



Usage of Zoom Cloud Meeting for Virtual Meetings and E-Learning

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I Introduction

The world is facing unprecedented times with the global Covid-19 pandemic. Schools, businesses, and recreational centers' activities are continuously suspended until there is a sharp noticed containment of the deadly disease. With strict social distancing measures in place, it has become imperative for all and sundry to catch up with the paradigm shift to virtual meetings for productivity, sustainability, and job retention. Various technologies have been developed by the IT industry or educational institutes to facilitate remote learning and meetings. This paper introduces the zoom cloud meeting (ZCM) technology as a sophisticated electronic tool to help make a seamless transition from a face-to-face meeting to a virtual meeting and its features that makes it well suited for distance education. This paper uses ACTIONS framework to describe the selection, use, and features of ZCM as educational technology. Relevant and useful recommendations are given to users and intending users.

There are many web apps/mobile apps that enhance virtual meetings. They include, among others, Zoom, google hangout, Skype, Google Meet, GoToMeeting, Bitrix24, Cisco WebEx, Blue Jeans, Blue Button, Slack, Appear.in, webinar, etc. Other popular chat apps include WhatsApp, telegram, ToGo, Facebook, Instagram, Twitter, etc. While the former has more advantages in virtual meetings, the latter has some limitations on virtual meetings when finitely large numbers are involved. On the Google play store, the relevant apps for IOS, MAC, and Androids are domiciled, where they can be readily downloaded.

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Research in distance education has shown that distance education can either be synchronous or asynchronous. Synchronous teaching brings spontaneity and immediacy if it is offered at times and places that are convenient for the learners (Bates, 2005). A good example of asynchronous technology is video-conferencing. Although the learner and the teacher are not together, both of them must be present at the same time in video conferencing.

Through video conferencing learners who are self-motivated can collaborate with each other, share materials critique others' work, and finally study together (Mark, 1998). A model for technology selection and application should have the following characteristics (Bates, 2005):

- Should allow decisions to be taken at two different kinds of levels, strategic or institution-wide, and tactical or instructional level.
- Should work in a great variety of context
- Should separate media from technology, in order to provide the best mix of them and then apply this mix in any context
- Should pay the same attention to instructional and operation issues equally.
- Should accommodate new developments in technology
- Should assign host privileges to moderate the meeting environment.

The model that meets the above conditions is the ACTIONS model (Bates, 2005). ACTIONS model consists of the following questions. These questions should be answered by any institution wanting to select and use teleconferencing technology in open learning and distance education.

A - Access: how accessible is a particular technology for the targeted learners?

C - Costs: what is the cost structure of each technology?

T - Teaching and learning: what kinds of learning are needed? What instructional approaches will best meet these needs and what are the best technologies for supporting this teaching and learning?



I - Interactivity and user-friendliness: what kind of interaction does this technology enable? How easy is it to use?

O - Organizational issues: What are the organizational requirements and the barriers to be removed, before this technology can be used successfully? What changes in an organization need to be made?

N - Novelty: how new is this technology?

S - Speed: how quickly can courses be mounted with this technology? How quickly can materials be changed?

All the above questions build the ACTIONS framework. Besides, these specific questions need to be asked in any kind of context and the answers to these questions will depend on this context (Bates, 2005).

This paper studied available teleconferencing technologies and recommended that zoom cloud meeting (ZCM) technology best suits learning and administrative purposes based on the questions from the ACTIONS framework.

Zoom is an application that can be downloaded wither to a personal computer of a mobile device. Zoom.us offers robust collaboration and engagement tools as part of its standard free license, including the ability to connect using VoIP or via traditional phone when the internet is not available. Zoom.us is a leader in corporate video communication with a cloud platform which is secure and reliable for video and audio conferencing, chat, and webinar. Zoom is a video and web conferencing platform while zoom webinars are unique feature allows presenters to broadcast to up to 500 participants, available to premium members only.



2 Basic Zoom Features

ZCM technology includes the following:

- File sharing
- Video conferencing
 - HD video
 - HD voice
 - Active speaker view
 - Fullscreen and gallery view
 - Simultaneous screen share
 - Join by telephone call-in
 - Virtual background
- Web conferencing
 - Desktop and application sharing
 - Personal room or meeting ID
 - Instant or scheduled meetings
 - Chrome and outlook plug-ins
 - Scheduling w/chrome extensions
 - MP4 or M4A local recording
 - Private and group chat
 - Host controls
 - Raise and clap hands
- Group collaboration
 - Breakout rooms
 - Mac, Windows, Linux, IOs, and Android
 - Group messaging and presence
 - Screen share any iPad/iPhone app



- Co-annotation and shared screen
- Keyboard/mouse control
- White boarding
- Multi-share
- Security
 - Secure socket layer (SSL) encryption
 - AES 256 bits encryption

One Consistent Enterprise Experience



Figure 1: Zoom enterprise experience

How to host a zoom meeting for online classes

3 Joining a zoom meeting

To participate in a meeting, a computer, tablet, or mobile device is required. You can join a zoom meeting for online classes through the app or accepting an electronic invite. To join an online class, you either click the electronic invite to use the web platform or sign-in on the desktop or mobile app and click join. Once the join button is selected, you will need to enter a

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unique meeting ID and a display name. you do not necessarily have to sign in to your account to join a meeting as you can enter one by just providing the correct meeting ID and password.

4 Participation in ZCM

By default, zoom.us displays the active speaker, if one or more participants join the meeting, a video thumbnail is assigned to each participant. Swiping left from the active speaker view to the gallery view, one gets to see participants' videos all on one screen. During a meeting, clicking icon labeled "participants" at the bottom of the bottom center of the screen shows all available participants with their status as either muted or unmuted. At the bottom of the right side of the screen, clicking the button labeled "Raise Hand", signifies that a participant is seeking permission by raising hands. When muted in a zoom meeting, hold the space bar to talk, and the zoom window is in focus. Your screen will show a message indicating that you are temporarily unmuted, and the microphone will appear green when you talk. To remain unseen, click anywhere on your video window (the one showing yourself), and then click on the three dots that appear in the upper right-hand corner. Select "Hide Me" from the menu that appears. In an ongoing meeting with crucial matters been decided on, it is practically possible for you to privately chat with other participants just as if they are seated next to you in real-time physical meetings.

5 ZCM for e-Learning

The word “meeting” in Zoom is generic. The ZCM can be essentially used for teaching and learning. The host, in this sense, the teacher will use the “share content or share screen” button. The teacher can choose to use the white screen board for teaching and writing on the board while simultaneously discussing the concept being taught. Alternatively, the topical

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content can also be prepared ahead of the class in a PDF, Microsoft, or PowerPoint which can be screen shared with the students in real-time. Hence, it should not be seen that ZCM is all about the meeting. As a matter of fact, there is Zoom education which also enhances better result-oriented.

6 How to Record a Zoom Meeting

To record, you will find a record button on your screen to be able to do this. Recording can be done on one's device locally or be recorded on the cloud which is retrievable through the zoom account based on the type of licensed account owned by the host.

Meanwhile, in the case of passing host controls to another user, if the original host is a licensed user, then the meeting can continue for an unlimited amount of time once the controls are handed off, even if the user who received the host controls is a free user.

This can happen for example if a meeting is being presided over by someone and the meeting is hosted on his device/account or an administrator, and he can delegate authority to someone to continue on another device even when his device is switched off.

7 Probable Limitation and Challenges

With the Zoom Basic service, one gets unlimited meetings, with unlimited minutes for one-to-one meetings. For the basic account, the meeting cuts out after 40 minutes. So, if one is having an important meeting where crucial issues are being discussed, once the meeting is cut off, one will need to start another instant meeting or click on the same meeting link. To be safe and to enjoy the full features of ZCM, Zoom charges a monthly fee of \$14.99 for a Pro account. An institution may just have one single zoom account for all various virtual meetings to be held by various Departments, Schools, and Committees as may be desired.

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Equally, a strong internet connection is required, otherwise, the speech flow and video output will be very discouraging, especially if the network shortcoming is coming from the host.

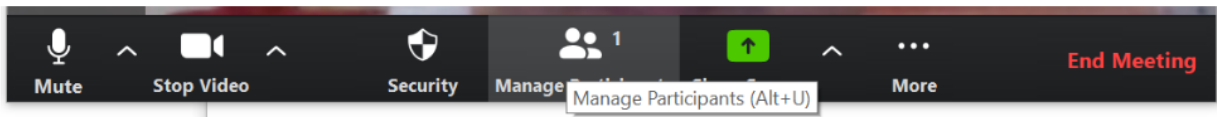
- Enter your username and password

The image shows two screenshots of the Zoom Cloud Meetings interface. The top screenshot is the 'Sign In' screen, which has fields for 'Enter your email' and 'Enter your password', along with social login options for SSO, Google, and Facebook. A 'Sign In' button is at the bottom. The bottom screenshot is the main dashboard, featuring four large buttons: 'New Meeting', 'Join', 'Schedule', and 'Share screen'. A clock shows the time as 8:47 on 01 April 2020. Blue arrows point from the 'Sign In' screen to the 'Join' button in the dashboard, and from the 'Sign In' screen to the 'Sign In' button in the top screenshot.

- There are 4 (four) main menus:
 - New meeting
 - Join
 - Schedule
 - Share screen
- Click the "New Meeting" button

Figure 2: Pictorial representation of ZCM Interface when hosting a meeting.

- Zoom Participant Menu
 - Join Audio, Stop Video, Invite, Manage Participants, Share Screen, Chat, Record, Reaction, End Meeting
- Click "Manage Participants (Alt + U)"



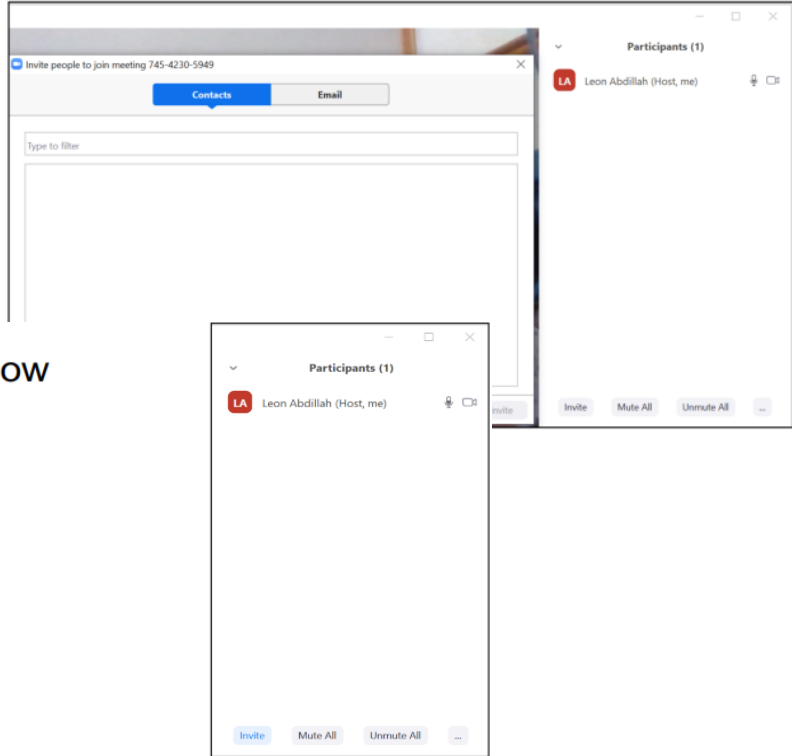


- "Invite people to join meeting ..."

- Click "Copy URL"

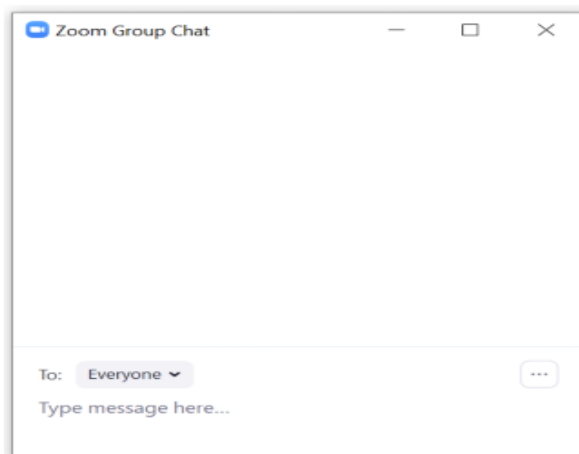
- The Participant Window appears on the right

- Click "Invite"



- Zoom also has a Group Chat facility

- To everyone
- To someone





- Enter meeting password
- Join Meeting

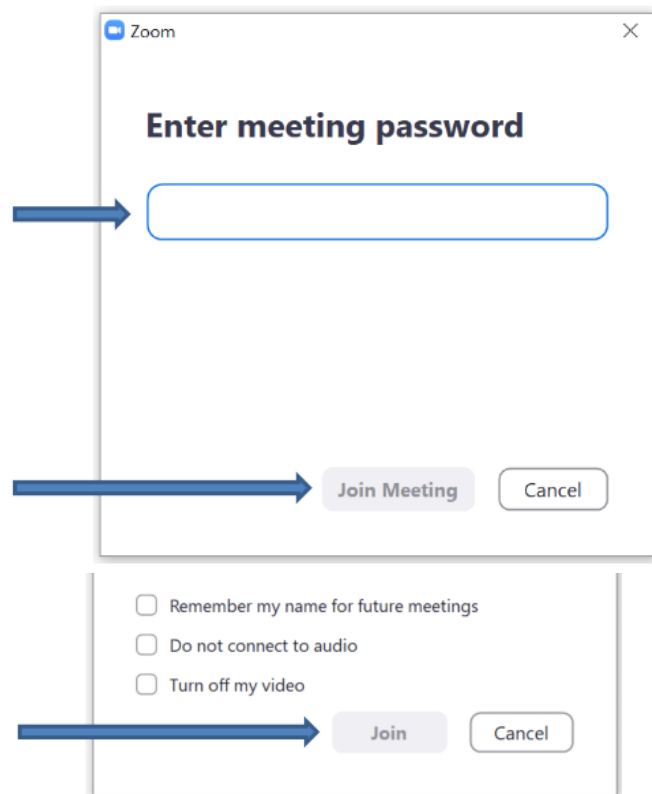
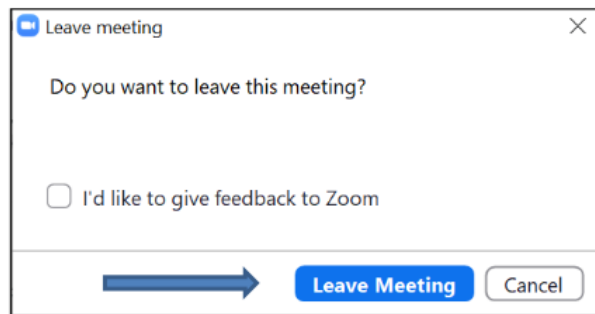


Figure 3: Pictorial representation of ZCM Interface when joining a meeting.

- Close window
- Click the "Leave Meeting" button



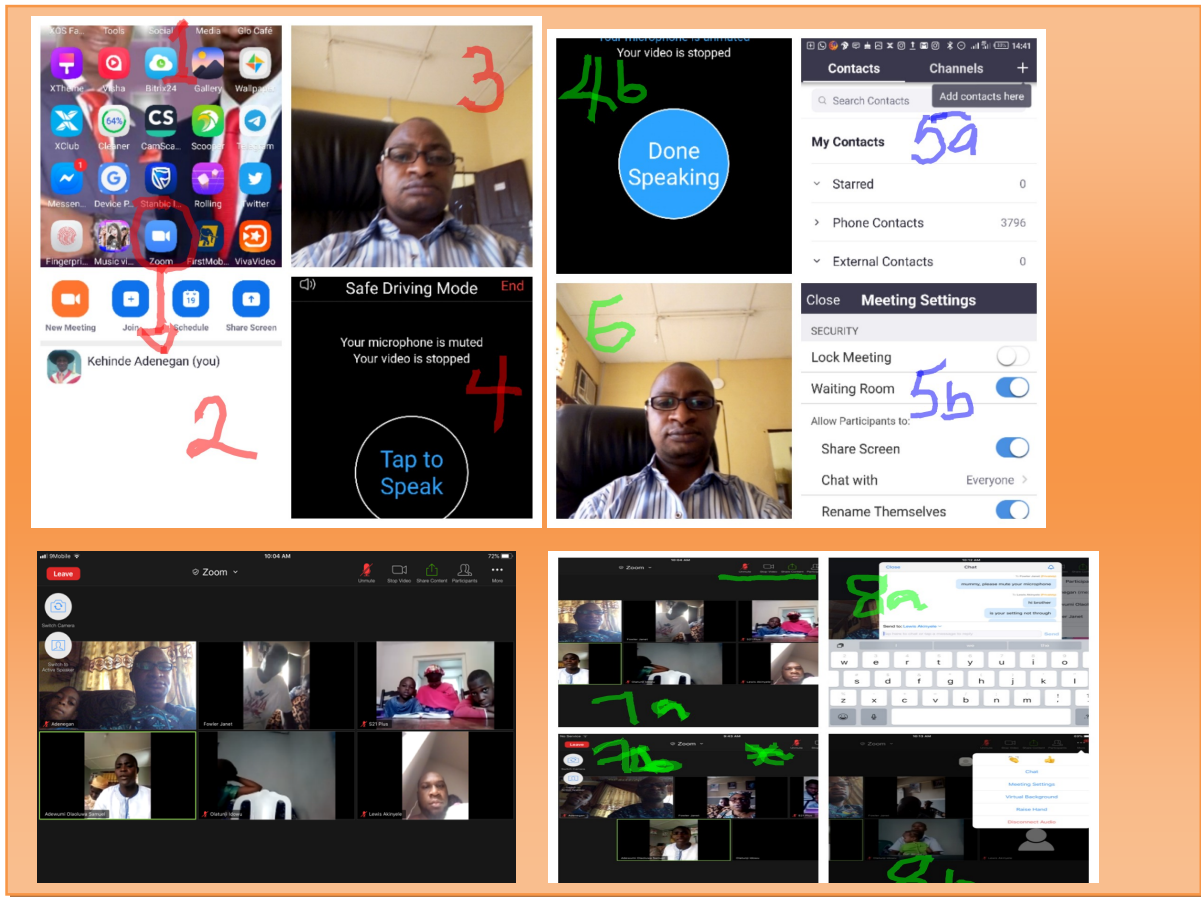


Figure 4: The meeting outlook and features: Source – Author’s Meeting Room

8 Conclusion and Recommendation

Learners should be able to reach and interact effectively with educators and vice versa (Fahy, 2001), ZCM is sophisticated enough to cover the need of different target groups and the requirements of the courses in different areas of teaching. ZCM enables its users to collaborate from any device overall types of connections while providing a rich video conferencing experience. Finally, ZCM technology provides a platform that is easy-to-use, a way to communicate with people without stress or traveling. Learning and administrative duties will become more flexible by adopting zoom cloud meeting technology.

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References

- Adenegan, K. E. (2020). An invitation to Virtual meeting for ACE e-administration. *Unpublished Seminar Paper*.
- Bates, A. W. (2005). *Technology, E-Learning, and Distance Education*, 2nd edition. New York: Routledge.
- Callum, S. (2020). What is zoom for online classes? How to use for online learning and meetings. Accessed May 2020. <https://www.hitc.com/en-gb/2020/03/18/what-is-zoom-for-online-classes-online-learning-meetings/>
- Cakir, Z., & Savas, H. B. (2020). A Mathematical Modeling Approach in the Spread of the Novel 2019 Coronavirus SARS-CoV-2 (COVID-19) Pandemic. *Electronic Journal of General Medicine*, 17(4), em205. <https://doi.org/10.29333/ejgm/7861>
- Fahy, P. J. (2001). Considerations in planning for online technology in open and distance learning. *Global E-Journal of Open and Flexible Learning*, 1(1).
- Hoadley, C., & Kilner, P. G. (2005). Using technology to transform communities of practice into knowledge-building communities. *SIGGROUP Bulletin*, 25(1), 31–40.
<http://msu.zoom.us/>
<https://zoom.us/about>
<https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting>
- Laurillard, D. (2001). *Rethinking University Teaching: A Conversational framework for Effective Use of Learning Technologies*. 2nd edition. London: Routledge.
- Lion, A. A. (2020). Online learning using zoom teleconference
- Mark, G. (1998). *Building Virtual Teams: Perspectives on Communication, Flexibility, and Trust*. ACMSIGGROUP bulletin volume 19 issue 2, pages 38-41



- Rosell-Aguilar, F. (2005). Task Design for Audio graphic Conferencing: Promoting beginner oral interaction in distance language learning. *Computer Assisted Language Learning*, Vol18, No 5.
- UNESCO. (2020). UNESCO Report, 'COVID-19 Educational Disruption and Response'. Retrieved from <https://en.unesco.org/covid19/educationresponse/>
- Walker, P. G. T, Whittaker, C., Watson, O., et al. (2020). 'The Global Impact of COVID-19 and Strategies for Mitigation and Suppression'. Imperial College of London. <https://doi.org/10.25561/77735>
- Wilson, B. (1997). Thoughts on theory in educational technology. *Educational Technology*, 37(1), 22-26.