EdMedia

BEST PRACTICES GUIDE

to Creating and Delivering Video
Guide to Creating and Using Video

This guide will outline the best practices and considerations to help you to create and deliver video content for use on our website or in course and presentation development. Please note that branding and logo materials that represent the TLC unit, should follow the guidelines set out in the branding guide created for the University.

The guide is divided into 3 main categories:

I. Technical Best Practices
   a) Recording Audio
   b) Recording Video
   c) Lighting

II. Specific Uses
   a) Screen Capture & Web Cam
   b) Stand Alone Video (on location, interviews etc.)
   c) Green Screen

III. Delivery
I. Technical Best Practices - AUDIO

No matter how good the image, if the sound is bad your message will be lost, so making sure you record good audio is perhaps the most important element to any video asset. So even before you think about codecs and bit rates, think about how you plan to record the voice and sound.

Use a Microphone or Recording Device

Using a built in laptop microphone only works if you are speaking directly into it. If you are more than 1 foot away the quality is terrible, and regardless, overall quality is only mediocre. If this is something you plan on doing even more than once, invest in a microphone.

If at all possible DO NOT use webcam mics or headset video conferencing mics. These are adequate for Skype calls with your cousin but to create a high quality media asset you will want an appropriate microphone.

The TLC has a variety of microphones available, from table mics, USB mics and Zoom mics, as well as lapel mics. All are easy to use.

CONSIDERATIONS:

- **Microphone placement.**
  For any audio recording, there is a sweet spot where the microphone is picking up the voice, AND, the least amount of room tone. (Hums, furnace sounds, traffic etc.)

  If you are TOO close to the mic it will record all your “P” pops and “S” sounds. Too far away and you will sound distant. GENERALLY you want to be 1-1.5 ft. away from the mic and you MUST monitor with headphones.

- **Find a quiet location.**
  Think your spot is quiet? Close your eyes for 20 seconds and just listen. If you can hear the air conditioner, the computer hum, voices, the refrigerator, traffic, etc. so will the microphone. And while it is sometimes possible to remove these sounds, it is a BIG undertaking. It is always BEST to get it right and NOT try to fix it in postproduction.

- **Check your levels.**
  You want to record voice at -12 db. Not too loud or quiet but this mid-level can accommodate fluctuations in speech. Again, you will want headphones to check the sound quality, and set your recording quality, if possible to .wav with a minimum setting of 128kbps.

  - There are many other options like mp3 etc. But you want to start with the largest file type you can to avoid compression at this stage.
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I. Technical Best Practices - VIDEO

If you need to record video in a live environment, such as with an interview, or in a classroom or out in the field, there are many considerations to keep in mind when preparing for your video shoot.

- **Scope** – How big is the project you are working on? Do you need lights? Sets?
- **Time commitment** – How much time is required to execute and complete. (Always multiply your estimate by 3)
- **Turn around time** – How quickly is this asset needed. This consideration combined with an honest appraisal of your capabilities should mediate some of the other constraints.
- **Shelf life** – How long will the asset be used? If it is only a one-time asset perhaps don’t spend 6 months on it.
- **Technical know-how** – Once you have recorded everything, how are you going to put it together? This includes post-production editing and audio syncing.
- **Final Delivery** – Where is the final product going to go? YouTube? Canvas? What file types are supported? What size of file is optimal? [SEE final section on delivery for more complete info]

There is a huge range of cameras to choose from when creating video content. Web-Cams, DSLRs, handy-cams, iPhones etc. Each camera can work for the right project, but honest planning is key to being prepared and efficient. Weigh the pros and cons early on and plan out what you are looking to shoot ahead of time.

If you know you are making a long-lasting piece of rich video media, spending time to plan and consider using a high-end camera and microphones so you come away with quality content that will stand the test of time.

If you are doing a series of interviews for a research paper a smaller portable camera might suffice.

**CONSIDERATIONS:**
- **Shoot high-res.**
  1080p x 720 is standard widescreen format.
- **Plan on recording high quality audio.**
  Whether it is a microphone connected directly to the camera or a remote audio recorder (ZOOM H4N), this will be key to creating a high quality video asset.
- **Use a tripod.**
  Shaky handheld footage is pretty frustrating for viewers.
- **Always bring an extra light.** (or 3)
- **Uploading to the WEB.**
  If you are uploading to the web you will want to export your video using the **H.264 – mp4 codec**. This allows for high compression but the video still looks good and is playable on all video platforms.
I. Technical Best Practices - LIGHTING

How we see anything is directly related to light. How much light is let in to the camera, and for how long the image is exposed to that light are THE most fundamental aspects of photography. Whether you are taking photographs or making a video, by virtue of the fact you are creating an image based asset, you need to think about how the image will look when it is recorded and lighting your subject is a simple and basic element in achieving that. Where you choose to create, and the limits of that location, will dictate some aspects of your project but by analyzing this basic THREE POINT LIGHTING diagram (below), you should have a practical understanding of the basic principals of lighting. You can use this simple set-up to great effect, even using desk lamps or lights you might have around the office or house.

Key Terms:

**Key Light:**
The most powerful light. Usually positioned at a 45° angle from the face of the subject.

**Fill Light:**
A second light is used to "fill" or balance the lighting on the subject. Without this, your subject would only have light on the "key" side and would have shadows on the other side.

**Back Light:**
This is used from either below or above the subject and is there to help create a "halo" on your subject and can be used to separate your subject from the background and to remove shadows created by the key and fill lights.
Watch Out For:

**Overhead lights:** When light comes down from above, *see image above*, it creates shadows in the eyes and below the nose, leaving the forehead very bright.

**Backlighting:** While using a backlight in conjunction with other lights is good, using only a backlight will obviously result in not being able to see the subject. A common example of this is when people stand in front of a window. The camera cannot balance the light and the subject is dark, while the window is bright.

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II. Specific Uses - WEB CAM & SCREEN CAPTURE

**Web Cam**

A web cam may seem like a quick and easy and accessible solution to recording yourself, but it is very limited in its uses. First of check the manufacturer to see what is the highest resolution you can get. 1080 x 720 HD is best.

**HOWEVER,** there are some fundamental questions to ask yourself before you commit to using a web cam.

a) Do you need to be onscreen for what you are doing? What purpose does it serve? Could a simple AUDIO (voice-over) recording suffice?

b) If you do think it important to be on screen would it be better to spend a little more time and use a better camera better location?

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**CONSIDERATIONS:**

If you are going to use a web cam to record video, pay attention to these simple tips.

- **Location**
  
  Find a location that is contained, well lit and quiet. Away from pets, kids, traffic etc.

- **Background**
  
  Make sure your background is not cluttered or too busy. This will be distracting.

- **Camera and Eye Placement**
  
  Often when using a web cam we forget to look directly into the camera and drift off to look at ourselves onscreen. The end result is disorientating for the viewer. Position the camera at eye level and look directly into it as if it were the person you are speaking to.
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Screen Capture
In many circumstances actual video recording is not needed and SCREEN CAPTURE is the most effective way to record and explain a particular point. For this there are a number of technologies, but perhaps the most common is CAMTASIA.

Screen capture is a quick and relatively painless way to record what is on your screen.
• Website walkthroughs
• Content highlighting
• Course tutorials
• Procedural tutorials etc.

Products like CAMTASIA are great. CAMTASIA in particular is fairly easy to use and allows for a wide range of asset integration, such as incorporating music, slides (JPGs) and video.

CONSIDERATIONS:
• Record your narration first.
  Plan what you want to say and record this first. It is always easier to manipulate images than it is audio. With USB microphones you can record directly into your computer (and directly into your CAMTASIA or POWERPOINT project).

Don’t worry about getting it perfect in one take. You can, and WILL edit. Record in small chunks and get the quality and tempo down to feel natural.

• Matching Audio to Video.
  If you have a more complicated set-up for recording and need to do it away from your computer, you must now match the picture to the voice recording. To do this bring the video into your timeline and make the necessary cuts and speed changes (making the clip longer or shorter) in CAMTASIA and slide the image around to match the tempo of the audio.

Remember people are both watching and listening, but what we hear most often reinforces what we see and retain.

II. Specific Uses – STAND ALONE VIDEO (interviews etc.)

CONSIDERATIONS:
  This will make it fast and efficient and you won’t forget to get something important.
• Pre-visit location.
  If you can, visit the location ahead of time to get an idea of where some nice places to shoot might be.
• Shoot more than you need. You will edit it later.
• Shoot “B” roll footage.
  This is content that isn’t of the formal subject or interview subject necessarily, but might be interesting. EG: You are interviewing a basketball player. Also get images of the basketball bouncing, feet on the court, the ball in the basket, sweat on the brow...
II. Specific Uses – GREEN SCREEN

So you’re feeling confident and want to try something a little different. Perhaps you want to interact with some visuals you use in a course or take a walk in Paris. Using a green screen is a great way to do this and so much more. The point being to film against the green screen and then in post production extract the green and replace it with whatever you like. (Images, video etc.)

HOWEVER, to be effective there are a few guidelines that will help

<table>
<thead>
<tr>
<th>CONSIDERATIONS:</th>
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<tbody>
<tr>
<td>• <strong>DO NOT wear green.</strong></td>
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<tr>
<td>If you do whatever is green will also be erased.</td>
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<tr>
<td>• <strong>Light the green screen and then light yourself.</strong></td>
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<td>This will help eliminate shadows, making it easier to “pull” out the green afterwards.</td>
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<tr>
<td>• <strong>Sit as far away from the green screen as you can.</strong></td>
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<tr>
<td>This helps to avoid “spill” (reflection) of green onto you or the subject.</td>
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<tr>
<td>• <strong>Be aware of the frame.</strong></td>
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<tr>
<td>Anything that goes out of the green screen area, as seen by the camera, will not be able to be isolated.</td>
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III. Delivery

After having created and edited your video asset you are now ready to deliver it to your audience. When preparing your video asset for export, there are a couple of final steps to consider.

**CONSIDERATIONS:**

- **Delivery Method**
  - Internet – YouTube etc.
  - Mobile – Tablet, Cellphone etc.
  - In Class Presentation – Video projection on big screen.

- **Compression and Export Quality.**
  This refers to file type and compression standards that relate to file size and playability. These preferences are selected upon final export from any video editor software program such as:
  - Adobe Premiere Pro
  - iMovie
  - Windows Movie Maker
  - Final Cut Pro

Each of these considerations should be thought of a two parts within a single process, as how you export the video will affect the delivery method and having an idea of the delivery method will affect your export and compression preferences.

While there are many different types of files you can choose from here are a few of the most common:

- .MOV
- .AVI
- .WMV
- .M4V

**HOWEVER**, in recent years many internet video hosting platforms such as YouTube and Vimeo have standardly adopted the .MP4 file type generated in conjunction with the .H264 compression codec. This is now the basic standard for any video being generated and shared on the Internet.

Together these export preferences manage to offer **high compression = smaller file size** while maintaining smooth playback and good colour quality.

**Going BIG**

If you are planning on presenting your video piece on a big screen in class, you will want a larger, uncompressed file such as a .MOV / Apple Pro Res 422, or Quicktime HD. This will allow the video to play large without losing information due to compression.

**Key Terms:**

**File Format:**
As discussed this relates to the type of file you will be generating. (.mp4 / .H264)

**Frame Rate:**
This is usually resolved in the shooting process but in North America, digital video usually has a frame rate 29.97 (frames per second). **[FUN FACT: Real, actual FILM was 24 fps]**
Bit Rate (or Data Rate):
This is perhaps the most important consideration in this process. This is how you can manipulate the final file size. A higher Bit Rate = larger final file = longer upload and download time.

Aspect Ratio:
Standardly there are two options; an almost square ratio of 4:3 or a widescreen ratio of 16:9. Today almost all video is recorded in 16:9 (long and wide).

Resolution:
Measured in pixels this refers to the size of the video as it appears on the screen. Keeping in mind your intended viewing environment (ie: tablets or computers) and that all video now is HD (high definition) set these preferences as 1280x720 (width and height) or half that at 640 x 360

Audio:
Much of this is set during recording but standards CD quality is 44.1 kHz and 128 kbps.

For more specific resources on software and hardware uses, image and graphic development and more, visit our resources page at http://www.sfu.ca/tlc/media/focus.html