DUNCAN JONES

Coach-Consultant
Hexagon Innovating

Driving growth by
optimizing innovation efforts

65 Chudleigh Ave
Toronto, Ontario
M5R 1T4

Text/ Cell: 416 301-6700
duncanjones@hexagon-innovating.com

www.duncanjones.ca
www.hexagon-innovating.com

If a picture is worth a thousand words, is video worth 3,000 words/a million?[1,2]

Video and Audio Recordings in Education

Reading time: 6+4 minutes (1,500 words)

I have recently embraced a wider application of video and audio recordings for my university lectures as well as student assignments.[3] These include online lectures, video-based assignments and audio-based assignment feedback. The objectives were three-fold: to add a bit of fun and variation to the assignments, free up some valuable class time, and improve overall learning, retention and feedback. Judging by the student feedback to date, these innovations have been well received and have delivered these benefits.

Like many lecturers, I generally post my lecture slides and the rough audio recording of the lecture after class.[4,5] However as a result of two "snow days", i.e. school closings due to weather, I took it upon myself to deliver these two lectures online by providing an audio overlay to the PowerPoint slides that I had prepared. There are a number of ways to

---

[1]From Shipper, F. (2013). If a Picture is Worth 1,000 Words, Is a Video Worth 3,000 Words? A Review of Video Resources Available for Use in Todays Management ClassroomIf a Picture is Worth 1,000 Words, Is a Video Worth 3,000 Words? A Review of Video Resources Available for Use in Todays Management Classroom. *Academy of Management Learning & Education,12*(4), 684-686. doi:10.5465/amle.2013.0304

[2] From Yadav, A., Phillips, M. M., Lundeberg, M. A., Koehler, M. J., Hilden, K., & Dirkin, K. H. (2011). If a picture is worth a thousand words is video worth a million? Differences in affective and cognitive processing of video and text cases. *Journal of Computing in Higher Education, 23*(1), 15-37 doi:10.1007/s12528-011-9042-y

[3] I currently lecture at the undergraduate (Institute for the Management of Innovation) and graduate level (Master of Biotechnology) at the University of Toronto Mississauga.

[4] I usually supply my slides in PDF format to avoid compatibility issues. For general audio recording, I use the free program www.audacityteam.org and export it as an MP3 file however a smartphone will suffice. I generally do not videotape my lectures as I find the slide and audio combination superior to a "talking head with slides over the shoulder" movie. Although it takes one more step as discussed below, by dubbing the audio over the slides it is possible to create a useful MP4 recording.

[5] Indeed, I often post a set of pre-lecture slides as well that are missing some of the key items to which I plan to direct questions, generally in a quick write format.

accomplish this within PowerPoint or other software.[6] It is best if you take time to fashion a script as the resulting recording tends to be shorter and tighter. Nevertheless, it can be done top-of-mind, mimicking a live lecture, which is quicker and more spontaneous.[7] In these recordings, I still asked quick write questions; asking the students to pause and answer questions using online tools.[8,9] Having prepared these recordings, in addition to previously producing a few formal topic-specific videos, it reminded me of the all the benefits of Massive Open Online Courses (MOOCs) and the flipped classroom concept.[10,11] As a result, I plan to make more recordings. These recordings provide students with a well-focused, asynchronous method of learning and reviewing the core material, while at the same time freeing up class time for higher order discussion and debate.

Given the ease of preparing videos and slide-audio recordings, I have also introduced them on the student side. I have had my students video themselves (in a slides over the shoulder mode), usually by tripod-mounted smartphone, giving 6-10 minute presentations on course-

---

[6] The quickest, editable, slide by slide method involves simply inserting the audio on each slide (PP: Insert/Media/Audio/Record Audio/Insert or Keynote: Insert/Record Audio/Inset). An audio icon then appears on each slide, that can be played by clicking or animated to start automatically. One advantage of this method for the students is that it can be viewed and selected slide by slide. The disadvantage is the correct version of the specific software is required.

For a cruder one-take recording, PP: Slide Show/Record Slideshow and the microphone is automatically on as you toggle slides. Keynote: Play/Record Slideshow and then toggle the microphone on and off as you advance the slides.

You can also import your slides into more sophisticated video tools like Apple's iMovie and then dub audio on top to make a full MP4 video capable of running on any computer. I tend to do use this method when producing more formal videos so that they will run in a standalone manner. I have also used this method to dub a live audio recording from a presentation over the corresponding slide set (see my quick write presentation at https://youtu.be/Sk6eem-WfZU as an example).

[7] A combination of first giving a spontaneous talk, recording it, transposing it by hand or through voice recognition software, and then using this transcript to produce a polished script is the ultimate but somewhat more timely way to go.

[8] For more on quick writes, watch my video https://youtu.be/Sk6eem-WfZU.

[9] Here I tend to use www.GoSoapBox.com but this could also be done with other online tools like Blackboard or Canvas, or even through email directly.

[10] These are online courses supplied at little or no cost from companies like www.coursera.org, www.edx.org and www.udacity.com covering a multitude of topics including academic courses from major universities. I highly recommend exploring their courses, having taken a number myself.

[11] The flipped classrooms concept revolves around having the primary learning being done outside class through readings and especially videos. This frees up the in-class time for more tutorial style discussion, clarification and hands-on problem solving. For more information see https://en.wikipedia.org/wiki/Flipped_classroom.

relevant topics.[12] The resulting MP4 recordings are then posted on a shared hard drive so that I and a number of their peers can provide feedback on their presentation style and the content of their presentation.[13] Given that video recording is only a tool, the quality and production of the recording itself is not, and in my opinion should not, be assessed. The advantages of making and sharing these recordings include: providing a fun and alternate way to complete an assignment, saving valuable class time by replacing in-class presentations, allowing students to practice presenting as well as observing and critiquing their own style and that of others, and finally creating a permanent record that is richer and easier to review for exams than articles or slide decks alone.

In a recent class, I also asked my students to prepare and post a 10-20 second video of themselves stating their name as well as telling me why they were taking the course and what they hoped to learn. This allowed me to match names and faces, perfect name pronunciations, and learn a little about each person. This was invaluable and is a practice that I will continue in the future.

Finally, I have started posting short audio commentary to student submissions. I first came across this idea in a research paper written by a colleague.[14] In that study, Dr. Rawle et al. found that 70% of students felt that audio feedback improved their learning. The audio feedback that I now provide compliments both the specific, line-by-line, in-text comments that I post as well as the four level scale of the specific rubrics (i.e. exemplary, accomplished, attained, unattained) that I complete and post for assignments. I plan to extend this use of audio commentary to live or recorded students submissions as a supplement to the graded rubric and general written comments. The advantage of such audio feedback is that broad and general comments can be provided, including the highlighting of major issues, themes, insights and even oversights. In addition, audio allows the proper tone of the comments to be conveyed.

I have found that the wide application of video and audio recordings for lectures as well as student assignments and grading can add significant value to learning outcomes as well as being well received by my students.

---

[12] The one difficulty with these recording is their size. For a smartphone, a 10 minute video filmed at 720p requires 600 MB, whereas at 4K it is almost 4 GB. As a result, sharing files often requires the use of cloud-based storage like www.dropbox.com or https://drive.google.com.

[13] To allocate peers and collect the feedback, I use the online tool https://app.peerscholar.com. Generally I have each student complete 5 peer reviews and then a self-evaluation.

[14] Rawle, F., Thuna, M., Zhao, T., & Kaler, M. (2018). Audio Feedback: Student and Teaching Assistant Perspectives on an Alternative Mode of Feedback for Written Assignments. *Canadian Journal for the Scholarship of Teaching and Learning, 9*(2), 1-20. doi:10.5206/cjsotl-rcacea.2018.2.2 Retrieved from https://ir.lib.uwo.ca/cjsotl_rcacea/vol9/iss2/2.