction with the learning process. Moreover, instructor are able to identify the learners' weaknesses and strengths; thus, enabling them to address the learners' academic needs. In contrast, e-learning does not allow face-to-face conversation between the learners and instructors (Baumgardner, 2010). However, advances in the computer technology have led to the development of video conversations, although it occurs over distances. In online education, communication is done through electronic means such as emails. Therefore, exchange of ideas between instructors and learners is not efficient and, it does not give learners opportunity to share personal values, which are believed to be fundamental in enhancing competitiveness among learners.

The third difference between e-learning and traditional education is interaction. Traditional education is characterized with face-to-face interaction between learners and instructors. Learners can respond to

questions from their instructor in the course of the learning process. In addition, instructors are able to identify personal characteristics of learners; thus applying the most appropriate teaching approaches to enhance social interaction.

Moreover, it is also believed that traditional education enhances social diversity among students because; it brings together students with diverse social backgrounds. In traditional education, students with diverse social cultures and talents intermingle in the course learning leading to enhanced social development. This aspect is entirely absent in online education; thus, traditional education does not only promote the learners intelligence, but also influence their social nature significantly.

On the other hand, e-learning is known to be devoid of face-to-face interaction between learners and instructors and even amongst the learners (PRLog, 2011). However, digital connections are currently being used in online learning to create an element of physical interaction. For instance, video conferencing and web chats are some of the useful tools in online learning (Dawley, 2007). However, it is worth noting that digital connections allow learners and their instructors to connect over distances.

Learners do not interact in real life situation in co-curricular activities, which are instrumental in enhancing social interaction.

E-learning fulfils the needs of today's learners at their own comfort and requirements. Thus it has proven to be fruitful because of various reasons. It can be availed at any time at the learner's own convenience by purchasing the subscriptions of different platforms or logging in to access the courses (Colchester et al., 2017). It can share and offer teaching-learning materials in diverse formats such as slideshows, audios, videos, PDFs, e-mails, word documents and so on. Webinars and direct communications with teachers via various chat forums or messaging is also an open option in E-learning process. It offers free access to certain e-manuals like PDFs. It provides clear, easy, gradual instructions for better understanding of the learners. It is often regarded as the most suitable way for self-learning. It provides a wide range of materials for the learners that covers almost all topics and doubts (Bajaj and Sharma, 2018).

Arora, (2013) studied the development of students with the use of ICT with complete virtual learning and their impact. The researcher compared the use of traditional method with the modern teaching methodology where

the impact and use of ICT for learning on the student at university level, an objective type questionnaire was developed to collect the data. A sample size of 30 students was taken and the questionnaire was made to fill by them. It was concluded that there is a great impact of audio-visual aids in the teaching-learning process in Indore. According to the students, they find this method of teaching very effective. They said that if the topic shown to them are all related to their curriculum and gives them additional knowledge then they get more attracted towards this technology. It motivates students to attend lectures, as they are very curious to see or hear what the teacher is going to show them in the upcoming class. They say by seeing animated effects, colorful presentation and hearing recording they are able to concentrate more in class.

Further it was found; it develops a strong bonding between students and teacher and students open up with their queries and those who used to hesitate to ask a question they do not feel shy now. Thus, it makes an interactive learning and makes the teaching-learning process more effective. Students also say that text-books are knowledgeable but if they need updated knowledge then they refer to presentation and videos shown them in class

and they also said that it saves there time from copying notes from the board
and thus increasing more of communication in class.

E-learning skills among undergraduate students.

Education is an important part of human life. People learn new things every day to survive in this changing world. It is informal learning in the sense that people learn new things through their interactions with their environment at a given time (Rogers, 2016). In the context of formal education, however, learning begins at home as a child and continues through schools, colleges and businesses (Anekwe, 2017). Learning is a process that causes change as a result of experience, increasing the chances of better performance and learning in the future (Radha et al., 2020). A learner's knowledge, attitude or behavior can change. As a result of their 74 experiences, learners gain a new perspective of ideas, concepts and/or the world. Learning is something that students do for themselves rather than something that is forced upon them. It affects how students understand and respond to their experiences.

The learning environment at school provides possibilities for lecturers and students to collaborate on institutional teaching and learning. Various technological gadgets are used in this learning process to make it easier for students to learn. The internet, e-mail, websites, mobile phones, iPods, etc. are examples of advanced technologies (Anekwe, 2017). These cutting-edge

technologies can be applied in a variety of ways to provide valuable assistance and are a viable alternative to traditional educational approaches. Virtual learning, or online learning, is a sort of learning that takes place anywhere on the globe without the use of traditional face-to-face instruction.

Skills are the knowledge or abilities required to perform a job or task (Huang et al., 2019). Having different abilities can help you succeed in many areas of your life, whether in school, at work, or even in sports or hobbies. Skills give you confidence and freedom in life, and they are essential for success. Talent is the learned ability to take action with unexpected consequences and execute it successfully, often with limited time and energy, or both. Students must have a variety of skills to learn online effectively (Huang et al., 2019). Some of them are:

Persistence: Students must be able to accept technological issues, seek help when required, work every day in every subject, and persevere through hurdles to be successful in online learning. When you encounter difficulty, keep trying and asking for assistance. Students must create and stick to a manageable study plan for themselves.

- **Effective time management and communication skills:** Time management and communication skills are essential for successful online learning. Students must be able to manage their time well, because lessons are either very time consuming or not useful, and classes do not have a set time. It can also be bad for a student who spends a lot of time, can't keep up with a consistent study schedule, or can't complete homework without reminders when all.
- **Basic technical skills:** Basic technical abilities, as well as computer skills, are required for online learning. These abilities include the capacity to generate new documents, utilise a word processor, surf the Internet, and download software. School administration must provide orientation for students for e-learning to be successful. These generally do not cover the fundamentals of how to utilise the school's learning management system and other online resources. If students lack fundamental computer abilities, they may find an online class challenging.
- **Reading and writing skills:** The capacity to read, comprehend, and interpret written words on a page of an article or other reading material is referred to as a person's reading abilities. When reading, a person with

strong reading skills will be able to assimilate a written work in a short length of time. While writing talents are unique qualities that enable authors to convert their thoughts into meaningful words and psychologically connect with the content, the more kids read and write, the more their vocabulary expands and they can communicate concepts properly and effectively with others. In e-learning class, students can communicate mostly via reading and writing (Huang et al., 2019). Students must also be comfortable reading a large number of papers on a computer screen and be able to write to be successful with online learning.

- Motivation and independence: To be successful, an online student must have a strong desire to succeed. Independent learning, personal drive, responsibility, and a certain amount of maturity are all required for online learning. Students' motivation and ability to work on their own will help them be happier with their jobs in the future.

Summary of Reviewed of Related Literature

E-learning refers to the use of the Internet/ICT i.e. information and communication technology to enhance and support the teaching and learning process. It is a way of using wireless technology and internet to provide

many training solutions. The importance of e-learning can improve standards and improve results through the use of personal, personalized and interactive tools to improve individual learner support, increase retention and improve results through guidance and support. online courses tailored to enable students to take on more responsibilities. for their own learning at the level and level that suits them, despite all the importance of online learning, there are many challenges that prevent it, such as electricity, technology, school curriculum, insufficient and lack of access to technology, software costs and. rights, support and technical support, cybercrime, dishonesty / trustworthiness, etc.

If challenges can be kept to a minimum, the subsequent results such as using e-learning will help learners to be motivated, eager to learn, and creative. It helps students to create a situation or a situation in which curiosity is stimulated, thought is stimulated, interest is created, ideas are expanded and attitudes are changed, thus achieving the foundation of education.

With an e-learning environment, students can pursue teacher-learner interactions from different locations at different times. Online learning

eliminates the limitations of time and place while providing a learning environment at a low cost. In the learning process, the relationship between teacher, learner and peers is very important. Individual learning is also important, however, the effectiveness of joint learning cannot be avoided. Success depends on support and individuals who need help learning a subject. Therefore, students who use e-learning tools must have continuous education; because, many e-Learning programs require interaction through technology tools.

Additionally, the rapid development in technology assists in the development of educational system as well as leading to more educational models to emerge. Establishment of virtual labs provides the chance to follow the developments in education in the world, especially for the institutions, which are financially unavailable to purchase lab equipment. Therefore, a competitive environment is created in education, which leads to sustainable development.

CHAPTER THREE

METHODOLOGY

This chapter describes the research methodology that was used in the study under the following sub-headings:

- Research Design
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Administration of the Instrument
- Method of Data Analysis

Research Design

This study is designed to investigate the use of E-learning tools among undergraduate students in the University of Benin. Survey research method is adopted to enable the researcher carry out systematic investigation and obtain information across population of the study.

Population of the Study

The population of the study will consist of the thirty nine thousand, two hundred and forty three (39243) students in the university of Benin. The breakdown of the population is given below.

S/N	Faculty	Number of students
1	Physical science	3552
2	Social science	3036
3	Environmental science	596
4	Law	989
5	Life science	5088
6	Management science	3131
7	Agriculture science	2056
8	Art	5710
9	Basic medical science	1948
10	Medicine	795
11	Pharmacy	994
12	Dentistry	168
13	Education	7369
14	Engineering	3811
	Total	39243

(University of Benin students affair, 2022)

Sample and Sampling Technique

The sample consists of two hundred and fifty (250) undergraduate students from 100 level to 600 level which would be randomly selected faculty of Law, Education, Life science, Management Science, and Physical science, 50 students from each of the above-mentioned faculties.

Research Instrument

The research instrument is a questionnaire designed by the researcher titled “the use of E-learning tools among undergraduate students in the University of Benin”. The student questionnaire is divided into two sections: sections A and B. Section A contains particulars of the respondents (demographic data) such as the name of faculty, level, and sex. section B contains twenty items. The questions contained in the questionnaire revolves round the research questions raised in the chapter one of this study and the response obtained from the respondent will help to validate the research questions.

Validity of the Instrument

In order to ascertain the validity of the instrument, the questionnaire designed by the researcher would be given to the supervisor and two other lecturers in the Department of Curriculum and Instructional Technology (CIT) to scrutinize and for necessary corrections to ensure content as well as face validity. Corrections made on the draft would be incorporated in the final draft.

Reliability of the Instrument

The reliability of the instrument was determined by administering the questionnaire to thirty (30) students who were not part of the main study. The data collected from the students were subjected to cronbach alpha reliability statistics

Administration of Instrument

The questionnaire would be administered personally by the researcher to the respondent that was randomly selected from the sample students. The respondent would be assured of confidentiality and urged to answer the questions honestly to the best of their knowledge. Instructions would be given to the respondent on how to fill out the questionnaire and the questionnaire would be collected the same day to avoid incident of loss.

Method of data analysis

The data collected is properly organized and tabulated. The responses are statistically analysed by the use of mean deviation and simple percentage.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULT

This chapter presents the results obtained from the analysis of data for answering the research questions raised and testing the hypothesis for the study. The data was presented in tables and are arranged according to research questions.

Data Presentation

Research Question 1: What are the E-learning tools used by University of Benin students for learning?

S/N	ITEMS	ALWAYS		SOMETIMES		NEVER	
		FREQUENCY	%	FREQUENCY	%	FREQUENCY	%
1	Podcast	6	2.4	31	12.4	213	85.2
2	Computers	167	66.8	75	30	8	3.2
3	Ipads	88	35.2	129	51.6	33	13.2
4	Smartphones	233	93.2	17	6.8	Null	0.0
5	Digital libraries	109	43.6	98	39.2	43	17.2
6	Interactive boards	12	4.8	16	6.4	222	88.8
7	Multimedia projector	164	65.6	49	19.6	37	14.8
8	E-mails	79	31.6	121	48.4	50	20
9	Wiki	2	0.8	6	2.4	242	96.8
10	Google	199	79.4	51	20.4	Null	0.0

11	Internet/Web Environment	88	35.2	126	50.4	36	14.4
12	Blogging	39	15.6	89	35.6	122	48.8
13	Learning Management System (LMS)	Null	0.0	6	2.4	244	97.6
14	Social media	107	42.8	131	52.4	12	4.8

Table 1: E-learning tools used by University of Benin students for learning

Table 1, shows the first item Podcast; as observed 6(2.4%) of the respondents always use o Podcast, 31(12.4%) of the respondents, sometimes use Podcast, while 213(85.2%) of the respondents, do not use Podcast for learning.

The second item is Computers; as observed 167(66.8%) of the respondents always use computers, and 75(30%) of the respondents sometimes use computers, while 8(3.2%) of the respondents do not use computers for learning.

The third item is Ipads; as observed, 88(35.2%) of the respondents always use Ipads, 129(59.6%) of the respondents sometimes use Ipads, while 33(13.2%) of the respondents do not use Ipads for learning.

The fourth item is Smartphones; as observed, 223(93.2%) of the respondents always use smartphones, 17(6.8%) of the respondents sometimes use smartphones.

The fifth item is Digital libraries; as observed 109(43.6%) of the respondents use Digital libraries, 98(39.2%) of the respondents sometimes use Digital libraries, while 43(17.2%) do not use Digital libraries for learning.

The sixth item is Interactive boards; as observed, 12(4.8%) of the respondents always use Interactive boards, 16(6.4%) of the respondents sometimes use Interactive boards, while 222(88.8%) do not use Interactive boards for learning.

The seventh item is the Multimedia projector; as observed 164(65.6%) of the respondents always use Multimedia projector, 49(19.6%) of the

respondents sometimes use Multimedia projector, while 37(14.8%) do not use Multimedia projector for learning.

The eighth item is E-mails; as observed, 79(31.6%) always use E-mails, 121(48.4%) of the respondent sometimes use E-mails, while 50(20%) of the respondents do not use E-mails for learning.

The ninth item is Wiki. As observed, 2(0.8%) of the respondents always use Wiki, 6(2.4%) of the respondents sometimes use Wiki, while 242(96.8%) of the respondents do not use Wiki for learning.

The tenth item is Google. As observed, 199(79.4%) of the respondents always use Google, 51(20.4%) of the respondents sometimes use Google, while zero percentage of the respondents do not use Google for learning.

The eleventh item is Internet/Web Environment. As observed, 88(35.2%) of the respondents always use Internet/Web Environment, 126(50.4%) of the respondents sometimes use Internet/Web Environment, while 36(14.4%) of the respondents do not use Internet/Web Environment for learning.

The twelfth item is Blogging. As observed, 39(15.6%) of the respondents always use Blogging, 89(35.6%) of the respondents sometimes use Blogging, while 122(48.8%) of the respondents do not use Blogging for learning.

The thirteenth item is Learning Management System (LMS). As observed, zero percent of the respondents always use Learning Management System (LMS), 6(2.4%) of the respondents sometimes use Learning Management System (LMS), while 244(97.6%) of the respondents do not use Wiki for learning.

The last item on Table one, is the Social media; as observed, 109(42.8%) of the respondents always use Social media, 131(52.4%) of the respondents sometimes use the Social media, while 12(4.8%) of the respondents do not use Social media for learning.

Research Question two: What are students' perceptions of the use of E-learning tools for learning

Table 2 students' perceptions of the use of E-learning tools for learning.

S/N	Item	SA (4)		A (3)		D(2)		SD(1)		Efx	X
		F	Fx	F	fx	F	fx	F	Fx		
1.	Using e-learning is too challenging	56	224	73	225	88	86	33	13	487	1.9
2.	Learning with e-learning tools makes the teaching/learning process interesting	124	496	87	262	11	22	28	28	808	3.2
3.	e-learning makes the learning of difficult concepts simple	163	652	65	196	13	26	9	9	883	3.5
4.	E-learning tools make learning relatively more permanent	109	436	88	264	27	54	6	6	760	3.0
5.	e-learning makes learners to learn at their own pace	88	352	79	237	61	122	22	22	733	2.9

Result in table 2 indicates the responses to the above question. Using e-learning is too challenging, learning with e-learning tools makes the teaching/learning process interesting. Also e-learning makes the learning of difficult concepts simple, E-learning tools make learning relatively more permanent and e-learning makes learners to learn at their own pace; they had mean scores of 1.9, 3.2, 3.5, 3.0 and 2.9 respectively. This implies that the students had a positive perception of the use of E-learning tools for learning.

Research Question three: What are the challenges that hinder students' use of E-learning tools?

Table 3 challenges that hinder students' use of E-learning tools.

S/N	Item	SA (4)		A(3)		D(2)		SD(1)		Efx	X
		F	Fx	F	Fx	F	fx	F	Fx		
6	There is no proper orientation on the use of e-learning in Uniben.	112	448	75	225	41	82	22	22	777	3.11
7.	There is poor internet signal in Uniben	76	304	54	162	106	212	14	14	692	2.77
8.	The cost of e-learning tools is expensive	133	532	87	261	16	32	14	14	839	3.37
9.	e-learning facilities are always difficult to maintain	102	408	74	222	54	108	20	20	758	3.03
10.	Unstable power supply pose a huge challenge to the use of e-learning tools.	98	392	87	261	59	118	6	6	777	3.11

From table 3 the following mean scores (x) were obtained, 3.11, 2.77, 3.37, 3.03 and 3.11. The above mean score stood for there is no proper orientation on the use of e-learning in Uniben, there is poor internet signal in Uniben, the cost of e-learning tools is expensive, e-learning facilities are always difficult to maintain and unstable power supply pose a huge challenge to the

use of e-learning tools were on the same table. This means there was no disagreement from the respondents and the various items should the challenges of e-learning in the University of Benin.

Research Question four: are there gender difference in the perception of the use of e-learning tools for learning?

Table 4 Gender difference in the perception of the use of e-learning tools for learning

S/N	J	SA (4)		A (3)		D(2)		SD(1)		Efx	X
		F	Fx	F	Fx	F	Fx	F	Fx		
11.	Male students are more proficient in the use of e-learning	124	496	64	192	33	66	29	29	783	3.13
12.	Female students tends to shy away from e-learning because they feel its complex	111	444	42	126	74	148	23	23	741	2.96
13.	The use of e-learning tools as no gender barriers	72	288	65	195	102	204	20	20	707	2.83
14.	Most e-learning tools are designed for male students only	88	352	61	183	36	72	4	4	611	2.44
15.	The only e-learning tools females used proficiently is the social media	107	428	63	189	64	128	16	16	815	3.26

The respondents gave the following indices to indicate their stand on the above issue. The question; some student believed that male students are more proficient in the use of e-learning, the mean (\bar{x}) of 3.13, this was followed by female students tends to shy away from e-learning because they feel its complex. They had mean score of 2.96. item number 13, 14 and 15 showed that the use of e-learning tools as no gender barriers, most e-learning tools are designed for male students only and the only e-learning tools females used proficiently is the social media. They had mean scores of 2.83, 2.44 and 3.26 respectively.

Discussion of the Findings

From the research question one, among the various E-learning tools listed, the analysis revealed that computers, smartphones, digital libraries, and multimedia projectors were predominantly used by University of Benin students for learning.

Research findings indicate that students refuted that using e-learning is too challenging 45.2% in support of it, learning with e-learning tools makes the teaching/learning process interesting, e-learning makes the learning of difficult concepts simple, E-learning tools make learning

relatively more permanent and e-learning makes learners to learn at their own pace had percentages of 88.8%, 91.2%, 78.8% and 66.8%.

Research findings also shows from research question three, that 74.8% were in support for There is no proper orientation on the use of e-learning in Uniben, 52% revealed that there is poor internet signal in Uniben. The cost of e-learning tools is expensive also had 88%. E-learning facilities are always difficult to maintain had 70.4% and Unstable power supply pose a huge challenge to the use of e-learning tools. had 74%.

From research question four, result gathered shows that Male students are more proficient in the use of e-learning with 75.2% this was followed by Female students tends to shy away from e-learning because they feel its complex with 61.2%. the use of e-learning tools as no gender barriers had 54.8%, most e-learning tools are designed for male students only and The only e-learning tools females used proficiently is the social media had 59.6% and 69% respectively.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter gives the summary of this work, as well as conclusion and recommendation drawn from the findings of the study

Summary

The purpose of this research was designed to find out the use of E-learning tools among undergraduate students in the University of Benin.

The researcher made effort in analysing e-learning tools used by students for learning, students' perception towards the use of e-learning tools for learning, the challenges that hinder students' use of e-learning tools, and gender difference in the perception of the use of e-learning tools for learning. All of which have been discussed in details under the review of literature.

The collection of data was carried out through the administration of questionnaire to two hundred and fifty (250) undergraduate students from 100 level to 600 level which would be randomly selected faculty of Law, Education, Life science, Management Science, and Physical science, 50

students from each of the above-mentioned faculties. The data were interpreted and discussed using percentages, mean and frequency table. The sampling technique used for the research is the purposive random.

Conclusion

Following the analysis of the data collected and finding made, the following conclusions were drawn:

1. Computers, smartphones, digital libraries, and multimedia projectors were predominantly used by University of Benin students for learning
2. Also the University of Benin students had a positive perception of the use of E-learning tools for learning.
3. Challenges of E-learning identified were no proper orientation on the use of e-learning in Uniben, poor internet signal in the university, and unstable power supply pose a huge challenge to the use of e-learning tools

4. The cost of e-learning tools is expensive and e-learning facilities are always difficult to maintain were also identified as a problem.
5. The work identified that there were slight gender difference in the perception of the use of e-learning tools for learning.

An appropriate research instrument was designed to address the questions. University of Benin undergraduate students made up the population for the study and data gathered were analyzed, interpreted and presented.

Recommendations

Based on the findings and conclusion, the following recommendations were made by the researchers.

1. Tertiary institution management should make a concerted effort to provide e-learning environments that would enhance student learning in schools and also facilitate their self-development efforts.
2. Also, in order to maximize this potential of e-learning, its implementations should endeavor to satisfy the needs and concerns of all stakeholder groups as much as possible.

3. Government should be proactive in ameliorating the challenges identified in this study and build on the opportunities e-learning offers educational institutions
4. For e-learning to be effective, appropriate measure should be given to maintenances, provision of stable internet provider to support easy and fast learning and teaching and Electricity is one of the driven force and backbone of computer and computer tools, so Government should finance and make provision for alternative power supplies.

Suggestions for further Studies

This study investigated out the use of E-learning tools among undergraduate students in the University of Benin, using 250 respondents. The future researcher may repeat this study by using larger population such as more than one university.

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Appendixes

**DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL
TECHNOLOGY (CIT)
FACULTY OF EDUCATION,
UNIVERSITY OF BENIN, BENIN CITY**

**QUESTIONNAIRE ON THE USE OF E-LEARNING TOOLS
AMONG UNDERGRADUATE STUDENTS IN THE UNIVERSITY
OF BENIN.**

Dear Respondents,

This questionnaire is designed for academic purposes. It is structured to find out **the use of E-learning tools among undergraduate students in the University of Benin.**

Please kindly respond sincerely to the questions by ticking [] where applicable. Your responses which are needed for research purposes only will be treated with high level of confidentiality. Thank you.

Section A

Instructions: Please tick () where applicable.

1. Name of

faculty: _____

2. Sex: male() female ()

Section B:

Research question 1: What are the E-learning tools used by University of Benin students for learning?

S/N	ITEMS	Always used	Sometimes used	Never used
	Multimedia Aids			
1.	Podcast			
2.	Computers			
3.	Ipads			
4.	Smartphones			
5.	Digital library			
6.	Interactive boards			
7.	Multimedia projectors			
8.	E-mails			
9.	Wikis			
10.	Google			
11.	Internet/Web Environment			
12.	Blogging			
13.	Learning Management System (LMS)			
14.	Social media			

Source: Swank, R.C (2011)

Section C

Please tick (√) where applicable

Keys: SA- Strongly Agree, A- Agree, SD- Strongly Disagree, D- disagree

SN	ITEMS	Strongly Agree	Agree	Strongly Disagree	disagree
	What are students' perceptions of the use of E-learning tools for learning?				
1.	Using e-learning is too challenging				
2.	Learning with e-learning tools makes the teaching/learning process interesting				
3.	e-learning makes the learning of difficult concepts simple				
4.	E-learning tools make learning relatively more permanent				
5.	e-learning makes learners to learn at their own pace				
	What are the challenges that hinder students' use of E-learning tools?				
6.	There is no proper orientation on the use of e-learning in Uniben.				
7.	There poor internet signal in Uniben				

8.	The cost of e-learning tools is expensive				
9.	e-learning facilities are always difficult to maintain				
10.	Unstable power supply pose a huge challenge to the use of e-learning tools.				
	Gender difference in the perception of the use of e-learning tools for learning				
11.	Male students are more proficient in the use of e-learning				
12.	Female students tends to shy away from e-learning because they feel its complex				
13.	The use of e-learning tools as no gender barriers				
14.	Most e-learning tools are designed for male students only				
15.	The only e-learning tools females used proficiently is the social media				