Lecture Instructions and Presentation Guidelines

Overview

Daily topics

- up to two hours of lecture
  - the lecture will be pre-recorded
  - it can consist of one or several videos
  - students will watch lectures asynchronously
- 1-2 hours of practical work
  - practicals will be done during a twice-daily live Zoom meeting
  - tutors will assist with practicals, and should be familiar with the material
- Test your recording setup before producing the entire lecture

Important dates

- First draft lecture videos are **due on April 16, 2021**
- Final draft lecture videos are **due on May 21, 2021**
- The first day of the workshop is **June 7, 2021**

Practicals

- Very similar to how they are done at live Workshops
  - Students will use SSH to get command line access
  - Students will use RStudio for R based exercises

Shared Google Drive

This document contains links to the Workshop shared Google Drive named "IBG-SD-Workshop-Faculty". Accessing these locations requires a Google account and an invitation. If a link does not work for you, and you think it should, please contact Jeff Lessem at `Jeff.Lessem@Colorado.edu`.

The Workshop shared Google Drive can be used to store any Workshop related files, and is ideal for collaborating with other faculty. The students will **not** have access to this space. Individual files from the shared Google Drive *can* be shared publicly with the students, though they will typically access tutorial files directly on the Workshop computing cluster.

Lectures

Lectures will need to be recorded. You can do the recording by any method you are comfortable with. Recording with Zoom is recommended, and instructions are provided below. Other options are OBS Studio, PowerPoint's builtin recording feature, or a stand-up lecture in front of a large screen TV.

Uploading Videos and Slides

Recorded videos and slide presentations should be uploaded to the appropriate topic subdirectory in the "Lectures" directory on the Google Drive.

Videos can be uploaded in any standard format–`mov`, `mp4`, `mkv`, etc.

Slides can be in any standard format–`pptx`, `pdf`, `key`, etc.

If the lecture video is in multiple parts, please make the order clear. For example

- `Genetics and you, Introduction - part 1.mp4`
- `Genetics and you, Understanding the data - part 2.mp4`
- `Genetics and you, Reporting results - part 3.mp4`

Recording with Zoom

These instructions are based on, and often taken directly from, the instructor instructions for the ABCD ReproNim Course, with thanks to Prof. Angie Laird (Florida International University)

Recording with Zoom requires a paid account. If you do not have a paid account, please contact Jeff Lessem at `Jeff.Lessem@Colorado.edu` to schedule a Zoom meeting, and record under his account.

1. Launch the Zoom application and login to your Zoom account
2. Click "New Meeting" (connect and test your audio)
3. Click "Share Screen" (select your desktop, the PowerPoint application window, or other appropriate window)
4. There should be a small window with your camera view in it
    1. The size of the window determines the size of the camera view in the final recording
    2. The window may have buttons at the top to adjust its size
    3. The size may be adjusted by dragging the window's border
    4. You may need to make several test recordings to find a camera view size that is large enough to bring a personal element to the lecture, but small enough to not obscure too much of the slides
5. Start your slideshow (in PowerPoint, Keynote, etc.)
6. Move the mouse to the top of the screen to reveal the Zoom menu
    1. This may require resting the mouse at the top of the screen for a second, or clicking on the Zoom status bar at the top
    2. Click the **...** "More" menu
    3. Select "Record on this computer"
7. Record your lecture
8. Go back to the Zoom menu
    1. Click the **...** "More" menu
    2. Select "Stop Recording"
9. On the Zoom status bar click "Stop sharing"
10. "End" the Zoom meeting and select "End Meeting For All"

11. The video will convert. This may take several minutes for a long lecture
12. The video is probably saved in `Documents/Zoom/` in a directory with the current date, time, your Zoom name, and meeting ID
    1. The file will be named `zoom_0.mp4` or similar
    2. You can rename it to something descriptive, or leave it
    3. Upload it to the appropriate subdirectory of the "Lectures" directory on the Google Drive

Recording Tips and Problems

We have all had more experience being on camera and talking into a microphone in the last year than we might have ever expected. Many of these tips are simple things you may have learned after your first remote lecture. If you have a setup that has been working well for you, then it is probably good enough to record a Workshop lecture.

Regardless of what platform is used for recording videos, there are several important considerations to make sure the video is high quality, and useful for the students.

The advice given here also applies for the live Zoom meetings.

Many of these problems can be avoided by making a short test video before recording the lecture. Record the first 30 seconds of your introduction, then watch it looking for these problems

- Is your voice clear, and at an appropriate volume?
- Are your slides large and in display view?
- Is your face well lit?
- Is the camera window appropriately sized for the slides?
- Is everything visible in the camera appropriate?

Audio

Modern computers can have surprisingly good microphones, and the one builtin to your computer or your camera may be all that is needed. However, they are usually directional, so if you are not looking at your computer, your voice will not be recorded at an adequate level.

If you naturally move around when lecturing, then it is best to use a headset of some type. Bluetooth earpieces, "AirPod" style airbuds, "gamer" style over the ear headsets, and wired earbuds are all suitable options for recording.

Additionally, many Bluetooth headsets and AirPods include noise canceling microphones, which will reduce background noise.

Figure 1: Several examples of microphones that may work better than your computer's builtin microphone

Presentation view

Your slides should be in display view. If you have multiple monitors attached to your computer, or other things set, then your slides may automatically go to "presenter view". That is where PowerPoint shows notes, slide previews, and other information not intended for the audience.

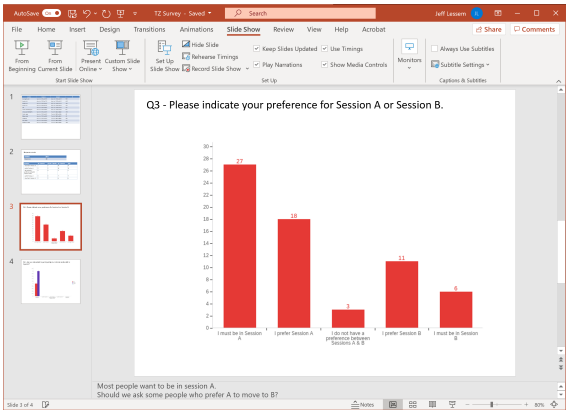

Figure 2: Editor view **Don't do this!**

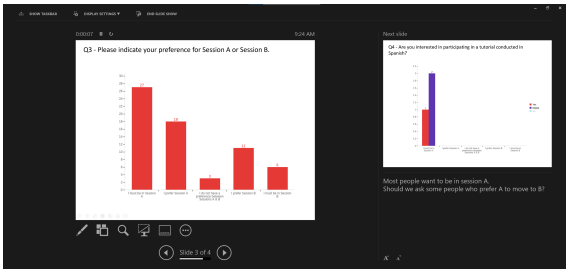

Figure 3: Presenter view **Don't do this!**

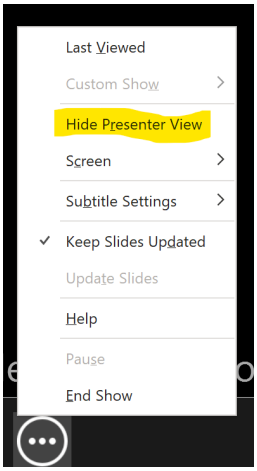

Figure 4: Use the **...** menu to turn off presenter view.

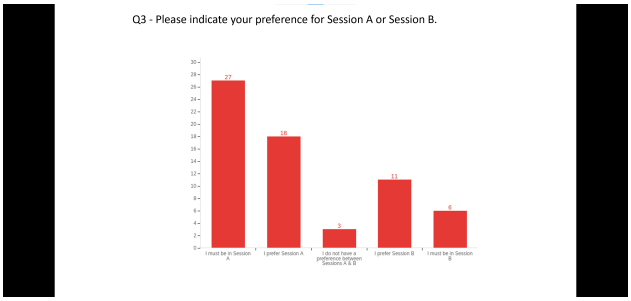

Figure 5: Use this view to show slides.

Lighting

Your camera will record best when you are well lit from the front. That means that the primary light source should be behind the camera. Back-lighting, where the primary light source is behind the speaker, will result in silhouettes and other poor looking visuals.

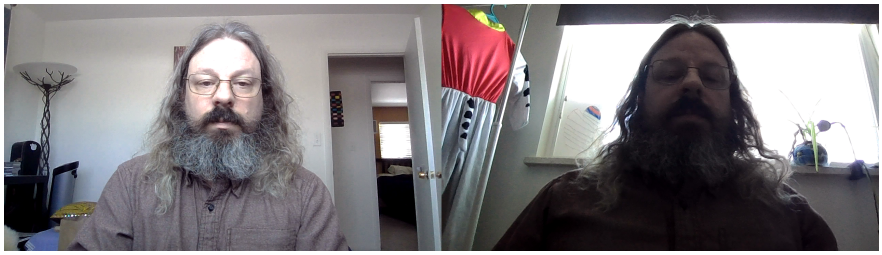

Figure 6: The difference between a front-lit and back-lit image

Environment

These videos will be made public. For that reason it is important to maintain a professional environment during the recording.

- Dress in a way you would feel comfortable giving an in person lecture
- Make sure any art, books, etc. in the background of the video would be appropriate for your at-work office
- Record at a time with minimum background noise, and other distractions, a headset with a noise canceling microphone will help reduce background noise
- Silence computer and phone notifications, as these often are excessively loud in recordings
- Make sure there is no background music, as we do not want to get a lecture taken down for a copyright notice

Workshop logos

If you would like to include logos for the Workshop in your slide show, they are available on the Google Drive. The logos are available in various formats, sizes, and variations. For use with PowerPoint, the `.emf` files are recommended.

Figure 7: The Workshop logo

Computing environment for practicals

Command line

Similar to live courses, students will use Workshop computers to do their practicals. The primary difference is that students will use an SSH client on their own computer to connect to the Workshop computing cluster. Once on the cluster, it will be an identical command line environment to what is used at live courses, so command line based practicals which have been used in the past, should work.

Just like at the live courses, faculty files will be available in named directories under `/faculty/<faculty username>`. For example, Ben Neale's directory will be available to the students at `/faculty/ben`.

Unlike at live courses, students will not have access to a graphical file browser to copy files. Some may use the file window in RStudio, and others or the file transfer window in Bitvise, but it is probably best to plan on using the command line to copy files.

Written out instructions could look something like this:

```
workshop~50:~> mkdir Day1
workshop~50:~> cd Day1
workshop~50:~/Day1> cp -r /faculty/ben/lesson1
workshop~50:~/Day1> cd lesson1
workshop~50:~/Day1/lesson1>
```

If students will have to edit text files for the practicals, then instructions should use `nano` or the text editor built into RStudio. Students are free to use `vi`, `vim`, `emacs`, etc., but many will not be familiar with those editors.

Please let Jeff Lessem know as soon as possible what programs you will use. Just like at the live course, all programs need to be installed ahead of time to insure that they work correctly for the students.

If you intend to use any datasets larger than a gigabyte, please contact Jeff Lessem to arrange for all students to access the data from a single place, instead of each one copying it.

R

Students will use RStudio running on the Workshop computing cluster to do their work in R. It can be accessed at `https://workshop.colorado.edu/rstudio`.

Please let Jeff Lessem know what R packages you will use. Many R packages have external dependencies which may not be installed, so if you plan to have students run `install.packages("myRthing")`, then expect your practical to go badly.

Questions?

If you have any questions, please reach out to Jeff Lessem by email or on Slack at `https://boulder-workshop.slack.com` in the `f-creation-of-videos` channel, or by DM.