Best Practices for Instructional Videos

Jackie Luft, Ed.D. and Ian Wilkinson

Texas Tech University

3Play

# Instructional Video Modalities - Passive Video

* Traditional, “sit and stare” TV experience- viewer has no control
* Film Strips, VHS, DVD, large file download- inconvenient to learner
* Few, if any, demonstrated pedagogical benefits to this mode of delivery (Merkt, et al.)
* Most of the studies that show little value to video are older studies that primarily examined passive video
* More like reading a book- the student can go back and review and move through the content at will
* New video platform technologies index content to make the video searchable
* Most interactive video streams to any device at viewers convenience
* Studies show that interactive video enhances learning and retention
* This guide assumes you will create interactive video
* Two Main Types of Video in Education

## Lecture capture

* A recording of activity and teaching that is already being presented in a classroom- easy when you’re already there
* Lecture capture is easy to create- just walk into a room and record your face-to-face class as usual… what could go wrong?
* Camera angle and lighting is less than ideal (usually awful)
* The microphone is poor, or you forget to it on at all
* Even when you remember to turn on the microphone, the audience questions are not picked up and you forget to repeat them
* Worse, awkward and off-topic audience questions ARE recorded
* ALL ambient room noise- sneezes, paper shuffling, etc. clutters your recording
* Lecture capture can still be somewhat useful for face to face students to review a lecture they’ve already attended
* Lecture capture is almost entirely useless for fully online students. The technical quality is poor, and they feel socially excluded
* The reality is that lecture capture is riddled with technical and pedagogical errors, making it expensive and difficult to reform into a useful video asset

## Instructional Video

* Takes a great deal of planning and forethought, often perceived as extra work and effort- a burden to an already busy schedule
* Instructional Video is more challenging to create, but will be able to serve as a useful and enduring teaching tool
* Multiple studies show that thoughtfully produced instructional video has the power to increase student engagement with the material and improve their retention of content

# Three Main Steps:

* Plan
* Produce
* Publish

# Plan:

* Planning and scripting will be at least 90% of your time spent
* Modern viewers have spent a great deal of time watching video and have a keen eye for quality
* Amateurish quality will undermine your message
* Accept that effective video takes a great deal of time to create- an hour of video will take several hours to plan and produce
* Make a checklist for the process

## Audience & Objectives

* Know your audience
* Different learners can require different types of content
* Full lecture or “bite-size” nuggets of information?

## Define Learning Objectives

* Defined objectives help both student and instructor
* Emphasize and reinforce core content

## How to Share/Present Content

* Watch a LOT of Instructional Video
* Look at peers and decide what works best for your content
* Learn what to avoid and what to borrow
* Decide What to Record
* Narrated slides
* Video of you speaking
* Video of a project or activity
* A combination of the above

Content Lifecycle

* If you wish to recycle the content for multiple terms:
	+ Separate accepted and tested knowledge from latest research and trending topics
	+ Avoid current events and specific dates
	+ Use “written in 1966” rather than “written fifty years ago”
	+ Say “this semester” rather than “Spring 2016” etc.

## Content Length

* Shorter video segments are better:
	+ Viewers prefer 6-10 minutes of video
	+ Short video segments can be modular- replace short segments as knowledge is updated rather than entire lecture
	+ Easier to record, edit, and caption

## Create an Outline and Practice

* Write a Script
	+ Organize your content
	+ Tell a story to keep learners engaged
	+ A script facilitates the creation of captions
* Practice
	+ Rehearse your relation between content, pacing, delivery
	+ Revise your outline after practicing
	+ Prevent “uh…” moments when you record

## Manage Expectations

* Video cannot replace face-to-face interaction
* Organize your content for conversational delivery
* Address the camera as you would a person
* Use Video to Reinforce Learning
* Video is not just for fully online courses- use it to “flip” your in-person classes and deliver the same content to all learners

## Accessibility Concerns

Captions

* Make your content accessible to all viewers
* Captions have benefit for all students
* Creating shorter video segments eases your captioning efforts

Audio Descriptions

* Describes what is visual on the screen
* Includes words on slides or anything that is being demonstrated

Visual Design Considerations

* Be mindful of color contrast, background fuzz
* Avoid flashing content and animations when possible
* Fonts – Limited number, use san Serif

## Intellectual Property

Images

* Secure licensing for outside visual and video content
* Be mindful of IP when displaying content on your screen

Sources

* Have a method for citing sources
* Utilize metadata features in your video platform

# Produce

## Technical Considerations

* This is part of planning
* It doesn’t matter what devices or software you have if your content is not captured correctly at the outset
* Think about a movie set: lights, microphone, sets, backgrounds, costumes
* You don’t necessarily need to be “Hollywood” elaborate, but you need to consider all the components that go into making a professional production
* There is no such thing as a “One Take Wizard”- plan on multiple takes

### Background & Clothing

* Background is your “set”- keep it clean and professional
* Clothing should be fashion and season neutral
* Plain clothing is best- heavy patterns can give “weight” to the video encoding and cause problems for streaming

### Lighting

* Soft, natural lighting- don’t rely on overhead office lights
* No windows in background
* Light your subject
* Try different configurations and evaluate

### Video Equipment

* HD Webcam is OK for desktop recording
* Invest in a quality HD video camera for anything else
* Optical zoom
* Use a tripod
* Practice using the camera- know the buttons and controls

### Video Quality

* Bit rate, frame rate, resolution, and other technical components of video can affect learning and undermine pedagogical benefits of video
* Having a basic understanding of the mechanics of video streaming will help you avoid problems such as buffering and visual noise
* This said: always capture at the highest possible video quality- your video can easily be scaled down, but cannot be scaled up.
* An excellent overview of the mechanics of streaming video can be found at [Streaming Learning Center](http://www.streaminglearningcenter.com/)

### Audio

* Sound quality is the most important part of your video
* People will listen even if video is poor, but will not stay to watch good looking content that sounds terrible
* Test and review your audio quality- do not make assumptions
* Sound quality is near impossible to “fix”- do not neglect this aspect of your video production process

### Audio Tips

* Do not use the “built in” microphone
* “Podcast” USB mics are great for desktop capture and do not require technical expertise
* Manage the conditions in the room- be mindful of fans, outdoor noise, and interruptions.
* Hang an “On Air” sign on your door to prevent interruptions

### Software

* Different software recording products have strengths and weaknesses- decide what you want to accomplish and research products that can enable your vision
* Careful planning will help you identify what will meet your needs
* No “silver bullet”- you may need to employ a combination of products
* Rely on IT Experts to help advise on finer points

# Publish

## Edit

* Watch Your Video
* Edit for length, content
* Opportunity to add titles and other “fun” things to your video
* Quality assurance before proceeding with next steps
* Few of us enjoy seeing ourselves on camera, but it’s a necessary part of the process- watch every minute
* Avoid wasted time: edit video before creating captions

## Captioning

### Purpose

* Educational programs are legally bound by ADA to provide accommodations for disabled learners
* It is the right thing to do
* Captions help all learners by providing another route to learning
* Captions are useful for any viewer watching in a loud (or very quiet) environment
* Captions can also serve as a source of indexed, searchable text

### Standards

* Captions must be 99% accurate or better
* Disservice to students if content is wrong or inaccurate

### Two types of captions

* Open - “Burned in”- captions are part of the video file
	+ Cannot be turned on/off
	+ Cannot be indexed
* Closed - “Sidecar”- a file with text and time code hosted with the video
	+ CC button can turn the captions on or off at user’s discretion
	+ Text is indexed in many platforms to make video searchable by word

### Captioning Methods

* Captioning Service: have someone else do it!
	+ Quick & easy
	+ Expensive: $2-4 per minute of video
	+ Helps meet legal requirements when a LOA is presented and captions are needed on a hard deadline

## Transcript

* Provide viewers with a transcript
* Read along
* Great for non-viewing reference
* Useful if power or network make video unavailable

## Audio Descriptions

* Assistance for visually-impaired viewers
* Separate audio track to describe images and action, or
* Include a description of the screen while recording.
* Keep this in mind during planning if you intend to include a great deal of visual content

## Distribute

* Sharing Your Video
	+ Burn a DVD
	+ Outdated and extremely inefficient
	+ Shared storage (Dropbox, WikiSend, etc.)
	+ Control of content is lost- downloaded files can be shared with others
	+ Set up your own video server
		- Equipment costs
		- Maintenance costs & security concern
* Streaming Video
	+ Resides on a server to provide instant playback to viewers anywhere, anytime
	+ No download time for viewers
	+ Can provide challenges to distance students with poor bandwidth, another good reason to have a transcript.
	+ Backups and redundancy to preserve content
	+ Metadata and other interactive video features
	+ Security- control who sees your video
	+ Viewer tracking to understand usage
	+ Free Services (YouTube, Vimeo, etc. )
		- Cheap and easy to use
		- Reliable
		- Hidden costs
		- Ads shown to students before or with your content
		- Student views are tracked by third parties
		- Your content and students get monetized by third parties
* Use your institution’s video streaming service
	+ Your content is not shared outside your school
	+ Already tied into campus electronic security
	+ Supported by IT Department
	+ Faculty support
	+ Student support
	+ Once hosted, share with your students
* Link to video in email, etc.
* Embed video in LMS

## Evaluate

* Feedback will help you improve future video
* Most streaming services offer a wealth of analytics- make use of them
* Track number of views
* Track repeat viewers
* “Hotspots” in viewing trends can reveal opportunities to improve your content when creating the next set of videos
* Survey every class/section- get student opinion of your video