Best Practices for Instructional Videos

Jackie Luft, Ed.D. and Ian WIlkinson

Texas Tech University

# 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
* Instructional Video
* Takes a great deal of planning and forethought, often perceived as extra work and effort- a burden to an already busy schedule
* 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

* 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 give consideration to 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 actually 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 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
* Machine Captioning- is there an app for that?
  + Speech recognition software
  + Hours of training for each speaker
  + Results still need hours of work to proofread and make accurate
  + What about Siri/Cortana/Echo, etc.?
  + Services listen for key words and make a guess- will not caption
  + For now, machine captioning is a science fiction fantasy
  + Tech giants (Google, Apple, Microsoft, etc.) still haven’t solved this challenge
  + Don’t expect it to happen soon
* Manual typing- do it yourself!
  + Cheap & simple
  + Tedious & time-consuming

## 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

## Keep recording!

* Video learning is not a cure-all, but it can be a useful tool. If a picture is worth 1000 words, video can be worth a million; video enables you to share content that is difficult or impossible to convey otherwise, especially in an increasingly online world. These tips are meant to help you ensure that your video is more help than distraction.
* Stay tuned for our next exciting episode, Adventures in Virtual Reality