

Creating Digital Learning modules: what I have understood

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Abstract:

My (short) experience in creating digital learning modules taught me few things: what to do and what not to do. Tricks and tools are available, often user-friendly, but sometimes are not the first things we think about. In this brief talk, I discuss few points in the creation of a module: the choice of tools, the content, the recordings of video or screencast, and the exercises and interactions. These points will be discussed and practised in more details in the week-long event that will take place next year at Cecam.

participant's summary

The point of this contribution will be “what I learned from creating digital learning modules and MOOCs”.

Disclaimer: all conclusions are temporary ones, my experience is still brief.

Whenever preparing teaching materials, I have 3 simple guidelines. These are the obvious ones, that should always be taken into account, online or not.

What are the 4 new items to take into account, specifically for online:

- Choice of tools
- Content
- Recording or not
- Exercises.

We'll go through each 4 of them:

1. Choice of tools and platform:

Choose the easiest tools you can find (e.g. simple screencast with png-equations from a paper) that works, but it's a short term solution. If you want to be serious, take decisions that can live on for a while. For instance: good audio, use the proper standards (open source, not proprietary), tools that can write equations well, a proper tool for quizzes and polls,...

2. Content of the lecture

Using an outline, being exhaustive, give many details,... : it works for a one-hour classroom, but not for a video that people might watch while commuting.

Better: one video = one message. Easier to prepare, and easier to recycle in another course.

3. Recording

Good microphone, good recording software, hence everything OK?

If you are a good and experienced speaker, the danger is that you will improvise your video as if you were presenting for a class or conference. Improvising is the enemy of spontaneity. You have to prepare a good and spontaneous script. It will still sound as spontaneous, but it will be much more effective than if you improvise.

4. Extra

Try to engage the learners. That is difficult, because you do not see their faces. What can you do:

- Alternate slides and the speaker regularly. Appear on the right moments, when you don't distract from the slide.
- Use interactions in the video: simple reflective questions, or polls/quizzes,
- Finish a module with a test, as a way of giving feedback, and to give incentives (badges, leaderboards, points, etc.)

Q&A

Q: can you estimate the time/effort difference between your do and don't approaches? Even a small additional barrier can be "fatal"

A: at the beginning it seems much bigger. in the long term (after a couple of modules created). it is actually easier (and less time consuming) to work with a well established set of tools.

Q: No outline, lots of micro-objectives: confusion and mental overload? <- second that. Aren't Coursera's courses with 5 minute videos for every small idea too dispersed?

A: it could be. I think common sense (and our experience as teacher also should play) dictate the good amount of micro-chunk. my videos spans from 7 to 10 minutes (rather than 5 minutes). But it is a good point. structuring shouldn't lead to wild fragmentation.

Q (or not so Q): Word-by-word scripts are boring because you start reading them word by word. Educational (!) researchers in Germany tend to do that. Rather, improvise like a Jazz musician: practice, practice, practice.

Comment (brian) - Prepare well (use good powerpoint or chalkboard techniques) - have a "script" in your head - record - if you drift from the "script", re-record. (personally I'm conflicted on scripts - it may depend on individual circumstances - remember if you record quickly and are not happy with it it is easy to do it again - maybe even easier than writing a script) - (myrta) this was my take in the emergency. my videos are awful but given the circumstances is what I did. I'd differently if I'd think to reuse them

A: I knew not everybody would agree. My main point is: already the fact of 'preparing' a script is useful. If you do not follow it word by word, it's not a problem. But improvising what you want to say, like what you would do in a normal talk, leads, in my opinion, to bad results.

Q: can you go into tools for reflective pauses, quizzes into the videos

A: many: FS uses a layer with h5p interaction on top of videos from youtube or vimeo, inside his moodle platform. (J.L.: Same on the German platform "mooiin" with some of my MOOCs) Stops videos + interaction with clicks, quizzes, word boxes... Does not recommend matching tools and others do not work on smartphone (depends on device)

(Comment - Brian - I feel that with short videos there is not a strong need to insert interactivity in the middle of the video - this will require a new set of skills and significant effort - if you want a reflective pause, just ask the student to pause the video - e.g. to do a calculation. Ask the student to take notes and have a quiz after the video.)

Q: after the quiz, what happens if they realize they do not understand? You have to follow up with a tree of stuff and more material?

A: if needed yes. you can create (automatically in advanced platform like moodle, otherwise manually) learning path: if less than, say, 50% of good answer, give hints, extra materials, or simply suggest to listen to some of the videos and take the test again afterwards.

(Brian) - I feel that you need to use a "continuous improvement" approach here. Try to find out why the students / some students are not understanding and either redesign your video or create additional explanations. (A tough question)