



Identification of Key Challenges, Merits and the Opportunities of Remote Learning with Zoom App

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ABSTRACT

COVID-19 pandemic of 2020 has globally caused a lot of changes in human activities. The aftermath of the lockdown, which is the temporary closure of most schools globally, and the need to maintain social distancing due to the Corona virus pandemic has ushered in the use of Zoom video conferencing communications, which currently has become the most required software since the world was hit by the disease. The software has become one of the most famous video conferencing apps and has recently gained prominence in the education sector. It presently has a lot of users, all to reduce the effect of social distancing due to the Corona virus pandemic. Hence, the purpose of this paper is to trace the historical origin of the Zoom app and its positive and negative effects on the education sector, especially as it concerns remote teaching and learning processes. Also discussed by the authors are the possibilities of the software amid similar apps as technology advances.

Keywords: Zoom App, Remote learning, electronic learning, Electronic teaching, and Digital technologies, and e-education.

INTRODUCTION

There is no qualm that since the March 2020 lockdown situation across the sphere, which was necessitated by the COVID-19 pandemic, which caused the temporary closure of almost all businesses and educational institutions, being in a technological era, professional bodies, schools, colleges, and other educational institutions have started using diverse virtual learning platforms to educate their students remotely (Bowen, 2020). Hence, the use of online meeting or video conferencing tools has risen tremendously.

As most of the world sits at home due to the momentary lockdown, most professionals' world over, and notable educational institutions have started employing the zoom app to meet their professional and other obligations. Zoom has been identified as one of the leading video communication software, which generally provides an easy, effective, reliable, and efficient cloud platform for audio and videoconferencing services. It equally provides chat, face-to-face collaboration among faculty staff and students, and other forms of virtual seminars across desktops, mobile devices, and other similar electronic gadgets (Bowen, 2020).

Before now, just like computers, video conferencing or meeting was a luxury, and only affordable to big business enterprises and organizations. Currently, several businesses of all kinds and sizes are solving their business solutions by investing in virtual meetings, which gives them access to meet with clientele, employees, social groups, thereby breaking the barrier of traditional audio and display systems, which gives no room for facial expressions and physical gestures that make virtual meetings interesting and truly effective (Seymour, 2020).

The Zoom software has become the best means in which teachers and other educators can easily and quickly reach and address their students' academic requirements while sitting at the comfort and convenience of their various homes taking lectures in almost all subject areas. Zoom App is very

useful for online classes, good for business professionals, and as well as user friendly for teachers and students alike.

Therefore, the need for electronic education to complement students' studies since they were put out of their classrooms for months has become very indispensable. It becomes pertinent to study online; consequently, the application of the Zoom app has become inevitable as an immediate remedial measure to the traditional system of schooling. There is no gainsaying that both medium and large businesses are investing in Zoom's video conferencing to stay in business, and solve all sorts of business solutions online.

This write-up will examine or identify some fundamental gains of the Zoom app in teaching and learning processes. As well, it will examine major challenges for adopting the Zoom app for remote in the education sector. Also to be examined are the prospects of the Zoom app in the education process in the years ahead.

Electronic teaching and learning have become a buzz in the contemporary educational process in all fields, as it accommodates the needs of modern-day learners (Guzacheva, 2020). The scholar further expressed that the infusion of technological innovations in classroom learning has added to stimulus and enhanced learner's interaction within the classroom.

The Zoom app currently supports video and audio calls. Guzacheva (2020) described Zoom as "A cloud-based service, which offers Meetings and Webinars and provides content sharing and video conferencing capability". It is an online software that brings students and teachers together in a frictionless environment; it is the leader in modern enterprise video communications, with an easy, reliable cloud platform for video and audio conferencing, collaboration, chat, and webinars across mobile devices, desktops, telephones and room systems (Guzacheva, 2020).

Origin of Zoom Video Conferencing Communications

Eric Subra Yuan was born on 20 February 1970 in Shandong province, China (Weiner, 2017) 1970 to Mining Engineers' Parents. He is undoubtedly the founder of the Zoom app. He as well holds US citizenship; hence, a Chinese-born American billionaire businessman (Prabhu, 2020).

He read Applied Mathematics and Computer Science at the Shandong University of Science and Technology (Weiner, 2017), Oklahoma (<https://www.republicworld.com/technology-news/apps/is-zoom-banned-in-india-zoom-app-origin-country-and-more-know-details.html>), and Masters of Engineering Management at China University of Mining and Technology in Beijing (<https://www.forbes.com/profile/eric-yuan/?sh=735ec8e761bf>).

The founder was inspired by a business entrepreneur, Bill Gate, after given a talk on the Internet in the 1990s. At the same period, he decided to come to the United States because of the Internet, which he knew was the wave of the future (Weiner, 2017). Though his initial quest to move to Silicon Valley to place his name on the world map was frustrated or delayed after 8 failed attempts to obtain a visa from the American government. However, after struggling for two years to obtain the visa, the American government in 1997 accepted the 9th Visa application to actualize his dreams into a reality. He was employed in a video conferencing company named Webex, as a software engineer. The company was later acquired by Cisco Systems for 3.2m Dollars. Eric Yuan rose to the rank of Vice President before he left the company, and started his at the age of 41 (Weiner, 2017). He eventually ventured into the development of the Zoom app in 2011, succeeded, and finally launched it in 2012 as a video conferencing app, which we all know today as Zoom (Weiner, 2017 and Bhatia, 2020).

Furthermore, the app is one of the most popular video collaboration tools employed in businesses, industries, and presently in the education sector. Eric Yuan is also the CEO of the company with the headquarters in California (Weiner, 2017). It is believed that the founder as well owns about 22% of Zoom Video Communications (Prabhu, 2020).

The company, by May 2020 introduced a new version called Zoom 5.0 and as well acquired Keybase, which intends to possibly improve the security on its platform (Prabhu, 2020). At the initial launch of the Zoom app in 2012, it faced tough competition in the market with other similar conferencing tools, such as Google, Apple, Microsoft, Yahoo, and Skype. But two years later, the Zoom app had over 40 million individual participants that used Zoom's videoconferencing app for various activities. However, let examine some fundamental meaning of the major terms as contained in this paper.

Zoom app: Zoom has been described as a cloud-based video conferencing service that supports both desktop and mobile users (Giaquinto, 2020). As Weiber (2017) put it, Zoom is a platform for video,

audio, web conferencing, and IM/Presence; it works on mobile and desktop devices, and in conference rooms.

It is software that is intended for businesses to work remotely and offers a wide range of services to accommodate any business's needs; zoom services include collaboration, video-conferencing, audio-conferencing, chat, and webinars collaboration (Giaquinto, 2020). The scholar also described zoom software as a comprehensive video conferencing service that combines simple online meetings, group messaging, and video conferencing into an easy-to-use platform.

It is an innovative solution built to deliver exceptional audio, video, and screen-sharing experience across devices, such as Mac, Windows, Android, and iOS, as well as room systems like H.323/SIP (Giaquinto, 2020). The platform, as the author opined, enables users to communicate face-to-face (which reduces isolation, and facial expressions), host virtual meetings, video conferences, webinars, video demonstrations, and online training. Zoom's screen sharing is one of the benefits ascribed to zoom that is very beneficial to both the teachers and the learners, and any other businesses as it shows the presenter on one screen and also the presentation on the other screen (Bowen, 2020).

E-learning: E-learning represents electronic learning. This word or term has been defined by Clark and Mayer (2011) as, "Training delivered on a digital device such as a smartphone or a laptop computer that is designed to support individual learning or organizational performance goals" (P.7). While Aparicio, Bacao and Oliveira (2016) defined it as, "An umbrella term in which technological tools are aggregated to provide students with a comprehensive learning environment" (P.7).

Sayers, Carter and Carter (2014) argued that "E-learning includes the use of technology in the traditional classrooms, virtual classrooms, blended learning environments, and the full delivery of instruction in an online format" (P.8). Clark and Mayer as well described it as "Instruction delivered on a digital device such as a computer or mobile device that is intended to support learning" (P.8).

Mangal and Mangal (2009) defined e-learning in its literal meaning as "The type of learning carried out, facilitated or supported by some of the other electronic gadgets, media or resources. (P. 765). In another sense, the scholar described it as: "An electronically carried out learning facilitated and supported by the use of advanced learning technology particularly calling for the services of computers, networking, and media. (P. 765).

Remote Learning: When discussing remote learning, the first thing that comes to our mind is distance. Thus, remote learning is learning from a distance made possible by the technological advances of our time. It is a situation whereby the student and the educator, or information source, are not physically present in a traditional classroom environment (<https://tophat.com/glossary/r/remote-learning/>). Remote learning occurs both in synchronously and asynchronously modes, depending on the instructional strategy adopted by the educator concerned.

Synchronously, it means that learning is in real-time; that is, learning is simultaneous (peer-to-peer, or face-to-face interaction and collaboration), made possible with the use of video and audio conferencing methods.

Asynchronously, it means that learning is self-paced learning; learning that is independent of the instructor, and the teaching and learning that is usually delayed, and information is relayed through technologies, such as CDs/DVDs, discussion boards, and online assessments.

It could as well be lectures or study guides that are delivered through the surface mails. Conclusively, Ray (2020) described it as learning that provides an opportunity for students and teachers to remain connected and engaged with the content while working from their homes.

E-education: E-education is the delivery of education or any other type of training via electronic teaching methods, such as the Internet, Computers, Television, Radio, Smartphones, CDs, and DVDs; similarly, teaching materials could as well be obtained through the same means (<https://talentedge.com/articles/meaning-e-education/>). The use of electronics in teaching and learning is referred to as e-education. It is the teaching-learning that is powered by the use of new technologies, especially via computers.

Digital Technology: Digital technology has severally been defined by scholars. Teach with digital technologies (2019) defined digital technology as: "Electronic tools, systems, devices and resources that generate, store or process data". (P.189). It has also been described as the use of electronic tools and devices to produce and generate data; additionally, any information used on a computer or disseminated through a computer is as well known as digital technology (<https://www.igi-global.com/dictionary/digital-technology/7723>).

There is an abundance of these technologies in use today, especially in the education sector. Examples of these include - social media, online games, multimedia and mobile phones” (P.189). Well known examples include - social media, online games, multimedia and mobile phones” (P.189).

However, Ng (2015), Squire (2017), and Goodman (2019) have listed major digital technologies that are relevant both inside and outside the classroom as follows:

1. Desktop computers
2. Mobile devices (laptops, tablets, mobile/Smart phones, etc.)
3. Digital recording devices (digital Cameras, voice recorders)
4. Data logging equipment and associated probes
5. Interactive whiteboards (Smart-boards)
6. Web 2.0 technologies (Social Media)
7. Online resources (TED-Ed, iTunes, Skype, Moodle, Dropbox)
8. Educational software packages (Inspiration, Adobe , etc.)
9. Online games
10. Multimedia
11. Websites
12. web pages
13. Digital Televisions
14. Video Streaming
15. Digital Music
16. Blogs
17. Printers
18. Self-Scan Machines
19. ATM's
20. Clocks
21. Robotics
22. Videogames
23. Online forums
24. Data and databases
25. Web-based applications, and
26. iPads

Merits of Using Zoom app in Remote learning

The Zoom videoconferencing app has been credited with lots of advantages since its inception in 2012, principally in the education sector during the COVID-19 deadly disease. Thus, most of these merits will be discussed herein to help individuals, groups, and large business enterprises to decide its suitability for their businesses to empower them to make the right buying decision (Giaquinto, 2020). With increasing worries about the Covid-19 pandemic, there is a need for organizations or business enterprises not to be out of business, and equally maintain online eye-to-eye, and facial contacts, and also to bridge the social contacts due to the Corona virus, which seems to defy most all medical measures.

To start with, the Zoom applications has been attributed for ease of use, high-quality video, and crisp audio as strong points to consider while taking purchasing decision by professionals (Guzacheva, 2020). Seymour (2020) asserts that the Zoom platform enables users to host webinars, virtual meetings, video demonstrations, video conferences, and online training.

Zoom’s features allow teachers to annotate their shared screen and make lessons more interactive. The annotation feature provided by the Zoom app enables users to leave notes or marks on some places on the screen for future reference, and this is made possible by using pens, arrows, or highlighters at the bottom (Bowen, 2020). This action is perfected by clicking the downward-pointing arrow next to the “stop share” button.

It also enables teachers and students to record and store live lessons in electronic devices, which can be uploaded later to the cloud or locally for future needs, especially for other students who could not participate in the class (Bowen, 2020). On the same note, during lessons, students can as well record and turn to record on and off as desired, provided that the feature is enabled by the teacher

(Guzacheva, 2020). Zoom app as well gives users the option to stop recording live classes and lectures when desired.

Teachers can evaluate the strengths and weaknesses of their students by watching the recorded lessons. On the same note, the students or learners can self-assess their skills by watching recorded lessons again and again (Guzacheva, 2020). This method, the scholar emphasized improves the learners' performance overtime after constructive feedback.

Zoom app has a vast application in almost all fields. The software enables teachers to present the content of their lessons in various ways, share screen, and materials, such as videos and articles, and presentations (Guzacheva, 2020). During a live video conference, the Zoom app allows the participants to share their presentations.

Zoom technology facilitates collaboration (team cohesion) with teachers and students. Students can employ the use of a chat box with peers and the teachers alike; it provides the features of seeing everybody's camera and as well listens to everyone. The Zoom app allows teachers to use the breakout rooms to group learners in desired sizes, which encourages group work, or pair work, and as well allows medical students to work independently. Zoom has become an indispensable technology that facilitates the way we work, teach, and learn together. The Zoom software supports large audiences as it has the capability of hosting 100 participants and even more at a time (Giaquinto, 2020). The scholar as well affirmed that if you are using Zoom for Webinars, that it can allow up to 10,000 virtual attendees to sign up. A zoom app is an ideal software for businesses with many employees, and the platform is designed to work well even with limited bandwidth.

The technology brought by Zoom has made businesses, teaching, and learning, especially in the medical field very real as students can virtually participate in all learning activities, ask questions and get immediate feedback that enhances positive learning outcomes for diverse groups of medical students, as well as encouraging higher education in remote areas while potentially reducing workloads for teachers (Guzacheva, 2020). Traditionally, there is no doubt that it is usually difficult to organize a large meeting, but the Zoom app makes it very possible for organizations to stream any meeting or webinar on Facebook, making it easy and free for attendees to join without any restrictions.

Zoom's basic plan, though with limited features is wholly free of charge (Bowen, 2020). Due to its cheap and affordability, individuals and business enterprises could use the Zoom app for online businesses at no cost, as it provides small businesses or organizations the opportunity to host their private and business conferences, especially during the corona virus outbreak, thereby enhancing businesses growth. Zoom communication app has helped individuals and businesses alike to save money and also help them keep track of their daily activities (Giaquinto, 2020).

Thanks to the unlimited, 40-minute meetings you can do for free; there is no reason to not give it a try. You may very well find out that the free version is more than enough at your current staff size. Zoom's free version equally offers a waiver of 40min, which is more than enough for businesses with staff size to host their meetings (Bowen, 2020). As well, 40min is enough time to host classes at primary and secondary levels of education, and other online conferences on a small scale.

The Zoom platform is very easy to use; as (Giaquinto, 2020) pointed out, the Zoom software makes the platform ideal even for the most non-tech savvy entrepreneurs to manipulate; you just download Zoom, click it, set it up, and you use it (Seymour, 2020).

In traditional business office settings, members regularly rely on other members of the organization to remind them about a meeting via face-to-face interactions or surface mails; but the Zoom app is fully compatible with the services of Google Calendar, which helps many people and business organizations to keep-track their daily activities, especially for hosting an online meeting and other schedules.

Scalability for small, medium and large businesses forms one of the benefits of Zoom software. Zoom is expandable; as the business grows, the Zoom app provides opportunities for businesses or organizations to upgrade their subscriptions to match their business growing needs at a moment's notice.

Versatility has also been attributed as one of the merits of the Zoom app. With Zoom, remote collaboration is made easy and free. The Zoom software creates opportunities for organizations to handle all types of communication, be it in conference rooms, on desktops, and/or mobile devices, thereby giving employees, customers, and corporate bodies the opportunity to collaborate with a

group of as few as 2 persons and as large as 500, all on video (Weiner, 2017). This function can take place anywhere, anytime, which is not limited to the house, office, car, or airplane (Seymour, 2020).

As well, the platform has a video webinar platform that supports streaming to unlimited audiences; it gives individuals, groups, and corporate organizations easy and faster means of communication via videos, chats, email meetings that are not restricted to geography, thereby allowing employees to have more flexibility to work from homes, and builds teams and command a remarkable wide range of users (Weiner, 2017).

Bowen (2020) noted that the Zoom app among other similar services and applications is noted for high security and protection of data globally from online thefts, hacking, and malware, and provides regular security updates.

Zoom software has the capability of running on several operating systems, such as Linux, Android Operating System, Windows, iOS, and Mac. The advent of Zoom communication software is now a blessing to several organizations and professions. For instance, teachers or educators use it to conduct online classes at remote places, which draws education nearer to the less privileged to participate; developers use it to write code together, physicians use it to diagnose patients; it is a medium for lawyers to mediate and interview their Clients and witnesses; actors also use it to conduct rehearsals, and employees use it for the training of newly recruited staff (Weiner, 2017).

Challenges of Using Zoom app

The Zoom app has been credited with lots of merits, but it is not without its downsides. Lau (2020) declared that Zoom has a history of not being super careful with security. This, the scholar said that for the singular reason that they want to make the app very easy to use and scalable (Lau, 2020). The scholar as well reported that a study conducted at the University of Toronto in April 2020 revealed a potential lack of confidence in Zoom meetings, as the aftermaths of its use during the COVID-19 pandemic. Recently, the Zoom app has been accused of rerouting calls via Chinese servers, thereby putting users' personal information or data in jeopardy.

Weiner (2017) observed that one of the flaws of Zoom app is that the service lacks modern features of screen sharing for mobile.

It has also been noticed that one of the challenges of the Zoom app is the cost of its subscription. For instance, Giaquinto (2020) avowed that hosting a webinar that will allow about 10,000 attendees could cost several thousand dollars per month. However, the cost depends on which tier you choose, such as pro, business, or enterprise. Again, the scholar observed Zoom-bombing as a new occurrence on the Zoom platform. This is a situation where unwanted or intrusive activities by individuals (cybercriminals) disrupt and crash ongoing conference meetings or calls. This, Giaquinto (2020) further declared that the above actions will result in loud or inappropriate behavior by someone that is not affiliated with anyone on the call to disrupt it for fun. Zoom invaders have succeeded in perfecting this act through exposed passwords and/or hacking (Giaquinto, 2020).

Another challenge that is associated with Zoom is that it cannot delete inappropriate comments on the fly. Zoom app has again been associated with the speed of the Internet. For a quick and smooth operation of the Zoom app, users need a fast Internet connection. This has been ascribed as one of the disadvantages of the software.

Additionally, Zoom's basic plan is indeed completely free, but it has limited features to accomplish the required tasks. The Zoom app has also been accused of being sometimes blurred and noisy. Furthermore, one of the big flaws as reported by Giaquinto (2020) while comparing Zoom with similar conference platforms is that Zoom does not work without downloading it to your browser, which might create a big barrier of entry for new students or employees.

Opportunities for Zoom App in Remote Learning

Zoom communication app has recently become a reliable option for all sorts of business, particularly in the education sector because of the ravaging COVID-19 pandemic, which necessitated the temporary shutdown of most schools globally, thereby forcing most institutions at all levels to study online. Similarly, looking into the current level of computer awareness and understanding by teachers, students, and administrators in schools, the constant and global increase in population and diseases, and the drive-by universities worldwide to adopt electronic education to stay in the business of

educating the citizens, and the regular technological advances, there will certainly be increased use of Zoom app in virtual classrooms and other businesses in the years ahead.

With commendable features of zoom app, which include easy usage by users, as it connects easily across desktops, mobile devices, and room systems that effortlessly integrates or connects individuals, various departments, offices, and remote participants. Besides, Zoom's basic plan, which meets individual and small business plans or activities, simultaneous screen sharing, group messaging, white-boarding, good video, and audio quality, full-screen view, cloud service, partner integration, and the global need for social distancing gives it a better opportunity to stay in business for many years ahead (<https://zoomappdownload.com/zoom-for-school/>).

As well, the global need for social distancing occasioned by the COVID-19 deadly disease is yet another reason for further use of the Zoom app.

SUMMARY AND CONCLUSION

The authors have carefully and concisely discussed major basic terms or concepts as contained in the paper; also considered is the origin of the Zoom software. Also discussed are the advantages and the flaws inherent in the Zoom app, particularly in the teaching-learning process. The Zoom app, though with its flaws has generally been acknowledged as one of the greatest video conferencing platforms that is favoured with lots of features that fit into small, medium, and large business organizations.

The app has as well found its way into the education sector to facilitate remote learning by reaching the less privileged citizens in the society, who could have not imagined reaching the four-walls of the traditional institutions, and to save the entire education process from imminent total collapse, especially in the face of the Corona virus disease ravaging the entire world, which has disorganized the entire human activities in 2020, and in which the end is not yet in view.

The opportunities created by the Zoom app for personal use, small business webinars, video conferences, flexible, free, unrestricted important virtual meetings, and online training give the app more prospects. There is a future hope for increased use of zoom app in various activities because many businesses want to go online for better, easy, and fast communication with customers.

Furthermore, the improvements in computer literacy level of educators, students, and the general public; the urge for most educational institutions worldwide to study online because of technological advances, the need to reach more audience, and the Corona virus pandemic, which is forcing every activity online adds more credence to the prospects of the Zoom app for teaching-learning and other businesses.

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