

# Teaching Skills and Equations Online

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## Teaching and Learning Services

### *Background and Best Practices*

Videos that demonstrate how to perform specific skills like sewing or brush technique or solving equations are valuable tools for students in both face-to-face and online courses. Some of the benefit of videos include:

- Students can pause and replay sections of the video thereby allowing them to proceed at their own pace.
- Students can revisit a topic repeatedly in order to model skills and develop understanding.
- Many students seek out videos for learning. If you provide or recommend videos you can help to ensure they are looking at quality videos that teach appropriate skills and don't contribute to misconceptions.

Of course, quality matters when it comes to video resources. That doesn't mean that you need to take acting classes or have the videos professionally edited, but it does mean that finding existing videos or creating your own videos will take time to ensure that the videos meet learner needs in your course. Based on the current research in the field, here are some best practices to keep in mind.

- Plan the video first. Write out key points or create a script to keep yourself on track.
- Focus on one concept per video.
- Keep it short. 10 minutes is maximum but 3-7 minutes is ideal.
- Show them your face. Intersperse your talking head or use a picture-in-picture format from a tool like Screencast-o-matic.
- Let your enthusiasm show.
- Make use of automatic captioning through Kaltura.

**Creating your own videos is one approach, but you can also look for videos that already exist. MOOCs and Khan Academy are two places you can begin your search.**



## Recommended Technology and Resources

This list is a starting point. There are other options.

Gooseneck HD Webcam – Make sure you go with a high definition model such as HUE HD or HUE HD Pro.

Drawing Tablets – The Intuos Wacom Tablet is relatively affordable and easy to use.

Screen recording – Kaltura Capture (video tutorials <https://bit.ly/KalturaMacEwan>) or Screencast-o-matic (<https://bit.ly/ScreencastMacEwan>).

Talk to the educational developers in TLS if you would like assistance.

[Teaching@MacEwan.ca](mailto:Teaching@MacEwan.ca)



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## The Options

### Option 1: Phone, pen, and paper



This is the lowest tech option. You can probably do it without purchasing any extra equipment. This option is also one that you can give your students so that they can record themselves solving a problem so you can see and hear their process.

Set up: Prop your phone up on a stack of books or flat objects so that you can see your writing surface. You may need to place something on top of the one end of the phone to keep it balanced. Use whatever video recorder you have on your phone. Remember to check the focus and adjust as needed. You will probably be able to record your voice at the same time just make sure to check the sound quality first.

This option will also work for things like demonstrating techniques such as brush technique. The best option for getting this video to your computer is posting it to your Google drive as the file size is likely to be too large to email.

### Option 2: Webcam, pen, and paper

There are two options here. If you already have a webcam and don't want to purchase anything new you can prop your webcam up similar to how you would prop your phone up in the first option. If you're looking for a more seamless solution you can pick up something called a gooseneck webcam. As the name implies, this type of camera has a long neck so that you can extend it over the piece you are working on.

One advantage of using a webcam instead of your phone is that the video can be recorded right onto your computer. As a result, you can use screen recording tools like Kaltura Capture or Screencast-o-matic to create the recording. The most difficult part of this option is making sure the focus is sharp enough.

### Option 3: Drawing tablet



There are dedicated drawing tablets that you can connect to your computer. One of the main benefits of these is that, if you have a webcam as well, you can include both video

of you talking, which helps students connect to you, and the capture from your tablet. When you purchase one of these tablets you can download the included software. You can also use programs like Microsoft PowerPoint or Microsoft Paint to draw in. Then use screen recording tools like Kaltura Capture or Screencast-o-matic to create the recording.

### Option 4: Android or iOS tablet

If you already have a tablet, you may want to use it to record. You will need to install a specific screen recorder like AZ Screen Recorder for Android. For Apple, iOS 11 or later has a screen recorder already installed. You'll also need a program like Microsoft PowerPoint to draw in. You would then need to post the video file to your Google drive in order to access it from your computer.