



TEACHING IN THE AGE OF COVID-19: Real-time video conferencing



zoom

PROS

-  Free one-to-one meetings with no time limitation.
-  Group meetings are free for up to 100 participants for 40 minutes.
-  Meetings can be recorded and shared.
-  Features can be expanded on paid plans.
-  Audio Zoom attendance via phone is a possibility in selected countries.
-  Meetings are available via dedicated applications or via standard browser.

CONS

-  Although there is an academic pricing plan, Zoom can still be expensive for large groups.
-  On fullscreen mode, users may not see the toolbox of Zoom.
-  Cloud saving of meetings' recordings is available on paid plans.



-  The breakout groups feature enables users to separate into smaller groups where they can share ideas in a smaller and/or private forum.
-  Use bandwidth wisely when you have multiple participants. Opening up multiple cameras can restrict your bandwidth and decrease the quality of live streaming.

cisco Webex

PROS

-  Free option with up to 100 participants per meeting with unlimited meeting time.
-  Meetings can be recorded and shared on paid plans.
-  There is an option to call into Webex via phone or with your smartphone or laptop application or with a browser.
-  Can be made HIPAA compliant if using the business plan.

CONS

-  It can be pricey if not utilizing a group business plan through your institution.
-  Limited to 1 GB of cloud storage if using the free option.
-  Use is not as intuitive nor as popular as Zoom.



-  Integrate with Microsoft Exchange so meeting invitations include Webex information.
-  Important to note that for presentations with live audience members and remote participants, live audience members should have microphones for remote participants to hear them adequately.



TEACHING IN THE AGE OF COVID-19: Live from the recording studio



YouTube

PROS



Video can be streamed on YouTube to hundreds of people without any cost.



Interaction with the audience can be only made using the live chat function.



Use the Mobile app of YouTube for mobility.



CONS



If you do not have a verified account, you need to verify it before you start going live. Activation may take 24 hours.



The presenter cannot see or hear the audience.



Cannot share your screen unless you use third-party software.



Need to have at least 1,000 subscribers to stream on the mobile app.



Have the team all login and get comfortable about 15-20 min before you "go live".



Best to have some show notes to know where you are headed.



Finally, make sure to smile! You're on camera!

Podcasting

PROS



Many people are already using podcasts to learn. Adding one more might not be a hard thing if it is worthwhile.



Push out content with a single upload.



Easily reach learners via devices they already use.



For those who are camera shy, it only requires your voice!



CONS



Might be hard to "just start-up" without an experienced coach's assistance.



Producing and creating a high-quality sound recording can be tough.



Requires funds to host content on a podcast server.



Making podcasts available on multiple platforms can be hard.



Learners tend to do other things while listening to podcasts.



Start with basic research to see if your podcast idea has already been addressed heavily by others.



Not all podcasts are equal. Think about what you want to do, and stick to that brand.



Use a popular podcast server like Libsyn or Soundcloud, as they have relationships with podcast apps and will push your content across all of them.



TEACHING IN THE AGE OF COVID-19: Small group conversations



Skype

PROS



No account necessary to generate a meeting code to participate in a call.



Ability to display a presentation or supplement materials.



Ability to record the session and download for up to 30 days after the event.



Voice-to-text transcription option available.



CONS



Not all web browsers are supported.



Without an account, there's no option to schedule a meeting or save a video.



Saved videos do not include the chat bar used during the session.



The chat function is grouped by participants rather than by designating projects or topics.



- ⌚ Log in early to get comfortable with the interface.
- 👉 Work on using interactive slides, questions, discussions, and audience participation to keep the learners engaged.
- 💬 Use the parallel chat function during your lecture for people to ask questions.
- 💡 Place a light source in front of you to avoid a backlit screen.
- 🎧 Test your audio and video before and use headphones.

Meet

PROS



Can join pre-scheduled meetings using calendar invites, via a link or phone access.



Easy to use on both mobile or desktop devices.



Offers polls, recording meetings, and live streaming on the highest level plans.



You can do a live stream for up to 10,000 people within a domain.



CONS



Requires membership cost to Google G Suite. Now free.



No option to buy the app in isolation.



- ⏸ Set ground rules about interruptions and pausing for others to finish their thought to minimize overspeaking.
- 📍 Avoid meeting in loud places, private offices/rooms with reliable wifi or cellular service are ideal.



TEACHING IN THE AGE OF COVID-19:

Enhancing discussion with digital asynchronous chats



WhatsApp

PROS

- The interface is user-friendly.
- Syncs mobile contact lists.
- Multiple modalities of connection (text, audio, video).
- User can set up notifications for new messages and mute channels for a period.
- No ads or commercials.
- Can be used on multiple operating systems.
- Group calls make it easy to reach multiple people.
- Ability to broadcast the same message to multiple individual chats at once.
- One of the most popular messaging apps internationally.



- If you are starting a group, reach out to individuals first to see if they would like to join and collect/confirm cell phone numbers.
- Do not be afraid to politely leave a group if your participation is no longer necessary.
- Export your group communications and store them in an email for later access.

CONS

- Notifications can be overwhelming.
- Cannot send large files (documents max out at 100MB and videos - at 16MB)
- The lack of search function requires users to know each other's cell phone numbers.
- No "logout" option.
- A maximum of 256 users can be added to a group.

slack

PROS

- Simple for new users.
- There is a long list of applications that can be added as integrations
- Reduces email traffic.
- Acts as a digital hub and home base for remote teams.
- Messages are archived and easy to search.
- Real-time and asynchronous communication.
- Ability to set up private groups for specific tasks/projects.

CONS

- It can be difficult to disconnect.
- Depending on the volume of messages, earlier topics can be buried.
- Multiple, simultaneous conversations can be difficult to track.
- It has numerous beeps, buzzes, alerts that can sometimes be more of a distraction
- The free version only stores up to 10,000 messages after which it will start deleting.



- Set rules for the team to understand, agree and all adopt. Discuss expectations for message response time.
- Set up "office hours" so that you can disconnect and keep a work-life balance.
- Create channels for targeted collaboration. Include all files, discussions, images etc. pertaining to that project within that specific channel.
- Use @mentions to bring a specific person or people's attention.
- Use the Slackbot to schedule reminders.
- Unsubscribe from channels that are no longer relevant or active.

Microsoft Teams

PROS

- Most institutional academic hospitals have Microsoft licenses that come with Microsoft teams
- Often comes with large scale professional training
- It comes with a Wiki function as well as video chat and task management capabilities.
- Has a large application library for integrations, generally focused on institutional needs.



- Consider "office hours," and set ground rules for the team to understand, agree and all adopt.
- Use channels for targeted collaboration. Include all files, discussions, images etc.
- Export your group communications and store them in an email for later access.
- Use @mentions to bring a specific person or people's attention.
- Unsubscribe from channels that are no longer relevant or active.

CONS

- Personal use subscriptions range from \$99.99 to \$149.99 and vary on the number of users allowed.
- Must have specific security features installed.
- It doesn't integrate well with Google products.
- Doesn't yet integrate with audio function.

vt VoiceThread

PROS

- Users can enter comments at any time point in the presentation.
- Comments can be added in audio format, video or through text.
- Can be easily integrated into already existent online courses.

CONS

- Not a tool that is utilized in real-time.
- One has to select time in the presentation or a slide upon which to insert the comment.
- Users may be uncomfortable using their voice.
- Comments are not private.



- Best utilized as a question and answer format for predefined presentations.
- Consider adding Voice Threads to any asynchronous lectures, presentations of posters or slideshows.
- Allow users to watch a demonstration video or have a practice presentation where users can trial each of the comment forms such as text comments, video recordings, and audio comments.



TEACHING IN THE AGE OF COVID-19: Assessing learners remotely



socrative

PROS

-  Real-time knowledge of how many learners are in the "room."
-  Teacher can release questions one at a time or give the entire quiz.
-  Answers can be revealed or hidden.
-  Tests can be shared.
-  Data are available and exportable afterward.
-  Allows to design your curriculum or assessments flexibly.
-  Easily track progress of individual students.

CONS

-  Allows a maximum of 50 learners per room (free).
-  Rostering and multiple rooms are only available in Pro.

-  Use as a real-time tool to assess how learners retain information.
-  Create core assessment questions and share with your peers within the same field.
-  Use the live-results dashboard for synchronous assessment to observe students' answers and timings.
-  Delivery method of a quiz can be set with various modes.

Poll Everywhere

PROS

-  Users can answer questions from different devices.
-  Interactive activities or questions can be embedded directly into the presentation.
-  Participants can see others' responses in real-time.
-  Multiple formats can be utilized including multiple-choice questions, free text questions, clickable images, and word clouds.
-  Gamification can be incorporated.

CONS

-  Requires internet access to activate the poll and text.
-  Embedding questions into slides is a multi-step process that requires downloading different tools.
-  Users may feel that the process of inputting questions into PE is cumbersome.
-  Maximum audience size of 40 participants for the free version.
-  Some features are accessible with a paid subscription.

-  When writing questions, download the free Poll Everywhere app on your device.
-  Set aside time at the beginning of the session to allow participants to log into the poll.
-  Start with a simple practice poll question to allow users to become familiar with the technology and process.
-  Remember to activate your poll to get started capturing responses.
-  Limit the total number of questions utilized during your talk.
-  Mix question formats.
-  Interactive activities such as Poll Everywhere questions take time!

Mentimeter

PROS

-  Real-time knowledge of how many learners are in the "room."
-  Allows for the teacher to release questions one at a time or give the entire quiz.
-  Answers can be revealed or hidden.
-  Tests can be shared between faculty.
-  Data are available and exportable afterward.

CONS

-  Allows a maximum of 50 learners per room (free).
-  Rostering and multiple rooms are only available in Pro.

-  Plan and test your quiz ahead of time. You can reset it as necessary.

Google Forms

PROS

-  Completely free.
-  The form-creation interface is easy to use.
-  Masked questions can help you collect what you need.
-  Enabling "quiz mode" allows responses to be graded.
-  The "File Upload" question type allows for attachments from learners.

CONS

-  Whatever you collect is stored on Google. Be careful of private questions.
-  Conditional questions change based on previous responses and require different sections to redirect.
-  Design features are limited.
-  Participants cannot be tracked to determine whether or not they filled out the form.

-  Use Quiz mode for online exams.
-  Design and organize forms collaboratively by giving access and permissions for other users to edit the form.
-  Embed your form if you need to integrate with your learning management system, website, or platform.



Learning management systems (LMS)

Google Classroom

PROS

- Very simple to set up.
- Multiple classes can be created to host various cohorts of students.
- Use Assignments function to collect students' works, and make the process of grading simple.
- Use Originality Reports to ensure that students' work is genuine.



- Reuse the same post if you need to copy over different cohorts of students.
- Use class code to enroll your students.

CONS

- Dependent on Google services
- Gradebook is limited and you may need to keep better records elsewhere.
- Account management is hard.

ALiEMU

PROS

- ALiEMU and Foundations of EM are free and easily available to all residents
- Both are high quality through either post-publication curation or peer-reviewed content.
- Customizable options for level of learner.



- Use a faculty champion to review and select modules.
- Keep groups smaller.
- Share additional resources after the sessions to further support long term retention.
- Consider follow up quizzes to capitalize on the testing effect and spaced repetition.

CONS

- Need to familiarize faculty with the platform if not already using them.
- Faculty will need time to review content and select the most relevant material.
- Faculty unfamiliar with flipped classroom or effective small group teaching methods may be uncomfortable with these platforms.

slack

PROS

- Simple for new users.
- Great way to archive multiple, long conversations.
- Easily invite others to join the platform via email link.

CONS

- It can be difficult to communicate across purposes and to sustain a deep conversation
- Going back through conversations to find a specific topic can be challenging.
- Alerts and can create more of a distraction.
- The free version only stores up to 10,000 messages.

Course Networking

PROS

- Users are able to network with other learners and instructors.
- The site is designed for easy use on computers and mobile platforms.
- Courses are searchable and instructors can set whether the course is public.
- There is a reward system.
- Course pairing exists to group similar course content for further collaboration.
- Assessment tools and grading functions are available.

CONS

- There's a possibility that learners in your course are exposed to misinformation in their networking.
- Many courses are private.
- The search function for courses is imperfect.
- The global posts function, similar to social media, does not allow for tagging others, or following trends or topics efficiently.

moodle

PROS

- Extend core features using plug-ins for your needs.
- Designed for easy accessibility via mobile platforms.
- Customizable with multiple affordances: comments, messaging, statistics, etc.
- Restricted access is available to tailor content to different audiences or subgroups.
- It can accommodate small groups to large audiences.

CONS

- Technical knowledge is required to effectively own your installation.
- The free version on cloud is supported by up to 50 users and 200MB file storage space



- For all LMS, learn what affordances, or tools, each offers to help determine which is the right fit for your needs.
- There will be a period of trial-and-error both for the instructors and the learners.
- Open-source LMS have many customizable features, so continue to explore.
- Seek feedback from your learners.