



Use Of Zoom Technology For Teaching And Learning Among Undergraduate Students Of Ambrose Alli University Ekpoma Edo State, Nigeria

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ABSTRACT

This study investigated the use of Zoom Technology for teaching and learning among undergraduate students of Ambrose Alli University Ekpoma Edo State, Nigeria. The descriptive survey design was adopted for the study. Five research questions were raised for the study. The population of the study covered all undergraduate students in the Faculty of Education, Ambrose Alli University Ekpoma, Edo State. A total number of two hundred and ninety five (295) responders were used as sample for this study. Data collected were analyzed with tables and simple percentages, mean and standard deviation. The result of data analysis of the study revealed that: the level of awareness of zoom technology for teaching and learning among undergraduates in Ambrose Alli University Ekpoma, Edo State was high to a great extent; there were several benefits of Zoom Technology teaching and learning among undergraduate students. Also there were several challenges faced in using Zoom Technology for teaching and learning among undergraduate students. The study concluded that the level of awareness of zoom technology for teaching and learning among undergraduates was high to a great extent. Based on the findings of the study, it was recommended among others that zoom technology phone apps should be

encouraged among undergraduate students. Universities should intensify ICT training which will expose students to a range of co-curricular practical tasks on zoom technologies to help the students to be become more aware and motivated for virtual learning.

Keywords: Technology, Zoom, Use, Students, Teaching, Learning, Undergraduate

INTRODUCTION

The emergence of information and communication technologies (ICTs) and the ubiquitous connectivity of internet and networks improve man's ingenuity and opportunities given that societies consciously depend on real-time information to be proactive and to discount the effects of environmental changes (Eze and Chinedu, 2018). Entities attempt to cope with disruptive technologies; they make huge investment in the state of the art ICT platforms owing to the need to build competitive advantage amidst decreasing cost of technologies in the contemporary information systems (IS) market. ICT is an agent of socio-economic changes (Al-Gahtani, 2016) and a force for creative destruction in human existence, especially in the educational setting, where the academia and consultants progressed from providing simple teaching aids to interactive learning environments. Higher education institutions (HEIs) have embarked on rigorous programs that promote the use of technologies for effective contact and online teaching and learning and for developing cognate skills needed to make socio-economic contributions in the knowledge world. Hu and Hui, (2012) opined that the IT-based innovations (e.g., e-commerce, e-learning, e-payment, e-service, or e-procurement) revolutionize the HEIs' competitive landscape and reflect the dramatic evolution from fairly predictable brick-and mortar affairs to rapidly changing and often more unpredictable environment. Greenberg and Zenetis (2012) observed that video has the highest traffic in internet use. Videos can be described as recorded content that has sound and motion which can be stored or delivered live, and can be streamed to a variety of devices (Woolfitt, 2015). The importance of videos in education cannot be over emphasized. They can spark curiosity, promote scientific enquiry and help students make connection between their experiences and the content to be taught. In developed nations, videos are an important part of higher education. More than half of institutions of higher learning in developed nations use integrated video solutions, integrated into their learning management systems for teaching and learning while about 72% of all lecturers in developed nations use videos for students' assignment (Lee, 2016). Lee further noted that more than half of all students in higher institution in developed nations can create videos. Videos especially video streaming has lent itself as a viable means through which institutions of higher education can wriggle out of budget cuts being experienced in institutions of higher learning orchestrated by economic recession in many countries.

The availability of internet connectivity and technological tools like digital camera and smart phone has made Zoom technology (streaming) possible. Zoom technology has enabled higher education institution overseas to implement globalization strategy of reaching out to wider students without regional barrier. Palmer (2018) noted that use of video streaming in higher education is more cost effective, time effective and sustainable method of teaching and learning.

While many institutions are experimenting with the various types of services for users with zoom technology, Fasae and Adegbilero-Iwari (2015), observe that few are thinking of the potentially dramatic changes that the uptake of this platform with sophisticated capabilities may have on their user community and more specifically on the use of digital information resources. As patrons continue to make greater use of the zoom technology through technology devices, some schools now use websites/portals as a means to facilitate access to zoom technology for effective teaching and learning in higher institutions. As technology evolved, zoom technology has gained increased popularity with widespread use and is on track to replace the traditional way of teaching and learning especially in this time of pandemic (post covid 19) as the means for effective teaching and learning and access online information and communication. Zoom technology is altering the way we communicate, teach, learn, entertain ourselves and make decision. Zoom technology today can run complex software allowing learner and educator for advanced interactivity and with new hardware and technologies such as global positioning system. Universities can serve better and improve better learning environment in this period of covid 19 with so

much protocols to control the pandemic; wearing of face mask, physical distancing among others which may make learning challenging as a result of lack of adequate infrastructures and facilities, by adapting the growing Zoom technology offer access to effective teaching and learning (Ray, 2020). Zoom technology has made visual communication and information access very convenient and timely to students even from the comfort of their own homes and offices, and from wherever they are while on the move with their cellular phone units or PDAs (personal digital assistants) (Ray, 2020).

Zoom technology will help students and both lecturers for effective teaching and learning and also stay relevant in an increasingly technological / mobile society. They need to be aware of technological changes, peer forward, and prepare for the future of internet interaction. School of higher learning must be commensurate with this trend and integrate themselves into the Zoom technology realm if they wish to deliver and enhanced quality education for both theory and as well as practical works with simple instructions via Zoom technology. Zoom technology offer tremendous flexibility for those who want to take advantage of e-learning in this challenging world especially in this moment of post Covid 19 pandemic (Erasmus, 2020). With a simple 3G - 4G connection, students and educator can access and connect each other via Zoom technology which make learning comfortable, gives room for free interactions between the students and the instructors. Zoom technology offers wide range of self expression and contribution to studies where most students who are shy to express themselves in a classroom find it convenient for self expressions.

Mobile technology has also made it very easy and stress free for easy access to Zoom technology. The recent advances regarding cellular phone technology have enabled mobile devices to perform functions previously not possible with handheld devices and these advanced functions have been captured by Android phones in connecting quiet large of students through Zoom technology (Erasmus, 2020).

Statement of the Problem

Utilization of zoom technology in university globally has been as a key factor in ensuring effective teaching and learning (Roy, Ray, Saha, & Ghosal, A2020). With the commencement of zoom technology in different sectors, universities inclusive, one would expect to see a holistic and integrated application and utilization of technologies and other platform of e-learning, of which Zoom technology is an exemplary part, in the provision and utilization of effective teaching and learning in universities in Edo State. However, many schools of higher learning have not embraced e-learning for teaching and learning especially the Zoom technology in this time of pandemic which discourage large gathering of school in a confined learning environment or class room. The problem of this study is, the relative poor applications, utilization of Zoom technology or teaching and learning in the universities in Edo State.

It has also been observed that there is poor or shortage of internet or e-learning platform and facilities in Nigerian universities

Purpose of the Study

The main purpose of this study is to investigate the use of Zoom Technology for teaching and learning among undergraduate students of Ambrose Alli University Ekpoma Edo State, Nigeria The specific purpose of this study are to:

1. identify the level of awareness of Zoom Technology for teaching and learning among undergraduates in Ambrose Alli University Ekpoma Edo State, Nigeria;
2. to find out the perceived ease of use of Zoom Technology for teaching and learning among undergraduates students in Ambrose Alli University Ekpoma Edo State, Nigeria;
3. to ascertain the level of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria;
4. to ascertain the benefits of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria;
5. to find out the challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria.

Research Questions

The following research questions are raised for the study:

1. What is the level of awareness of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria?
2. What is the perceived ease of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria?
3. What is the level of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria?
4. What are the benefits of using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria?
5. What are the challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State, Nigeria?

Significance of the Study

1. The findings of this study would be of benefits to undergraduate students, libraries, librarian, Educators, Government and stakeholders.
2. It is hoped that the findings of this study will be of benefits to undergraduate students as the study will help to participate in zoom teaching and learning. It will also help them to develop the relevant skills for e-learning via zoom technology as this will help to improve their academic achievement.
3. It is hoped that the findings of this study will assist librarians to identify the problems militating against the effective application of zoom technology in the university. This is because zoom technology also play a significant role in obtaining relevant information related to library users as part of mobile technology.
4. The findings of this study may be used to sensitize the librarians and educators on the need to acquire the relevant skills necessary for effective application and use of zoom technology in universities for effective teaching and learning. The outcome of this study is expected to bring about enhanced utilization of the application of zoom technology in academic libraries' by the librarians thereby leading to improved utilization of library resources by users especially the students, which will in turn help to improve academic performances of students as well as the ability to favourably compete with counterparts from the developed parts of the world.
5. For the Government, an investigation into this study would serve as an underlying basis for further development of the research in Edo State, Nigeria. The constraints against the utilization of zoom technology would enable the stakeholders to know whether university are adopting online/ e-learning education in this challenging time as a result of covid 19 pandemic that would enhance effective and continues teaching and learning in the area under study.
6. It is also hoped that this study will be a contribution to knowledge as it will contribute to existing literatures on zoom technology therefore it can be referred to in the course of further research.

REVIEW OF LITERATURE

Level of awareness of Zoom Technology for teaching and learning among undergraduates

Oye et al, (2012), opined that it is generally believed that with the advent of Information and Communications Technology (ICT), zoom technology is among the catalysts that will drive learning. Hence, zoom technology should become an integral part of learning in tertiary institutions. Another rationale for zoom technology could be seen in the fact that the world of the twenty-first century can aptly be called an e-driven world (Oye et al 2012). E-or virtual technologies have brought profound changes to all facets of life. In order to equip students with the necessary skills and knowledge to foster the growth of independent, creative and lifelong learners, schools should use zoom technology to provide relevant experiences to support and facilitate the students' development.

Studies have generally indicated that the use of traditional didactic lectures alone cannot make students to be globally literate and succeed in this information age (Ahmad, 2012). New methods of effective teaching and learning, which meet the expectations of the diverse student body and which engage

students, should be explored and implemented. Students need to be challenged to become engaged in the 21st century way: electronically. For any electronic learning technologies such as zoom technology to be effective, students must be aware of what it entails, be motivated and competent to use it. However, due to difficulties of lack of ICT implementation in overcrowded classrooms; insufficient training, lack of learning support materials and support, curriculum overload, lack of clear planning and assessment, and severe pressure on lecturers to increase their research outputs, integration of zoom technology may not be a priority for lecturers (Oye et al 2012). There is need for students to use zoom technology to complement the efforts of the lecturers and classroom lectures.

Awareness of zoom technology among university students would determine to a great extent, if Nigeria could have more independent learners, who are problem solvers and who can contribute positively in improving the way things are done in Nigeria and other nations of the world. Many university students have cell-phones and other digital technologies that are Internet enabled, and many have access to the Internet-enabled computers. Prensky (2011) stated that young people of the digital native generation possess sophisticated knowledge of and skills with information technologies. Whether Nigerian students use these facilities, knowledge and skills for zoom technology is yet to be empirically ascertained. However, most of the studies on the status of zoom technology in universities were confined to developed countries like the United States of America, Britain and Australia with very few studies in developing countries like Nigeria

Accordingly, Haqien et al (2020), stated that zoom technology for learning depends critically on an electronic devices and effective library system with online resources with seamless access from across the globe. In most developing countries, learning is mostly done traditionally (face-to-face), thus adapting to zoom technology would requires certain behavioral changes and regulatory directives in order to make it work for the learner and teachers. This become more important because not all the students and lecturers are adequately conversant and proficient on how to participate in zoom technology platform. As such, zoom technology can only be effective where there is adequate support system. For such support to be sustainable, both students and facilitators must have seamless access to electronic devices, internet as well the required skills to navigate the platform. Furthermore, they must be attuned to the new environment and culture of learning. Consequently, the perception of students on zoom technology resources may lead to acceptance and use which may translate to good additional method of learning during the pandemic lockdown (ASUU-UI Publicity Committee, 2020).

More recently, various studies about the subject (zoom technology) have been carried out globally, however there is little or no studies that specifically address issues relating to the perception and readiness of undergraduate students towards zoom technology in Nigeria during the Covid-19 pandemic lockdown.

Perceived ease of use Zoom Technology for teaching and learning among undergraduates

According to Ifeanyi et al (2021) the use of zoom technology teaching save money, freed nature of workshops, saves travel risk, in the comfort of your home, and opportunity for all (not waiting for sponsorship by institute), staying at home and connecting to virtual workshops not only save money, but save participants from the risk of accident on the road.

According to Ogwunte et al (2020) in their research work Perceived Influence of Zoom Cloud and Whatsapp Technologies on Instructional Delivery in University Business Education Classroom in Rivers State their result reveals that zoom cloud technology offers educators with the ability to communicate in real time with dispersed students via computers and mobile phones, ability to secure record and store sessions without recourse to third party software, ability to create users specific authentication, ability to create real time encryption of meetings, ability to back up recording to online remote server network, ability to connect synchronously with students over videos and audios, ability to share screen and ability for students to work in group.

The study also perceived Influence of Whatsapp Technology on Instructional Delivery in University Business Education Classroom that whatsapp technology offers educators with the ability to connect with their students, share ideas, share pictures, share messages and information of interests, ability to construct a public profile within a bounded system, ability to connect semi public profile within a bounded system,

ability to provide message with images which are more effective for students learning, ability to instantly send messages to anywhere in the world and ability to provide audio and video callings.

Extent of use of Zoom Technology for teaching and learning among undergraduates

Research carried out by Crompton (2013) and Cohari (2013) show that the misapplication of zoom cloud technology and Whatsapp conference video calls in teaching and learning may induce orientation and cognitive overload that could interfere with learning rather than enhance learning. Irrespective of the falls that might arise from the misapplication of zoom cloud technology and Whatsapp in teaching and learning in business education classroom, Chipunza (2013), and Mbah (2016), studies have confirmed that the utilization of zoom cloud technology and whatsapp video conferencing in the classroom would provide the teachers with a more effective way to transfer knowledge and information to students, and also enable the students to learn in a more productive way.

Research has also found that girls feel less confident in dealing with computers than boys (Braak 2004). A study by González-Gómez et al. (2012) which inquired into gender differences with regard to e-learning sought to determine which aspects of teaching could be improved to boost the satisfaction of female and male students. In addition to observing significant differences between male and female students in terms of their satisfaction with e-learning in teaching, González-Gómez et al. (2012) found that female students assigned more importance to teaching methods, planning and to fostering active participation in the learning process than their male peers. A longitudinal study with 484 undergraduates found that gender differences were also reflected in attitude and intentions to use technology (Padilla-Meléndez et al. 2013). According to the findings of this study, playfulness influenced the females' attitude toward using the system, whereas in males, the influence of playfulness on attitude was mediated by perceived usefulness.

Hind et al (2021) On the other hand explained that some studies have found that there were no (or negligible) gender differences in the use of technology. For example, a study by Whitley (1997) found that gender differences in computer-related behaviors were small and did not differ as a function of study population. In addition, while identifying the constructs that affected male Fig. 1 The technology acceptance model (Turner et al. 2010) and female students' behavioral intention to use a computer based assessment, Terzis and Economides (2011) found that both genders were more likely to use the system if it were playful and its content was clear and relative to the course.

Benefits of Zoom Technology for teaching and learning among undergraduates

Accompanied by a positive, constructive outcome, people prefer online technology to avail of better communication and educational results. Talking about online learning, of course we need an application as a bridge between lecturers and students such as whatsapp, google classroom, skype, zoom cloud meeting and other applications that support learning (Fitriyani, Febriyeni, & Kamsi, 2020). Online learning can also be used to maximize the teaching learning process although it is conducted without face to face meeting (Febrianto, Mas'udah, & Megasari, 2020). Various applications or online learning media are scattered in the midst of COVID-19 pandemic, but researchers are more interested in using zoom as an alternative to replace face-to-face meetings with video conferencing that can be accessed by students and lecturers to maintain the quality of learning so that the learning process continues smoothly.

Zoom cloud meetings is a very useful alternative application for virtual meeting to facilitate communication with many people without making direct contact and be able to support learning needs in today's digital era (Pratiwi, Afandi, & Wahyuni, 2019). This application is used for video conference instead of direct meeting in the classroom. It can be installed with devices such as computer, laptop, android and smart phone. So for the students who do not have laptop, they can use their smart phone to take part in virtual class. Zoom meeting application is very helpful in communicating remotely; all lecturers' explanations can be conveyed directly without having to meet physically.

Zoom facilitate discussions between lecturers and students and among students with direct communication through video conference which is supported by zoom features such as raise hand and group messages, so that if there are problems in audio, the students are helped with the available chat features. Some features in zoom let the English teachers to present and assess four language skills through

full interactions with medical students and deliver the essence of material in various ways (Guzacheva, 2020). Zoom cloud meetings really help learning process in difficult situation of the current pandemic and can facilitate access to information and communication in the learning process for students.

Shadat et al (2017) stated that in using zoom for distance learning process for Engineering students is more interactive, creates satisfaction, provides positive experiences in learning process. The innovative of zoom increases better learning outcomes for different groups of students. The classroom action research about e-learning model with zoom application to improve the ability of giving strengthening skills in mathematics learning was carried out to the fourth semester students of mathematics education study program Bengkulu University, the result indicated that the lecturer activities in the teaching learning process with e-learning model with zoom application was in a good category and the students' activities improved and the ability of giving strengthening skills in mathematics learning also increased (Andriyani & Sari, 2020).

Another research was carried out by (Brahma, 2020) about the use of Zoom as an online based learning in Sociology and Anthropology subjects for the students majoring in Citizenship Education at STKIP Kusumanegara Jakarta. The result showed that Sociology and Anthropology courses become more interactive and in demand by students because the online learning media used are very innovative and effective according to the current development. Through zoom, lecturers and students can conduct video conference which is used as a means of communicating in online learning and the recordings made during the meeting are more secure. On the contrary Haqien & Rahman, (2020) revealed that lectures activities using Zoom Meeting are considered less effective for the university students in Jakarta and Depok because of the network problem or internet signal for students who do not use Wi-Fi which will have an impact on the quality of learning they receive.

According to Guzacheva (2020) Online distance learning in educational process has become a buzz in the medical education and today it caters to the needs of modern-day learners. Infusing technologies in classroom learning have added to stimulus and enhanced learner's interaction within the classroom. Distance learning has a vast presence in almost every field. Language teaching is one such field where technology has taken over and improved the ways of learning. As for the strengths of an online distance learning course, the following come to mind. They: Provide easier access to course resources.– Offer greater convenience for the English teacher and medical student, and offer flexibility– in scheduling. Can be personalized – that is, English teachers can cater to each medical student's– proficiency level and learning goals by delivering different online resources to individual students so they can work on them in their own time.

Challenges faced in using Zoom Technology for teaching and learning among undergraduates

According to Ifeanyi et al (2021) concerning the challenges of participating in online zoom, all the participants mentioned that buying the data bundle for the internet is expensive and can therefore frustrate them. Using the zoom platform requires a bandwidth, which will be problematic for participants who lack strong internet connections or have limited data plans. Lack of computer/android phone.

Agbo et al (2020) stated that ownership of desktop, laptops, smart phones is a condition for use of social media and lack of skills/experience in using the zoom application. Baro and Godfrey (2015) stated that lack of skills power failure, lack of time, lack of facilities and the attitude of some zoom user were deterrent to the use of Web 2.0 tools in Africa.

Julius, et al (2021) investigated the challenges and opportunities of using ZOOM app in the teaching and learning of mathematics during COVID-19: lecturers' and students' perspective. The study sought to establish challenges lecturers' and students' encounter when using ZOOM app in the teaching and learning of mathematics during COVID-19 pandemic and determine opportunities lecturers' and students' encounter when using ZOOM app in the teaching and learning of Mathematics during COVID-19 pandemic. Fifty (50) students taking Mathematics courses and ten (10) lecturers who teach mathematics courses at five (5) institutions in the Lusaka district of Zambia participated in this study. A mixed method approach which followed a descriptive survey study design, was used. Data was collected using a semi-structured questionnaire and a semi-structured interview schedule. Data was analysed descriptively and thematically. The challenges of using ZOOM app in the teaching and learning mathematics included:

ZOOM app has limited capacity to accommodate more participants during the teaching and learning process; lack of good network connection; ZESCO power outages; lack of technological knowledge; high bundle consumption; and lack of devices for online learning such as smart mobile phones, computers, tablets, desktop, and smart televisions. In terms of the opportunities of using ZOOM app in the teaching and learning of mathematics, the study has established that: ZOOM app allows lecturers and students to teach and learn from anywhere; ZOOM app is cost effective than physical learning; ZOOM app facilitates group work; and ZOOM App options are easy to use; ZOOM app allows lecturers to schedule mathematics lessons in advance; and ZOOM app allows participants to join before the host. In view of these findings, it was recommended that government through the Ministry of Higher Education (MoGE) should promote the use of ZOOM app in the teaching and learning of mathematics. It was further recommended that government through the Ministry of Higher Education (MoGE) should ensure that more training should be given to lecturers as well as students in order to reinforce the change and support the new innovation due to COVID-19 to overcome ZOOM app challenges in teaching and learning of mathematics.

RESEARCH METHODS

The method of the study deals with the method and procedures the researchers used in carrying out the study. It was organized into the following sub-headings: Design of the study, population of the study, sample and sampling technique, instrument for data collection, validity of the study, reliability of the instrument, method of data collection and method of data analysis.

Design of the Study

The study adopted the descriptive survey design to examine the use of Zoom Technology for teaching and learning among undergraduate students of Ambrose Alli University Ekpoma Edo State. Survey design was considered appropriate, because opinion of a large sample of respondents was sought for through the use of questionnaire and presented in their natural setting to draw inference.

Population of the Study

The population of this study covers all undergraduate students in the Faculty of Education, Ambrose Alli University Ekpoma, Edo State with a total number of four thousand nine hundred and eighty seven (4,987) students. **Source:** Statistical Bulletin for the year 2019/2020.

Sample and Sampling Technique

A total number of two hundred and ninety five (295) responders were used as sample for this study. All the Departments in Faculty of Education were sampled for this study, which include Department of Educational Foundations and Management, Guidance and Counselling, Curriculum and Instruction, Department of Human Kinetics and Health Education, Vocational and technical Education, Business Education and Library and Information Science were sampled for this study. A total number of two hundred and ninety five (295) students which represent six percent (6%) out of the entire population in all the Departments in Faculty of Education were selected for the study through simple random sampling technique. Forty students were selected randomly from each department. Simple random was adopted to ensure equal chance of any of both male and female students in all the departments in Faculty of Education Ambrose Alli University Ekpoma, Edo State. This helped to minimize sampling error and also helped for meaningful generalization.

Instrument for Data Collection

The research instrument for this study is questionnaire. The questionnaire was made up of twenty five (25) items which is designed by the researcher to obtain information from the respondents. The questionnaire was made up of two sections: A and B. Section A elicited information from respondents on this sex and level while section B contained items on research questions which is on a four point scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with rating of 4,3,2, and 1 respectively. Research questions sought information on use of Zoom Technology for teaching and learning among undergraduate students.

Validity of the Instrument

The instrument was subjected to scrutiny by the two experts who checked and made necessary corrections that led to the final instrument used.

Reliability of the Instrument

The reliability of the instrument was determined through test re-test method. The questionnaire was administered on two separate occasions on thirty (30) students who are not part of the study. It was re-administered after two weeks.

Method of Data Collection

The questionnaire was distributed to two hundred and ninety five (295) respondents students by the researchers. The distribution and collection of the questionnaire was done within two weeks. All useable questionnaires were collated for analysis.

Method of Data Analysis

The data collected was analyzed using mean to answer the research questions and standard deviation to determine the closeness or otherwise of the responses from the mean. A cut of 2.5 was used as a basis for decision making meaning that any mean item with a mean score of 2.5 and above was accepted while any mean score of below 2.5 was rejected. While hypotheses was tested using t–statistical method.

RESULTS

Results and discussions deal with the presentation and the analysis of the data collected from respondents. A total number of 295 questionnaires were distributed and 243 were returned. Relevant mathematical and statistical tool was used in the presentation and analysis of data derived from the questionnaire.

Demography of respondents

Table 4.1: Distribution Of Respondents By Sex

Gender	FREQUENCY	PERCENTAGE
Male	113	47
Female	130	53
Total	243	100.0%

Source: field survey, 2021

From the above table, 113 (47%) of the respondents were males while the 130 (53%) of the respondents were females.

Table 4: Awareness of Zoom Technology for teaching and learning among undergraduates in Ambrose Alli University Ekpoma Edo State

SN	ITEMS	X	SD	Remark
1	Zoom to interacts with lecturers for instruction	3.42	0.85	HE
2	Use of cloud meetings/conferencing	3.34	0.83	HE
3	Online interaction via video with course mates for academic purposes	3.67	0.91	HE
4	Discussion of academic program via zoom on assignment and test	3.72	0.93	HE
5	Recording and saving in online classes and tutorial via zoom	3.18	0.79	HE

Key: X= Mean, SD= Standard Deviation

Source: Field Survey, 2021

Table 2 showed the mean and standard deviation on the level of awareness of Zoom Technology for teaching and learning among undergraduates in Ambrose Alli University Ekpoma Edo State. The respondents agreed on Zoom to interacts with lecturers for instruction, Use of cloud meetings/conferencing, online interaction via video with course mates for academic purposes, discussion of academic program via zoom on assignment and test, recording and saving in online classes and tutorial via zoom with mean ratings of 3.42, 3.34, 3.67, 3.72 and 3.18 which are above the mean

benchmark of 2.50 set for the study. This result indicated that the level of awareness of zoom technology for teaching and learning among undergraduates in Ambrose Alli University Ekpoma Edo State was high to a great extent.

Table 4:3: Showing perceived ease of use of Zoom Technology for teaching and learning among undergraduates students in Ambrose Alli University Ekpoma Edo State

SN	ITEMS	X	SD	Remark
6	I feel it is easy to use zoom technologies	3.77	0.94	Agreed
7	I do not have confidence to use zoom technologies	2.44	0.31	Disagreed
8	I belief that zoom technologies are too cumbersome for me to use	3.51	0.87	Agreed
9	I feel interaction with zoom technologies will be very beneficial	3.13	0.78	Agreed
10	I believe I have the necessary skills to use zoom technologies	3.49	0.87	Agreed

Key: X= Mean, SD= Standard Deviation

Source: Field Survey, 2021

Table 3 showed the mean and standard deviation on perceived ease of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State. The respondents agreed that they feel it is easy to use zoom technologies, they are confidence to use zoom technologies, they said interaction with zoom technologies will be very beneficial and they believe they have the necessary skills to use zoom technologies with mean ratings of 3.77, 3.51, 3.13 and 3.49 which are above the mean benchmark of 2.50 set for the study. This result indicated that students find it easy in using zoom Technology for teaching and learning among undergraduates students in Ambrose Alli University Ekpoma Edo State.

Table 4.4: Showing the level of use of Zoom Technology for Teaching and Learning among undergraduate students in Ambrose Alli University Ekpoma Edo state

SN	ITEMS	X	SD	Remark
11	I use Zoom cloud meetings to facilitate communication with many people	3.17	0.79	Agreed
12	I use zoom to read, view or listen to online academic programmes through my cell-phones and other Internet facilities.	2.23	0.29	Disagreed
13	I use zoom to attempt online assignments with instructions and guides from learning platforms	2.33	0.32	Disagreed
14	I use zoom in sharing information in educational blogs via cloud meetings	2.42	0.38	Disagreed
15	learning through internet simulated tutorials without a physical teacher	3.88	0.97	Agreed

Key: X= Mean, SD= Standard Deviation

Source: Field Survey, 2021

Table 4 showed the mean and standard deviation on the level of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State. The respondents agreed to item 11 and 15 with mean raring of 3.17 and 3.88 on the level of use of zoom technologies which are below the mean benchmark of 2.50 set for the study, while they disagreed to item 12, 13 and 14 with mean rating of 2.23, 2.33 and 2.42 which are above the mean benchmark of 2.50 set for the study as showed in the table above. This result indicated that the level of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State was relatively low among students.

Table 4:5 Benefits of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State

SN	ITEMS	X	SD	Remark
16	Zoom facilitate discussions between lecturers and students and among students with direct communication	3.62	0.72	Agreed
17	Zoom fosters students understanding of the interrelationships of students worldwide	3.82	0.76	Agreed
18	it provides students with access to online lecture notes, sample exams in their learning fields	3.96	0.79	Agreed
19	it allow students to learn at their own pace within and out of school	3.86	0.77	Agreed
20	it provides access to open learning environment for criticizing and ridiculing students' contributions	3.45	0.69	Agreed

Key: X= Mean, SD= Standard Deviation

Source: Field Survey, 2021

Table 5 showed the mean and standard deviation on the benefits of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State. The respondents agreed to all items on the benefits of using zoom technologies with mean ratings of 3.62, 3.82, 3.96, 3.86 and 3.45 which are above the mean benchmark of 2.50 set for the study. This result indicated that there are several benefits of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State.

Table 4:6: Challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State

SN	ITEMS	X	SD	Remark
21	High cost of internet facilities	4.21	0.84	Agreed
22	High cost of internet access (subscription)	2.94	0.58	Agreed
23	Lack of knowledge of how to use mobile zoom app. Effectively	3.97	0.79	Agreed
24	Poor internet services by network providers (available but slow)	4.03	0.80	Agreed
25	Infrequent internet services (rarely available)	3.49	0.87	Agreed

Key: X= Mean, SD= Standard Deviation

Source: Field Survey, 2021

Table 6 showed the mean and standard deviation on the challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State. The respondents agreed to all the items that high cost of internet facilities; high cost of internet access (subscription); lack of knowledge of how to use mobile zoom app. effectively; poor internet services by network providers (available but slow) and infrequent internet services (rarely available) with mean ratings of 4.21, 2.94, 3.97, 4.03 and 3.49 which are above the mean benchmark of 2.50 set for the study. This result indicated that there are several challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State.

DISCUSSION OF FINDINGS

Findings from research one revealed that the level of awareness of zoom technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State was high to a great extent. This finding is in line with the study of Chipunza (2013), and Mbah (2016), studies that confirmed

that the utilization of zoom cloud technology and Whatsapp video conferencing in the classroom would provide the teachers with a more effective way to transfer knowledge and information to students, and also enable the students to learn in a more productive way. And Prensky (2011) also stated that young people of the digital native generation possess sophisticated knowledge of and skills with information technologies. Whether Nigerian students use these facilities, knowledge and skills for zoom technology is yet to be empirically ascertained.

Findings from research question two revealed that students find it easy in using zoom Technology for teaching and learning among undergraduates students in Ambrose Alli University Ekpoma Edo State. This finding is in line with the study of Brahma (2020) which stated that the use of Zoom as an online based learning in Sociology and Anthropology subjects for the students majoring in Citizenship Education at STKIP Kusumanegara Jakarta result showed that Sociology and Anthropology courses become more interactive and in demand by students because the online learning media used are very innovative and effective according to the current development. Through zoom, lecturers and students can conduct video conference which is used as a means of communicating in online learning and the recordings made during the meeting are more secure.

Findings from research question three revealed that the level of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State was relatively low among students. This finding is in line with the study of Baro and Godfrey (2015) which stated that lack of skills power failure, lack of time, lack of facilities and the attitude of some zoom user were deterrent to the use of Web 2.0 tools in Africa.

Findings from research question four revealed that there are several benefits of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State. This finding is in line with the study of Pratiwi, Afandi, & Wahyuni, (2019), where they stated that zoom cloud meetings is a very useful alternative application for virtual meeting to facilitate communication with many people without making direct contact and be able to support learning needs in today's digital era.

Findings from research question five revealed that there are several challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State. This finding is in line with the study Ifeanyi et al (2021) who stated that the result of their research revealed that all the participants mentioned that buying the data bundle for the internet is expensive and can therefore frustrate them. Using the zoom platform requires a bandwidth, which will be problematic for participants who lack strong internet connections or have limited data plans and lack of computer/android phone.

Summary

This study was carried out to investigate the use of Zoom Technology for teaching and learning among undergraduate students of Ambrose Alli University Ekpoma Edo State. The descriptive survey design was adopted for the study. The population of this study covers all undergraduate students in the Faculty of Education, Alli University Ekpoma, Edo State. A total number of two hundred and ninety five (295) responders were used as sample for this study. Data collected were analyzed with tables and simple percentages, mean and standard deviation. The result of data analysis of the study revealed that:

1. the level of awareness of zoom technology for teaching and learning among undergraduates in Ambrose Alli University Ekpoma Edo State was high to a great extent;
2. Students find it easy in using zoom Technology for teaching and learning among undergraduates students in Ambrose Alli University Ekpoma Edo State;
3. the level of use of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State was relatively low among students;
4. There were several benefits of Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State; and
5. There were several challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University, Ekpoma, Edo State.

RECOMMENDATIONS

Based on the findings of this research, the following recommendations were made:

1. Zoom technology phone apps should be encouraged among undergraduate students in Edo State.
2. To make the students become increasingly aware of zoom technology for learning, lecturers need to incorporate zoom technology activities in curriculum delivery, task design processes and outcomes, teaching pedagogies, and measurements of actual learning.
3. Government agencies, University management, or Students' Union Government should organize seminars and conference to intimate students more on the constituents and benefits of zoom technology to their course curriculum.
4. Universities should intensify ICT training for students. They should expose students to a range of co-curricular practical tasks on zoom technologies to help students become more aware and motivated for virtual learning.
5. The Universities should provide adequate, reliable zoom technology learning platform or software and tools to interconnect all students' and lecturers' for zoom technology learning.

CONCLUSION

Based on the findings of the study, it was concluded that the level of awareness of zoom technology for teaching and learning among undergraduates was high to a great extent; Students find it easy in using zoom Technology for teaching and learning among undergraduates students; the level of use of Zoom Technology for teaching and learning among undergraduate students was relatively low among students; there were several benefits of Zoom Technology for teaching and learning among undergraduate students; and there were several challenges faced in using Zoom Technology for teaching and learning among undergraduate students in Ambrose Alli University Ekpoma Edo State.

The study also concluded that use of zoom technology for learning has emerged as a useful source for promoting learning and preparing youths to participate in a global economy. The important point that must be considered is the continuity of the video conference at this zoom depends on the internet network so that lecturers and students must use good and supportive internet access in order to use the zoom application for taking part in learning activities.

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