QUICK TIPS
on making videos of Capstone Presentations
and Poster walkthroughs.
Brought to you by Dr. Eck Doerry, SICCS, NAU

Creating engaging and effective video presentations is a valuable skill that will serve you well throughout your careers. Whether it's creating how-to videos for the latest software produced by your startup software house, pitching your greatest new idea for circulation within your organizations hierarchy, or creating quick training videos for onboarding new team members, understanding the basic process, how to use some basic tools, and getting some applied practice is excellent real-world training. In short, there are some real silver linings here:

- You get to learn a valuable new skills
- There are no problems with stage fright; you can do as many "takes" as you need to nail it.
- You have a lasting artifact (your video) that you can use to impress future employers.

In practical terms, you're not looking to become an expert video editor here; the trick is to quickly and efficiently pick up enough info on tools and techniques to create a clean, professional presentation. Focus on good lighting, clear audio, and making sure the pieces come together smoothly. With this in mind, let's look at some options:

The Basics: How to just record yourself speaking over a Powerpoint presentation.

There are endless ways to do this these days; practically every app for videoconferencing (skype, Zoom, etc.) has a record button on it…if you hit "share screen" and record while you talk, you have it solved. Here are some options:

- Record presentation in Zoom
  - How to record: https://support.zoom.us/hc/en-us/articles/201362473-Local-Recording

- Record Presentation in PPT.
  - How to record a ppt: https://support.office.com/en-us/article/video-record-presentations-2570dff5-f81c-40bc-b404-e04e95ffab33
- Using mouse as laser pointer: https://support.office.com/en-us/article/turn-your-mouse-into-a-laser-pointer-77367b36-d25b-4ed2-8c87-358bc216a1e0

An absolute key is to have good audio and clear video. The video part in the "basic" mode we just talked about is easy: it's recording your screen, so lighting and focus is no problem. It's the audio that can be an issue. Make sure the mic on your computer or laptop is up to it. Often these are mediocre, sounding like your talking into a tin can. Try some alternatives: do you have a hands-free headset for your car? It's Bluetooth, so try pairing with your computer and

using it. How about those earphones from your iphone? They have a mic attached! Plus em in and see how that sounds. Even more convenient: I've been using my airpods: decent audio and no wires to get in your way. In short, these days it's easy to attach and try out some different mics.

Using something that is NOT your computer's built-in mic can be especially useful when you need to be further away from the machine, as in the techniques discussed below.

More advanced: multiple scenes, putting humans in the picture, video editing:

Just watching a slide stack while some invisible person is blabbing is okay…but is not super engaging.   A more professional presentation will put the speaker into the picture, e.g., switching between a view that has the speaker and a close-in focus on the talk slides. This is what polished presentations like TED talks do. For example, here is a *particularly relevant* TED talk that does a good job with this:

https://www.ted.com/talks/bill_gates_the_next_outbreak_we_re_not_ready?language=en

Note how the video keeps you engaged by cutting back and forth between views of the speaker and close-ups of the slides. Now, you might not need to get as fancy as they do here with gobs of different camera angles, but it's easy to make some simple little improvements over the basic "invisible person talking over slides" approach. There are two basic approaches you could pursue to record something like this:

Approach 1: Film separate clips asynchronously and then edit them together into a nice coherent movie. This is of course the standard "Hollywood" way. The advantage is that you can have all sorts of control, nice transitions (e.g. wipes, dissolves, etc.), can layer audio over video separately if you like, etc. So you could record yourself standing in front of a screen with your presentation on it for the more general intro/segue parts, then screen-record separate clips of you talking over slides for when you're plowing through details. The downside is that you then have to do some video editing to seam it into a coherent talk, which takes some time and the requirement to learn a bit of the basics of how that works. There are tons of free video editors for any platform you might be using though, and similar gazillions of "intro to video editing" tutorials. If you happen to have access to some fancy (and spendy) software like Adobe Premier, go ahead and use it…but there are tons of open-source and shareware options that are free and more than adequate for this fairly basic assembly job.

For Mac: iMovie comes installed on every Mac as part of MacOS and is actually a step up from basic; you can do what you need to here and much more with it. It's perfectly adequate for sequencing together a bunch of clips into a movie, layering sound over them, and making basic quality adjustments. You then start an export to distill the finished movie into an mp4 and go crack a beer while it cranks away for an hour.

For Windows:
There are truly tons of free apps out there. Have a look at:
http://www.videosoftdev.com/news/windows-10-video-editor-programs-available-for-free

VideoPad was mentioned often as the default basic tool, with similar functionality to Mac's iMovie.

Approach 2: Record it with the different scenes in there right from scratch.
With this approach, you do your multiple scenes and angles at record time, rather than later with a video editor. This can make it easier in some ways… though it does take good planning and possibly multiple takes to nail it. The idea is that you set up multiple "scenes"; two is probably plenty: one is zoomed in completely on the slide filling the screen, and one that has the speaker standing in front of the slide show. You do need a cheap external USB web cam for this approach, to film the second scene.   You could also add a "scene" where the speaker is PIP (picture-in-picture) in the presentation…though here you need to watch out so your PIP doesn't obscure anything vital in your talk. Of course, you could design your slides to keep a corner free for the PIP. Here is an example of a fellow doing exactly this:
https://www.youtube.com/watch?v=nmf-oObylnk&feature=youtu.be

Great software to do all of this is the same thing that gamers user to film themselves while playing games. Check out Open Broadcast Studio (OBS): https://obsproject.com/. It's open-source and the UI is a bit clunky in places, but it works great. You can define the two (or three or whatever) scenes…then switch between them with the click of a button. Record that while you talk, and you're set. Here a nice intro…and there are tons of other ones on google.
https://www.dacast.com/blog/how-to-use-obs-professional-video-streaming/

Advanced: If you want to get fancy, OBS will support it: you could actually place your image **in front of** your presentation. This is like the local weather forecast on TV, where the weather announcer appears to be standing in front of a national weather map talking you through it. The method here is called "chromakey", also known as "green screen". The idea is that you film yourself in front of a green screen (make one out of green cloth, buy one, whatever), and OBS superimposes the two video feeds for you. For some basics see:
https://streamshark.io/blog/chroma-key-software-live-streaming/
Here's a nice example of using greenscreen technique in a technical presentation. Pretty cool!
https://www.youtube.com/watch?v=HerCR8bw_GE
Of course you need to remember to move around so you don't block key parts of the slides "behind" you and you talk about them!

Overall, my personal preference and recommendation would be for Approach 1, i.e., editing together some individual clips. You just have a lot more control over everything, being able to easily (re)do "takes" of each part, then choose the best ones to piece together. It also makes it simple for teams: each team member can work on nailing their own parts, and building a edited together video clip of it…and then you splice em together to make your complete talk. You can even throw in nice transitions, e.g., a wipes or dissolves between speakers to smooth it out. But it's up to you. Check out the tools and decide for yourselves.

In short, with minimal equipment, a bit of planning to make your presentation more engaging, and investing a little time messing with the tech, you can put together a really slick Capstone presentation.

Doing a brief "poster presentation" in a video format

A poster is a great way to summarize a project, but can be less than effective just by itself. Normally, there is a "poster session" where everyone puts up their poster…and then stands by the poster to discuss and explain it to passers-by. It's this combo of visual material and personal interpretation that makes it effective.   To match this in a virtual poster session, a professional team will provide a brief "poster walkthrough" with their poster, a short video where you briefly present the poster. Again, the lame way here would be to show a static screen share of your poster and talk through it. But a huge poster is hard to see on a screen…what you need to do as you talk is zoom in on the part you are covering. A more professional approach, then, is to use something like Prezi or similar (Focusky, Sozi) to Zoom around on your poster as you walk through it, moving the focus as you speak. Here is an example that I put together in about 45 minutes with Prezi and a research poster I had handy: https://youtu.be/E-R9IbumsvA

Note that I only get a C+ for verbal delivery here, with plenty of "umm, uhhh" in there! Zero practice, just off the cuff first-take verbal for this demo. Just confirms what you already know: practice your verbal!

How to do it is simple, and the process is similar in all products:

1. Export your Powerpoint poster into a large image (e.g. PNG). Make sure it's large enough so that it doesn't look grainy as you zoom around on it. I exported mine at like 1500 pixels wide. Different products may require specific image formats. Prezi was fine with PNG, but Sozi requires SVG…so I actually had to download OpenOffice, open my PNG in that, just so I could export it as SVG (because Powerpoint doesn't support it).
2. Look around in your Prezi-like tool on how to install this image as your "background" for the presentation.
3. Define the "frames" for your talk on top of this background. These are the "zoom to" places in your presentation, i.e., where the visual frame moves to as you click through it. You place those where you want on the poster, in whatever order you want to move between them. Then when you "run" it, and each time you click it zooms from one to the other to the other. Your first and last ones should be "the whole poster".
4. Save your presentation. Start your favorite screen recording solution (Zoom, Skype, whatever) and run the animation as you verbally give a quick walk-through of your project. Export to mp4 and you're all set.