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Exploring the potentials of zoom cloud meeting for online instructional delivery amidst unprecedented events in Nigeria

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Article Info

Abstract

The growing rate of insecurity and unprecedented events in Nigeria and the world at large is sounding a huge call for training educators and students to familiarize with the utilization of new technologies for teaching and learning at their comfortable location. Zoom is one of the cloud-based video-conferencing softwares that provides both video conferencing and screen share capabilities. It can provide alternative ways of delivering instructional contents to learners in the face of unprecedented circumstances, thereby facilitating teaching-learning pathways at any location. Therefore, this paper, unveiled how the potentials of zoom cloud meeting can be explored for online instructional delivery amidst unprecedented event. It was concluded that zoom can provide education and training in a more flexible way than the regular ones. Students can acquire learning on any topic of their subjects or courses through zoom cloud video- conferencing, and can ask questions to participants from all locations involved, thereby enhancing their communication skills and promoting collaboration among themselves and teachers. Practical use of zoom cloud meeting would help in achieving online instructional delivery. It was suggested amongst others that: educators and students should be trained on the use of zoom for teaching and learning.

Keywords: Online Instructional delivery, Teaching- Learning, Potentials, Zoom Cloud meeting

Introduction

Insecurity is presently crippling Nigeria more than ever before. The issue of insecurity in school environment and Covid-19 pandemic has resulted to traumatic disorder and toxic stress on how to ensure successful teaching and learning for students and pupils. Their attendance and enrolment have been negatively affected as parents pull out their children from schools while in some dangerous cases, insecurity has led to closure of schools. Nwosu, Ukwunna, Ebokaiwe and Ukwunna (2019) [19] revealed that attacks on schools usually lead to vandalization and outright destruction of school facilities which discourages the establishment of new schools. Also, government resources are depleted as funds meant for other developmental projects are channeled to tackling the aftermath of attacks. In the end, educational attainment in terms of quality of graduates and manpower suffers which impinge on overall national development aspirations.

Rio-Chillcce, Jara-Monge and Andrade-Arenas (2021) [26] revealed that there is high use of use of different softwares for student education due to COVID-19 global pandemic. The arrival of the pandemic led to abrupt change; confinement of people at homes where they are unable to go out due to decree on immobilization by various governments worldwide. This has led to growing need for all educators and students from primary to tertiary level to establish and become familiar with new teaching and learning process, making the frequent use of various platforms more common.

There is need for educational institutions to be aware of the influence and outcome of the technologies that are capable of facilitating learning pathways at various educational programmes during unprecedented circumstances. The use of smartphone is now common among students in both rural and urban areas. Just few in rural areas due to poverty do not possess smartphones or computer devices. However, government's provision for learners in such conditions will promote equal education among them in spite of their locality. It is equally important to train the educators and students to familiarise with the use new technologies for teaching-learning processes. To adopt a new technology, irrespective of delivery method, it should be able to encourage contact between students and facilitators/instructors, develop reciprocity and cooperation among students, use active learning techniques, give prompt feedback and emphasize time on task. Online instructional delivery is education that takes place over the Internet. It is often referred to as "eLearning" among other terms. However, online learning is just one type of "distance learning", the umbrella term for any learning that takes place across distance and not in a traditional classroom. Online learning is catalyzing a pedagogical shift in how we teach and learn. There is a shift away from top-down lecturing and passive students to a more interactive, collaborative approach in which students and instructor co-create the learning process. The Instructor's role is changing from the "sage on the stage" to "the guide on the side."

Software companies are creating user-friendly tools that are incorporated in learning and teaching at educational institutions. This tools takes the form of video conferencing. Advances in information and communication technologies has offered people of various facets of lives with new opportunities of meeting together without physical contact. This advances has been made possible through the development of various video and conferencing technology such as Skype, Zoom meeting etc. The evolution of the COVID-19 pandemic and the associated confinement of citizens, social distancing and quarantine has brought with it the widespread use of video conferencing and chat applications such as Zoom, WebEx, Houseparty, Google Meet or Microsoft Teams (National Cryptologic Centre, 2020) [16].

Video conferencing has become an essential component of the business world. Today, it had penetrated into the classroom setting and has been accepted as a mode of instruction. New technologies such as video conferencing brought new ways for teachers to work with students and encouraged the development of strategies more consistent with the emerging technology (Paderanga, 2014) [22]. Video conferencing utilizes synchronous two-way audio and two-way compressed video via the Internet. By utilizing special cameras, viewing monitors, and microphones at each location where instructors and students are able to interact with each other at distant sites as easily as those located at their various homes or locations. They receive instruction and information on any topic, allowing them to exchange information and ask questions from other participating sites.

In technology-enhanced learning environments, learners" expectations toward e-learning have been growing toward on-demand, anytime/anywhere and high-quality instruction (Ely, 2003; Khan, 2005) [4, 11]. Video conferencing tools simulating face-to-face learning purport to enhance communication, collaboration, and social presence (Pittman,

2003; Townsend, Demarie, & Hendrickson, 2001; Wilkinson & Hemby, 2000) [23, 27, 29]. Video conferencing participants are able to see and hear each other and to share information by means of different types of visual aids. The first video conferencing system, Picture Phone, was implemented by AT&T in the mid 1960s (Pittman, 2003) [23]. Video conferencing tools have evolved with innovations in telecommunication technologies such as Integrated Services Digital Network (ISDN) and compressed video data transmission (Grant &Cheon, 2007) [7]. Video conferencing has played important roles in various areas (Carvalhoh, 2000). In telemedicine, urgent expert diagnostics and other medical information can be transmitted to remote areas via the video conferencing. Grant and Cheon (2007) [7] noted that many business companies rely on video conferencing to train employees and communicate with other sites. Therefore, technology makes open flexible learning environments with globalization.

One of the greatest instructional benefits of video conferencing includes improved communication skills, and presentation skills among students. Instead of just reading textbooks and other printed materials, video conferencing allows students to interact with real people outside of one's country (Paderanga, 2014) [22]. In this capacity, video conferencing allows students to learn from exciting speakers and educational excursions without even leaving their classrooms. As a result, students learn about the culture and current events of other countries rather than reading outdated text books, looking at pictures or hearing from the teacher about the country. Though considerable interest has been expressed in the use of Classroom Video Conferencing (CVC) for teaching, being fairly new, little has been known how to use this new medium in the classrooms (Paderanga, 2014) [22]. One possible use is building harmony through classroom video conferencing. Video conferencing, as a form of distance education, illustrates well the relationship between the use of technology and the need for reorganization in order to maximize their benefit of it (Gladović, Dereć,&Drašković, 2020) [6].

Challenges of delivering instructions to learners in the face unprecedented events like insecurity, pandemic amongst others calls for adopting alternative means of achieving teaching and learning activities inspite of learners' location. Zoom cloud meeting is capable of providing solution to such challenges. It is on this note, that this paper unveils how the potentials of zoom cloud meeting can be explored for online instructional delivery amidst unprecedented event in Nigeria.

Concept of Zoom
Zoom is a cloud-based conferencing solution that provides both video conferencing and screen share capabilities. Zoom is used for meetings among individuals or to conduct interviews for potential hires. Zoom is similar to WebEx, GoToMeeting and Adobe Connect.

Zoom isa video conferencing software or video-telephony with real-time messaging and content sharing that is easy to set up and use, allowing meetings with up to 100 participants for free of charge (National Cryptologic Centre (NCC), 2020) [16]. Developed by Zoom Video Communications, It has a free plan that provides a video chatting service that allows up to 100 participants concurrently, with a 40-minute time restriction. Users of zoom have the option to upgrade by subscribing to a paid plan, with the highest allowing up to 1,000 participants concurrently, with a 30-hour time

restriction (Wikipedia, 2021) [28].

A beta version of Zoom, which is capable of hosting conferences with up to 15 video participants, was launched on August 21, 2012 (Mossberg, 2012) [14]. On January 25, 2013, version 1.0 of the program was released with an increase in the number of participants per conference to 25. By the end of its first month, Zoom had 400,000 users, which rose to 1 million by May 2013 (Pleasant, 2013) [25]. After the start of the COVID-19 pandemic, by February 2020, Zoom had gained 2.22 million users in 2020, more users than it amassed in the entirety of 2019 (Novet, 2020) [18] with the company's share spiking by 35 per cent. On one day in March 2020, the Zoom app was downloaded 2.13 million times (Neate, 2020; Fry, 2020) [17, 5]. In April 2020, Zoom had more than 300 million daily meeting participants (Isaac, 2020) [9]. On August 24, 2020, Zoom experienced widespread outages for several hours before service was restored (Li & Imam, 2020) [12].

During the COVID-19 pandemic, there was a major increase in the use of Zoom for remote work, distance education (Abbott, 2020) [1] and online social relations (Lorenz, Griffith, & Isaac,2020) [13] The increase led to Zoom being the 5th most downloaded mobile app worldwide in 2020 at 477 million downloads. As of July 2020, Zoom Rooms and Zoom Phone also became available as hardware as a service products. Zoom Phone is available for domestic telephone service in 40 countries as of August 2020.In January 2021, the company disclosed that it had sold 1 million seats for the Zoom Phone service. Zoom for Home, a category of products designed for home use, became available in August 2020 (Wikipedia, 2021) [28].

In September 2020, Zoom added new accessibility features to make the app easier to use for those who are deaf, hard of hearing, or visually impaired. New features include the ability to move around video windows in gallery view, pin video windows to be spotlighted; improved keyboard shortcuts; new tools to adjust the size of closed captioning text; and sign language interpreters' windows can now sit directly next to the speaker (Jefferson, 2020) [10]. These shows that zoom possess the potentials for online instructional delivery.

Characteristics of Zoom
Zoom application can be run on Windows, macOS, iOS, Android, Chrome OS, and Linux. It is noted for its simple interface and usability, regardless of technological expertise (Brandon, 2020 & Natasha, 2020) [2, 15].

Some of the features of zoom include
- One-on-one meetings;
- Group video conferences;
- Screen sharing;
- PLUGINS;
- Browser extensions and
- The ability to record meetings and have them automatically transcribed (Wikipedia, 2021) [28].

Other features of zoom include security password-protected meetings, user authentication, waiting rooms, locked meetings, disabling participant screen sharing, randomly generated IDs, and the ability for the host to remove disruptive attendees. As of June 2020, Zoom began offering end-to-end encryption to business and enterprise users, with AES 256 GCM encryption enabled for all users. In

October 2020, Zoom added end-to-end encryption for free and paid users. It is available on all platforms, except for the official Zoom web client (Wikipedia, 2021) [28].

Practical Steps of Using Zoom Meeting for Online Instructional Delivery
Situation of insecurity and pandemic could occur where instructors of a residential teaching environment may experience times when they are not able to deliver class in person. Application of the guidelines will help for teaching and learning through zoom. Zoom was originally intended to be used in business settings, where most folks try their best to act professionally. However, teachers and students to know the best settings and features to use to boost learning and minimize disruption. Teachers can ensure safest settings when using zoom meetings to prevent Zoom bombing. This can be done by requiring students to register for each meeting or class period through their use of password (Oh, 2020) [20]. In order to ensure full safety and peaceful atmosphere in the use of zoom meeting for instructional delivery, Oh (2020) [20] suggested that the following key settings be applied.

- **Random meeting ID.** Though you can use the same meeting ID for every class, Zoom recommends teachers use random meeting IDs which is an option when they are creating the invitation. This is a bit convenient, but more secure.
- **Meeting password.** These are turned on by default for education users. When a participant manually enters a meeting ID, they are prompted to enter the password.
- **Mute.** Participants or students can and should mute themselves when they are not speaking. Teachers can also mute students individually or all at once, and can set up the meeting to automatically mute all participants upon entering.
- **Chat.** The teacher can control whether students can chat publicly and privately during a meeting.
- **Disable video.** As a participant, you can join the meeting with audio only and then turn on the video once you're ready. Teachers can also disable an individual participant's video.
- **Nonverbal feedback.** These optional little icons let students raise their hands, give a thumbs-up or thumbs-down, and even let the teacher know they need a break, all without interrupting the class.
- **Waiting rooms.** This is like a lobby or a velvet rope at a club: Participants are held in a virtual room, and the teacher admits them one by one to make sure no outsiders gain access.
- **Turn off file transfer.** Students can share memes, GIFs, and even quiz answers through the chat unless the teacher disables this feature.

Before class
Find a quiet well lit location: Ensure there is no background noise in form of fans, washing machines, loud music, any other forms of noise etc. Ensure there is adequate lighting if you are using the webcam video.
- Use ear-buds with a microphone or headphones.
- Test your audio and webcam before your conference begins.
- Notify students of Zoom classes or meetings (Harvard University Information Technology, 2021). This can be achieved by letting them know they can access the link

through Zoom in Canvas, share your Zoom URL via email or Canvas calendar event, announcement, or any other shared digital space that everyone can access. Schedule meetings with Google Calendar (Zoom plugin)

▪ Establish guidelines and make students aware of your expectations for class.
▪ Record the Zoom class session to the cloud. The audio will automatically be transcribed with machine-based captions. You may edit the transcription after the meeting to correct errors. Having lecture capture or video captioned as soon as possible after production is important for students with hearing concerns.

Harvard University Information Technology (2021) also suggested that zoom be installed as first thing to do before testing for the workability of audio and video devices to ensure they are in good condition.
However, the following will provide teachers with practical steps on how to use zoom meeting for delivery of subjects or course contents as it is done physically in the classroom setting:

Before Class
The teacher or instructor being the host would need to set up and install Zoom on the computer or smart phone devices for use. However, Brown Zoom Account must be set up before proceeding with the following steps:
Open your subject or course in Canvas.
Update the Canvas subject/course/Navigation to enable the Zoom course tool.
From the left menu, click Zoom.
Click Schedule a New Meeting.
The Topic header will auto-populate with the name of the subject/course.
Under Time Zone, check the "Recurring meeting" checkbox, then from the "Recurrence" drop-down menu, select No Fixed Time. (This will generate a meeting link that can be used at any time and will expire after 365 days).

Enable join before host
If this is selected, students will be able to join the meeting before you.
If this is unselected, students who join the meeting before teacher will see a notice to wait.
Select Mute participants upon entry. Students will need to unmute their microphones if they want to talk or comment.

Record the Meeting Automatically
In the case that someone has a technical issue, you may want to offer them future access to the class material. To address this, you can record the class session. (Harvard University Information Technology, 2021). Classes held via zoom can be recorded and uploaded to Canvas to enable students who cannot participate synchronously due to their time zone or other factors to watch at a later time. This can be done through the Select Record the meeting automatically in the cloud; Zoom will start recording when the meeting starts and stop recording when the meeting ends. Zoom cloud recordings will be automatically saved to the subject/course site.

Once a meeting has been created, students should be instructed to
a. To access the meeting by clicking Zoom from the Canvas menu;
b. Copy the Invite Attendees Join URL and share it to students, or invited guests (possibly via their mail);
c. Click the Copy the invitation link to copy and send the meeting information listed to students or guests.

Preparing to teach
Once a zoom meeting has been scheduled in Canvas, share the Zoom information and class expectations with students. You may post an announcement in Canvas so students know when and where to meet. In your announcement, let students know what to prepare and expect to do during the Zoom class. If you do not use Canvas, you may email your students the information. Plan and share your agenda and remote teaching guidelines so students know when and how they will participate during the session. Will they use text chat or audio to communicate? Will they submit something before or after the class? What do they have to do to prepare for the class? All this should be communicated to students before the class begins. If you want to enable breakout rooms, plan what you want students to do while they are in the small group, and how they will know when you want to call them back to the main meeting room.

During Class
For the zoom meeting class to be a vibrant and engaging environment, it is important to let students know when the class will end and what to expect after the class. Turn on your video so students see you. It makes for a more personal remote teaching experience. Depending on the class size, you can ask students to turn on their videos as well. To record your session so that it may be posted to students later, click the Record button on the lower right of the Zoom screen, and select Record to the Cloud. However, if the meeting is set to record to cloud automatically, you do not need to click the record button.). Use the Share Screen tool to share documents, websites, images, or slides, etc., and provide different means for representing the information. Screen sharing for participants (students) is off by default. The recording layout is based on your view when you begin recording. Therefore, remember to share presentations before recording, and switch to the active speaker view rather than the gallery view or do not use your webcam at all, otherwise the video of you will be superimposed over the top right corner in the recording (Harvard University Information Technology, 2021). It is important to learn how to enable it. Breakout Rooms allow instructors to split a Zoom meeting into small group rooms. Instructors can choose to split students into breakout rooms automatically or manually. Instructors may enter any breakout room at any time and switch between them. If using breakout rooms, explain what students are expected to do in the breakout room.

End Meeting
Students should be allowed to leave the class meeting first. If you end the meeting, it may feel like you are pushing them out of class. Stick around until the last student leaves in case

they have any final questions. It is important to note that remote teaching in Zoom may feel awkward at first, but you will get more comfortable with it after practicing. Remember that students are not used to learning in this way, either. The key is to communicate expectations and centre your teaching on the students by engaging them in the process of teaching and learning.

After Class
As much as possible, consider what would most benefit your teaching goals and your students before the class begins so you have a plan for after class. If you recorded the session to the cloud, you will receive an automated email from Zoom once the recording has processed, then shortly afterwards an email indicating the recording has been migrated automatically to where it will only be available to students enrolled in the course. This process can be enabled for all courses being taught online. If some students were unable to attend the class, you may ask them to watch the recording and complete an alternative assignment so they get a similar learning opportunity as the students who attended. Assess students based on your set learning goal. If you did not get to hear or assess the students during the session, provide an assessment after the session to allow students to demonstrate their learning.

Conclusion
Unprecedented events like insecurity, pandemic and others could pose challenges to teaching and learning process. However, using zoom meeting as a unique video-conferencing platform, students will be able to receive instructions as if they were in person and enhance collaboration among themselves and their teachers. Zoom can provide education and training in a more flexible way than the regular ones. Utilizing zoom meeting for instructional delivery will offer teachers with new ways of presenting materials, working with students, and thus stimulating the development of strategies that are consistent with new technology. Students' communication skills can be enhanced through the use of zoom when they communicate with each other and with their teachers. Students can acquire learning on any topic of their subjects or courses through zoom cloud video- conferencing, and can ask questions to participants from all locations involved. Therefore, importance of exploring the potentials of zoom cloud meeting for online instructional delivery cannot be over-emphasized.

Suggestions
Careful consideration of how the potentials of zoom cloud meeting can be explored for online instructional delivery amidst unprecedented event in Nigeria leads to the following suggestions:
1. Educators and students should be trained on the use of various technologies for the enhancement of their skills in using a new technologies.
2. Zoom meeting should be used as a downloaded application on a computer or phone device rather than using it through a browser for its complete functionality.
3. Educators and students should be trained on the effective use of zoom meeting application.
4. Zoom host and participants should adhere strictly to security measures on the use of zoom meeting.
5. There should be support on technology education for students in rural areas so that they would be familiar with the use of new technology.

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