

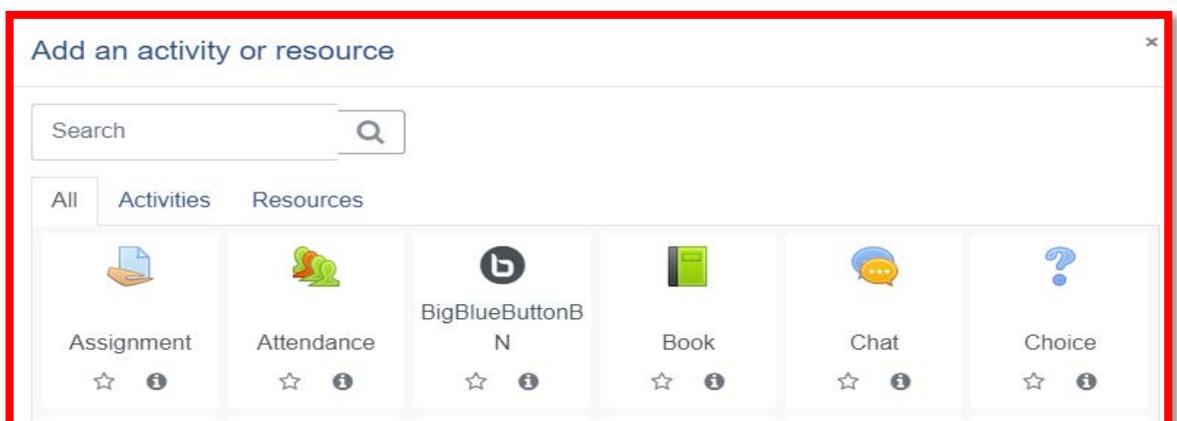
VIRTUAL CLASSROOM

The digital replica of a traditional classroom is called **virtual classroom**. Two videoconferencing tools have been integrated and activated on the **eAiiSH** to facilitate virtual classroom. They are **BigBlueButton**, an open source tool and **Congrea**, a proprietary application available in both free and paid versions. Both can be added to the courses like adding other activities such as assignment, quiz etc.

A. Setting up of Virtual Classroom using BigBlueButton

As indicated above, the BigBlueButton is an open source video conferencing tool. It has the following features and functionalities for teaching online: (i) Chat window for text communication, (ii) Webcam sharing , (iii) Audio sharing , (iv) Status indicators permitting participants to indicate emotion, opinion or status like happy, unavailable, raised hand to ask a question, (v) Break out rooms to encourage group discussion with learners, (vi) On the fly polls to solicit opinions and trends within the class, (vii) Whiteboard to visually support topic content (learners may also contribute to the whiteboard), (viii) Visuals as the focus of the session (E.g. video, images, slide shows, animations, web links) (xi) Desktop or application sharing to demonstrate processes or share a presentation.

1. Click **TURN EDITING ON** button on the course page
2. Click '**Add an activity or resource**' link in the course page where you want to add the **Virtual Classroom**
3. **Choose BigBlueButton** from the list of activities and resources (Figure 1)



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Figure 1

4. Select the **Instance type** as **Room/ Activity Only**
5. Under **General Settings** enter a **Name** for the virtual classroom, ideally the topic of discussion or presentation and a **description** if necessary.
6. The description may be made available on the course homepage.
7. Under Activity/Room settings, enter a Welcome message
8. Do not click the option **Session can be recorded**
9. Under **Participants**, maintain the default settings for the **Add participant** entry. Also, make sure that, under **Participant List**, the settings for **All users enrolled as Viewer**, the **Role Teacher as Moderator** and the **Role Student as Viewer**.

Note: A **viewer**, usually a *student* can chat, send/receive audio and video, respond to polls, and display an emoji such as raise hand. They can also draw on the whiteboard provided the presenter permits and join a breakout room. The viewer, however, doesn't have any control over the session itself. That's the role of the moderator. A **moderator**, usually the *teacher*, has all the capabilities of a viewer plus the ability to mute/unmute other viewers, lock down viewers to restrict them from doing private chat, and assign anyone (including themselves) the role of presenter. A session can have multiple moderators. Moderators can also eject any user, start/stop recording, end the session at any time. The **presenter** controls the presentation area. He can upload slides, annotate the current slide with the whiteboard controls, enable/disable multi-user whiteboard, start a poll, and share their screen for all to see. Only one person at a time can be presenter.

10. Under schedule for session mention the timing of the virtual class session using the **Join open** and **Join closed** options.

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11. Maintain the default settings for the Common module, Restrict access, Activity completion, Tags, and Competencies.
12. Click **SAVE AND DISPLAY** button
13. In the resulting window, click **JOIN SESSION** button (Figure 2)

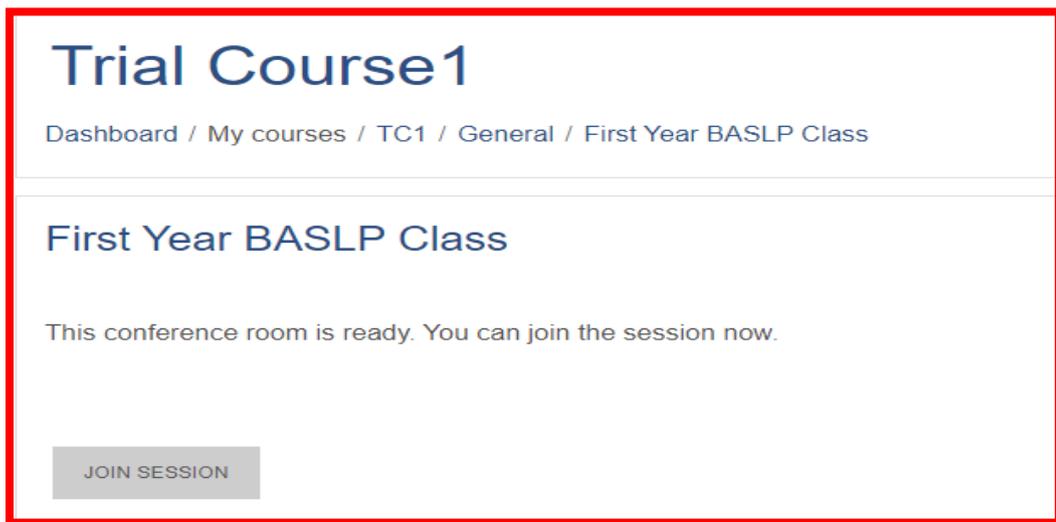


Figure 2

14. The system will first do an **echo test** for checking your computer's audio
15. The introductory window has three portions: The main presentation area, left side chat area and an extreme left panel with users list and other facilities like public chat and shared notes. In the participants list, the moderator's icon will be in square shape and the participants' icon in circle. The teacher can mute the participants. The teacher can also record the session and pause as and when required. The teacher can lock the students and by doing so they can be prevented from viewing others' webcam, private chat, public chat, sharing microphones, From the users' list any name can be clicked and make private chat with that person. The shared notes section is a collaborative area where everyone can write.

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The User can click against her own name in the participants list and set her status like Away, Raise, Undecided, Confused, Sad, Happy, Applaud, Thumbs Up, Thumbs Down. In order to open the webcam, click the icon at the bottom. Select Camera and click **sharing**. **The presentation area can be minimized and webcam can take the whole place**. The Presenter can upload the slides and optionally downloadable by the students. The teacher can draw on the presentation slides. The students can also be permitted to draw on the whiteboard.

16. Click the + button at the bottom left side
17. Click the slide button to create whiteboard slides.
18. The whiteboard is with a toolset on the right side using which we can write on the board using text, pencil, draw triangle, square and **Undo** and **Clear** all the items written.

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B. Setting Up of Virtual Classroom Using CONGREA

CONGREA is another open source video conferencing tool. Unlike BiBlueButtonBN, Congrea is a proprietary commercial video conferencing tool. The features of the Congrea for setting a virtual classroom include whiteboard, document sharing & annotation, online video sharing, screen sharing, poll, quiz, audio-visual interaction, collaborative real-time editor, HTML5 presentation sharing, private and public chat, ask question, notes and bookmarks, session recording and playback.

1. Click **TURN EDITING ON** button on the course page
2. Click '[Add an activity or resource](#)' link in the course page where you want to add the *Virtual Classroom*.
3. Choose **Congrea** from the list of activities and resources (Figure 3)

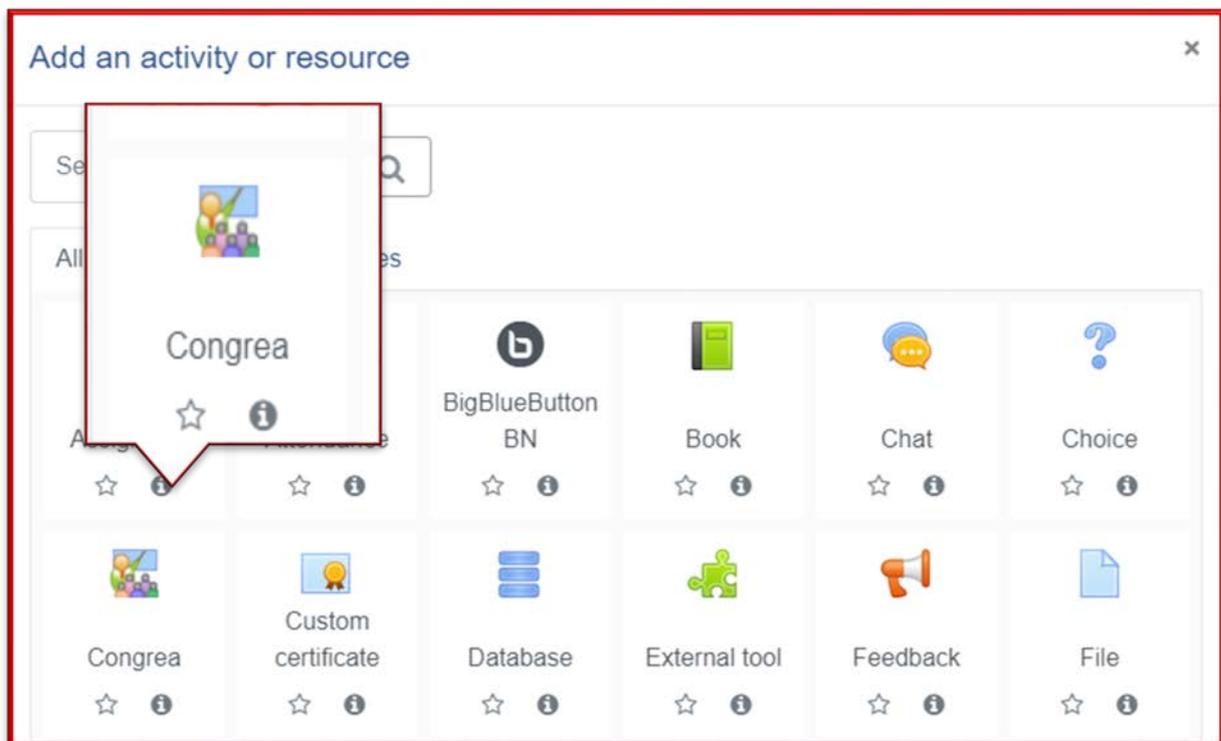


Figure 3

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- Under **General** settings enter a **Name** (*congrega name*) for the virtual classroom, ideally the topic of discussion or presentation and a **description** if necessary. (Figure 4)

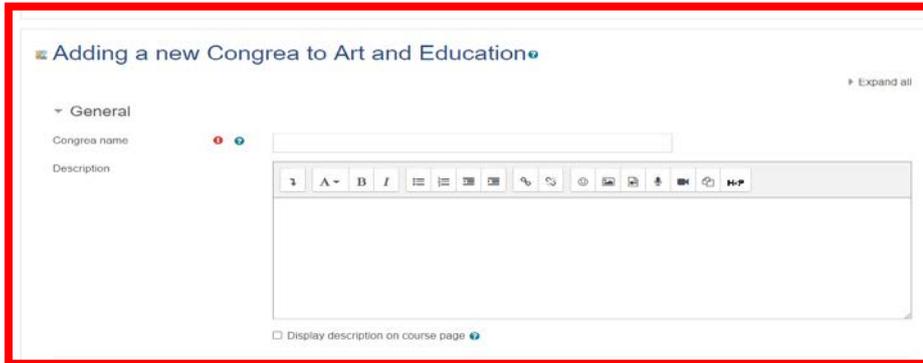


Figure 4

- The *description* may be made available on the course homepage by ticking option. (Figure 5)

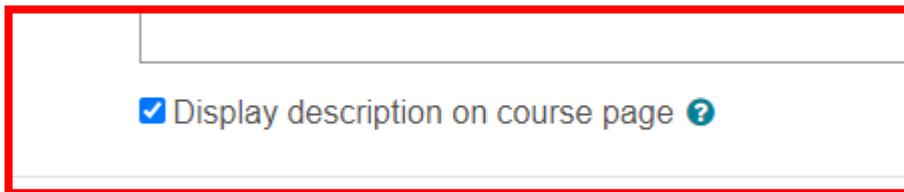
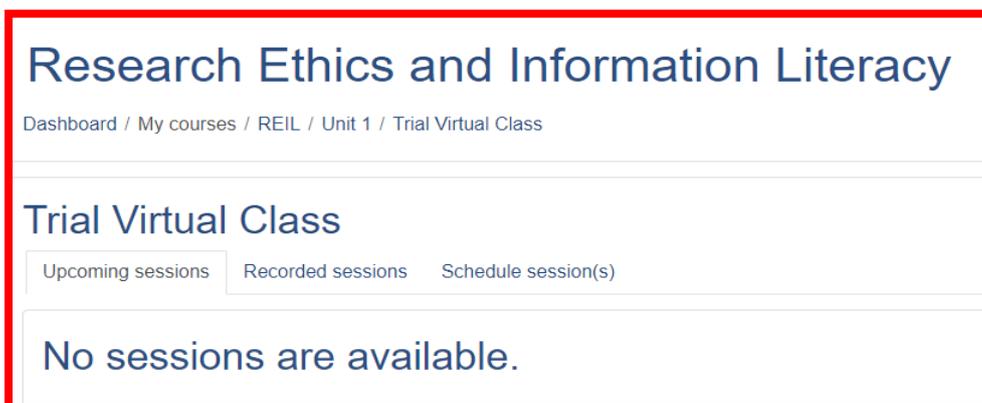


Figure 5

- Maintain the default settings for **Common module**, **Restrict access**, **Activity completion**, **Tags** and **Competencies**.
- Click **SAVE AND DISPLAY** button at the bottom.
- In the resulting window, click on **Schedule session(s)** button (Figure 6)



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Figure 6

9. Under [Schedule session\(s\)](#) click **ADD SESSION** button (Figure 7)

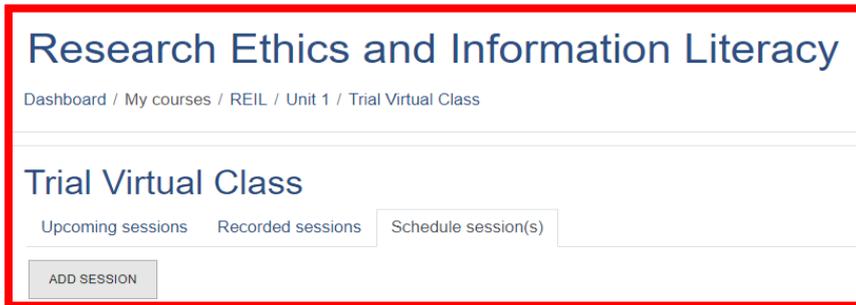


Figure 7

10. Schedule the session by entering [Session start time](#), [Time duration in minutes](#) and [selecting presenter](#) (*The default presenter is teacher*). (Figure 8)

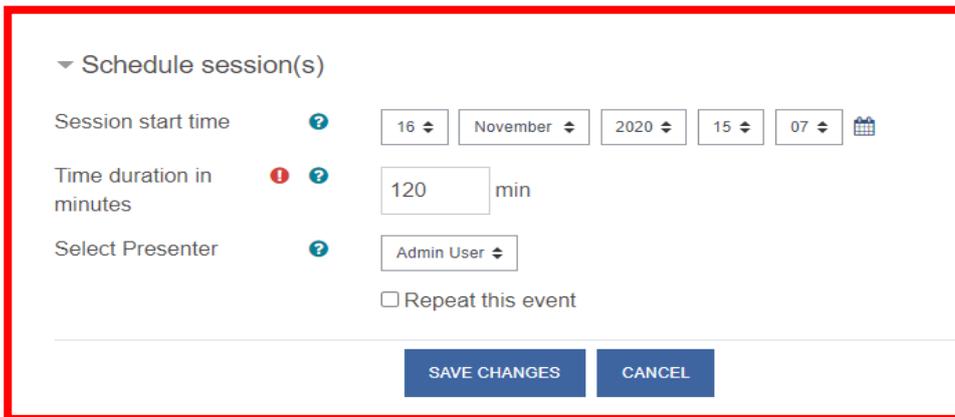


Figure 8

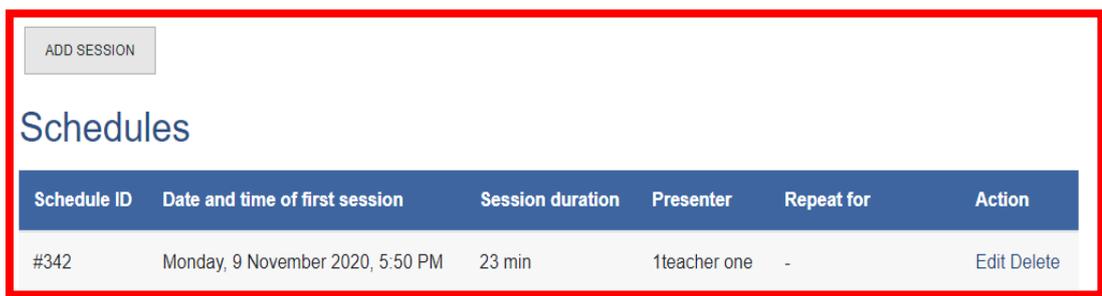
Note: In order to keep the session as open-ended i.e. without time limit, put 'o' as a value in the duration and then the classroom will stay open until this setting is changed. (Figure 9)



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Figure 9

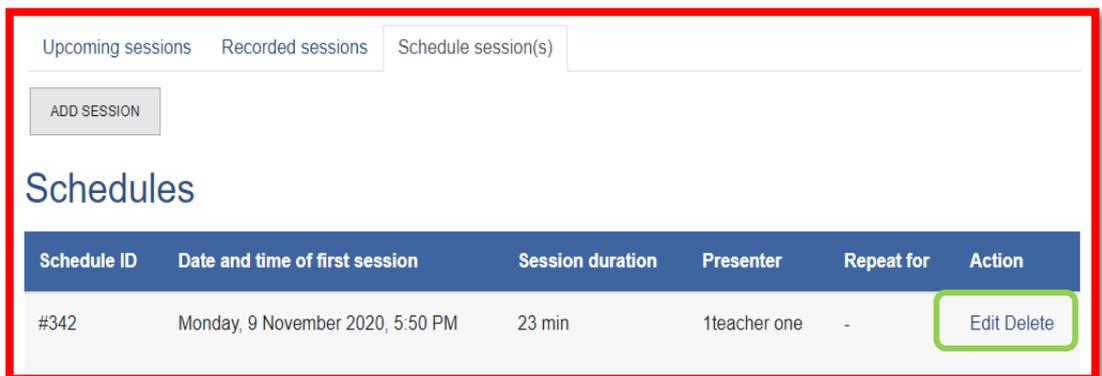
11. To repeat the session, tick the [repeat this event](#) box and choose the number of weeks until you want your session to last, repeating session will allow you to run your session on the same day that you have scheduled it for the number of weeks that you have chosen. *It may be noted that open-ended sessions cannot be repeated.*
12. Click [SAVE CHANGES](#) button. The scheduled session will be reflected once you click the save changes. (Figure 10)



Schedule ID	Date and time of first session	Session duration	Presenter	Repeat for	Action
#342	Monday, 9 November 2020, 5:50 PM	23 min	1teacher one	-	Edit Delete

Figure 10

13. Multiple sessions can be added by clicking the [ADD SESSION](#) button above the [Schedules](#)
14. The already scheduled sessions can be edited or deleted by clicking the [Scheduled Sessions](#) button, and then clicking [Edit](#) / [Delete](#) button. (Figure 11)



Schedule ID	Date and time of first session	Session duration	Presenter	Repeat for	Action
#342	Monday, 9 November 2020, 5:50 PM	23 min	1teacher one	-	Edit Delete

Figure 11

C. Joining the session

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1. At the time of your scheduled session, click **JOIN VIRTUAL CLASSROOM AS PRESENTER** under **upcoming sessions** tab.

Note: A link to the upcoming virtual classroom session will also be created on the course main page/ dashboard

2. Upon clicking the JOIN VIRTUAL CLASSROOM AS PRESENTER button, the Congrea will first test (a) browser compatibility (Figure 12)

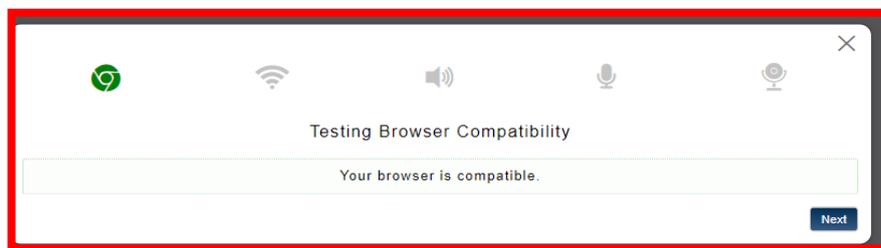


Figure 12

- (b) Internet speed (Figure 13)

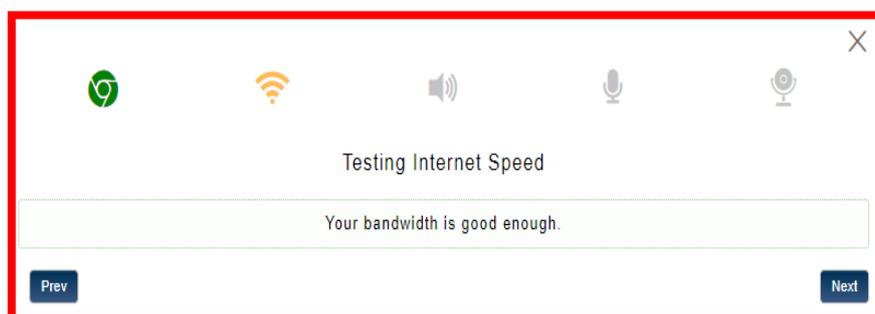


Figure 13

- (c) Speaker (Figure 14)

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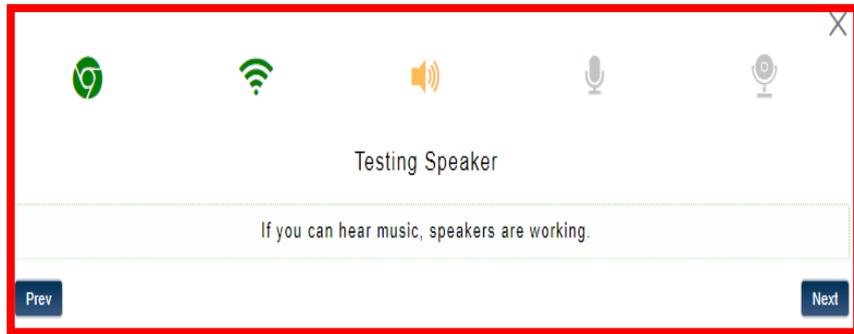


Figure 14

(d) Microphone (Figure 15)

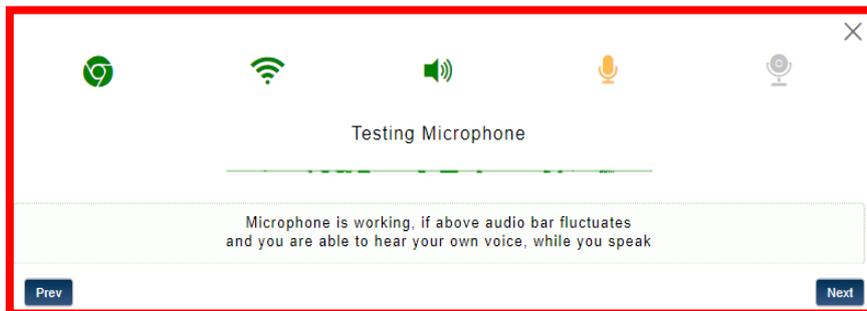


Figure 15

(e) Webcam (Figure 16)



Figure 16

3. By clicking the **join session** button at the right corner of the *testing webcam* window the teacher can join the session.

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4. The Congrea window consists of (a) A left side bar with various functionalities bar (b) Middle working space and (3) Right side frame with the presenters video on the top (*provided the video is on*) followed by the list of participants.

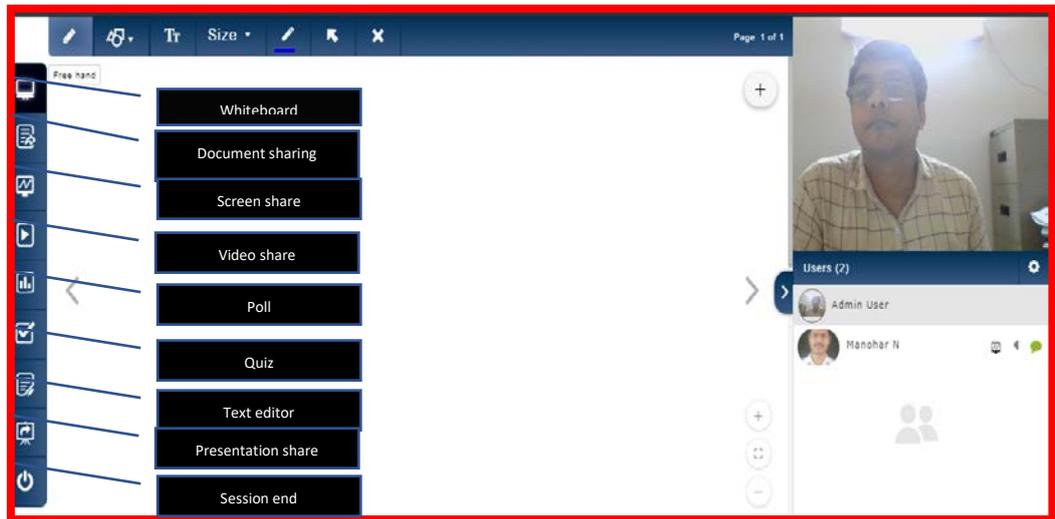
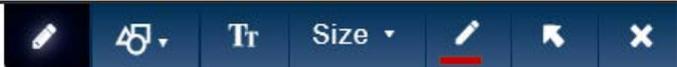


Figure 17

By default, the teacher will be taken to the whiteboard of the virtual classroom (Figure 17)

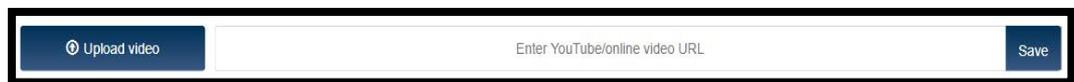


5. (The first icon on the left side bar). On whiteboard, the teacher can write and delete the text using the tools set  available on the top of the middle working space. It is also possible to use standard shapes with options to resize and color.

6. The next icon  is for sharing and annotating document with shapes and text.  Document types supported include .pdf, .ppt, .docx, .gif, .txt, .xml, .pptx, .doc, .jpg and .png. Upon sharing a document, a *document dashboard* will appear at the bottom of the left sidebar using which the uploaded documents can be managed and  sequenced.

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7. The third icon is for sharing the screen of the presenter. The students can also share their screen if the teacher enables.
8. Using the fourth icon,  the teacher can share video, either stored in the computer or from the YouTube. Upon selecting the share video icon from the left bar, a new frame, as shown below, will appear at the bottom portion of the middle working space. In order to share the video from the local computer click **Upload video** button, and to share a Youtube video enter the URL of the video in the space provided and click **Save** button.



9. The fifth icon  is used for creating instant polls during the class session. The teacher can take feedback/opinion or ask questions using the poll.

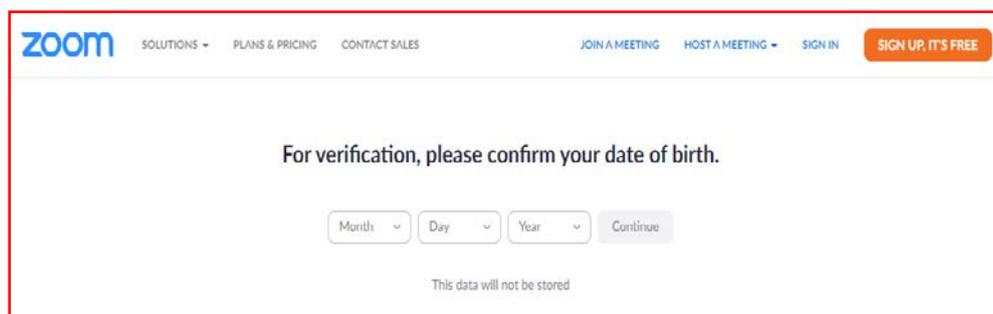
Setting Up of Virtual Classroom using Zoom (*free version*) as External Tool

Zoom Meeting is a US-based **web conferencing** or **video conferencing** tool with facilities for desktop client and a mobile app. It is available in both free and paid versions. The tool allows the users to meet online, with or without video. The eAiiSH facilitates virtual class using Zoom Meeting by integrating it as an externally hosted learning tool. Following are the steps involved in using Zoom Meeting on eAiiSH.

A. Creation of Zoom Account

1. The teacher has to create a Zoom account on the official website of the Zoom at <https://zoom.us/>
2. Visit the site and click sign up (The faculty *already having a Zoom account may skip the step and continue with sl. no. 4*)

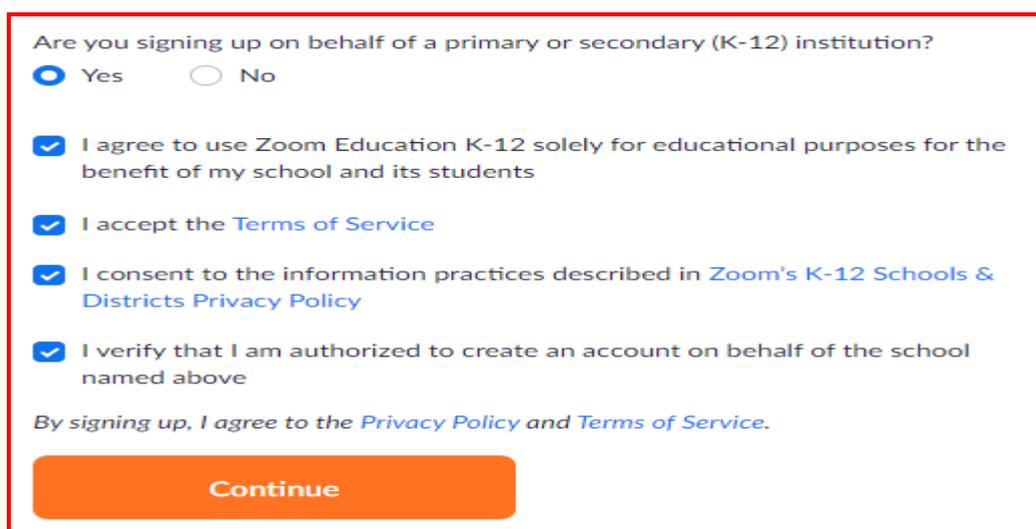
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The screenshot shows the Zoom website's registration page. At the top, there is a navigation bar with the Zoom logo and links for SOLUTIONS, PLANS & PRICING, CONTACT SALES, JOIN A MEETING, HOST A MEETING, SIGN IN, and a prominent orange button labeled SIGN UP, IT'S FREE. The main content area features the text "For verification, please confirm your date of birth." Below this text are three dropdown menus for "Month", "Day", and "Year", followed by a "Continue" button. At the bottom of the form, it states "This data will not be stored".

Figure 18

3. Enter your date of birth and click **continue** button (Figure 18)
4. Enter the personal e-mail id (*It must be the same e-mail id registered with the eAiiSH*) and click **sign up** button
5. Open the email and check for an *auto activation link* sent by Zoom and click it to activate the account.
6. In the resulting registration window, enter the First name, Last name and Password.
7. Click **Yes** for the question *Are you signing up on behalf of a primary or secondary (K-12) institution?* and agree/accept the associated declarations. Then, click the **continue** button. (Figure 19)



The screenshot shows a consent form for K-12 institutions. The question is "Are you signing up on behalf of a primary or secondary (K-12) institution?". There are two radio buttons: "Yes" (selected) and "No". Below the question are four checked checkboxes with the following text: "I agree to use Zoom Education K-12 solely for educational purposes for the benefit of my school and its students", "I accept the Terms of Service", "I consent to the information practices described in Zoom's K-12 Schools & Districts Privacy Policy", and "I verify that I am authorized to create an account on behalf of the school named above". At the bottom, there is a line of text: "By signing up, I agree to the Privacy Policy and Terms of Service." and a large orange "Continue" button.

Figure 19

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8. Skip the step **Don't Zoom Alone** by clicking the button **Skip this step** at the bottom.
9. On the resulting **Start your test meeting** window, click the **Solutions** link on the top left.
10. Select **Marketplace** under **PRODUCTS**
11. Click on the **LTI PRO** icon under **All Categories** (Figure 20)

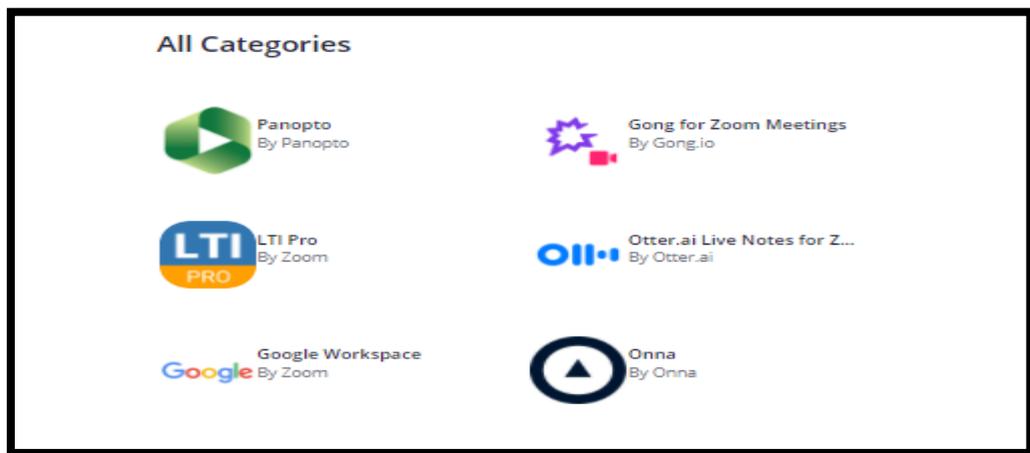


Figure 20

12. Turn on the **Pre-approve** button and then click **Install** (Figure 21)

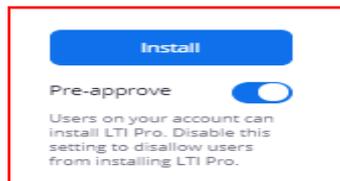


Figure 21

13. Click on **Authorize** in the resulting window titled **LTI Pro is requesting access to your Zoom account** (Figure 22)

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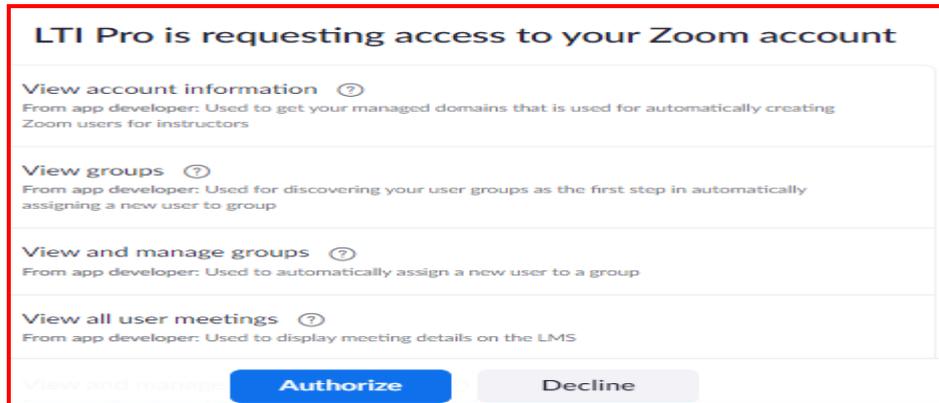


Figure 22

14. Click **Create a new credential** button in the new window (Figure 23)

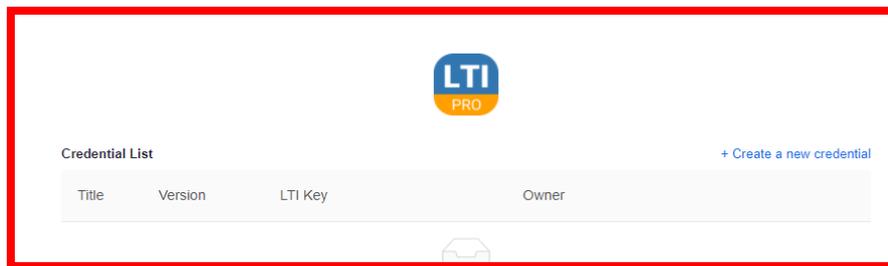
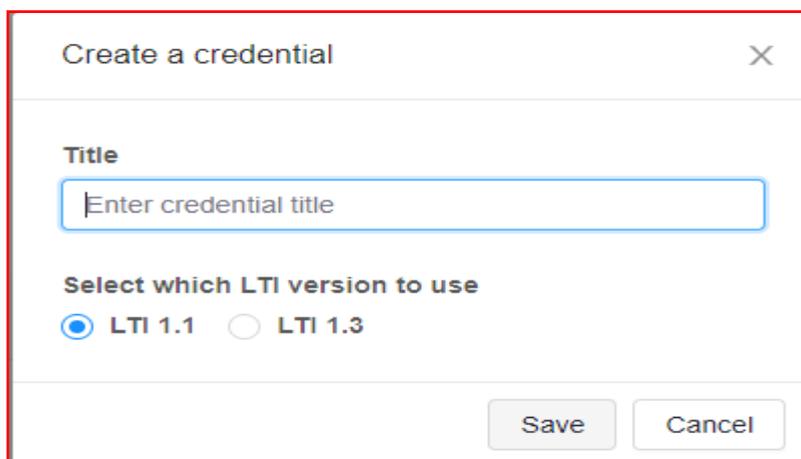


Figure 23

15. Create a credential by entering your name followed by a hyphen and the wording "Zoom meeting". E.g. Manohar-Zoom meeting. Maintain the default selection of **LTI version** as **1.1**. and **SAVE**. (Figure 24)



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Figure 24

16. Copy the following into a Word document and sent to the eAiiSH administrator.
 - a. Credential title
 - b. LTI URL
 - c. LTI Consumer Key
 - d. LTI Secret Key

For eg.

Credential title: 1teacher-ZoomMeet

LTI URL: <https://applications.zoom.us/lti/rich>

OAuth Redirect URL: <https://applications.zoom.us/lti/rich/oauth/complete>

LTI Key: nR6hcOcoQTSO1syqUF1xUg

LTI Secret Key; RhXknybilPIxDFp6Q8gX43SiP6yUepFFNZUN

B. Creation of Virtual Classroom

Once, the Administrator pre-configured the teacher's Zoom account on eAiiSH, the teacher can login to the eAiiSH using her credentials and create Virtual Classroom on Zoom

1. Click **Turn Editing On** button
2. Click Add an Activity or Resource
3. Select External Tool from the Activity chooser