

Schulich School of Music

A Brief Guide for Remote Practical Instruction

Compiled by Jennie Ferris and Douglas McNabney June 2020

Many of us will agree that it is difficult to recreate an online equivalent to the live performance conditions that are critical to artistic formation. However, in circumstances when a remote delivered lesson is a better option, the following guide is intended to provide some advice and approaches to take best advantage of the medium.

To be effective, a remotely delivered lesson can be conceived as a very different experience from an in-person lesson. While approaches are developing rapidly, challenges such as unreliable internet connections, low bandwidth, latency, and the poor sound quality of consumer level equipment on both ends (instructor and student) may still limit the usual spontaneous back and forth exchange of an in-person lesson.

Equipment, software, and technical considerations, however, are only part of the equation. The actual design of the lesson (course design) and thought behind how and what the student can learn in this new environment is more important than the technical medium used.

If you are experiencing some of the limitations described above, one of the best workaround approaches to remote delivery is to include flexibly scheduled (asynchronous) elements (i.e., content delivery and student performances are not 'live'). For example, a student can record a performance in advance and upload the recording to MyCourses, [OneDrive](#) (or another McGill-supported server). The instructor and student can then listen to the recording together online at their meeting time, pausing to discuss details. A shared screen can also be used to display the score that the instructor can annotate. Or an instructor could consider making a short video capsule on a particular technical subject and uploading it to MyCourses to be viewed by a student at their convenience.

This guide is intended to be a 'living document' that will be frequently updated with advice and experience shared by staff. It offers brief information and advice about equipment and software, some principles to keep in mind, a sample approach to remote practical instruction (before/during/after a meeting), and links to additional resources.¹

General advice

Implementing some of the following suggestions can help the remote practical instruction experience go more smoothly:

- An internet connection of at least 1MB per second for both uploading and downloading²
- If possible, use an ethernet connection to your modem – wifi connections can be less reliable.
- Shut down computer programs you will not need during the meeting.

¹ Resources, guides, strategies and principles to inform remote teaching writ large are available on Teaching and Learning Services' (TLS') webpage "[Teaching Remotely During a Time of Disruption](#)".

² McGill IT has additional suggestions on improving an internet connection [here](#)

- When having a conversation, become accustomed to speaking more slowly and waiting to respond.
- Consider lighting and environment of your camera (avoid distracting visual and noisy backgrounds).

Software Platform

There are a variety of streaming platforms suitable for remote practical music lessons – McGill-vetted platforms such as Zoom, WebEx and Microsoft Teams may be quite familiar to instructors by now. Others such as Skype, FaceTime, and Google Hangouts may also be well known. What is less well known is that while Zoom can function in stereo, Skype and Microsoft Teams can only function in mono. Zoom also has superior user controls for sound quality.

All things considered, **Zoom is currently and approved, reliable way to videoconference with McGill students for remote lessons.** In addition, Zoom has been vetted by McGill IT and is embedded in MyCourses, which means specialized support from TLS and IT is available.

In recent months, instructors have identified and shared other software that can further support remote lessons, notably through higher audio quality and reduced latency. For instance, as of version 1.2, Cleanfeed is currently being vetted by McGill University IT/Procurement for possible use, further to instructor recommendation. While instructors are well-placed to identify software of potential pedagogical benefit, the purpose of the university vetting process is to assess whether prospective software is compliant with the university's [Cloud Directive](#), intended to help protect personal information and comply with privacy legislation. If you identify a software that you would like to have vetted, that fills a pedagogical need that is not met by software already approved by the university, please contact Jennie Ferris (jennie.ferris@mcgill.ca) at TLS, who will be in touch with next steps. Note that the vetting process does take time, and approval is not guaranteed.

Zoom settings for instructors and students

There are a few settings in Zoom that can be adjusted to improve the experience of sharing music, whether live or recorded:

- Optimize sound settings:
 - Change the “original sound” [setting](#) and the “background noise suppression” [settings](#).
 - Enable [stereo audio](#) in Zoom (only available in desktop client – not on tablets or mobiles)
- Annotate music scores:
 - Zoom documentation: [Using annotation tools on a shared screen or whiteboard](#)
 - YouTube video by Straznicki Violin Studio: [How to Screen Share and annotate music in Zoom](#)
 - Zoom documentation: Access the score on a tablet and [share the screen](#) ([iOS-specific screen sharing instructions](#))
 - How to share using a tablet, a computer, or a smartphone: [share handwriting in Zoom](#)
 - In-depth instructions for [using a smartphone as a document camera](#) to project an image of hard copy sheet music, plus a [sample set-up](#)
- Sharing computer sound:
 - Zoom documentation: [Sharing computer sound during screen sharing](#) (e.g., to share a video or audio file from your computer with a student, or vice versa)

- Synchronize video and audio: for instructors pre-recording modules, or for students recording their playing in preparation for a meeting with the instructor: [this video](#) [at 14:27 mark]

Some music-specific platforms including [Soundjack](#), [Jamkazam](#), [Jamulous](#), and [Ninjam](#) have been created for simultaneous music making. While latency is a common fatal flaw, they might have features for some musicians that could prove useful for teaching as well. Links to some alternatives such as Doozoo, Panopto, and Bandlab can be found in the very good AEC resource found [here](#) (Association of European Conservatories, of which McGill is a member). As these have not yet been vetted, please see the information on that process earlier in this section.

Hardware and Equipment

Using the built-in microphone and camera of a laptop or desktop computer is sufficient for most users, including students, during an online meeting. Students and instructors may make a smart-phone video for uploaded content that provides more than adequate sound and video quality for the purposes of remote learning. For those who wish for enhanced sound and video quality, instructors may also wish to have a good quality USB microphone and standalone webcam. Some may prefer to have two webcams – one for closeups of keyboard or instrument, and another for speaking to the student.

Some examples of good USB microphones:

- [Blue Yeti USB Microphone](#) \$259
- [Blue Snowball USB Microphone Brushed Aluminum](#) \$99
- [Samson Meteor Mic USB Studio Microphone](#) \$99
- [Apogee Hypemic](#)
- Many others by Shure, Sennheiser and cheaper versions on Amazon

Resumé of the advice:

- A good mic for music will have 24-bit 96Hz sampling
- Avoid a mic with DSP (digital Sound processing)
- Be sure there is gain control (volume) on the mic – avoid automatic gain control

USB Webcameras

Quality of the image will likely be less important for most of us as compared to sound quality. Nowadays, there are low-end webcams offering resolutions of 720p, mid-range webcams offering 1080p resolution, and high-end webcams offering 4K resolution at 60 fps. A good camera with 1080p at 30fps will be sufficient for most. Higher resolutions usually require higher internet bandwidth. A microphone will not be needed on the camera, if a separate USB mic is being used. You may wish to have a camera with a zoom function for closeups. Consider the Field of View you will need – 65°, 78° or greater. (Please remember – a smartphone camera will also do a great job for recording and uploading videos!)

- [Microsoft LifeCam Studio](#) \$99
- [Logitech C922 or Streamcam](#) \$149
- [Logitech Brio Webcam](#) \$249

Stand to hold the mic and/or camera

[Amazon Basics](#) mic stand \$46

For those interested in high quality video and sound recording to produce content of their own, the [Zoom Q8](#) (not to be confused with the Zoom platform!) is an ideal solution that combines superior video capabilities with high quality mics and control of sound files. \$539 at Long and McQuade

In addition, [Camtasia](#) is an excellent video editor you can use to polish your video capsules before posting to MyCourses. It is a free download for McGill staff at the McGill [software store](#).

Finally, McGill IT has developed a list of recommended [specifications](#) for various equipment (non discipline-specific).

COURSE DESIGN

Many resources can be found on the TLS site, including in-depth resources on [teaching remotely during a time of disruption](#). The latest iteration of the comprehensive Guidelines for Remote Teaching and Learning can be found [here](#).

Also consult the various [tools](#) that are available to help plan for remote teaching including the use of Zoom in MyCourses.

1. Basic principles to consider for a remote delivered lesson:

- **Articulate your goals/learning outcomes:** What are the goals/learning outcomes that you and the student have for a given lesson (hereafter, “meeting”)? Share these with the student, or co-construct your goals for the meeting. How will you know if you’ve reached these goals by the end of the meeting, or by the next meeting?
- **Consider different student circumstances:** Some students may have access to high-quality recording equipment, a designated practice space, and excellent internet. Other students may be making do with less and might only be able to practice at certain times of day or in less-than-ideal acoustic circumstances. Think about how you can support students in making progress on their instrument, starting from where they are. Consider offering meetings at different times of day, recognizing that some students are in different time zones or have caregiving responsibilities that may affect their availability.
- **Acknowledge limitations and consider the potential** of the current situation: While the nuances of live sound in an in-person performance will not be perceivable in remote practical instruction, consider what aspects of students’ playing *can* be developed in this context, or may even be advantageous. For instance, students can revisit the meeting recording to inform their practice and preparation for the next meeting.
- **Revisit frequency and duration of meetings:** Depending on your and your students’ approach, your schedules, and other factors, it might be beneficial to consider shorter, more frequent meetings (e.g., meet twice a week for 30 minutes each time, rather than once a week for 60 minutes).

2. A sample approach

The following approach to remote practical instruction is offered as a starting point for consideration.

When	Actions (student)	Actions (instructor)
Before the meeting	<ul style="list-style-type: none"> Record passages assigned at the previous lesson. Send the recordings and complementary information (e.g., their goals for the lesson; what they would like feedback on; specific questions, ideas or concerns; images of relevant sections of their score) to the instructor. 	<ul style="list-style-type: none"> The instructor may choose to develop short video modules (5-10 minutes) that address frequent challenges that students face and share these videos with students as appropriate to inform their practice. Listen to the recordings provided by the student Set goals for the lesson, taking into consideration the information the student provided.
During the meeting (Zoom)	<ul style="list-style-type: none"> The instructor summarizes the goals for the lesson, and the student confirms or clarifies the goals. The instructor and student may... <ul style="list-style-type: none"> discuss the recording(s), including what went well, what challenges arose, and how these might be addressed. play short passages on their instruments, e.g., for purposes of demonstration or to clarify understanding. However, playing entire pieces during the lesson is not recommended due to technical limitations. share their screen to discuss certain passages and make annotations in the score. agree upon what passages the student will record in advance of their next lesson, and by what date the student will send them to the instructor. Depending on the circumstances, these may be new passages or the same passages. 	
After the meeting [before the next meeting]	<ul style="list-style-type: none"> The student prepares and records the passages identified during the lesson, and the cycle continues. 	<ul style="list-style-type: none"> The instructor may choose to develop additional short video modules as they notice repeated questions or challenges from multiple students. The instructor listens to the recordings provided by the student and sets or co-develops goals for the next lesson, and the cycle continues.

3. Additional resources

Honour, E., Kaiser, J., & Olson, J. (2020). Resources for teaching music and audio production online.

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