

An outcomes-based approach for developing effective and entertaining instructional videos

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We remember that which captures our imaginations. To put this another way, learning is dependent on focused attention and an engaged mind. And of course, memory and learning are at the heart of the matter with what I want to say about making instructional videos.

Watching videos, of course, is physically passive. You sit and watch them. Or maybe you walk while watching them on your phone and get eaten by a bear. Regardless, the active verb here is “watch”. Watching, generally speaking, and I think we can all agree here, is not doing. We do not consider it active. As in “active learning”. I don’t know about the rest of you, but everywhere I’ve worked, “active learning” has been treated with the kind of respect usually reserved for doctrine, dogma, and cheesecake. When I was being trained, the idea was that if students are doing something, they are learning. On the flip side, if they are not doing something, they are not learning. As if learning can be turned on and off like a switch. I can see why the idea is popular—it makes us feel in control. We want our students to learn, and now we know exactly how to force them to learn what we want, when we want. Great. Glad we got that whole learning thing all wrapped up. When's dinner?

But something isn’t right. People remember songs, movie lines, sports statistics, and other things they only passively witnessed. And some of them do it extremely well. What explains this? Robert Leamson, in “Learning as Biological Brain Change,” argues that because learning takes place in the brain, and is the result of mental effort, it doesn’t matter what your hands are doing, as long as your mind is engaged with the subject matter. It’s like sugar and fat. We love eating sugar and fat. It tastes good and makes us feel satisfied. It’s easy to eat sugar and fat. Actually, it’s hard not to. Our bodies are wired to like sugar and fat. Cabbage, on the other hand, is not especially appealing. Nobody I know daydreams about cabbage, at least not the way people daydream about chocolate or ice cream. Turns out, our brains work the same way as our taste buds. Our brains like to focus on stuff that captures our imaginations, stuff that is fun to think about. I know a man who can read a list of baseball statistics in a single sitting and have them memorized. Schoolwork, however, tends to be a lot less compelling than sports, with the possible exception of human sexuality classes. My psychologist friends tell me that those classes tend to be filled with raptly attentive students.

There is nothing wrong with our students’ abilities to learn and remember. They just don’t want to learn the stuff we’re teaching. So they ignore it. Like me with cabbage, their brains actually recoil in horror at the prospect of ingesting boring information. On their own, they wouldn't ever choose to learn about this stuff. They need to be inspired, to be motivated. That, then, is why we need good teachers. A charismatic teacher inspired a friend of mine to become a mathematician. Another teacher inspired me to learn about graphic design. Before my friend and I were inspired by these teachers, we had poor attitudes toward those subjects. We didn’t want to learn about them, so we didn’t. After we were inspired, you couldn’t stop us from learning.

Let’s recap. Learning happens when you focus on something, regardless of what your hands are doing. We focus on the things that inspire us, and ignore what bores us. Those two lists, what inspires us and what bores us, are not static. Teachers can inspire us to want to learn about things we used to see as boring. So can experiences. I saw *A Midsummer Night’s Dream* when I was 17, and it blew me away. And I didn’t even want to go to the theater. Boy howdy did my attitude totally change in the space of two hours, and that adjusted attitude has persisted for nearly two decades. After that experience, I have consistently sought out opportunities to see plays, and ended up reading a lot more about Shakespeare than I otherwise would have. I don’t think instructional videos are in a position to have that kind of effect, but I do think they can entertain students well enough to get them to pay attention, and if they pay attention, they can learn.

At this point, I'm going to canvas what I see as the two primary goals of a successful instructional video series: to be pedagogically sound, and to be appealing.

Instructional videos, shockingly enough, should instruct. Apart from guessing and hoping, though, how do we know if (or how well) they are working if we don't assess them? We don't. And adding assessment measures after the fact is problematic at best. So we build them from the ground up with assessment in mind. This calls for an outcomes-based design process. While creating the initial five videos for the Kimbel Library instructional video series, my colleague John Watts and I developed this process, and have followed it ever since. Here's how it works, along with some commentary.

The Outcomes-Based Design Process

Step 1. Identify a specific assignment or task students will be working on. This gives your project focus, and makes it relevant for the students. It is tempting to create videos that focus on more general information literacy concepts, so they can be used in a wide array of instructional environments. Avoid this temptation. The farther away you get from students' immediate needs, the more challenging it becomes to gain and maintain their attention and good will. When students watch these videos, they should immediately realize that each video was made specifically to address their specific problems in a specific situation. Sometimes you get lucky and by making a video that targets a narrow aspect of some assignment, you get something that's useful elsewhere. Let that be a happy accident when it occurs. Better to make a few videos that are perfectly suited to one course than a bunch that don't really belong anywhere.

Step 2. Collaborate with stakeholders & subject specialists to determine the minimum necessary concepts and skills that students need to know in order to complete the assignment, or at least to get started. This step involves two things: playing well with others and nailing down achievable goals. Videos aren't good for in-depth education, or at least it gets harder to make a good video the more complicated your goals become. The best value, in my opinion, comes from using videos as a starting point. Give students what they need to get started on something worthwhile. Unless you possess a mastery of the subject matter you're making videos about, it's a good idea to consult closely with your stakeholders. They will be better able to answer questions about just which concepts would be best addressed in videos, and can make the judgment calls about which concepts should have a video, and which ones can be allowed to slide. With an experienced team, I find that it is possible to produce about a video a week, if everyone on the team is only working on making videos. The fewer videos you promise to produce, the more likely you will be able to produce them on schedule, and of acceptable quality. Also, by working with people who teach in the program you're making videos for, you are more likely to get buy-in, which leads to your videos actually being seen by students.

Step 3. Write a student learning outcome for each concept or skill. Once you've got the minimum concepts identified, having a student learning outcome for each one helps to focus your efforts, and avoids scope creep. It's usually tempting to try to squeeze extra subject matter into each video, especially things that almost made the initial cut. Use the student learning outcome to guide your efforts--everything in the video must address that outcome, or it must be removed.

Step 4. Create a quiz for each student learning outcome. Make it simple, multiple choice or true/false. Something students can do quickly, and are unlikely to be confused by.

Step 5. Write scripts that teach to each quiz, being sure to emphasize key ideas through repetition and any other techniques that strike you as relevant. Focus on nothing but concisely explaining the concept or skill at hand. The quiz and student learning outcome are your guides.

Step 6. Revise each script, one at a time, adding appealing elements. This idea is addressed at length below. Here, just let me say that the creative process is key. Take your time to relax, and collect as many good ideas as possible before settling on what to include. Be prepared for some of your best ideas to pop up while you are in the bath, or while exercising. Carry something to write with wherever you go.

Step 7. Film & edit. This step will likely be unique for each video-making team. If possible, though, try to do all of your filming in one stretch. Little details, like lighting, can be nearly impossible to recreate even a day later, and can result in lots of extra effort.

Step 8. Test the completed video. Show it to a sample group of students and see how they do on the quiz. Revise the video as needed.

Step 9. Implement in the wild.

Appealing elements

Appealing elements, for the purposes of this essay, fall into two categories: visuals and humor. There is often interplay between the two, but it's easier to discuss them as separate entities.

Visuals should do one of two things: entertain or elucidate a concept. Ideally, they should do both at the same time. Visuals should also feature motion or change. It's video, after all, and the strength of the medium is in its ability to depict a moving image. This is one of my myriad beefs with screen captures—hardly a thing changes except the position of the cursor, or, if we're really lucky, the page will scroll. Anyway, the prime directive for visuals is that they not be boring. Boring visuals make for a video that doesn't get watched. Really good visuals can save a crummy video.

I want to go on record saying that there is no such thing as a naturally funny person. Humor, especially the ha-ha variety, is a skill. Like all skills, it can be learned. Sure, there's plenty of room for natural aptitude—some of us will put in less effort and reap superior results, but everyone can be funny. It just takes time and some work. And of course, the right technique. Stand-up comics are in the business of constantly producing humorous content, and we can borrow their methods. They have formulas, reliable techniques for creating humorous ideas. If you would like to learn more about these techniques, consult Carter (1989).

Best Practices for Video Development (a very bossy list)

1. Use screen capture as little as possible. I realize that sometimes you absolutely have to, but here is why I think too much can be a problem. Interfaces change, and rarely on your schedule. Also, have you ever watched someone else play an exciting video game? Pretty boring, right? Think how much more boring it is to watch someone else do research. Also they have a cold, mechanical feel to them. So we tend to overcompensate by recording voiceover narration that is soothing, slow-paced, and generally soporific.

2. Use natural language and speak directly to the student. Don't use library jargon like OPAC, Boolean, or catalog, and don't try to sell the student a bill of goods.

3. Do use livestock. Or anything silly or weird. Memorable is always better than bland. Being bland is about the biggest sin a video can commit.

4. Visual consistency is valuable. We used a white board, but there are many other approaches. Sock puppets, stop motion, flip books, shadow puppets, anything that takes advantage of a moving picture.

5. Make videos no longer than three minutes. Even three minutes is pushing the attention span for online video. We are competing with professional entertainers. No reason to test our students' patience.
6. One topic per video. Just because we include more doesn't mean they'll learn more. It's like trying to drink from a fire hose.
7. Speak clearly but quickly—many tutorials drag on forever. Think about radio announcers. We can process the spoken word faster than most people can speak. Also, use a dedicated voice recorder—audio quality is about ten times as important as video quality.
8. Respect the creative process as a necessity, give it the most time. It's tempting to want to dive right in and start making puppets and shooting video, but really solid planning produces the best results. We'll work for twenty or more hours developing a script for just one video.
9. Limit creative control to one or two people. Decisions by committee produce unremarkable garbage.
10. Leave pop culture out of it. Just like software interfaces, what's popular is always changing. Videos are expensive and time-consuming to create, so we want them to remain relevant as long as possible. Additionally, the pop culture that we library-folk enjoy and the pop culture that our students enjoy isn't always identical. References to Pulp Fiction and Silence of the Lambs always get me and my friends going, but those films were made before a lot of our students were born.

References

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