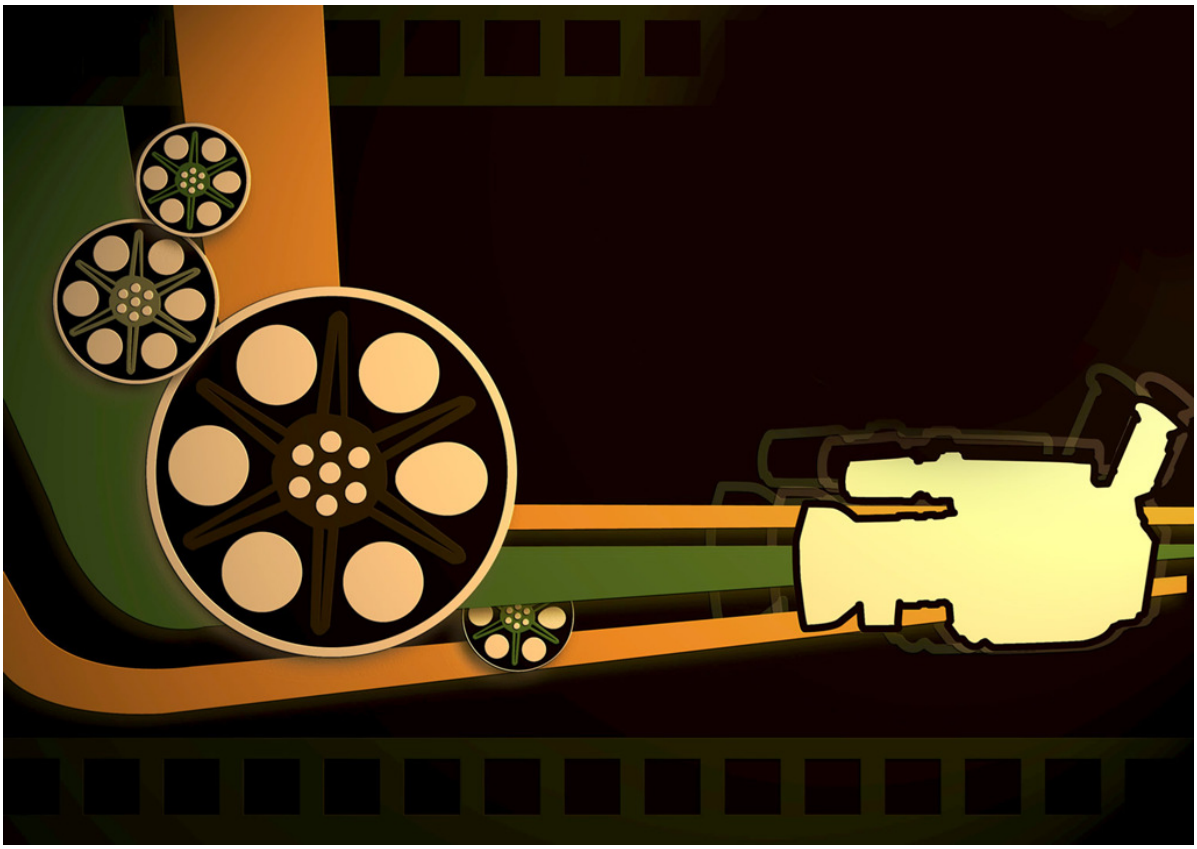
Video Production Primer



Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Contents

I. Overview 3

II. Pre-Production

1. Storytelling 4
2. Scripting 5
3. Interviews 7
4. Shoots 8
5. Other Media 9
6. Media Management and Storage 10
7. Time Management 12

III. Production

1. Gear 13
2. Basic Shooting 15
3. Video Tips 16
4. Audio Tips 17

IV. Post-Production

1. Software 18
2. Editing 19
3. Exportation 20

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

I. Overview

This document provides a beginner's course in video production. The lessons and advice are divided into three main sections each covering one of the three phases of video production.

Pre-Production

This is arguably the most critical phase of media production. Here you will construct your video on paper, plan your shoots, budget money and time and setup your interviews. Great pre-production can make the other two phases very easy. Conversely, poor pre-production can leave you in a serious hole when due dates loom.

Production

This is what most folks think of when they are asked to make a video: the actual shooting.

Post-Production

From editing to exportation, this phase sees the footage shot solidify into a narrative to tell your story. It also involves creating various formats for distribution on DVD and the web.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

II. Pre-Production

Storytelling

Filmmaking is storytelling.

This is pretty obvious in the case of feature films like Titanic or Inception. However, the same is true of documentary films as well. But when we begin talking about short student projects, it becomes even more critical to focus on storytelling. You have a short time to tell your story so it needs to be distilled down into a strong, concise piece.

All films, or at least all good films, have three main parts:

A Beginning

This must seem pretty obvious, but it's as critical as it is common knowledge. A film needs to begin. Often times the best way to begin is to set the scene. Let the audience know where they are, who the major characters are and what it is they are trying to do.

A Middle

Once you have established the scene and characters, it's time to show them doing something. In the Middle, your characters should be taking action to move toward a goal or overcome an obstacle. This is what films are all about, action and conflict. In feature films the protagonist faces some challenge and takes action to surmount it. This is often no different in documentary; in fact, it is clear conflict that makes the best documentary films.

An End

This is where you conflict comes to a resolution. Did your characters succeed in reaching their goal and overcoming their obstacles or did they not? This is where you answer all these questions. It's also a good time to examine what your characters might be doing in the future. Perhaps they overcame one obstacle, but perhaps there's more down the road? The End is where you examine these questions.

Scripting

In filmmaking there are two primary types of scripts. The first type is used in feature (fiction) filmmaking and is usually called a screenplay.

Screenplays are critical to making feature films since you need to have the story laid out in full before you shoot a single frame.

EXT. CLIFFS BY THE SEA - DAY

JAKE stands on the edge of the CLIFF and looks down at the ROCKS below.

BILL doesn't look down. He knows the score.

BILL

It's a long way down man.

JAKE

And it's the only way to get rid of this thing.

BILL says nothing, only NODS.

JAKE swings one foot out over the CLIFF and in a moment he vanishes over the edge.

WAVES CRASH on the ROCKS below.

BILL turns and walks back to the car.

There are zillions of examples of screenplay formatting all over the Web, but one of the most important things to note about the example above is that it's in present tense.

The other type of script is the two-column AV Script. This type of script is typically used for documentaries, PSAs and other non-fiction media. What is counter-intuitive about scripting documentaries is the fact that one often does not know what sort of footage one will get. That said, an AV Script is sometimes developed after primary photography is underway. As it becomes clear what images will be available, the writer can then add

meat to the story's premise. The actual script is then often used as a guide for the editor.

Video	**Audio**
A group of young men, boys really, march on a jungle path. AK-47's are slung over their shoulders.	The boys are chanting a song in their native language.
The same group of boy-soldiers are grouped around a campfire. The sun is falling. Many of the boys look pensive.	(V.O) Many of the boys from the nearby villages are compelled into uniform by promises of money and power. The rewards rarely come.

Interviews

Unlike feature films, interviews are often the crux of documentary filmmaking. In the absence of a true narrator, interviewees often act in a key voice-over role to tell the story.

With all this in mind it is clear that interviews are important. In order to make sure that you get what you want from your interviews there are a few simple steps you can follow:

1. List all the information you need to tell your story.
2. With your list of story-telling elements, decide which people can best fill in your blanks.
3. For each interviewee, compile a complete list of questions ahead of time. This way you can ensure that you are getting all the information you need from each subject. The last thing you want to have to do is re-interview someone because you forgot something.
4. Pre-interview each subject. Make sure that each interviewee is going to say what you expect/need them to say. Never assume you know what someone will say.
5. Schedule ample time for each interview. Setup and breakdown of cameras and lights adds time. You should also budget time for follow-up questions. Interviewees will ALWAYS say things you didn't even know you needed. You'll want ample opportunity to allow them to elaborate.

A mistake that many first-time filmmakers wander into is leaning their stories too heavily on interviews. Don't forget that filmmaking is a VISUAL medium and you should be leaning on images just as much as voice-over. Otherwise, all you've got is a podcast with some pretty pictures.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Shoots

Since films and videos are primarily visual media, making sure you have the correct images for your piece is mission critical. With this in mind, shoots should be approached very much the same way as interviews in that they should be planned out completely before hand.

To ensure that you have all the shots you need in post-production, follow this list of steps:

1. List all the information you need to tell your story.
2. With your list of story-telling elements, decide which shots you need to best tell your story.
3. Shoots take place at locations. Based on the shots you need, compile a list of locations at which you can get these shots.
4. For each location, compile a complete list of shots you need.
5. Scout each and every location carefully. Take note of the following elements as they will impact your shooting dramatically:
    a. Natural or Existing Light – This is of course variable based on the time of day, so make sure you know when you want to shoot based on the best choice for telling your story.
    b. Ambient Sound – Is there traffic, a lot of people talking? You'll need to take these elements into account as they will end up on your soundtrack.
    c. Permission – Are you shooting at a business or near a government facility? If so you may need permission from someone to shoot. Be especially careful in areas dedicated to public transportation; the police have arrested students for shooting in the metro!
6. Schedule ample time for each shoot. Setup and breakdown of cameras and lights adds time. You should also budget time for unpredictable conditions such as weather.
7. Make sure you budget some time in your production schedule for an extra shooting day.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Other Media

Still images and music can enhance video productions and underscore the main points of your story. However, there are a few considerations you must take into account before acquiring external media for use in your project.

The first and most critical question is ownership. Do you own the rights to the media you are adding to your project? Footage or images you shoot yourself you certainly own the rights to. But, photos or music you download from the internet are protected by copyright laws. Conversely, the Digital Millennium Copyright Act (DMCA) and fair use guidelines do provide some loopholes which allow the use of copyrighted materials for educational purposes. This is not, however, a free ticket to rip-off any material you find. You MUST obey the law on this matter. For more information on this you can visit the Media Services website www.american.edu/library/about/policies/copyright.cfm) which houses an excellent repository of information on this subject.

That said, there are some excellent (and free) resources online which provide images, music and even stock video clips.

Images: http://www.sxc.hu/ - This is a huge repository of high-quality stock images. You'll need an account to download, but it's free to join. You'll need to pay attention to each individual image as most of the photographers ask that they get credit when their images are used.

Music: http://musopen.com/ - A nice collection of classical music recorded in the public domain (which means you can use it for free). Again, you'll need to create an account, but it's free.

Stock Footage: http://www.stockfootageforfree.com/ - There's quite a bit of free stock footage on this website, but not a large variety. Still, it's worth creating an account and poking around.

Downloading Videos from YouTube: http://keepvid.com/ - Again the question of copyright comes up here. The copyrights for videos on YouTube are owned by the creators of the video (not always the people who upload them). But, as long as you are following the guidelines of the DMCA and fair use you can use portions of YouTube videos in your projects. The KeepVid website allows you to put in the URL of a video's page and download the video in a variety of formats.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Media Management and Storage

One thing that you will learn very quickly when working on a video project is that video is HUGE. And now that HD video is becoming the standard, storage becomes even more of an issue. One minute of HD video from a Flip UltraHD (the camcorders we circulate in Media Services) is about 67 Mb. Therefore 10 minutes is 670 Mb, more than half a Gb. This is about average for video, but conversion to more or less compressed file types can drastically affect file size.

With this in mind the question of storage becomes important. For most short video projects (10 minutes or less) a dedicated 16Gb flash drive is likely enough. For a longer piece a 32Gb flash drive may be required. If you are planning on making a number of videos you may find it worthwhile to invest in an external hard drive. If you choose this route, you'll want to make sure that it has a Firewire input. While Firewire is specific to Apple machines, it is a VERY fast connection and will make video editing much easier as it takes a lot less time for files to transfer between your drive and the machine. Besides, most of the editing software you will be using is on a Mac anyway.

Another critical consideration in planning a video project is media management. Media management refers to the process of keeping track of your media (including stills and music as well as footage). This seems like a simple task, but mis-management of media is one of the most common problems people have when using a high-level editing suite like Final Cut Pro. iMovie is somewhat more forgiving in this respect, but good media management is a good production habit.

The simplest way to achieve good media management is to setup a simple directory tree on your flash drive:

My Project >

- Project Files >
  - My Project File
  - Notes
- Media Files >
  - Video >

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Video 1

Video 2

Video 3

Images >

Image 1

Image 2

Music >

Song 1

Song 2

This file system keeps your media separate from your project files and in fact separates the various types of media. As long as you are conscientious about moving newly acquired media into the proper folders and implementing an understandable naming convention for your media, you'll never loose anything.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Time Management

One thing that first-time video makers learn very quickly is that filmmaking is a HEAVILY time-consuming process. You should always plan to take extra time to do every step of the process.

Oddly enough, pre-production should be the most time-consuming of the three stages of video production. With proper preparation, production and post-production can be made much simpler. But this means you must spend a great deal of time planning your story, planning your shoots and planning your interviews.

Then again, how often to things go precisely as planned? Murphy's Law dictates that things will go wrong and problems will crop up. With that in mind you need to make sure that you allow adequate time in your production schedule to return to shoot locations and re-visit interviewees.

One last thing: DO NOT WAIT UNTIL THE NIGHT BEFORE A DUE DATE TO BEGIN EDITING! This will result in disaster. Editing takes a great deal of time and, because 24-hour access to computer labs on campus is somewhat limited, there is a near guarantee that you'll be kicked out of a lab before you can finish your project. Start early and save yourself a headache.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

III. Production

Gear

Camera – This is the most important choice you will make when considering gear for a shoot. There are a couple of things to think about when selecting a camera for a project:

- Standard Definition vs. High Definition – The videography world is moving rapidly toward HD, but SD cameras are still very common. It's important to think carefully about your choice. It is true that HD footage is better resolution and therefore "looks" better, but the downside is that HD footage also takes up a huge amount of disk space. Do you have the storage space? Is HD required by your professor?
- Tape vs. Digital Media – The camera choices available on campus use two different means of capturing media:
  - miniDV Tape – Obviously you'll need to purchase tapes for these cameras. You'll also need to consider the fact that capturing media from a tape happens in real time which is to say that if you shot an hour of footage, it'll take an hour to digitize.
  - Media Cards (XDCAM/P2/SD) – Digital media cards capture footage directly into a digital format. They also make transfer very easy since the footage is moved as a file and not captured in real time.
- White Balance – Most video cameras available to students for academic projects have automatic white balance. But, you should ask the person or department form whom you get the camera if you will need to adjust the white balance on your own. If so, ask them how to do it.
- Focus – Most video cameras available to students for academic projects have automatic focus. But, make sure to ask the person or department form whom you get the camera if there is a manual focus option. If so, ask them how to adjust the focus manually.

Tripod – It always seems easier to just point and shoot, but the result is often horribly shaky video, especially if the camera is in the hands of someone new to video. There is nothing more distracting to an audience than shaky video. To combat this problem, you NEED to get yourself a tripod. Most cameras have small, screw-in mounts for tripods and it only takes a second to mount the camera. And, while it certainly seems cumbersome to haul a tripod around, the benefits are tremendous.

Microphones - Nearly all consumer grade and semi-professional cameras have built in microphones. Some are of dubious quality, but they have improved steadily over the years. For this reason it is important to make sure that you test your microphone BEFORE going on a shoot or an interview. Often times when using an on-board microphone, it can be helpful to move the camera closer to the subject, particularly in an interview. This can help ensure quality audio from the shoot. External microphones are another option, but you need to make sure the camera you have chosen has the proper jack. If so, you should make an effort to use an external mic as the audio quality is almost always better than an on-board mic.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Basic Shooting

There are a few basic concepts that are worth understanding when it comes to shooting:

Subject Shot/Action Shot – These are your interview shots. They are typically shot in a medium close-up framing (head and shoulders only). An action shot is a shot of the primary action of your story. If you were doing a video about demolition, one action shot would be the actual demolition of an old building.

Establishing Shot – As you might imagine, these shots establish the story of the video in time and space. For example, a video about a person who works at Bender Library might have an establishing shot of campus and/or the exterior of the library. Only then would you move into the library to your interview.

B-roll – B-roll is any shot related to your story other than your subject or action. Even establishing shots are b-roll. It is critical that you make sure to shoot tons of b-roll. Again, if you were shooting a video about a person who works in the library you might want to get shots of books, tables, chairs, computers, people working, the circulation desk, etc… B-roll is typically used to highlight points by interviewees or to breakup long interviews with more visually interesting imagery.

There are a number of excellent resources online which describe the shooting process in depth. One of the best is Media College (www.mediacollege.com).

Some of the tutorials you should look over before you begin shooting are:

Beginner Video Shooting (www.mediacollege.com/video/camera/tutorial)

Shots and Framing (www.mediacollege.com/video/shots)

Lighting Tutorials (www.mediacollege.com/lighting)

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Video Tips

Here are some things to keep in mind when shooting video:

- When shooting interviews, make sure to look at the entire frame before you being rolling. Interviewees can lose a lot of credibility if they have something which appears as if it is sticking out of the top of their head.
- Don't zoom for close-ups, move the camera forward.
- Keep a close eye on the background. Again, you don't want your images to have strange juxtapositions with background objects.
- Anticipate action. This can be difficult when shooting sports, but in most other situations it is possible. This will also be easier if you have scouted your location and planned your shoot accordingly.
- Be aware of natural light. For example, you don't want to shoot an interview with the sun behind the interviewee since he or she will appear natural but the background will be wildly over-exposed.
- Computer screens tend to flicker on video. Best to keep them out of the shot.
- Use a tripod. Steady footage is best unless your story can specifically be assisted by shaky imagery.
- Shoot a lot of B-roll. Better to have too much than to get to post and find that you need shots you don't have. This is especially true if what you shot was an event or other one-time occurrence.
- Test your camera before you use it in the field. This is critical. You want to make sure it works properly and you also want to know how it works. This will make your shoot much smoother.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Audio Tips

Here are some things to keep in mind when shooting that can help produce good audio:

- Be aware of background noises. Even the hum of fluorescent lights can be recorded as a horrid buzz on your footage. Clocks can also be deadly.
- Be aware of the wind. When shooting outdoors you can stand near buildings or trees to cut down on wind.
- Make sure you test your microphone (on-board or external) before you use it in the field. This way you will know how close you need to be to shoot an interview with good audio.
- If you are using an external microphone, make sure you have a windscreen.
- Supplemental audio can also be very helpful. If you have access to a digital audio recorder (which almost always has a better mic than a video camera) you can record interviews on that and sync them later in post production.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

IV. Post-Production

Software

There are four commonly used editing programs available for video editing.

1. Final Cut Pro – This application is only available for the Mac, but it is professional video editing software and is quickly becoming the Hollywood standard for film editing. The downside is that it is somewhat difficult to use without a fair amount of prior training. While you may have heard of Final Cut, it is not the program you want to try to learn if you've never edited video before.
2. Adobe Premier – This application is available for both the Mac and PC. While it is a reasonable editing suite, it has not caught on like Final Cut and it is therefore difficult to get assistance with problems in Premier.
3. iMovie – iMovie comes in two flavors:
    a. iMovieHD (also known as iMovie 6) – This version of iMovie is very easy to use. All media and project files are contained in a single file. The result is that there is no need for media management. On the other hand these single files can get very large and thus become hard to move around. This is also the easiest to use of the video editing applications available on campus and is highly recommended for beginners.
    b. iMovie '09/'11 – These newer versions of iMovie require careful media management since the project file is separate from the media files. The result is a steeper learning curve. This program is also much more difficult to use than iMovieHD. It is recommended for intermediate level users.
4. Windows Movie Maker – This program comes standard on most PCs. It is an absolutely horrible editing program. It is buggy and can in no way handle large video files. This is not recommended for any video production whatsoever. Avoid it.

Editing

The most basic method of editing a video for an academic project is to tell your story based on your interviews:

1. Begin by cutting down your interviews. You will NEVER need the entirety of an interview.
2. Once your interviews are cut down you can string them together to tell your story.
3. Leave the key moments of your interviews in the video, but cover everything else with interesting (and relevant) B-roll.

Some editing tips:

- Fancy transitions, funky type-faces and other glitz from iMovie or Final Cut Pro only detract from your story. It's best to avoid these and stick with simple titles and transitions.
- A shot of a person looking followed by a shot of an object is suggestive of the fact that the person is looking at that object.
- Be careful about juxtaposing shots together. An extreme example might be a smiling person followed by a shot of burning building followed by another shot of the smiling person. This string of shots is easily suggestive of the fact that the person is happy about the building burning. This may not be at all what the person was talking about, but the cinematic grammar is certainly suggestive of the alternative interpretation.
- B-roll can be used with great effectiveness as punctuation for an interview. If a person is talking about poverty in the rural south in the 1930's, shots of depression-age homes from Alabama would be an excellent highlight.
- Images can tell a story more effectively. To take your video to the next level, base your editing around images and not your interviews. Allow the interviews to be the punctuation to the images.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.

Exportation

The two main reasons a person would export a video are for DVD and for the web. While the particulars of exportation can be found in software-specific documentation or tutorials for each application, there are some important things to remember:

- When exporting for DVD you want to use the highest resolution export possible. Since a DVD is typically shown on a larger screen, you want to make sure that your images are of the highest quality possible.
- When exporting for the web you have two options for posting:
  - A video site like YouTube or Vimeo. These sites typically have players embedded into the site and will convert your video to the proper format upon upload. As such, the format in which you export the video is less important. .mov or .mp4 are both equally acceptable options.
  - A private website. Here you need to be much more careful about format. Since folks have a wide variety of computers and media players, it's important to export in a format that is most ubiquitous. The best choice here is an .mp4.
- When exporting for the web it is also important to keep file size down. Compression to an .mp4 will do this automatically, but for other formats you need to be aware of how large the final file will be and, if necessary, reduce quality. YouTube and Vimeo have time and file size limits.

Composed by Todd Chappell and the Media Services Department of the American University Library. May 2011.