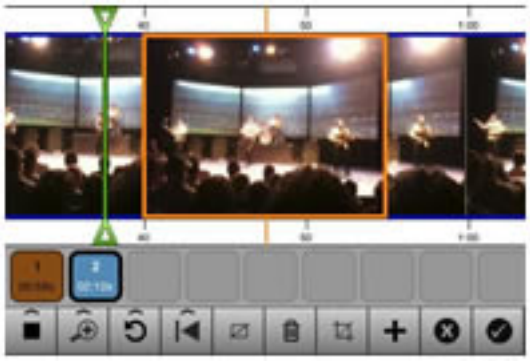
# A practical guide to creating learning videos

Video is very much the medium of the moment. Not only do we spend many hours each day watching it on our TVs, it has become an integral part of the online experience. An ever-increasing proportion of the population does not only consume video, it creates and shares it with a world-wide internet audience. Whereas once video cameras cost many hundreds, if not tens of thousands of pounds, they are now integrated for no additional cost in computers, stills cameras and mobile phones. And where once video editing could only be carried out by skilled engineers in elaborate editing suites, it can now be accomplished, often with equivalent production values, with free or low cost software on PCs and even mobile devices.


**Gone are the days when, to shoot a video, you depended on the services of a full crew and expensive equipment**



**The same applies to the post-production process. What once required an edit suite can now be accomplished with a smart phone app**

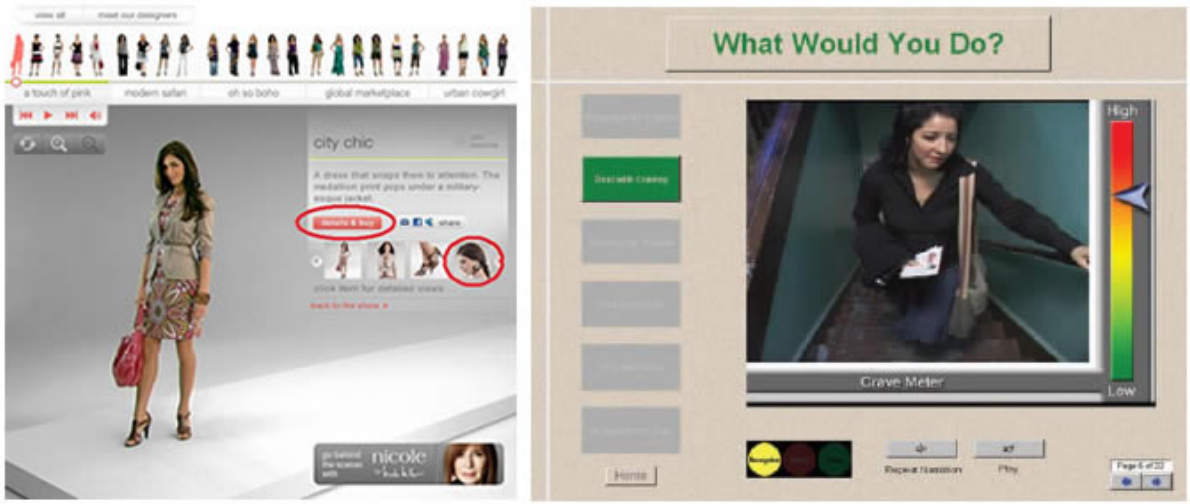
In a learning context, video provides a compelling means for conveying content, particularly real-life action and interactions with people. Amazingly, it can also be quicker and easier to produce than slide shows or textual content. Sometimes you just have to point the camera, press record, shoot what you see and then upload to a website. Obviously it won't always be that easy, but you should start with the attitude that `"I'll assume I can do it myself, until proven otherwise."

## Media elements

In its purest form, a video is a recording, in moving pictures and sound, of real-life action as captured by a video camera. In actual practice video goes way beyond live action, and is capable of integrating just about every other media element, including still images, text, 2D and 3D animation. At the heart of video, however, will always be moving images of some form and an audio accompaniment, whether ambient sound, voice, music or some combination.

## Interactive capability

As a general rule, video is not interactive, other than in an exploratory or navigational sense. And for the purposes of this Practical Guide we will be assuming no interactivity. Having said that, it is possible to build interactivity into video, whether that's on a DVD, a digital TV system or online; it's also possible to incorporate video material into what are essentially interactive media, such as scenarios and tutorials.




**Although not the focus of this guide, video can be used interactively using DVD, digital TV or online. It can also be used as an ingredient in an interactive scenario.**

## Applications

In its purely linear form, video can be useful for the simple exposition of learning content, such as lectures, documentaries, panel discussions and interviews. It can also function within a more learner-centred context, as a means for providing how-to information on demand, a facility that has been demonstrated with enormous success on YouTube.

As mentioned above, video also has a role to play within the more structured strategies of instruction and guided discovery, as a component within, say, interactive tutorials and scenarios. It is ideal for setting the scene for a case study or demonstrating a skill. It can also be effectively used as a catalyst for discussion in a forum or in a classroom.

Video is a rich medium in every sense. It is highly engaging and can portray real actions, behaviours and events more faithfully than any other medium. However, this comes at a price. Video is also data rich, and consumes vast amounts of bandwidth. On a CD or DVD this causes no problems, but

your IT department will certainly want to know if you are going to be distributing video on a large scale over your company network.

## Pre-production

We move on to the practicalities of getting a video made, starting with what the film and TV industries call pre-production – essentially all those tasks that need to be completed before you press record on the camera.

Seeing as we are concentrating on the absolute basics of video production, requiring the minimum of technical expertise and equipment, you might feel that pre-production is a bit of a grand topic to be spending any time on. But even the simplest productions need some planning, as we shall see.

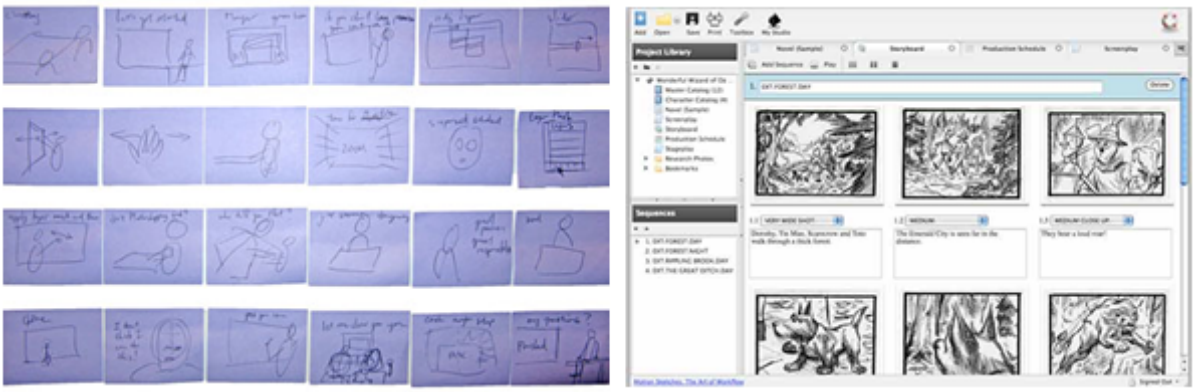
### Develop your concept

You need an idea. You can't just press record and shoot the first thing you see. This idea must be compelling to some degree or no-one is going to take the time to watch. So, take the time to consider what you could contrive that would enhance the lives of your audience in some way. In a learning context, that could mean showing how to do something, explaining a difficult concept, or allowing people to share their thoughts and opinions on a matter of some importance.

If we're talking online video (and probably we are) then you have to figure out how to realise your concept in five minutes or less. That's not a long time, but it's all most viewers are prepared to spare. Keeping your video short also reduces the burden on you in terms of the more advanced production techniques you would need to sustain interest over a longer period. Five minutes is not so long, but your video still requires a beginning, a middle and an end. Think this through up front – don't expect to be able to fashion all this in the edit.

### Prepare a script or storyboard

If your video requires narration or acted dialogue then this clearly has to be scripted in advance. Even if you are conducting an interview, you'll need to prepare the questions and have some idea how you expect the interviewee to respond and for how long. You can prepare a script using Microsoft Word or similar word processing software, or use a specialist application such as Final Draft. Normally a video script will provide some information about the visual content in the left-hand column and the words on the right, although there is no law about this.



**You can storyboard collaboratively with no more than some post-it notes. You can also use special storyboarding software.**

Whether or not your video is going to contain narration or dialogue, if you intend it to be visually rich, with many different scenes, camera angles, graphics or effects, then you should seriously consider preparing a storyboard. This goes beyond a script to provide a rough idea of how each shot in each scene should be composed. A storyboard will be a great help both in planning and directing your shoot, reducing the chances that you will have to go back to shoot important elements that got forgotten on the day. You may find you can storyboard adequately using a pack of post-it notes. For something more permanent and sharable, PowerPoint may do the job. And of course there is specialist software available, like the free Celtx.

## Find a suitable place to shoot

There are probably four main considerations when selecting a location for your shoot:

1. Will it allow you to show what you need to show? If you were looking to demonstrate a task or act out a scene in an authentic setting, then this would be the over-riding issue. If a more contrived setting, such as a studio, will work equally well, then you have less to worry about.
2. Will the environment be quiet enough? Without the right sound equipment, a noisy location could completely scupper your chances. If you really must work in a lot of noise, you will need a highly directional mic as close as you can to whoever is speaking. Of course this will not be an issue in a studio.
3. Will there be enough light? Time was when every video shoot required dedicated lighting, but modern cameras – even the really cheap ones – cope remarkably well in low light. Having said that, you will always obtain best results when the scene is well lit, so if the ambient light is not likely to be good enough, hire some proper lights.

Is the location available when you want and at an appropriate price?

## Deciding what equipment you will need

Assuming you are intending to distribute your video online then, contrary to what you might think, the camera you use is not going to make a big difference to the quality of the end result. Why? Because practically all cameras – even webcams and the cameras built in to phones – provide adequate resolution for display on a mobile device or in a small window on a PC.


**Video cameras come in many shapes and forms, including smart phones, digital SLR cameras and low-cost dedicated HD video cameras**

Amazingly, many cameras can now record in high definition, which is fine if you are playing back on an HD-compatible display, but pointless otherwise. Don't underestimate the processing power needed to edit HD video. Your computer will have to handle something like six times the number of

pixels than it would with standard definition and up to 20 times the number you need for YouTube. If your computer can handle HD then fine, but don't expect it to make any difference to the end result.

If you really do need to record at high resolutions and to very high quality, then go for a professional camcorder (you'll get something great for £1500) or one of the new digital SLR stills cameras with HD capability built in (the Canon EOS 5D Mark II sets the standard here). Otherwise there are plenty of excellent low-cost models to choose from, including what you have in your phone.

Much more important to the quality of the end result is the microphone. There will be one built in to the camera and this may be adequate, but if you want clear speech this has to be of good quality and highly directional. A much better option is to use an external microphone that can be positioned close to the subject. This could be wired or wireless, but does require that your camera has a socket to connect an external mic.

We've handled lighting already, which leaves the issue of a tripod. Some cameras have good integrated image stabilisation, but this can't perform miracles. If you really need a rock-steady camera then support it on a tripod. Simple as that.

## Production

So, we get to the day of the shoot. Here are some hints and tips for the set ups you're most likely to encounter when producing learning videos.

### The 'piece to camera' or PTC

We're all familiar with the piece to camera as a technique used in news broadcasts, but in the context of low-budget learning videos, we're more likely to use this approach to record a response to a question. The following tips will help you to do an effective job:

- Explain to the subject what you are going to do and what question you would like them to answer.
- Make a note of the subject's name and check the spelling with them before you leave.
- Find an interesting setting, ideally one which will reflect the context of the topic.
- Position the camera at the subject's eye level, ideally on a tripod. Whatever you do, do not look down on the subject.
- Frame the shot so you don't leave lots of space above the subject's head as this will make them look short.
- Ask the subject to look directly into the lens.
- Don't rehearse if you want the subject's response to sound really natural.

- If you're feeling adventurous, add some movement by using an occasional slow zoom in and out.

## The interview

The interview is one of the principle video formats and one that has real value for learning. In the ideal world you would shoot an interview with two cameras – one for the interviewer and one for the interviewee – and then choose the shots you would like to go with during the edit. However, this series is about what you can do with very little equipment and very little experience, so let's see what you can do with a single camera.

**Your simplest option is to set up the camera on a tripod and leave it with interviewer and interviewee in shot**

If you want to keep it simple, frame your shot to include both the interviewer and interviewee (see above). If at all possible you should use an external mic, which the interviewer can hold. It's also possible to simulate a two-camera shoot and this will certainly provide you with a more interesting end result, particularly if the interview is extended. You'll need to set up at a number of different angles:

- A shot which shows both the interviewer and interviewee (a 'two-shot'), to establish the scene and prove that this interview really did happen with both parties present at the same time! Sometimes this is shot over the interviewer's shoulder (an 'OTS').
- Close-ups of the interviewee listening to the questions (which are being spoken off camera) and then giving their answers.
- Reverse shots of the interviewer listening intently to the responses (usually called 'noddies'). These can be useful in covering up any cuts you want to make in the interviewee's answers.
- Reverse shots of the interviewer asking the questions. Be clear that, because you have only one camera and mic, these are recorded separately from the interviewee's answers – you can safely ditch the original questions to which the interviewee responded.

An over-the-shoulder shot establishes the scene

## The presentation

A video recording of a lecture or presentation is an invaluable way to extend the reach beyond the initial face-to-face audience. Your simplest option is to record the presenter and any slides in one mid-shot. The camera will need to be on a tripod for stability.

f the presenter is using a mic then your best bet is to take a feed from this directly. If not, you'll need to provide your own, ideally a radio mic that the presenter can attach to their shirt. Don't rely on the mic built into your camera, as you'll be too far away from the presenter to get a clear signal.

Your simplest option is to shoot the presenter and the slides in one mid-shot, but you'll do well to make the slides clearly visible

If you don't mind doing a little editing later, then you could mix up the shots. A wide 'establishing' shot of the meeting room will set the scene. Then cut between a close up of the presenter and his or her slides. Don't shoot the slides at the time – get a copy of the presentation, save each slide off as an image and then import these directly into the edit. You might also like to get some cut-aways of the audience to provide more visual interest.


You'll achieve a more interesting result by starting with a wide shot, cutting between a close-up of the presenter and his or her slides, and mixing in some audience shots

## Post-production

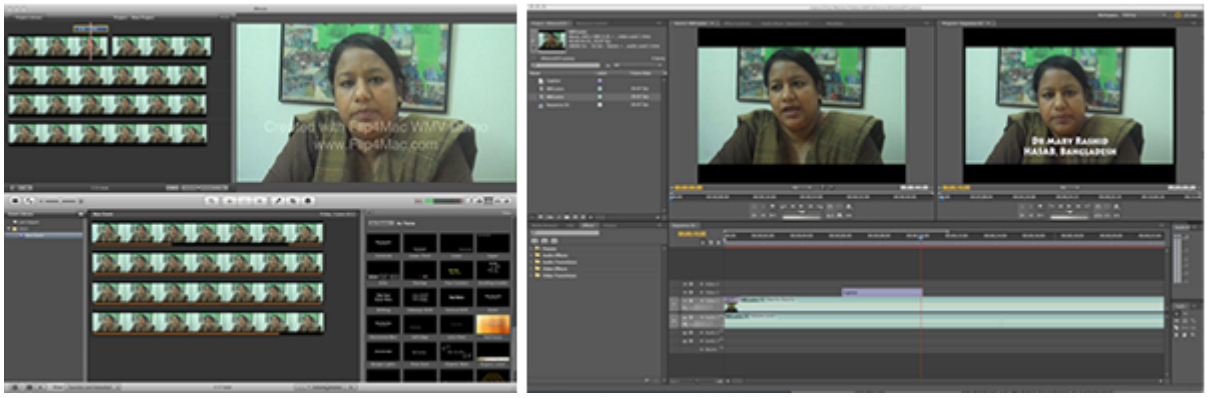
And so to the final stage in the creation of a learning video – post-production. At this stage we collect together all the material that we shot at the production stage, select what we want to keep and what we can safely leave 'on the cutting room floor', edit all this together, add titles, graphics, music and effects, export as a finished product and distribute to our audience. This may all seem very technical but modern software has transformed much of this to a process of drag and drop, copy and paste. So let's get started.

### Editing

Editing is not obligatory. There's nothing to stop you shooting something straightforward like an interview to camera and then uploading the results, without modification, to a site such as YouTube. But even the simplest videos will usually benefit from a little editing, even if just to trim the start and finish points and add a caption to inform the viewer who it is that's speaking. This sort of editing is a doddle. And while you're at it, why not add a title, perhaps with a little music behind? Yes, before you know it, you're putting together videos that, while not quite professional in quality, don't annoy the viewer with their amateurishness.

The aim of editing is to be invisible. In other words, you want the viewer to be able to concentrate on the content of your video without becoming aware of any of the mechanics of production and

post-production. If you've done a good job, no-one will say what a good job you've done of putting it all together – they'll just thank you for a great piece of content.



**Editing software works much the same way whether its a free program like iMovie (left) or a full professional package like Adobe Premiere Pro (right)**

Video editing software comes at three levels of sophistication: (1) the free programs that come with your computer, such as MovieMaker (Windows) or iMovie (Mac), (2) budget versions of the top-end tools, such as Adobe Premiere Elements (under $250) and (3) the top-end tools themselves, Final Cut Pro (Mac only), Adobe Premiere Pro and Sony Vegas Video Pro. Although you wouldn't think so from the price tags, pretty well all video editing software is roughly the same. The free software will get you a long way and may be more than enough for all your future needs. If you love playing with software, you'll want more features and the mid-level tools will provide you with plenty of toys. The top-end tools are for pros and if you're one of them you won't be reading this guide.

Your basic editing tasks are as follows:

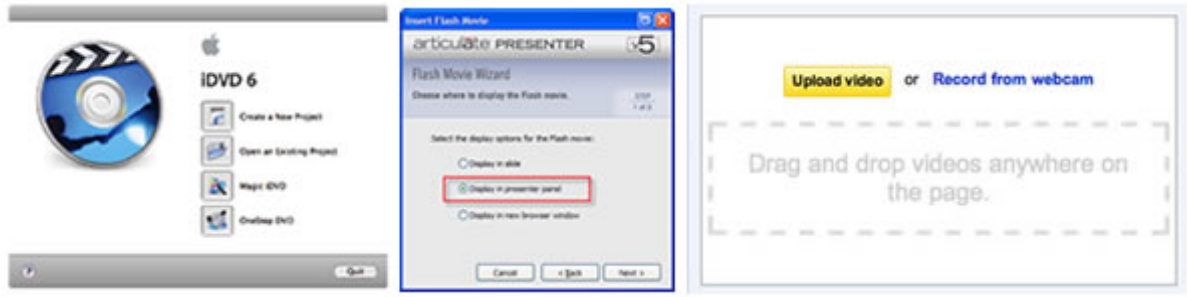
1. Import your clips from your camera.
2. Choose the clips you want to use and drag and drop them onto the timeline.
3. Where appropriate, split clips up into smaller clips.
4. Trim the start and end point of each clip.
5. Arrange the clips into sequence.
6. A simple cut between clips is usually best, but in some cases you may want to create a transition, perhaps some form of cross-fade. If you want your editing to be invisible, then avoid flashy transitions.
7. Overlay titles and captions where appropriate.
8. You may want to cut away to photographic stills or graphics. By contrast with your video clips, these could look overly static, so consider adding movement through some subtle panning or zooming.
9. To help create the right mood, consider adding a music track, particularly in those sections where there is no speech.

With a little practice, these tasks will be simple enough to perform. If you want more help, there are plenty of great how-to videos on YouTube – which only goes to emphasise what a great learning tool video can be. Look for inspiration on YouTube and on the TV. In particular, focus in on those programmes in which the editing is almost invisible and try to identify the techniques that were used to achieve that result.

## Sharing

Now your video is ready to go, you'll want to get it into the right format for your intended audience. You'll probably want to distribute your video material in one of the following three ways:

1. On a DVD: In this case your editing software will guide you through the steps needed to write a single disc or to prepare a disc image for duplication.
2. As an element within an e-learning module: The key here is to find out what formats and resolutions are supported by your particular authoring tool. Obviously you'll want your video to be played back in the largest video window and with the best audio quality possible, but check out whether this will be realistic given the bandwidth available to your audience.
3. Through a video streaming service such as YouTube: We all know how YouTube works and how well it adapts to the available bandwidth and the particular device you are using. You can upload to YouTube in quite a range of formats, but you should probably check out the most appropriate options on the YouTube site first. Your videos do not have to be made public – if you prefer you can restrict access only to those who are provided with the URL. Even so, if you need a completely secure service, YouTube may not be the answer. Check with your IT department or LMS provider to see what other options are available.




**Share your video on DVD, as part of an e-learning module or on a video streaming site**

Don't be too put off by the thought of the burden you will be placing on your organisation's network by making video available online. Chances are your network is capable of supporting hundreds, perhaps even thousands of simultaneous users without undue strain. But do check first. You won't be popular if business grinds to a halt as scores of employees rush to sample your latest offering.

That concludes this practical guide. Good luck!