



CHAPTER 2

How to Teach Unforgettable Lessons & Classes

On Zoom & Google Meet

A Step-by-Step Guide for Educators

Here, you'll find everything you need to know to teach
amazing lessons online today.

What Equipment Do You Need to Teach Online?

The short answer? Just a computer, mobile phone, or other device with a working camera and microphone.

The longer answer? There are some powerful - and affordable - tools you can use to optimize your teaching experience. Today, mics and cameras, lighting, and backdrops are dramatically more affordable than they were even a few years ago, and if you're serious about teaching online, it may make sense to upgrade your setup accordingly.

Again, lots and lots of teachers are sharing incredibly valuable knowledge with students using just basic tools, and you don't need fancy equipment to create an exceptional teaching environment and experience for your students. However, if you're planning on teaching lots of lessons each week, or if you're a music teacher or other professional who finds sound, visuals, or camera angles are important, it's worth taking a look at some tools that will make your experience better.

Let's take a look at some tools, equipment, and gear you can use to optimize your lessons.

Cables & Tools to Optimize Your Internet Speed

Sometimes, it can be hard to know what's causing technical glitches during an online lesson. Often taking a closer look at your internet can be telling. While it's possible to teach lessons on a slower internet, teaching on a higher speed connection will yield better results.

- Running an Internet Speed Test can reveal exactly how fast your internet is, and how well it can be expected to perform during your lessons.

If your internet is slow...

- It's possible that your internet speed isn't the culprit, but that you're simply positioned too far from your router. As a first step towards speeding up your connection, try moving closer. You don't necessarily need to be right next to it, but being in the same room - or even on the same side of the house - as your router can work wonders.
- If moving closer to your router doesn't make a difference, try plugging your computer directly into your router using an ethernet cable. Make sure you find an ethernet cable that's long enough to extend to your desired teaching set up, especially if you're fixed in place with a piano or other large object.
- If it's in your budget, upgrading your internet is a great way to improve your lessons. But, it's definitely worth trying the steps above before spending extra money on an enhanced connection.

Taking some time and energy to test and improve the speed of your internet will work wonders for your online lessons, and could be the number 1 step in improving your online education experience.

Enhancing the “Sound” of Your Online Lessons

For music lessons especially, it can be helpful to have a quality microphone to optimize your sound. From string instruments to voice, piano to brass, music lessons are clearer and more effective with a microphone.

“Having an upgraded microphone makes a huge difference,” says cello, piano, and orchestra instructor, Claire Mehm “It means the students aren't just hearing the pitches, but they can hear the tone and the timbre clearly.”

And it's not just music lessons that benefit from an upgraded mic. When you hook up even a basic microphone to your setup, your students will experience a fuller, more professional tone. Let's look at some different mic options:



1. USB Mic

USB mics plug directly into the USB port on your computer.



So a little cable plugs directly into the back of this mic, and then plugs into your computer.

Instead of dealing with a mixer and interface, these straightforward microphones improve your sound, without any hassle. Some recommended options:

- Choose the Blue Yeti Snowball Mic for an effective, but low-cost option
- For a mic with software included, try the Blue Snowball Studio USB Mic
- For a more comprehensive option, choose the Blue Microphone Studio All-in-One Professional Recording System for Vocals

2. USB Interface

If you're looking to fully-optimize your sound, you may want to use a digital interface with mic, mixer, and USB connector. This means you have a microphone that plugs into a mixer, which then plugs into your computer.



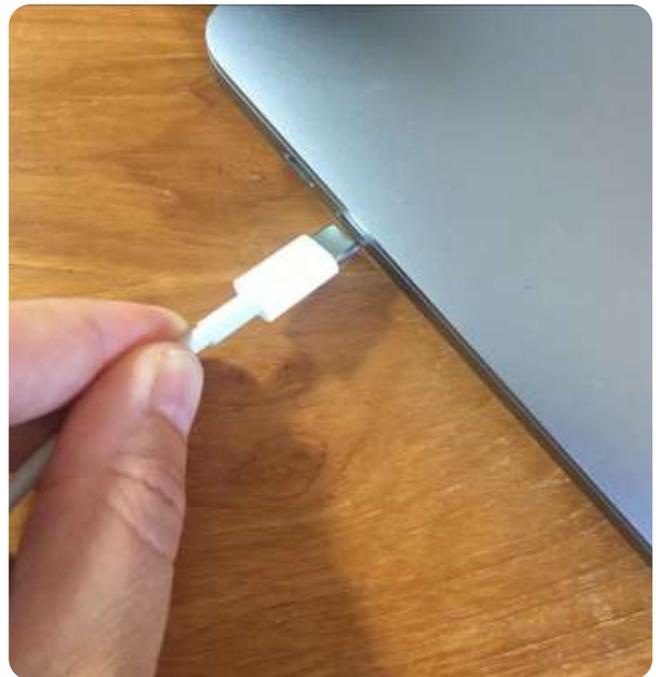
Traditional Microphone



Mixer/Interface



USB Cable that plugs into the back of your mixer



And then directly into the USB port on your computer

In these images, a USB to USB-C cable is used to connect the traditional USB on the mixer to the USB-C port on a Mac computer. Keep in mind that, depending on your computer ports, you might need an adapter for your interface or USB mic.



A traditional USB cable (Left) with a converter (Right).

An interface essentially converts sound waves that come through a traditional mic or instrument cable into sound that a computer can recognize.

Using an interface means you can make micro-adjustments to your sound quality using these nifty gain nobs on the front.



USB Cable that plugs into the back of your mixer

Luckily, home recording and livestreaming has become increasingly popular, which has driven the cost of USB interfaces down, and you can get a bundle (with an interface, mic, cables, pop blockers, etc.) for relatively friendly rates.

Some recommended options:

- Presonus AudioBox USB Audio Kit (shown above) gives you a mixer, mic, headphones, and mixing software, which gives you a visual look at your sound levels
- Focusrite Scarlett USB Interface gives you a mixer mic, mic stand, and pop blocker, but no mixing software

If you need a little extra footage to connect your interface, a USB extender may come in handy.

3. Headset



Language and music teacher, Azalea Laredo found that a headset worked best when teaching Spanish language lessons and classes, “I move around so much, especially when teaching young children, and using a headset gives me that freedom and flexibility,”

Having a headset will improve your sound dramatically, and works especially well for dancers, tutors, and language instructors. However, headsets won’t pick up sound from the rest of the room, so if you’re a music instructor, you’ll need to combine your headset with another mic to pick up the sound of your instrument.

Headsets either plug directly into your computer with a cable, or you can get a wireless headset for total flexibility.

- Check out this listing of 2020’s best headsets for online educators

4. Headphones

Using headphones or AirPods will reduce the chance of a feedback loop or echo. You can use headphones that plug directly into your computer, or you can get headphones that are designed specifically for music professionals, which will need to plug into a mixer or interface.

- Use AirPods for a convenient, cost-effective solution
- Consider headphones that plug directly into your computer



- Or plug into your mixer with headphones designed specially for music professionals. Note that these have a different input than headphones that plug into your computer.



Keep in mind that headphones won't improve the quality of the sound your students will hear (you'll need a mic for that), but they will help by cutting out background noise.

Now that you've enhanced the “sound” of your lessons, let's find some ways to improve how your lessons “look”...

Enhancing the “Look” of Your Lessons

You don't need fancy lighting or multiple shots to teach a great lesson. However, having more than one camera angle and adding a little extra light can make the learning experience even better for your students.

Lighting

Ensure your face is lit by a source directly in front of you. The best, low-cost or no-cost option to do this is to simply position yourself near natural light like a window, or rearrange the lighting in your home or studio so that it shines on your face.

Some teachers have told me that they simply rigged up two or three clip-on work lights from their garage. The work lights weren't visible to students because they were positioned behind the computer, and they dramatically enhanced the clarity of lighting when it translated to video.

However, if you really are looking to upgrade, it's worth investing in a light ring. This is a cost-effective way to create a professional lighting look for your lesson or class.

Video Equipment

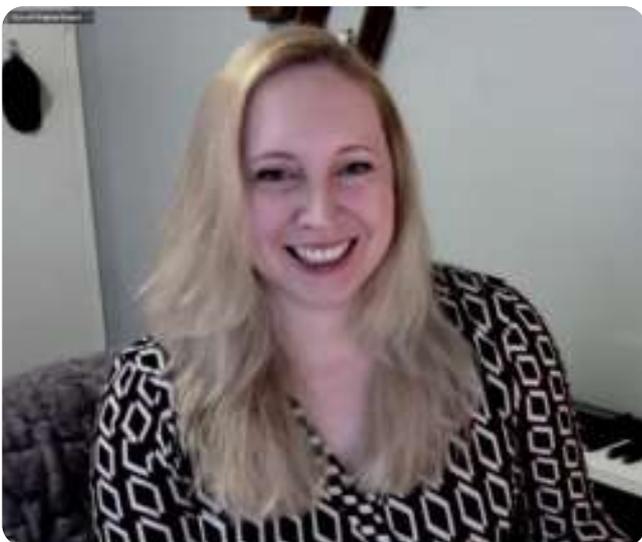
While the camera on your computer will work just fine for video lessons, you can always upgrade to a quality camera that provides a better visual experience for your students.

1. Web Cams

Web cams are cost effective solutions that quickly improve your visuals. Essentially, web cams are just small cameras that plug into your computer's USB port with a single cable. You can position a web cam any way you want, and many teachers use web cams strategically positioned to give close ups or side views when teaching subjects like instrumentals or movement.

Not only do web cams increase the flexibility you have as a teacher, and allow you to customize the angle your students are viewing from (it's hard to suspend your computer over a keyboard, for example), but they also improve the quality of your video itself.

An example of video without a web cam:



An example of video without a web cam:



An example of video with a web cam:

You also might notice that when you move quickly during a video call, your video has a hard time keeping up. For example, a built-in computer camera has a hard time tracking the hands of a pianist playing a very fast piece, or may blur the feet of a dancer who's demonstrating quick steps.

Web cams have the capacity to keep up with rapid motion, and your students will get a crisp, clear view that will enhance the look and feel of your lessons.

Some recommended options:

- Use Growfast 1080 Widescreen Webcam for a super affordable option
- Two higher quality - and slightly pricier options are the Logitech Brio or Logitech C922
- For a low light camera with mics included, try the Logitech 1080 Pro Stream Webcam

2. Tripods & Camera Stands

Web cams will hook directly to your computer, so you can get started with a web cam without actually needing a camera stand too.

However, if you want the freedom to be able to fine tune and adjust the camera angle during your lessons - especially if you're using a second web cam - you'll need a tripod or camera stand.

- This small, desktop web cam stand is good for a simple, second angle for simple lessons or lectures
- This 25-inch web cam stand clips to a desk and has a gooseneck capability, so you can bend and adjust as needed.

Web cams will hook directly to your computer, so you can get started with a web cam without actually needing a camera stand too.

Alternately, you can use an adapter to connect your web cam to the end of a mic stand. This makes it easy to suspend your web cam over your keyboard (for musicians) painting (for art teachers) or other angled work.

- Here's an example of a mic stand to web cam adapter.

Using Multiple Shots to Improve Your Teaching

If you're teaching piano, dance, or another discipline that benefits from more than one angle, consider setting up two web cams. These can give your students multiple view points, enhance engagement, and help you communicate complex ideas via video.



TakeLessons Partner, Claire Mehm uses several shots to enhance her teaching environment.

1. Choosing Your Cameras & Angles

To set up multiple camera angles, you don't necessarily need two web cams. You can invest in quality web cams to enhance your visuals, or instead, you can combine forces by using a web cam as a first angle, and your computer camera as a second. Or, you can use your computer camera as your first angle, and your phone camera as your second.

Once you've chosen your cameras, spend some time figuring out which angles will best benefit your students. If you're a guitarist, you might want to give your students a close-up of your left hand so they can understand chord positions more fully. If you're a yoga teacher, you might want to set up a camera on the side of your studio to give students a deeper understanding of postures and poses.

For piano players and other music teachers, it can be helpful to give your students a close-up view of the notes you're playing by suspending a camera above the keyboard.

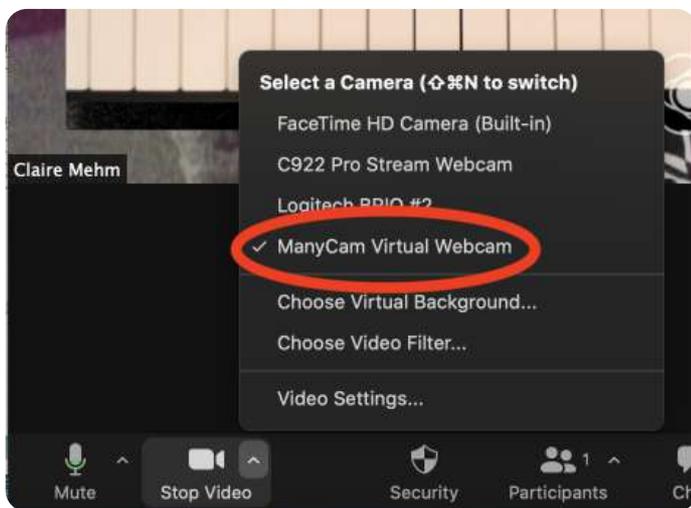
Finding the perfect positions for each of your shots will likely take some experimentation. Cellist, Claire Mehm teaches with two camera angles, one from the front angle so she can speak with students, and one that shows a closer visual of her hands, so students can better understand technique. She says, "I've switched around so many times to finally get the setup that I want."

To begin setting up your multi-camera shot, you'll want to start with a platform called ManyCam.

2. Downloading ManyCam Free Multi-Angle App

ManyCam is a free application that you can download from the internet. Once you've downloaded the software, simply open and choose your camera configuration. In Zoom settings, choose ManyCam as your camera option, and you'll be able to manage your shots right from the Zoom interface.

To do this. Navigate to the lower left hand side of your Zoom meeting screen, and find the little arrow next to the video camera icon. This camera will give you the option to enable your ManyCam cameras.



ManyCam will allow you to actually arrange the shots your students see in real time. You can drag and drop the video angles you're showing as you teach, and manually change them to demonstrate points for your students.

3. Multiple Shots & Animated Notes for Piano Teachers

Piano instructors can specifically benefit from multiple camera angles. Unlike in in-person teaching, it can be very difficult to speak to your student and also show your hand and finger positions via video



TakeLessons partner, Phillip Fullerton uses a combination of Muscores and ManyCam to show both his face, his keyboard, and an animated keyboard.

You can overcome this limitation in a couple of different ways:

- By having two camera angles - one that showcases you speaking to your students, and another that showcases your hands. You can do this by positioning a web cam over your keyboard, and attaching the web cam either to a goose neck camera stand or to a mic stand. Mic stands have handy mic stand to web cam adapters that make it easy to position your web cam above the keys (this is also helpful for visual artists or others who need an over-the-top shot of their work. Once you have your camera positioned, enable your ManyCam app to use that camera as one of your chosen shots.
- Another option for piano players is to show a live animated keyboard that plays along with you while you play, and even demonstrates the note names. TakeLessons partner, Phillip Fullerton uses this to great effect in his live group lessons, and has found it particularly valuable for students who may be brand new to playing piano. “I plug my midi keyboard directly into my computer with a USB cable. The midi is automatically accepted, and there are no drivers to download. Once I have it plugged in, I use a program called Musescore, which allows you to show keyboard animation in real time, with notes included. You can drag and drop this live animation,” By doing this, Phillip is able to show a video of his hands playing the keys, while an animated keyboard shows the letter names of the notes he’s playing. “I noticed in my group classes that I had a lot of students asking if I could show the letter names of the notes while I played, and I found this worked well.”

4. Green Screens & Virtual Backgrounds

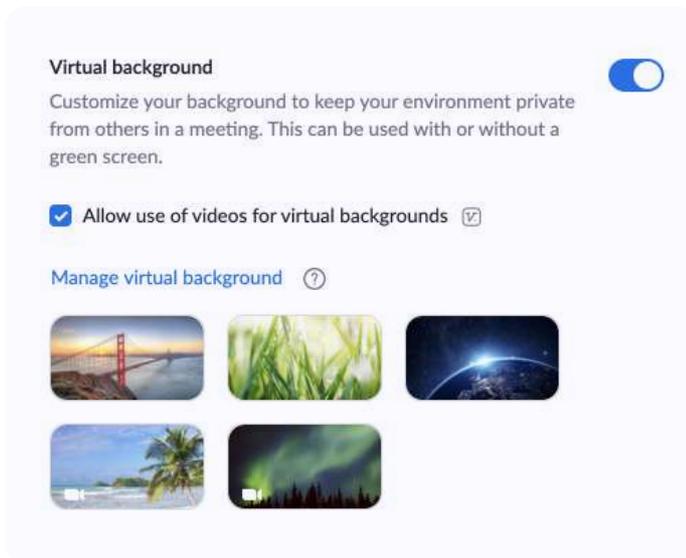
A green screen allows you to drop whatever images you want into your video background. Using a green screen, you can create the effect that you’re teaching from a huge concert hall or an island in the Pacific.

For teachers, green screens are helpful if you want to minimize distraction and create a simple, solid background that’s different from your home or studio space. Zoom has stock backgrounds you can choose from, or you can upload your own photo to use as your background.

Of course, you can drop a background into your virtual teaching space without a green screen, but using a green screen helps your camera differentiate between you and the space behind you, so your virtual background can be crisp and clean.

While green screens are common in large-scale movies and TV production, they’re actually extremely simple and accessible. You don’t need anything fancy to create an effective green screen in your own home. You can easily order a green screen online. Or, you can simply use a piece of green fabric hung against a wall..

Once you have your green screen set up, you'll need to enable your virtual background. To do this, simply log in to your Zoom account, go to your **settings** page, and then scroll all the way down towards the bottom of the page and enable the **Virtual Background** option.



Here, you'll be able to choose from Zoom's stock photos, or you can click the little blue, **manage virtual background** button to upload your own photo. You can find free stock photos to use for background images at Unsplash.

Summary of Online Teaching Equipment:

Yikes! That was a lot of information. If you're looking to up your game in your online teaching environment, you'll likely need to experiment to hone in on the perfect arrangement and gear for your teaching needs.

In summary, you'll want to prioritize:

- **Enhancing your internet connectivity:** by testing your speed, moving closer to your router, plugging into your router with an ethernet cable, or upgrading your plan.
- **Making your lessons look amazing:** using a web cam, or if you want to get fancy, get two web cams, using ManyCam to create multiple angles in your Zoom classes and lessons.
- **Lighting your lessons so you show up:** using lamps or upping your game with a ring light or other professional lighting tool.
- **Making your lessons sound great:** using either a simple headset, a USB mic, or a USB interface that will allow you to plug all your sound into your computer.

Remember, you don't need fancy equipment to teach amazing and memorable lessons online, but the equipment and strategies above will make your job easier, and will help keep your lessons accessible and enjoyable for both you and your students.

Hey... You Got This!

Teaching online can be challenging. But with a little preparation, you can create an education experience that's rewarding for both you and your students.

If you haven't already, now's a great time to start teaching with TakeLessons, and if you're looking for more resources for teaching and learning online, check out the TakeLessons Blog.