

# Communications

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## Creating a Videotape for Instruction

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Videotape provides some distinct advantages over other electronic media. The equipment has become more portable, easier for the non-technically trained person to use, and very cost effective when compared to 16mm film production.

Creating a worthwhile instructional videotape is a time-consuming challenge. However, its proven effectiveness in teaching, plus other production advantages, make it worth the planning and production time. An hour-long lecture by a teacher can be shortened to about forty minutes on videotape, without loss of content or meaning. Time saved can be used for review, questions or discussion.

The video version doesn't "forget" key points or get side-tracked. An instructional video is often better understood by the learner who can review confusing segments right away. CAUTION: a poor lecture will not magically become better just because it is videotaped.

Proper planning is vital to a quality instructional videotape. This guide is for non-technically trained persons working alone or with professionals.

### **QUESTION: How do I decide whether or not videotape is the best medium for my instructional message?**

First, consider the amount of visual value to the instructional message. If, for instance, the message needs to focus on the types of instruments in an orchestra or the lives of great composers, presenting it on videotape is very appropriate. Music appreciation, on the other hand, might be best taught on audiotape only, so that visual images do not interfere with the music.

Is motion absolutely necessary as an inherent part of the topic to be taught? If so, then videotape is an excellent choice. If motion is not needed, a good quality 35 mm color slide program might be just as appropriate. A color slide program is generally easier and cheaper to produce, to update, and to show to a large group.

Is the subject something that is very difficult or impossible to bring into the classroom? For teaching horsemanship

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**An extension specialist frames a wide angle shot for an instructional videotape on dog obedience.**

or fruit tree pruning, for example, it is much easier to bring these sights and sounds to the learner on videotape.

### **QUESTION: What are the different size formats used in videotape?**

Ask yourself: "If I have an instructional videotape, will I be able to successfully play it for my potential audience?" Although video playback equipment is becoming more common in schools, extension centers, churches and private homes, there are limitations due to differences in equipment.

Videotape comes in a variety of size formats. Two common formats are  $\frac{3}{4}$  inch and  $\frac{1}{2}$  inch. Most educational institutions use the  $\frac{3}{4}$  inch format. Most television stations use  $\frac{3}{4}$  inch for their portable "on-the-scene" cameras. If you anticipate your videotape being broadcast on television, it must be in  $\frac{3}{4}$  inch.

Most home video is now  $\frac{1}{2}$  inch, either VHS or Beta, with VHS more common. It is possible to "dub" or make excellent copies from larger formats down to VHS and Beta, or between VHS and Beta. However, when a  $\frac{1}{2}$  inch signal is transferred onto a larger tape format, the electronic information is "spread out"—resulting in a poor quality picture and sound.

For viewing or "playback," the size and format of the videotape and playback equipment must be exactly the same. Beta cannot be played on VHS and vice versa. If the

teacher will be using someone else's playback equipment, a careful check with someone on site is mandatory. Never rely on statements such as "I'm pretty sure it's the same as yours; that sounds like what we've got."

**QUESTION: Once I have decided to use videotape, where do I begin?**

Begin by analyzing the specific instructional message and the audience. If you've not done so, write down your goals or purpose in teaching the topic. Second, describe in writing what the viewers will be able to do after viewing the tape. Be specific here. Instructional goals are best met if written with action verbs such as, "will be able to define, describe, list the steps in, demonstrate or perform." Avoid vague verbs such as "will have an appreciation for" or "an understanding of." A statement of these goals early in the videotape will help give clear expectations to the viewer.

Next, think about the scope of the message. To maintain viewer attention, an instructional videotape should be 20 minutes or less in length. If your topic is longer, divide it into two or three shorter segments.

Now analyze the audience. Consider their current knowledge level. Does the audience have the same or different backgrounds? What are the age levels? Avoid the temptation to make a videotape that is a "say all, and do all, for every possible person who might see it." That may work for a public relations piece. For teaching, target your message to a specific audience. Last, check your instructional goals. Are they appropriate for the intended learners?

**QUESTION: I have completed my message and audience analysis, what should I do next?**

Develop a production plan and schedule. This lists all the production steps and tentative completion dates, allowing for some flexibility. Productions which run into trouble are those with no deadlines or whose deadlines are ignored.

Production Plan - 4-H Dog Obedience			
		DATE	DONE
○	- Content outline	Sept. 1	✓
	- Approval	Sept. 5	✓
	- Storyboard	Sept. 8	✓
	- Expand script	Sept. 15	
	- Session 1 - introd. scenes 1, 2	Oct. 1	
	- Session 2 - tape scenes 3, 4	Oct. 4	
	- Studio - Edit	Oct. 7, 8	
	- Tape narrator	Oct. 10	
	- Final edit	Oct. 20	
	○	- Copies made	Oct. 28

Figure 1 Sample production schedule

**QUESTION: My production plan is ready, now what?**

Complete a content outline. This is a list of phrases which describes *all the topics* to be covered in the videotape, not necessarily in exact order. Some people develop this from memory, as they have taught the subject so many times.

Others work from their notes. You might have an observer take notes in outline form from an actual presentation. Or, audiotape your own lecture. Listen to it and jot down main topics you need to cover. If your topic is a "how-to-do-it" procedure, you can later use the audiotape to help you fill in the details, step by step. Procedure or "how-to-do-it" programs require that even the smallest details, or tiniest steps be included for the new learner.

4-H DOG OBEDIENCE: CORRECT HEEL POSITION	
—	full exercise, from sitting to heel to halt
—	introduce heel position as basis for other dog obedience procedures
—	position of dog at handler's left
—	proper alignment of dog's shoulder with handler's left hip
—	correct leash position. . . right hand
—	leash position in left hand for flick control
—	sitting position, and handler's correct response to "forward"
—	left foot step-off at "heel" command
—	explanation of leash flick for guiding, control
—	example of using flick technique at "heel"
—	example of using flick technique for control during heeling
—	use of praise
—	heeling at brisk pace
—	leash at loose position
—	final review of key points

Figure 2 Example of a content outline

**QUESTION: I've completed a content outline, how do I know what to videotape?**

Determine the type of treatment your instructional program will take. One type of treatment is in-studio, the other on location. Another treatment choice involves the instructional setting. Will it be just a teacher, lecturing to the camera? Or will there be students in the scene, a classroom treatment. If the choice is teacher alone, use full classroom props, with chalkboard, demonstration table, etc. The least desirable instructional tape is the so-called "talking head" approach—a close-up of the instructor with no change in camera angles, distances, props or visuals. The classroom setting is best handled with a smaller than normal number of students and a seating arrangement which allows good camera angles. The schedule should provide plenty of time for shots to be redone. Videotaping an actual class in session at its usual location is not desirable. There are usually too many distracting noises, the camera cannot be positioned well, and there is little or no time to redo segments.

Another treatment choice involves the message. Will it be chronological, step-by-step, or comparison and contrast, for example? Whatever the choice, go to your content outline and make sure it is complete. Avoid a long introduc-

tory list of definitions or a lengthy identification of all the parts of some piece of equipment. Introduce definitions of new terms, concepts or pieces of equipment into the program only as they become relevant to a particular segment.

**QUESTION: I've selected a treatment and finished a content outline. . . .what next?**

Once you have decided how to treat the topic and have completed a content outline, a storyboard or flow chart will help you to plan the actual scenes and expand on the narrative. To prepare a storyboard, work from the content outline and draw stick figure sketches of each visual step on index cards. Use one card per step. Write the accompanying narrative or descriptive audio information down on the card. If a particular item needs additional visual steps to convey the information, just add more cards. You can then arrange the cards on a bulletin board or a table. Read through them to determine if anything is missing or if too much emphasis is on any one part. If something is out of sequence, add, delete, or rearrange the cards until the message is logical and complete. Finally, on each card, or stack of cards, add extra information such as a list of props or potential problems (e.g., possible glare from glass or water in the scene). Also note if a scene needs special attention such as an extreme close-up shot, or freeze motion.

explain or interpret the visual scene, not describe it. Avoid stating the obvious. Eliminate phrases such as "here you see. . ." or "this shot shows. . ." Write the script in a manner that avoids dating the program.

To prepare the script for taping sessions, include the narrative as well as cues or directions for video and audio. To assist the camera operator, keep directions for video separate on the page. (See Sample Script.) The script may include the actual narrative or an abbreviated version. It should be complete enough for the camera operator or production crew to tell where the teacher is, and what is coming next. Keep in mind that many home recorder units have a dub feature, allowing actual live sounds to be eliminated during a scene while a narrator's voice or music are added.

**QUESTION: What do I need to remember at the shooting session?**

To insure a good videotaping session, there are five key steps. First, check the storyboard cards to make sure that all the props and actors listed for the scenes to be taped will be at the location. Make sure any special equipment needs are taken care of, such as lights, batteries, and so on. Second, double check your arrangements for scheduling any facilities. Make sure that you will not be locked out, or have another group show up at the same time and place. Third, insure that on-location sessions are the best possible by selecting a time and place with a minimum of noise or distractors. Check maintenance or construction schedules, traffic patterns in the area, or special events that might interfere with your taping. . . .for example, a band concert in the park, or tournament on the school playground. Fourth, make sure that each person whose image or voice will be in the videotape has signed a release form, granting permission to the producer to use the performances without legal recourse. This includes friends and relatives. Minors must have parental or guardian consent. (See Sample Release form.) Fifth, arrive at least a half hour early with the camera crew. Make sure that everything is in place before the actors arrive. This allows the camera crew to set up without interference and keeps the participants from waiting.

During the taping session, make certain that you get all the possible shots you will need for that scene. Redo unsatisfactory segments right away. It is practically impossible to recreate a scene later that will look right when edited in with the original shots. Plan to tape a variety of camera shots—different angles and distances—for each scene. Use zoom sparingly, and hold the shot for a while once the zoom is completed. If the camera is to follow a horizontally moving subject, move the camera so that there is always more space ahead of the subject than behind.

"Walk-through rehearsals," in which participants go through all moves on the set and familiarize themselves with the general flow of the videotape, are a must. At this time, cue cards can be prepared and situated in key locations to aid the teacher in remembering important points. During rehearsal, practice with the cue cards enhances a more natural presentation.

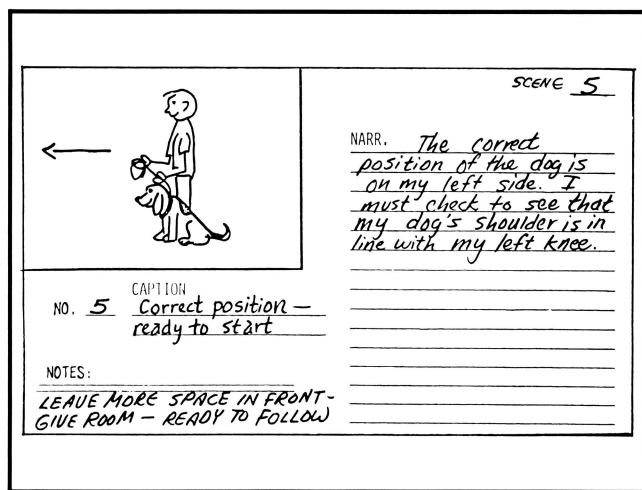


Figure 3 Sample storyboard card

An alternate method of planning is to produce a large flow chart of all the video and audio components. This organizes all the information in one place, visible at a glance. Continuity is thus built into the videotape, controlling both the pace and logical flow of the message.

**QUESTION: What about a script?**

From the completed storyboard or flow chart, an expanded script is developed. Keep in mind that the script has two purposes. First, it helps the on-camera teacher to organize thoughts, but should not be read verbatim. Second, it serves as a guideline for the production crew. The script should

VIDEO	AUDIO
<p>OPEN--LONG SHOT (LS) Handler with dog sitting, facing camera</p> <p>They move toward camera, heeling, and halt.</p>	<p>...Music....</p> <p>...Music fades....</p>
<p>TITLE: Superimpose over scene</p>	<p>NARR. "The correct heel procedure is the basis for all other dog obedience procedures."</p>
<p>(LS) Handler and dog from side, are heeling from right to left, camera pans with them.</p>	<p>NARR."The purpose of this program is to outline step by step, the correct way to execute heel position."</p>
<p>ZOOM to MEDIUM SHOT (MS) of handler and dog; then ZOOM to CLOSE-UP (CU) of dog's shoulder, handler's knee</p>	<p>HANDLER "The correct position of the dog is on my left side. I must check to see that my dog's shoulder is in line with my left knee.</p>

**Figure 4 Example of a video script**

When on camera, speak with a clear, normal, conversational voice. A little extra inflection by raising and lowering voice pitch, is important. Avoid the . . .temptation to pause. . . too often. . .in the middle. . .of a sentence. . .just because this is. . .a teaching program. Pauses should coincide with punctuation marks. On-camera nerves may cause some people to speak faster than normal. Have them take several long slow breaths before starting a scene. If you are teaching children, use the same pitch and tone of voice that you use with adults, just make sentences shorter and use less difficult words. Avoid a sing-song, baby-talk delivery.

Talk directly to the camera if there are no students with you in the studio. Do not keep glancing at the camera operator or others of the crew. Such eye movements are exaggerated on the video screen. Move and walk much slower on camera, especially when pointing or picking up something. Unless movements are slow and deliberate, the camera can lose the subject completely. This is especially true for close-ups where a move of inches can make an object disappear off screen.

Finally, interact with the camera as if you were talking to a friend, and you will avoid the appearance of a staged performance.

Clothing choice can affect the quality of the finished videotape. Avoid black or white, as well as vivid or "fluorescent" colors. Also, avoid wearing busy prints, stripes, large plaids or checks, even on accessories such as ties or scarves. Smaller checks and stripes will cause a

shimmery effect on camera. Try to choose clothing colors that will contrast with the background without clashing. Glittering jewelry, excessive makeup, fingernail polish other than clear, and extremes in clothing or hair styles are all undesirable. They will attract attention away from the subject and may prematurely date the program.

#### **QUESTION: What about editing?**

Editing builds continuity in the flow by matching the best video shots with the best audio. Extensive editing should not be used to compensate for a poor production plan. Remember to shoot a mixture of close-up, middle distance, and long distance shots. Close-ups are particularly helpful in emphasizing details. Long shots provide a background or frame of reference. If you go directly to a close-up of an unfamiliar object—have a common object in the same shot for size reference—a ruler, a coin, person's hand, for example. Variety is necessary in order to create an interesting final version of the videotape. The purpose of editing then, is to select only the very best shots, put them in the correct sequence, add music and narration, titles and credits.

Editing requires some technical expertise. Commercial videotape stores are beginning to offer "do-it-yourself" editing for a fee. One may choose to independently operate the equipment or to receive help from a store technician. When in doubt about editing, always seek advice from a videotape production expert. Check with commercial establishments, local television stations, or a media/com-

munications department at your nearby high school, college or university. Some public libraries have audio-visual equipment loan programs which include training. Contact the extension staff in your area to see if they have video production experience.

**QUESTION: What about title and credits?**

The title should be short, specific, and provide a clear idea as to the subject covered. Avoid ambiguous titles such as, "Stars in Her Eyes," which might be about an astronomy project or perhaps a young girl's struggle to become an actress or rock star.

Some producers choose to superimpose title and credits over video scenes relevant to the topic. Both editing studios and some home video cameras have character generators, which allow you to superimpose lettering electronically over a scene. Title and credit information can also be videotaped directly from artwork, or added in an editing studio from 35 mm color slides. All graphics (e.g., 35 mm slides, posters, artwork, etc.) must fit a horizontal format. Use a ratio of 3 units high to 4 units wide. Leave plenty of space around the edges of graphics, as a portion of the border will be lost on the television screen.

Once you have captured audience attention with a good title sequence, go right into the subject. Always place credits at the end of the program.

**QUESTION: How about music for my videotape?**

Music can set the tone or mood within the audience. Variations in music tempo or volume can signal transitions

in the program. But the volume of background music must be especially low when voices are to be heard. For best results, music is recorded separately on audiotape and then electronically edited onto the videotape.

The use of copyrighted music is legal only when written permission is obtained from both the composer and from the performing artists or their representative company. As a rule, recording firms seldom waive copyright. Certain firms specialize in music "libraries" whose copyright privileges have been purchased. The customer selects music and pays a fee each time the music starts. This is referred to as a "per needle drop" charge. Music should always support the program, not compete with it.

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The finished product, a master videotape, must never be used to teach with. Store the master—clearly labeled—upright in a dry cool place, away from electromagnetic equipment. Use it only to make duplicate or "working" copies. By following the procedures just outlined, it is possible for the novice to create just the right videotape for an instructional message.

**REFERENCES:** Wells, Judith A., and Trinklein, David H. "A General Guide for Creating Videotapes to Facilitate Agricultural Instruction," *Journal of Agronomics Education* 12 (1983).

Sanders, Annette C. "Producing and Using Instructional Media Materials," photocopied at University of Missouri-Columbia, © Sanders, 1981.

**Some Video Terms:**

*Ad Lib* speech or action that is spontaneous, unrehearsed

*Cue* a signal to begin action or speaking

*Close-up (CU)* view of subject through camera lens in which subject fills the frame

*Cut* instant jump from one scene to another

*Dolly In, Dolly Out* motion of entire camera (in) toward the subject or (out) away from the subject

*Dub* electronically record voice, music or background sounds over a pre-recorded image

*Dupe* the act of making a copy or duplicating a copy of a videotape; sometimes the copied version is called the "dupe"

*Fade* image on screen gradually goes from full black to the full image, or from image to a black screen

*Long Shot (LS)* often an establishing shot, shows subject plus much surrounding area

*Medium Shot (MS)* the subject fills about one half of the image area; medium shot is middle distance from subject between long shot and close up

*Pan* camera movement is horizontal, swings right or left parallel to the ground

*Tilt* camera movement is vertical, moving up or down

*Zoom* movement of the camera lens which can cause the image to appear farther away or fill the frame; camera and subject do not move

VIDEOTAPE RELEASE FORM

DATE: \_\_\_\_\_

I, \_\_\_\_\_, GIVE  
(Subject's legal name)

PERMISSION TO \_\_\_\_\_  
(Name of person or institution making the videotape)

TO MAKE VIDEOTAPE RECORDINGS AND OR VOICE RECORDINGS OF ME OR MY MINOR  
CHILD \_\_\_\_\_ OR OF  
(Name of minor child)

MATERIALS OWNED BY ME, AND TO PUT THE FINISHED PICTURES (RECORDINGS) TO  
ANY LEGITIMATE USE WITHOUT ANY LIMITATION OR RESERVATION.

● PROJECT TITLE: \_\_\_\_\_

● PROJECT DIRECTOR: \_\_\_\_\_

● GUARDIAN'S or  
SUBJECT'S SIGNATURE: \_\_\_\_\_

● SUBJECT'S NAME PRINTED CLEARLY: \_\_\_\_\_

● SUBJECT'S ADDRESS: \_\_\_\_\_

City State Zip

SIGNATURES OF  
WITNESSES: 1. \_\_\_\_\_ Date: \_\_\_\_\_

2. \_\_\_\_\_ Date: \_\_\_\_\_

Figure 5 Sample release form

