



Training of Trainers (ToT)

Developing Effective Laboratory
Training Toolkit



Delivering Successful Virtual Laboratory Training

Virtual training has become increasingly important, especially in the context of remote work and global connectivity. Within this resource, we will discuss what virtual training is and explore the features of popular online learning platforms. Please be advised that we do not endorse or support one platform over another. The platforms mentioned within this toolkit were provided by trainers like you and are referenced as examples of ways to use these tools to provide quality virtual laboratory training.

What is virtual training? Virtual training refers to training in a virtual or online environment, typically delivered over the Internet using platforms like Zoom or Microsoft Teams. In most cases, these virtual training sessions are live, where trainers and learners (participants) log into the agreed-upon platform simultaneously and interact with each other.

Benefits of virtual laboratory training:

- **Budgeting efficiency:** Virtual training is cost-effective compared to in-person training. Travel expenses (airfare, meals, accommodations) are eliminated, allowing laboratory sites to allocate funds more efficiently.
- **Engagement:** Well-managed virtual training sessions go beyond simple video calls. Learners can engage in lively discussions, practice skills, ask questions, and share experiences related to the subject matter.
- **Spaced learning:** Virtual training allows for spaced learning, where learners can absorb information over multiple sessions, leading to better retention and understanding.

Skills for successful virtual laboratory trainers

Effective virtual laboratory trainers possess the following skills:

- **Technical proficiency:** Familiarity with virtual platforms, tools, and features
- **Adaptability:** Ability to adjust content and delivery for an online audience
- **Engaging communication:** Keeping participants actively involved and motivated
- **Time management:** Efficiently managing session duration and breaks

Engaging activities for virtual laboratory training

To enhance engagement, consider incorporating the following activities:

- **Case studies and role-playing:** Apply theoretical knowledge to practical scenarios
- **Gamification:** Turn learning into a game with challenges, rewards, and competition
- **Demonstration:** Teach someone how to make or do something in a step-by-step process. As you show how, you “tell” what you are doing.



Engaging tools for virtual laboratory training

To enhance engagement, consider incorporating the following platform tools:

- **Interactive polls and quizzes:** Assess participant knowledge or check-in to ensure they understand the discussed concepts
- **Breakout rooms:** Break larger groups into smaller ones to foster more collaboration among group members
- **Whiteboards and annotation:** Foster collaboration, visualize concepts, brainstorm ideas, or solve problems interactively
- **Reactions:** Assess the participants' understanding of the content, satisfaction with the speed of the training, or propose a question
- **Chat:** Foster discussion, ask and answer questions, and share ideas and resources among participants
- **Sharing Screen:** Show on-screen content to participants, often in alignment with annotation
- **Live captions:** Support accessibility needs by converting presenter audio into text in real time

Remember that successful virtual laboratory training goes beyond the technical aspects. It is about creating an interactive and valuable learning experience for your learners.

Preparing for your training

As you prepare for your training, it is recommended that you practice using the various features you expect to use in your training at least the day before. It is also suggested that you ask a colleague to serve as a producer to assist with running the virtual training in the background. The role of a virtual training producer is to provide technical support, assist with monitoring the chat, setting up whiteboards, polls, and breakout rooms. This person should assist you in testing your audio and video before the day of your training and 20-30 minutes before your training begins. Having a virtual training producer can greatly enhance the overall learning experience.

If you plan to share a PowerPoint presentation, video, or other documents during your laboratory training, ensure you have those items open and ready. When sharing content in an online platform, make sure you choose the appropriate option to share audio. Most platforms have separate buttons for sharing screen, video, and audio. Select the one that specifically shares audio if you want participants to hear sound. Test the volume with the producer before the training begins. Lastly, close your email on your computer to ensure notifications or pop-ups will not interrupt your training.













































During your training

Expressing virtual learning expectations and protocol early in your laboratory training is important, often called "housekeeping instructions." At this time, ask learners to mute their mics if they are not speaking, eliminate background noises, turn on their cameras, and rename themselves if necessary. If you plan to record the session, let your learners know. Inform them of features available through the platform, such as transcription or closed captioning. You can also add any other instructions on acceptable uses of the virtual platform, such as rules for the chat, when and how questions may be asked, and ways you would like learners to let you know they need to step away. These features differ depending on the platform.

Table of platform features

An effective virtual trainer should be familiar with virtual platforms, tools, and features. The table below lists common features found in virtual platforms. Select each symbol for the support resource link.

Please note: This table is not exhaustive. Some features may not be available with all platform versions. We encourage you to check with your system administrator to see which features are available.

Features	Zoom	Microsoft Teams	Google Meet	Webex
General Support	Zoom Support	Microsoft Teams Support	Google Meet Support	Webex Support
Meeting Capacity*	100-1,000	1,000	500	500
Annotation				
Breakout Rooms				
Chat				
End-to-end Encryption				
File Sharing in Meeting Chat				
Live Captions				
Meeting Recordings				
Polling				
Reactions				
Sharing Screen				
Whiteboard			 **	

*Meeting capacity may vary depending on subscription.

**Google Meet's Whiteboard (Jamboard) will no longer be available after December 31, 2024.