



Virtual Learning Environment: A Sustainable Alternative Strategy for Teaching Business Education amid Covid-19 Pandemic

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ABSTRACT

This paper reviewed virtual Learning Environments as alternative teaching and learning strategies for teaching Business Education during and after COVID-19 crisis in Tertiary institutions in Nigeria. The sudden disruption caused by COVID-19 on academic activities in Nigeria came as a shock to many tertiary institutions as the academic session was abruptly halted. Most the tertiary institutions if not all, were not prepared for the abrupt disruption. As tertiary institutions in Nigeria remained closed, it is imperative to look at how Online Learning Environments can be used to ensure that teaching and learning activities continue in the context of the COVID-19 pandemic and afterwards. There is a need for a shift from the traditional face-to-face teaching strategy to alternative teaching and learning strategies. The paper identified some Virtual Learning platforms that are aimed at delivering ICT-supported remote learning such as Webex, Google Classroom, Telegram, Google Hangout Meet, Microsoft Teams, Blackboard, Video Conferencing, WhatsApp and Facebook that provide a different type of learning experience than traditional face-to-face context. Nigerian tertiary institutions must face the realities of the present-day global system of education, because learning activities may not simply return to the business-as-usual; face-to-face method of lecture delivery.

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INTRODUCTION

The education sector is seen as one of the most important sectors in every economy in the world, it has been the backbone of all meaningful developments of every nation the world over. The sustainability of education is of great and paramount importance for a nation's growth and development (Owusu-Fordjour, Koomson, & Hanson, 2020). The Nigerian education sector is faced with many problems and challenges of different

magnitudes in the past years, the recent challenge is the Corona Virus Disease (COVID-19) pandemic which adversely affects educational systems globally, leading to the general shutting of schools at all levels of education in the affected countries, and Nigeria is of no exception.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) is a body under United Nations (UN) that is responsible for issues regarding global education and is tracking the impact



of the pandemic on education. According to UNESCO (2020), over 180 countries have closed down schools nationwide with students sitting at home, Nigeria is never an exception. The Coronavirus pandemic has wholly affected educational system worldwide, leading to the widespread closure of educational institutions in nearly all countries, claiming over 91% of the world's student population (UNESCO, 2020), with more than 1.2 billion children out of the classroom (Li & Lalani, 2020). Thus, COVID-19 pandemic has created significant challenges and problems for the global higher education system (Joseph et al., 2020). The shutting of schools at all levels of education to manage COVID-19 have impacted on both social and economic matters; these issues include student debt, digital learning, food insecurity, health care, to mention but few (Cecco, 2020; Feuer, 2020; Jamerson, Josh, & Joshua, 2020; Karp & McGowan, 2020). Countries around the globe are battling to halt the spread and impact of the coronavirus pandemic (Jacob, Abigeal, & Lydia, 2020). Considering the abruptness of this pandemic and its impact on the Education system, it appears that response is a matter of urgency. This necessitates the need for a robust alternative delivery structure in our tertiary institutions in North-Eastern Nigeria.

Initial responses in countries around the globe that were affected by COVID-19 pandemic (mostly Asian and western world) were focused on the delivery of online teaching to students who were unable to go to school because of the schools' closure, most University faculties resort to virtual presentation mode, taking into account the suitability and appropriateness of technology and websites that could be affordable and accessible by both students and teachers. Tertiary institutions around the globe have resorted to looking for new strategies to cope and

adapt to these sudden changes in academia. (Perrotta, 2020).

The first case of COVID-19 in Nigeria was confirmed on 27th February 2020 in Lagos State. To contain, manage and control the spread of COVID-19, as the cases of reported COVID-19 pandemic increases, the Federal Ministry of Education announced the confirmation of the COVID-19 cases and directed the closure of all educational institutions (EiEWG, 2020; Jacob et al., 2020). With the coming of COVID-19, all the three levels of education in Nigeria are faced with a great setback, schools were closed for months, students remained at home without studying because of both national and state governments enforced lockdowns (Adnan, 2020). All schools (public and private schools) were closed across all the 36 states including the capital territory-Abuja as part of the Federal Government directives to manage and control the widespread of the COVID-19. The adverse effect of this pandemic has been felt by both the education managers, teachers and students in primary, secondary, and tertiary institutions the disruption of academic sessions (Adeoye, Adanikin, & Adanikin, 2020). As a result of this virus and the shutting down of schools in Nigeria, the tertiary system of education was adversely affected. The effects include disruption of the academic calendar, suspension of local and international conferences, gaps in teaching and learning process, loss of jobs by private school teachers (Jacob et al., 2020). This and other reasons indicate that there is a need for alternate delivery structures, mainly in relation to rapid digitalization of curriculum using online environment.

The tertiary level of education in Nigeria is made up the public and private university communities, polytechnics, mono-technics, and colleges of education (Jacob et al., 2020), these higher institutions of learning offer courses in diverse disciplines among which is Business



Education. To strengthen Nigerian response to COVID-19 now and into the future, there are vast and significant strategies to adopt and embed in teaching Business Education amidst COVID-19 in Nigerian Universities. Thus, Nigerian education system at the tertiary level demands changes and innovations in the process of teaching and learning, teaching can be done in line with advances in ICT through online learning, also known as e-learning.

THE STATE OF NIGERIAN TERTIARY INSTITUTIONS AMID COVID-19 PANDEMIC

Educational institutions at all levels in Nigeria remained shut since 23rd March 2020 about six months, however, recently students in exit classes; Primary 6, JSS3 and SSS3 students, resumed on 27th July 2020 to commence their final examinations (Common Entrance, BECE, SSCE), leaving tertiary institutions closed and students sitting at home. This has left many students and teachers in tertiary institutions in a predicament and stranded as some of these institutions were at the point of preparing for the end of semester examinations, fresh admissions, beginning of a new session, considering of results to mention but few (Adeoye et al., 2020). This led to a protest on 19th August 2020 by the Nigerian students under the umbrella of National Association Nigerian Students (NAUS) who felt that reopening of schools is due. The state minister for Education promised to return to the Presidential Task Force (PTF) on COVID-19 to review the situation and he urged the protesting tertiary institutions' students to exercise a little more patience with the government (Azeezat, 2020).

Up to the time of writing this paper, no date has been decided by the Federal Ministry of Education for schools' resumption as rightly stated by the Minister of State for Education, Mr Chukwuemeka Nwajiuba during the briefing of the Presidential Task Force on COVID-19 on

Monday 24th August 2020 in Abuja. The Minister in his briefing expressed optimism that the resumption date will soon be fixed and announced, he further disclosed that the Honourable Minister of Education had earlier met with stakeholders in tertiary education on the same issue (Yomi, 2020).

Unlike public tertiary institutions, the private tertiary institutions, specific universities in Nigeria have resorted to and embraced e-learning platforms as a means to ensure that their academic sessions are not totally and abruptly halted. These universities switched to Information Communication Technology (ICT) as a way of teaching and learning process to facilitate the transfer of knowledge amidst COVID-19. These e-learning platforms include; Zoom, Telegram, videoconferencing, google classroom Microsoft teams, google hangout (meet), skype, Bamboo learning, google classroom, Docebo, WizIQ, Adobe captivate, Elucidat, Blackboard learn to mention but few (Adeoye et al., 2020). It is highly unfortunate and regretted that majority of the Nigerian public tertiary institutions have not been able to adapt to the e-learning platforms as alternative teaching and learning strategy because of populated classrooms, sustainable internet facilities, the calibre of lecturers, etc., and above all, the public tertiary institutions majorly depend on grants from governments and interventions from TETFund. These pose a serious challenge to both teachers and students. However, the COVID-19 will serve as a reminder of the inadequate resources in the Nigerian academic institutions where insufficient access and availability of the internet and the lack of latest technology affected institutional responsiveness and students' capacity to partake in online learning.

The sudden disruption caused by COVID-19 on academic activities in Nigeria came as a shock to many tertiary institutions as the academic session was abruptly halted.



Most if not all tertiary institutions were not prepared for the abrupt disruption, now the major challenge is how the adverse effect of this pandemic affect tertiary institutions, hence the need for alternative strategies for teaching and learning specifically – Business Education. This is seen as a step in the right direction. There is an urgent need for higher academic institutions to improve their curriculum to embrace online instructional strategies (A. Muhammad & Kainat, 2020). That being said, moving from an environment of conventional teaching/learning to online teaching/learning should be the top priority as it is not known when this pandemic will disappear completely, educational institutions across Nigeria should reconsider using the available resources to facilitate online teaching/learning as a feasible decision to fill the classroom void for more than six months. This will surely reduce the risk of infection for students before the normal conventional activities are recommenced (Kaur, 2020).

To cushion the adverse effect of COVID-19 on the education sector, developed nations resort to online learning environments for their teaching and learning purposes, unfortunately, this is not the experience with developing countries like Nigeria where education sector is faced with numerous challenges that hinder a shift from the traditional teaching pedagogy to E-learning teaching strategy. These challenges include inadequate infrastructures, varying degree of preparedness of the institutions, poor funding, dilapidated state of schools, lack of internet facilities and policy issues in the Nigeria education sector (Adeoye et al., 2020). For these reasons, tertiary institutions across Nigeria need to innovatively begin to use online environment lecture delivery to maintain the tertiary institutions' calendar and session dates. In light of the foregoing, this paper examines online learning

environments as an alternative strategy for teaching and learning in Nigerian tertiary institutions with a specific reference to Business Education Students in Nigeria.

THE VIRTUAL LEARNING ENVIRONMENT

Virtual Learning Environment is a learning environment with no physical location and in which the teachers and students are separated by space, it takes place over the internet. Highlighted that Virtual learning is defined as the application of computer network technology, mainly over or via the internet, to deliver information and instructions to students or group of students (Chola, Phebby, Rini, & Rekha, 2020). It is a learning platform that gives room for sharing and exchanging educational ideas and materials between teachers and the learners through the internet web, it is often referred to as "e-learning". A virtual learning platform is a form of online education or distance learning that employs the use of the internet and Information Technology (IT) resources for content sharing between teachers and students (Ojeniyi, Enegesele, & Obafunmisio, 2020). The virtual learning will facilitate the shift away from top-down lecturing and passive students to a more interactive, cooperative approach in which teachers and students co-create the learning process.

The virtual learning environment is a learning platform that uses mobile communication gadgets such as mobile phones, iPad, Personal Digital Assistants (PDAs) and tablet PC (Nawi, Hamzah, & Abdul Rahim, 2015). Virtual learning environments provide the students with the opportunity to engage and experience the learning process at anytime and anywhere regardless of their locations (Sharples, Taylor, & Vavoula, 2007). The virtual Learning method is considered as an alternative for the traditional face-to-face method (Abas, Peng, & Mansor, 2009). The virtual learning environment provides for



both teachers and students with the flexibility to create spontaneous, informal, and privacy without going out of the learning context (Ally, 2009). It aims to deliver instruction to students not present in the classroom. It provides access to learning resources when the teacher and students are separated by time, distance or both.

Tertiary institutions around the globe have been hit directly or indirectly by the novel COVID-19 pandemic, this led to the replacement of the conventional physical/face-to-face learning by virtual learning to achieve uninterrupted education. The first University to switch to virtual teaching in England for a whole academic session was the University of Cambridge, this was done to contain the spread of the novel COVID-19, other Universities around the globe follow suit (Ellen, Geetha, & Laura, 2020). The University of Cambridge has become the first university in the United Kingdom to move to teach and learning online for a full year 2020/2021 to limit the spread of Covid-19 (Europe News, 2020). Other universities around the world have since followed the move (Europe, 2020).

The outbreak of Novel Coronavirus (COVID-19) has unveiled the weakness of the current structure of the Nigerian educational sector (Isaac, Ajamu, & Oluwakorede, 2020). The preventive measures recommended by (WHO) such as social distancing which suggested that 1-2-meter distance must be maintained to limit the number of people in any gathering. Enforcement of this preventive measure forced the Nigerian government to shut down schools since 23rd March 2020. This renders the conventional face-to-face learning the biggest casualty of COVID-19 (Fottrell, 2020; McKie, 2020). This necessitated the need for robust alternative e-learning teaching/learning strategies. An e-learning platform is an online form of learning in which lectures are broadcast and

which supports social distancing (Ojeniyi et al., 2020).

Most developed economies around the globe embraced virtual platforms as a teaching/learning strategy. Therefore, the government of Nigeria cannot be irresponsible by not taking the advantage of the present global stand-down to restructure and revitalize her educational system based on the global realities. A time has come when Nigerian government must wake up from its slumber to reconsider and reorganize her educational sector in such a way as to ensure sustainability amidst the novel COVID-19 pandemic and any other future social disruption if at all arises. Nigeria should maximally explore e-learning opportunities as an alternative strategy for face-to-face lesson delivery.

IMPORTANCE OF THE VIRTUAL-LEARNING PLATFORMS TO NIGERIAN TERTIARY EDUCATION SYSTEM

Nigerian tertiary education system is characterized by the conventional physical/face-to-face method of teaching/learning that confines students within the concrete classrooms. If the trend takes a shift from this old-fashioned practice to e-learning alternative, the students may become more interconnected and may come out of their shyness to become courageous and develop the zeal to speak up (Isaac et al., 2020). Higher learning institutions will be able to offer a variety of sustainable services to their students where ever they are as it is the current trend in developed nations. Virtual learning platforms will help remove the barrier imposed on students by the COVID-19 pandemic (Lau & Ross, 2020). Virtual learning platforms provide the opportunity for institutions to reach students remotely to minimize the effects of education disruption (UNESCO, 2020).

Virtual learning platforms provide the student's adjusted forms of delivering



learning content as well as tools that help to strengthen students to engage in individual and collaborative learning, in which students cooperate on group assignments. Virtual learning in which all of the learning activities take place online enables teachers to transfer knowledge with an excessive number of students. It is an undeniable fact that virtual learning is considered to be the best alternative solution to ensure sustainability in learning in the wake of COVID-19. The main benefit of a virtual learning environment is the remote participation of students around the world through the provision of accessibility to higher education and an online knowledge-based centre (Vikramaditya & Fotis, 2011). Virtual learning help provides learners with the access to learning resources anywhere, anytime, and in various formats, therefore, it has the potential to enhance profound students' learning competencies and to allow students to form their knowledge.

To cope with the present-day realities, tertiary institutions should be actively preparing virtual learning platforms for students to engage both during the COVID-19 crisis and afterwards because the pandemic aftermath may lead to massive budget cuts and redundancies. It is inevitable that when tertiary institutions reopen, things will be different, hence virtual learning will be the best alternative. The following virtual learning platforms are suggested:

Google Classroom

Google Classroom is a platform that brings together Google's G-Suite tools for teachers and students' consumption. It also acts as a digital organizer where teachers can keep class paperless materials and share them with students (Kate, 2020). Google Classroom is a free and collaboration-friendly tool that helps teachers efficiently manage and assess students' progress, through enhanced connections with learners

from school, from home, or on the go (Google, 2020). Teachers and students benefit from the education-friendly platform "Google Classroom" by making it possible, the benefits of paperless sharing and digital collaboration to classrooms. Google Classroom is used by millions of teachers and students around the globe, placing it as one of the frequently used online tool (Kate, 2020). It helps teachers manage the complexity of ecosystems of learning and keep everyone connected, active and productive.

Google Classroom is a tool that Simplifies teaching and learning by allowing teachers to add students directly, or share a code or link so that the whole class members can join and be carried along, classrooms and classwork can be set up in minutes and appear on students' calendars, it provides an avenue for easy communications and updates with guardians/parents (Google, 2020). Google Classroom provides new ways to collaborate and innovate. The Google virtual reality technology assists students to co-create immersive experiences for deeper exploration and learning.

The primary users of Google classroom, are teachers and students, they can have access to Google Classroom via their Google accounts mostly provide by their institutions (Kate, 2020). Google classroom ensures a strong connection between students and teachers where a teacher can connect with students from anywhere with a hybrid approach for both in-class and virtual sessions. It allows teachers consistently and transparently grade students' work. Google classroom is a suitable learning tool that keeps students' data and records protected where classroom activities are restricted to only members of the class for privacy issues (Google, 2020). Students can submit their work through google classroom, this can help teachers easily mark assignments during any free and



convenient time and grades without having to carry loads of papers around.

With Google classroom, teachers can streamline how they manage classes, they can digitally organize, distribute, and collect assignments, course materials, and students' work, communicate with students about their classwork, give students timely feedback on their assignments and assessments. Using Google classroom, teachers can equally streamline formative assessment which can be used to assist students who might require more support from teachers or extra challenges. Teachers can customize assignments to certain students or group of students in a class, teachers can be able to check in with individual students confidentially to check whether they need assistance or have any questions (Kate, 2020). Google Classroom can also be used to update parents who are referred to as guardians about students' classwork, through receiving emails summaries about missing work, upcoming work, and other academic activities. Google Classroom is an engaging and interactive platform for students. Teachers and students can share other types of media, including pictures, websites links, videos on YouTube, and screencasts.

Google Hangouts Meet

Google Hangouts now known as Google Meet, it is developed by Google as a video messaging tool that offers users with the opportunity to collaborate remotely, exchange instant messages, video chat, and share pictures, computer screens, as well as files. For educators, Google Hangouts Meet is a great tool that allows students to hold scheduled virtual training classes, engage and collaborate outside of the classroom. It overcomes geographical barriers. Teachers can use Google Meet to create an exclusive Meet link for students, in this way it makes it easier for both teachers and students to join class video meetings. Teachers can

exclusively create the Meet link. All Meet links created are nicknamed, which assist teachers to manage participants.

Google Hangouts Meet, offers teachers a face-to-face time with their students, it becomes the best alternative online strategy to teaching from a physical or conventional classroom. Hangouts Meet helps schools maintain the flow and sharing of communication among teachers, students, parents, guardians and fellow faculty members across a secure platform. Google Hangouts Meet is a more preferable alternative tool when it comes to distance learning. Live lessons and presentations can be broadcasted or transmitted via Google Hangouts Meet across small groups or classes (up to 250 participants for free), schools can record training and instructional videos for offline future access (MobileMind, 2020).

With Google Hangouts Meet teachers will be able to see, listen and speak to their students, which immensely and effectively reduces the distance in online learning. Online lessons, demonstrations and catch-ups can be scheduled or conducted at teachers and students' convenience and continued a free-flowing channel of communication. Through this process, the level of students' engagement and understanding will scale up and assist teachers to identify any gaps in students' learning, through group-wise interactions, Q&As and real-time charts (MobileMind, 2020).

Google Hangouts Meet offers offline opportunities for both teachers and students to cater for internet connectivity issues that may be a barrier to online learning. It allows teachers to pre-record or share recorded sessions using Google Docs, Sheets and Slides which can be accessed by students at a later date in offline mode. In this way, it caters for students who missed the online sessions. Teachers can send shareable links to view the videos through



Google Classroom, email or school website. Parents and guardians that assume the teachers' responsibility at home, stand to benefit from Google Hangouts Meet (MobileMind, 2020).

Telegram

A Telegram is a software designed for communication and instant messaging, it offers many possibilities such as sending numerous media files and making voice or video calls (TheScientificWorld, 2019). Telegram is a mobile application that can be used for teaching and learning, it is a tool for mobile learning which allows users to communicate using mobile device and computer. Telegram is viewed as a student-centred asynchronous teaching/learning platform that employs the use of online learning resources to facilitate information sharing among teachers and students or between students and students outside the constraints of time and place. This method combines self-study with asynchronous interactions to promote teaching/learning. Telegram works effectively on personal computers, smartphones, Laptop, iPad, Tab, and Web (Adesope & Nwaizugbu, 2018). Via Telegram, messages and photos with a self-destruct timer can be sent and it can screenshot these images or texts before they disappear within the secret chat. The application has enhanced security, which attributes to time-tested algorithms that blend security with highspeed delivery and reliability (Williams, 2014).

According to Denis (2017), Telegram is beneficial for teaching and learning as it concerns privacy issues, it is safer as everything is encrypted from the chat to the calls. Teachers and students stand to lose nothing as all conversations and contents are synchronized and saved in the cloud, conversations are protected by password, no one can access or read them. Students can communicate with colleagues by searching names or contact numbers and

finally, Telegram make it possible for students to create a super group that can accommodate up to 5, 000 members. Through this medium, students and lecturers are often engaged on an issue related to the course (Zanaton & Sumaiyah, 2017).

Telegram application as a learning platform offers conveniences for teaching and learning. For example, it can be downloaded easily and for free from the Play Store using Android/smartphones. It can be handled easily and offers users (students and teachers) options the opportunity to access it via different types of communication devices such as smartphones, tablets and computers. Documents, images, audio and videos can be uploaded for teaching and learning purposes (Zanaton & Sumaiyah, 2017). Thus, a teacher can use the Telegram program to share his teaching material to his students; he can use it in line with the special and unique educational conditions to accomplish the highest benefit in the aspect of education (TheScientificWorld, 2019). Telegram educational features include the following:

- It offers security and privacy to both students and teachers
- Tasks can be done faster
- It ensures effective communication and active participation between the academic community
- Share tasks and duties among learners
- Announcing the dates and time of lectures and study schedules (TheScientificWorld, 2019).

Zoom

Zoom provides simplified video conferencing and messaging across any device. This enables quick adoption with meeting capabilities that make it easy for students and teachers to start and join the meeting and collaborate across any device, students can join classes virtually, from any



device. Zoom Meetings help students and teachers synchronize their calendar system and deliver streamlined video conferencing through desktop and mobile. It provides robust security settings such as encryption, role-based security, passcode protection, waiting rooms, etc., that guarantees disruption-free meetings (Zoom, 2020).

Zoom is built for modern teams, teachers and students can bring HD video and audio to zoom meetings that provide excellent clarity and quality to virtual and hybrid classes with support for up to 1000 video participants where multiple excessive numbers of student participants can share their screens simultaneously, interact and co-annotate during Zoom meeting. Students can equally raise hands, record meetings locally or to the cloud, with searchable transcripts and chat with groups (Zoom, 2020).

Zoom increases learning outcomes by increasing students' involvement and learning retention with virtual and hybrid classrooms and micro-learning. Video breakout rooms, multi-sharing, polling, and group chats add a new level of engagement to virtual and hybrid classes (Zoom, 2019). Zoom helps students confidently work from home as it gives clear audio with advanced background noise suppression, they can share slides as their virtual background (Zoom, 2020).

Webex

Webex is an application that enables teachers to connect with students wherever they are around the globe and allows them to distribute learning across a large number of students, it is a tool that is suitable in handling all meetings e.g. full-fledged video conference with many offices – this transforms virtual classrooms into life-like experiences for students and teachers. Through Cisco Webex, students are more digitally engaged, it enables teaching/learning to take place regardless of

the students' location by engaging students in a connected student community. Teachers reach more students in more places through remote access and deliver better education experiences to the students (CiscoWebex, 2020).

Webex for Classroom is an online platform that helps users join or host class sessions, listen and search recordings, track class attendance, and provides a secure and easy-to-use web-based learning experience. It can be used by teachers to breakout students into small teams or groups to share ideas, work together on projects, and edit files if the need arises (CiscoWebex, 2020). Business Education teachers can use Webex on all devices and from wherever they are. The video capabilities of the Webex help teachers become closer to their students as they can meet, communicate, and collaborate from remote locations without the need for physical contact. This will help teachers devote more time for making teaching/learning sessions better for the students (CiscoWebex, 2020).

Microsoft Teams

Microsoft Teams is a digital hub for communication and collaboration, during remote/online learning. It is a great all-inclusive hub for the collaborative classroom. Microsoft Teams offers an online classroom that brings together virtual face-to-face connections, assignments, files, and conversations into a single place accessible on either mobile, tablet, PC or browser, it is free for schools and universities (Microsoft, 2020). Teachers can use the Teams built-in meetings features to hold and coordinate meetings with students, work together using virtual whiteboards, and share documents among students. Microsoft Teams improve accessibility and foster an all-encompassing classroom, Teams is a non-stigmatizing platform for online learning as it has built-in capabilities like the Immersive



Reader, message translation, and live captions for meetings (Mike, 2020).

Microsoft Teams offers meaningful feedback using built-in-rubrics for effective assessment of learning outcomes. These feedback mechanisms assist students to make meaningful adjustments and improve their learning experiences, in this way, offers teachers a consistent and transparent for grading students' performances. Therefore, Microsoft Teams makes it possible for teachers to distribute, provide feedback, and mark student assignments turned-in via Teams using the Assignments tab, Quizzes can also be given to students via integration with office forms. Microsoft Teams possesses a multifaceted built-in-OneNote Class Notebooks for note-taking which is used for a variety of online lessons and class activities. Every student has a personal workspace plus a content library for handouts, and a collaboration space for lessons, practical and creative activities. All sorts of lessons, content, and interactive apps can be embedded onto the OneNote page (Mike, 2020).

Blackboard

Blackboard is an excellent online learning tool mostly used for online conferencing. It is designed to create more flexibility and efficient engagement for teachers, captivating student experiences, and improving institutional outcomes. With this platform, tertiary institutions are driving excellence throughout the student's journey. With Blackboard teachers can drive academic effectiveness, engage students and enable sustainable and improved education experience (Blackboard, 2020).

Tertiary institutions can use Blackboard as e-learning tool to connect to a conferencing session anytime, students can join any web conference from an iPhone, iPad, or Android device for a fully-featured collaborative experience, provide presence and instant messaging tools to students so

that they can see who's online and available for collaboration and mentoring. Podcasts, voice presentations, and recorded feedback can be added to make asynchronous teaching/learning sessions more lively and interactive and appealing (Med, 2018). Blackboard helps higher institutions build a more all-encompassing online-learning environment and boost the students' morale for an improved learning experience with regards to the course content's usability and accessibility (Blackboard, 2020).

Both academic staff and students stand to benefit from using Blackboard. Probable benefits which Blackboard offers include increased availability, speedy feedback, enhanced two-way interactions, follow-up, and building skills such as organization, time management and communication. In terms of increased availability, Blackboard can be easily and conveniently accessible to students through the internet at anytime and anywhere, it offers students, the ability to view and download course materials and other relevant information plus submitting assignments online when they are readily complete. The increased availability appeals to most students as they appreciate the convenience (Heirdsfield, Walker, Tambyah, & Beutel, 2011).

Blackboard features that simplify interactions include announcements, discussions, virtual classroom, chat and email; these features of Blackboard encourage student-centred approaches to learning. In both synchronous and asynchronous discussions, an environment of support can be established within the student associates. These virtual interactions also allow students and academic staff to communicate and work together without having to meet together, therefore Blackboard is useful for time effectiveness for the academic staff and students alike (Heirdsfield et al., 2011).



Video Conferencing

A video conference is a live, visual connection between two or more persons residing in distinct locations for communication. Video conferencing provides transmission of both static images and text, full-motion video images and high-quality audio between multiple locations. It is important as it connects people who would not normally be able to form a face-to-face connection (Margaret, 2020). In education, it can improve performance amongst students as well as provide an improved way of communicating and interacting among teachers and students. Video conferencing offers great potential for learning in Higher Education. The impact lies in creating greater opportunity for the exchange of ideas which contributes more to effective teaching and learning, the exchange of ideas might be between teacher and students or between students and their peers. Video conferencing allows teachers and students in separate multiple locations to connect in real-time, providing live images and audio between two or more places. It is now making its presence known in classrooms as it is increasingly being embraced by educational institutions to advance with and adopt developing technology. It allows teachers to connect with other classes, introduce guest lecturers and speakers from around the globe, it offers the advantage of taking students on virtual excursions to witness live events (Videonations, 2020). Video conferencing offers benefits to tertiary institutions because it is cost-effective as it saves educational institutions both time and money, creates a global village, makes dreams a reality; there seems no end to its possibilities, and enrichment - the experiences it brings to lessons increase the standard of curriculum, offering students a more comprehensive understanding of the concepts taught (Videonations, 2020).

WhatsApp

WhatsApp is one of the most popular and widely used communication platforms today. It is primarily a communication application but shares several features with social media applications. It allows smartphone users to quickly and easily exchange texts/audio and video calls/messages for free, and make calls, WhatsApp provides students with the ability to send and receive a variety of media, such as images, videos and audio media messages (Simon, 2020). Though it is still new as a learning tool, can be an appropriate platform for academic success provided the correct method is applied during teaching and learning process (Tezer, Taşpolat, Sami, & Fatih, 2017). WhatsApp is a free messenger application that works across multiple platforms and is being widely used among tertiary level students to send multimedia messages such as pictures, videos, audios along with simple text messages. An excessive number of tertiary students prefer to use WhatsApp for learning purposes (Robinson et al., 2015). This shows that WhatsApp has the potential to grow as a tool for teaching and learning in tertiary institutions.

WhatsApp can be used to teach Business Education because it allows the formation of groups of learners up to 256, it is cost-effective and easy to use, and this gives it a competitive advantage over the other E-learning platforms. It is also considered a safe learning application because it offers an end-to-end encryption (E2EE) protocol. Since 2014 E2EE has been used to prevent data disclosure being transmitted over a network (Simon, 2020). WhatsApp can also be used to check if messages delivered by the academic staff have been received properly and read by the target students. WhatsApp allows for a longer-term learning impact and helps ensure higher student engagement and involvement. For example, large video files



of 20 megabytes can be split into smaller multiple videos and shared to a WhatsApp group for learning purposes, jpeg and pdf formats can also be shared among students (Simon, 2020).

Individual learning can take place via WhatsApp, the teacher can use it for one-on-one text exchanges to address individual students' challenges, expectations and needs. Updates on the specific lecture, discussion on course content, continuous assessment, assignment submission and collection can be communicated through WhatsApp Platform. Time differences, physical distance or office working hours are no longer problems with WhatsApp, students can get in touch with their course lecturers at their convenient times, this will reduce delays in giving feedback to the students, in this way, learning is enhanced and becomes much easier (Simon, 2020).

Facebook

Facebook is viewed as one of the most popular platforms used for online social networking among tertiary institution students (Muhammad, Norlida, & Mohamad, 2010). It is a social media platform which provides numerous social benefits to tertiary level students, and represent a viable mechanism for educational information exchange, sharing and learning. The nature of Facebook enables the improvement and stimulation of online Learning, for, it makes it particularly easy for students not only to connect and establish relationships with their virtual classmates but also to exchange e-Learning information (Christopher, 2015).

Using Facebook for online teaching and learning offers some strong points such as accessibility to everyone; Facebook can be easily accessible at anytime, anywhere, as such, sharing knowledge becomes particularly easy and efficient. It is ideal for social learning; when using Facebook as an online learning platform, students are

allowed to discuss ideas, challenges, ask questions, share knowledge and experiences, and discover new information. Facebook is the perfect platform that improves teamwork and active collaborative learning. It augments students' engagement; the popularity and user-friendly nature of Facebook make it easier for the more controlled class members to freely express their ideas and concerns regarding the topic of discussion, Facebook platform foster online discussion, and even inactive learners, can benefit and participate in online Learning sessions by asking questions or by making responses, comments and suggestions. It is cost-effective; Facebook is probably the most inexpensive means for sharing online learning content among students (Christopher, 2015).

CONCLUSION

Nigerian tertiary institutions must face the realities of the present-day global system of education, because learning activities may not simply return to the business-as-usual, face-to-face method of lecture delivery. Effective education requires engagement from both the students and the teachers, therefore, with online learning platforms described in this paper, institutions can design their institutional e-Learning systems that are engaging, interactive, and collaborative for their students. Instead of academic staff and their students passing information between themselves in a passive manner, online learning platforms allow them to partake in creating their learning environment. Combination of media like videos, pictures and voice notes along with constant availability of facilitator and learning anytime anywhere, has made e-learning platforms convenient and suitable tools for teaching-learning activity. The COVID-19 experience will serve as a reminder of the inadequate resources in the Nigerian



academic institutions where insufficient access and availability of the internet and the lack of latest technology affected institutional responsiveness and students' capacity to partake in online learning. A time has come when Nigerian government must wake up from its slumber to reconsider and reorganize her educational sector in such a way as to ensure sustainability amidst the novel COVID-19 pandemic and any other future social disruption if at all arises. It is noteworthy to put into cognizance, that each online learning platform has its strengths and weaknesses and its peculiarities that you should respect and try to work within its boundaries.

RECOMMENDATIONS

There is a strong need for special arrangements to be made between tertiary institutions and technology firms to provide, for cheap and discounted monthly internet data that aimed at tertiary level students to facilitate and allow them easy access to learning materials online. To cope with the current trend in technological advancement, the Nigerian higher education system needs to shift from the conventional face-to-face method of lecture delivery and embrace the rapid advancement of digital technologies. Tertiary institutions should take advantage of the challenges posed by the COVID-19 pandemic on tertiary education and use it as an eye-opener or a wake-up call to always be on the alert and have a contingency plan.

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