
UNIT 1 SKILLS AND RESOURCES FOR VIDEO PRODUCTION

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1.0 INTRODUCTION

In this unit, we focus on the planning, scheduling and execution of production and the technical resources needed for this endeavour. The unit will dwell upon details such as script analysis, production and graphics planning, camera work and recording. You will notice that our emphasis here is on the production of video programmes. Video production is a more complex process than audio production. Therefore, the production of video programmes subsumes the process of production required for the audio components. Hence our emphasis here is on the video production.

1.1 OBJECTIVES

In this unit, our discussion will mainly focus on some of the basic production skills needed in a studio as well as field/location shooting of programmes for education and development. After going through this unit, you should be able to:

- describe the significant elements of planning of an A/V production;
- explain the various stages in the organisation of scripts, budget and resources;
- convert a final script into a production script;
- describe the component elements of graphics, camera work, sound recording and lighting;
- explain the qualities of good graphic design for TV;
- operate and take care of camera;
- identify various kinds of microphones; and

- consider the use of light according to aesthetic consideration.

1.2 PRODUCTION PLANING, SCHEDULING AND EXECUTION

Having presented a fairly detailed account of the programme production process in Unit 1 of block 3, we now turn to a description of the planning, scheduling and execution of various production events. For the sake of continuity and clarity, let us pause and study Figure 1 which depicts essential production activities and tasks, which the producer has to carry out and co-ordinate with other specialists and functionaries after the final script stage.

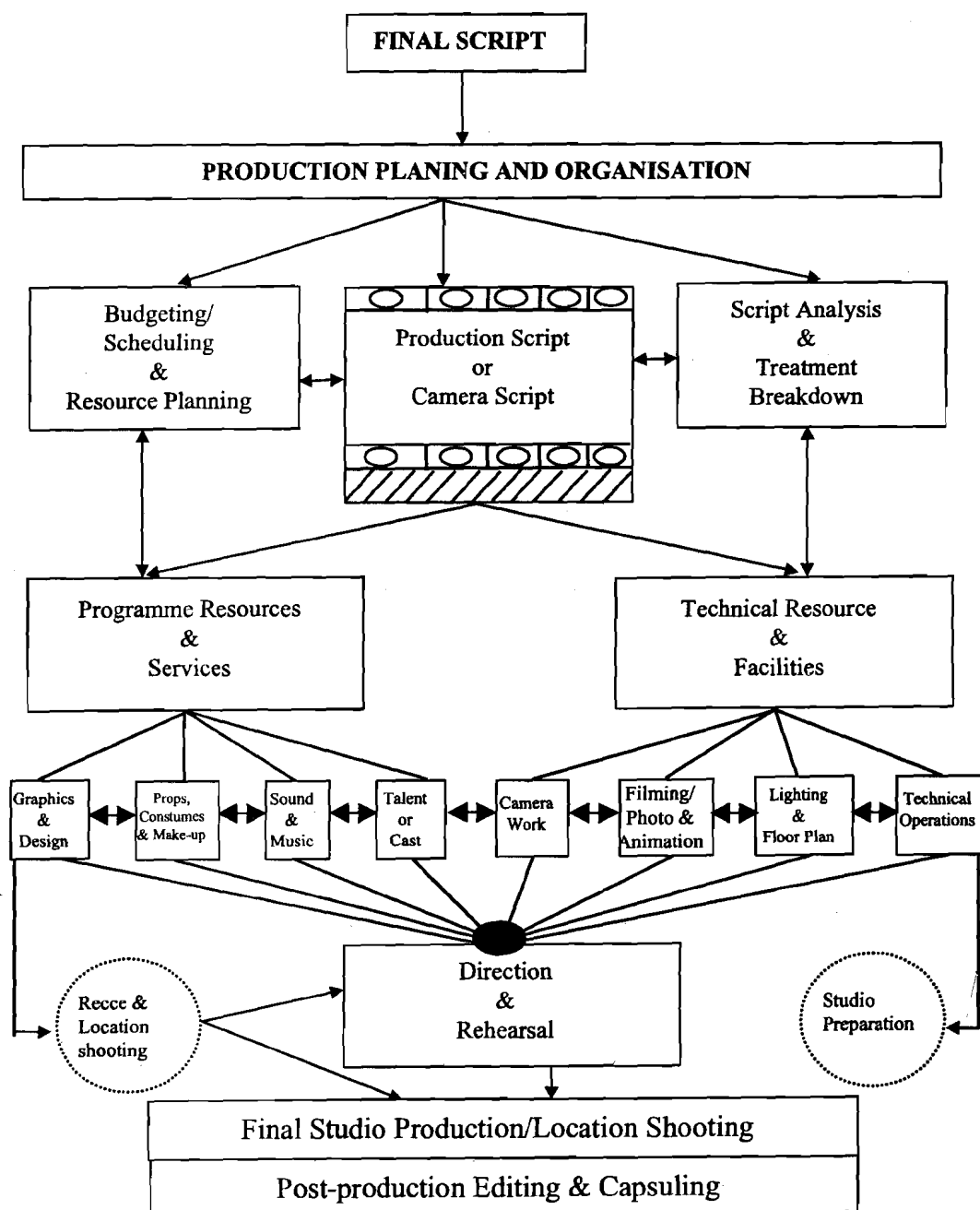


Fig. 1: TV Production: Planning & Organisation

Except in those media organisations, which follow **team-mode** production as a key policy, the scriptwriter generally bows out after he or she has done the final version of the script. In complex educational productions, it is, however, ideal that the scriptwriter and the academic or content experts remain associated with the production process till the end. In simple productions, the scriptwriter's role may become optional once the final script has been accepted or approved. It is frequently at this stage that the role of the producer comes into sharp focus and she/he takes over full command of the production in all respects.

Figure 1 presents a general overview of TV production planning and organisation. Each of the areas and activities indicated in it involves managing and co-ordinating a large number of people and tasks, doing and getting many different things done, often at the same time and without losing the continuity and rhythm of the whole process. In fact, the essence of television production is teamwork and a good producer must learn to deal with a variety of people and acquire sufficient skill and proficiency in managing men and matters. Advance planning, thorough preparation, consistent teamwork and skillful execution of all activities and tasks within a fixed time frame are the most essential requirements for a successful TV production.

1.2.1 Script analysis

Any kind of serious production planning always begins with the study and analysis of the programme script. Ideally, the producer should have been associated with the programme development process in its early stages or at least should have later familiarized himself/herself thoroughly with the theme and objectives of the programme. At this stage, he analyses the script from various production angles and works out detailed requirements in terms of various programme resources such as visual, aural, technical, personnel, financial and other miscellaneous pre-requisites. Keeping in view the constraints of resources, time, manpower and budget, the producer commits himself to what is called a 'treatment-breakdown' of different segments of the programme. He visualizes the systematic arrangement of visual and aural inputs, camera shots, movements and effects. Thus he attempts to evolve a logical, coherent and continuous television show. This exercise eventually leads to the development of a detailed production script based on a definite floor plan.

1.2.2 Developing a camera script

Also known as production script, the camera script is the blueprint for executing the production of a TV programme in the studio or on an outside location. It provides a meticulous blueprint of necessary guidelines and technical instructions for floor staff, artists, performers, cameraperson, engineers, technical assistants and all others associated with the production including the director or the producer. There are several standard formats followed by producers for laying out camera scripts. Usually the most common layout consists of two vertical columns: the left hand column for

vision and the right hand column for sound. The vision column is devoted to picture treatment giving shot numbers and description and nature of shots, camera numbers, camera positions, movements, switching instructions etc. The sound column is used for recording dialogue, sound, music, noise, special effects and lighting and stage instructions for floor staff, technicians and performers.

The full camera script, when developed in the standard layout, gives detailed information about what is required and should happen at each moment of production. Devising a camera script is not a simple task. In fact, it needs a lot of experience and imagination to visualize and carefully plan camera shots, angles, movements and transitions so that the action takes place sequentially and smoothly, eliminating all jumps, jerks and jarring effects. The producer must, therefore, invariably design his camera script in close consultation with his/her technical counterparts, cameramen, set designers and other associates. The camera script is, however, not a very rigid plan. It is rather a flexible blueprint which can be modified as and when the need arises even during the course of actual production. An example of what a camera script looks like in its finished form with all its abbreviations and coded instructions, is as follows. You will certainly recall the abbreviations of basic shots from block 3, unit 2. Please remember that this sample camera script is not complete. It is, however, typical and will give you an idea of such scripts. Interestingly enough, this sample camera script serves yet another purpose — it serves as the base for a discussion of production details in the next unit.

A Sample Camera Script		
Studio 1	Bhushan	
Media Department	AR/6-1998	
British Council	Final production	
London		
SCRIPTWRITING FOR EDUCATIONAL TELEVISION		
(A programme for ETV Scriptwriters)		
Director/Producer	C. Bhushan	
P.A. (Production Assistant)	Valerie Muncey	
Presenter	June Harben	
Vision Mixer	Ibrahim	
Camera 1		
Camera 2	Michael Kilcooley	
Camera 3	Angus	
F M (Floor Manager)	Jaffar	
AFM (Asstt. FM)	Yuvadee	
C/S (Caption Scanner)	Pirooz	
Sound	Richard Histed	
Vision Control	Koshal Pun	
Lighting	Michael Kilcooley	
VTR (Video tape Recorder)	David Hecker	Contd...
Designer	Norman Hoy	

SCHEDULE		
Monday 4 April 1977		
Set & Light	:	10.00 - 13.00
Rehearsal & VTR (Presentation)	:	10.00 - 13.00
Tuesday 5 April 1977		
Rehearsal & VTR	:	10.00 - 13.00
Panel Members		
Mike Barrat, Chairman		
Piers Pendred Arthur Gassatti		
Vijaya Mulay Richard Shrigton		

SCRIPTWRITING FOR EDUCATIONAL TELEVISION	
i) FU 3	FU MUSIC
LS: Writer at his desk Zoom in slowly to MCU, and tilt up to focus on pen	
ii) MIX 1	
Photo Caption (A TV Script)	
iii) SUPER C/S	
Title Caption: 2 (Writing for ETV) Lose Super	
iv) CUT 3	
Photo Caption: 3	Q Presenter (OOV) : Look at this picture ... What does it mean? Who is she? ... A woman? A girl? ... A fairly limited set of meanings. (Pause) Let's add a few words on to it and see hoe the picture meaning changes.
v) SUPER C/S	
Caption: 4 (Mona Lisa, the murderess) Lose super	
vi) SUPER C/S	
Caption: 5 (The mother-to-be) Lose super	
vii) SUPER C/S	
Caption : 6 The serving maid	
	Contd...

Lose super	
viii) CUT 2	
MS Presenter	Q (To Camera): When matched with pictures, words can often help to convey the desired meaning with clarity. Now look again and note the difference.
ix) MIX 3	
Photo caption 6: (repeat)	Out-of-vision (OOV): This beautiful portrait of Mona Lisa was made by the famous Italian painter, Leonardo da Vinci, who lived about 500 years ago. Many have wondered in speechless admiration at her mysterioussmile. Is it a sad smile? What does it suggest? What was the model thinking about?
x) CUT	
MS Presenter	(TO CAMERA) Words can give a host of information about a picture and can stimulate a lot of thinking in the desired direction. But what we use in television are not individual pictures, but series of pictures, still and moving, sometimes matched with words and sometimes without words , and arranged in such sequential continuity that they make sense and convey the desired message.
xi) CUT 1	
Caption: 7 (World outline map)	(OOV) A small island in the Northern Hemisphere, no part of the United Kingdom is too far from the sea ...
xii) MIX 3	
Caption: 8 (UK map)	

1.2.3 Budgeting

Budgeting is an important component of the production process. Media programme production, being a highly expensive proposition, requires accurate cost estimation and proper account keeping. Drawing up a budget and sticking to it is a major responsibility of the producer. She/he, therefore, has to cost out all the resources required for the programme. She/he must justify the expenditure proposed to incur or has incurred on each and every item/stage of production. In most organisations, it is essential for the producers to prepare budget estimates for each of their programmes and to obtain financial approval from the appropriate authority in advance. Budget

limits for programmes are generally fixed and producer has to keep his/her estimates within the overall ceiling prescribed for a programme. For special programmes, which involve travel and outdoor shooting, deviations are generally allowed on providing full justification for escalation of costs on account of night stays, meals, refreshments and travel expenses. Obviously, producers require reasonable and relevant training in the techniques of budgeting to perform this task successfully.

As mentioned in Unit 1 of Block 3, budgets for TV programmes are generally worked out on the concept of 'above-the-line' and 'below-the-line' production costs, 'Above-the-line' production costs include expenses on writing, performing and production personnel and other elements. 'Below-the-line' costs refer to technical and support service, such as equipment, studios, make-up, costume, properties, scenery, graphics and transport coupled with technical personnel and a large number of other support staff. Needless to say that 'below-the-line' production costs are by far the more expensive, though less visible, as these are usually part of a common set-up and are, therefore, difficult to apportion precisely.

It must, however, be stressed here that in television, equipment or machine-hire costs are estimated by the hour and studio utilization costs are measured in hours, minutes and seconds. So, using equipment, facilities and studios for longer periods that are legitimately required in producing a programme, amounts to as much of a criminal waste as is done through under-utilization or non-utilization of available equipment and infrastructure. Media producers are, therefore, required to learn not only money-budgeting but also more importantly 'time-budgeting' and judicious utilization of resources.

In cases where programmes are assigned to or accepted by outside producers for production on a turnkey basis, a method of direct costing is followed. Direct costing involves budgeting and accounting for expenses to be incurred on each and every item of services and facilities including fees for writing, editing, consultancy and direction. As a matter of fact, budgeting forms an important part of programme planning and producers are best advised to open a separate programme file for each production and preserve all planning and budgeting papers along with the script copies and other important programme notes in this file. Generally, the producer is assisted by his/her production assistants in keeping and retrieving all such information from the programme file. The producer is responsible for running costs of production on a day-to-day basis and must maintain all vouchers and submit final accounts for the advance drawn by him to meet part of the production expenses.

1.2.4 Resources planning and scheduling

Media production is a combination of several inputs and resources. By its very nature, it requires not only much advance planning but also the management of several things at a time. In reality, therefore, the process of planning programme resources and the scheduling of various production events begins in the earliest stages and continues parallel to script designing,

budgeting and other activities. The main resources, which the producer have to plan and schedule for execution can be classified into two categories namely (i) programme resources and services and (ii) technical resources and facilities. Some of these major programme and technical resources will be dealt with independently in subsequent sections of this unit. Here, the following details need to be considered for a better understanding of the theme under consideration.

i) *Scheduling of various events and numerous associated activities* is one of the key aspects of production organisation. It is mainly concerned with fixing and conducting meetings with other units and service departments, such as Design & Graphics, Props, Costumes & Make-up, Sound and Music, Camera & Lighting, Photo, Film and Animation, and Technical Planning & Operations, besides selecting and directing the cast. The producer must also hold a series of meetings beginning with the initial planning, meeting or a pre-production conference, script meetings, technical planning meetings and joint planning meetings with members of production and technical crew.

ii) *Booking of various facilities, services, studios, editing suites, performers, actors, artists, musicians, camera crew, studio staff, technical personnel, and other services, must be done quite in advance. All this requires a lot of pre-planning and co-ordination.*

iii) *Designing a detailed production schedule* for executing various tasks is also on the top of the producer's agenda. The production schedule is of much help in the execution of various jobs and serves as a good tool for monitoring the day-to-day progress of the production work allocated to various team members and support staff.

iv) *Fixing realistic deadlines* and defining and assigning clearly charted out responsibilities to all functionaries, are of utmost importance in the overall execution of the total production campaign. It is here that the qualities of the producer as a good PR man and a 'manager of men and matters' come to the fore. One of the best ways to plan and schedule the production of a programme is to begin with the final deadline (which may be kept a week ahead of the exact preview date) and then plan backwards, fixing a definite time frame for each activity and coordinating various events so as to save on total production time.

v) *Devising and using proformas, schedules, call sheets etc,* provide a great relief to the producers and their production assistants and makes their lives easy. Wall charts, production planners, scheduling charts, artists address lists, facilities request forms, performer's contract proformas, call sheets and several other schedules do serve as effective communication devices and should be accurately filled up and distributed to the personnel concerned stating strict deadlines and time limits.

Let us now move on to discuss some of the major programme and technical resources. But before that, do this exercise.

Check Your Progress 1

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

i) What is a camera script?

ii) Name two major categories of resources for which a producer has to plan and budget.

i)

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ii)

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1.3 PROGRAMME AND TECHNICAL RESOURCES

Before you attempt any aspect of production, a working knowledge of the programme and technical resources is needed. Since hands-on experience in production is difficult to obtain, we thought it would be useful to discuss these aspects with you in this section. We take up four main resources for discussion. They are **graphics**, **camera**, **sound** and **light**. Let us take them up one by one in the order given above.

1.3.1 Graphics

Designing or production of graphics is a technical area of the video production process. Graphics are used to convey ideas or present information, which cannot be presented or communicated easily by means of spoken words or live actions. They can make information effective, convincing, attractive and powerful.

Graphics or caption/photo-captions are widely used in television and video programmes. They are used in a variety of ways as two-dimensional illustrative materials such as titles, decorative and pictorial illustrations, photo captions, slides, graphs, diagrams, tables, maps, written and animated captions. Graphics do make a useful contribution to all types of video programmes. In educational and technical programmes, maximum information can be clearly presented with a single graphics in a few seconds, demonstrating relationship, proportions, development, etc. Statistical data can also be presented quickly, clearly and meaningfully by simplifying complex data through visual symbols, illustrations, tables and diagrams.

While planning, preparing and selecting graphics for video screen, the following three points should be kept in view.

Aspect Ratio: It means the relationship between the height and width of the graphic card or picture. The TV screen's or monitor's proportions are 3:4 or three units high and four units wide. All visual graphics should, therefore, fit into this aspect ratio.

Essential area: It is also called critical area or safe title area. All essential information must be contained within this area to avoid loss of picture during transmission and playback. The portion of the picture so lost during transmission and scanning, is known as domestic cut-off. To ensure that no portion of the graphic card is lost on the screen, the scanning and essential areas of the graphic must be included in the shot. Kindly refer to Figure 2.

Readability: It means that the viewer should be able to read the words or written information as it appears on the screen. Too much information, written in letters of too small a size, becomes unreadable and therefore the viewer cannot properly comprehend it. So, we should always use large and bold letters for proper readability.

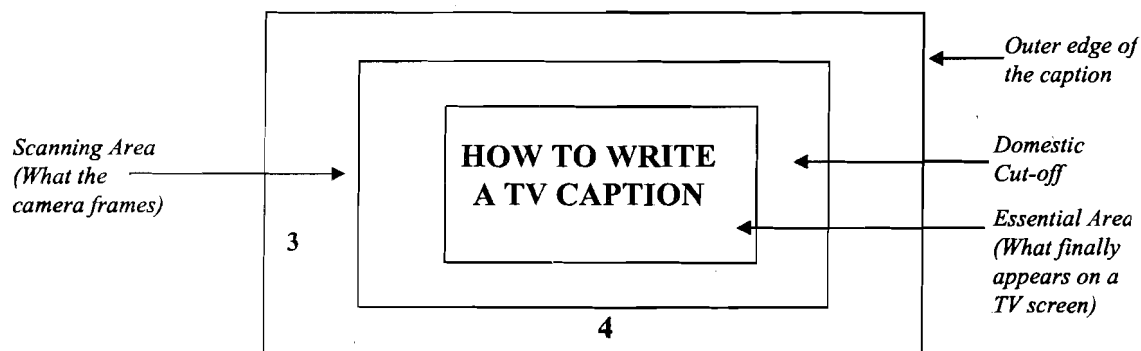


Fig. 2: Planning of Graphics

Types of graphics: Graphics are generally classified under the following five categories:

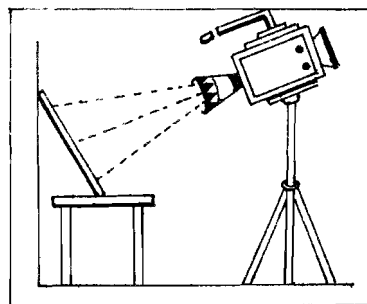
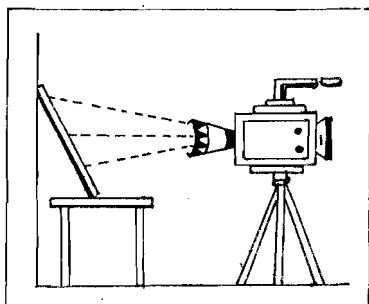
- i) **Title card:** It is a simple card, usually a written or partly-drawn graphic carrying such information as the title of the programme and/or names of the writer, the producer and the programme director.
- ii) **Key card:** It is also known as the super card or 'super caption' and usually contains white lettering on a black background while keying or superimposing, the black background drops out and white letters appear over the first source or scene. Often, a key card is used for identifying a guest by superimposing his name over his picture on the screen. The information on a key card is always brief and is written in simple bold letters.
- iii) **Slides:** Colour or 'black and white' slides can be used on a television screen only if these have been shot horizontally. Vertical slides are out of aspect ratio and look bad on the screen.

iv) **Maps, charts and photo-captions:** Maps, charts, diagrams, tables, graphs and photographs are important visual resources for video programmes, since they attempt to communicate the maximum possible information clearly, quickly and in a simplified way. Animated graphics can and do enhance the interest-value of a programme.

v) **The Chroma key card:** Unlike a super card, which has a black background, the chroma key card has a blue background. The chroma key card can be keyed into the background scene or picture by using the chroma key process that allows the blue colour to drop out during keying. In fact, the chroma key which is also known as 'colour separation overlay' or CSO, is a kind of electronic device which 'cuts out' all such parts of a picture that you do not want (by colouring them blue) and superimposes the remaining parts on another picture or background.

Shooting graphics

In handling easel graphics in the studio, we should be on the alert for two problems: *keystoning* and *glare*. Keystoning is an undesirable effect which is produced when the camera is not directly perpendicular both in its vertical and horizontal axis to the flat graphic it is taking! In this case, the floor person should rotate the graphic clockwise or counter clockwise or tilt the graphic up or down to reduce the off-axis angle rather than call upon the camera person to make the correction. Glare can be avoided by having the surface of the photograph developed in matte finish rather than glossy finish. A more immediate way to remove glare is to experiment with rotating the graphic at different angles from the offending light source



General rules for graphics: The graphic artists generally need sufficient time for preparing graphics, illustrations, maps and diagrams. In some cases, a few graphics may have to be re-done or slightly altered here and there. To be on the safer side, therefore, a producer must keep the following general rules in mind.

- Involve the graphic artist in your programme from its initial stages.
- Brief the graphic artist thoroughly about your specific requirements. Always discuss your script with him at the treatment stage, and pay heed to his advice.
- Try to make your captions short, simple and readable on the screen.

- Remove all unwanted information in maps, graphs, diagrams and tables. Simplify all information and keep it to the minimum.
- Clearly write out and make rough drawings of all your captions and graphics on separate sheets of paper and discuss them with the graphic artist to decide on the best design.
- Ensure that the artist prepares all graphics at least 24 hours in advance. It should give you enough time to alter some graphics or re-do them in a different way.

Check Your Progress 2

Notes: a) Write your answer in the space given below.

b) Compare your answer with the one given at the end of the unit.

List the major categories of graphics generally used in video programmes.

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1.3.2 Camera work

Of all the activities and operations involved in the process of television production, camera work is of central importance, because if the camera work is of poor quality, nobody will watch the programme. To preface our discussion on various aspects of camera work, let us first begin with what a television camera is like and how it works. The television camera is the one most important basic piece of production equipment. Fortunately for the TV producer today, a wide variety of electronic cameras — ranging from monochrome to colour, simple light-weight home-use camcorders and portable electronics news gathering (ENG) cameras to heavy EFP and other sophisticated and giant studio cameras — are available. The basic features of all the electronic cameras are almost the same. A standard television camera consists of the following three main parts:

- Camera head:** It consists of (a) the zoom lens and its attachments, (b) camera pick-up tube or the internal optical system, (c) the viewfinder, and (d) the camera cable.
- Panning head:** It consists of the 'pan handle' and its associated rotating mechanism which enables the camera head to tilt and pan smoothly.
- Camera mounting:** It may consist of a tripod, a leather clamp, a pedestal or a crane to support the camera securely and firmly on the ground or on the shoulder.

The television camera has several other features, connections and controls. Some of these are:

- Lens hood
- Lens cap

- Tally Light
- Indicator cue lamp
- Zoom control (zoom in/zoom out)
- Focus control
- Fade in/fade out (or Aperture control)
- Headset (intercom)
- Tilt and Pan Locks
- Camera/extension cables
- Microphone (built-in)
- Mic extension cable & Microphone
- Camera Batteries
- Camera carrying case

How does a video camera work?

All video cameras work on the same basic principles. They are:

- i) Conversion of an optical image or a scene into electrical or video signals, and
- ii) Transmission of these video signals, or their being recorded on a videotape. Using a reverse process, these transmitted or recorded video signals can be processed and converted again by a television set or a video monitor into viewable screen images.

Basic Camera Operations

The camera has been aptly described as the *producer's language*. We have already described a number of camera devices, movements, transitions, basic shot sizes and picture composition techniques in Section 2.2 of Unit 2 of Block 3.

Here, we venture to give below a few major steps, which can serve as general guidelines for good, systematic camera work.

Working with a portable video camera

While doing an ENG assignment, the producer or the cameraperson is usually required to assemble and operate the portable camera alone without the assistance of a video engineer. She/he must, therefore, learn and follow the following steps:

- Familiarizing oneself thoroughly with various parts, connections and controls of the camera and practise their operations.
- Assembling the camera parts, VTR, tripod, cables, etc. and doing the test recording.
- Loading and unloading video tapes.
- Changing, checking, connecting and charging batteries.
- Checking white balance level.
- Recording and playback in the viewfinder or the baby monitor.

Precautions

The video camera is a highly sophisticated, delicate and expensive device. So handle it very carefully and patiently.

- Don't panic if something goes wrong.
- Don't use force with the equipment.
- Don't fiddle with controls all at a time/one after the other.
- In case of trouble, report to the technician/engineer who will examine the equipment and repair it.
- Do not leave the video camera and other equipment unattended.
- Keep a watch on all equipment and accessories so that nothing gets lost, forgotten or stolen.
- Always prepare a checklist of equipment (in duplicate) before going out for location shooting.
- Always compare all equipment and accessories with the checklist as you pack up and get back to the studio.
- Always prepare a shooting script or a shot list before actual shooting. It saves much time in planning camera shots.

Camera care

There are some dos and don'ts of video camera. You may or may not operate a video camera yourself. But it is good to know a few basic operational rules of camera care as you are going to be part of a production team. Here is a simple checklist.

- To avoid 'burn-ins', never let your camera lens face the sun or any bright light.
- Cover the camera lens with the lid or lens cap when you are not using the camera.
- Don't walk or stand with your camera tube/lens facing down-wards or with the lens pointing down.
- Always fix the camera securely on the tripod.
- Tighten the pan and tilt controls securely when you are not taking any shots.
- Use microphones (mics), leads, lights, batteries, etc. carefully.
- Always check video and sound before actual recording.
- Always test your equipment before you go out for shooting.

Operating a studio camera

Normally, all studio cameras are regularly serviced and kept in 'fault-free' condition before each studio recording. In case any camera develops a fault during recording, immediate services of a maintenance engineer or technician are available. However, as in the case of a portable camera, adequate care and precautions are required to operate the studio cameras. The points given below may be useful to remember and follow each time a

cameraman operates a studio camera after it has been warmed up by the video engineer:

- Put on your headset and speak to the control room staff to check that the intercom system is working. If not, ensure that it is switched on by the technician concerned.
- Unlock the pan and tilt controls of the camera and check that the camera is properly balanced.
- Also unlock and check the pedestal up and down in the same way.
- Remove the camera cap and check the viewfinder picture for correct adjustment.
- Check the lens for its cleanliness and its zooming range and preset the zoom control.
- Check the focus control by focussing, defocussing and refocussing on objects, graphics and people present in the studio.
- Normally, each cameraman is given a camera card, which gives a sequential description of shots to be taken by each camera. Try framing and rehearsing these shots in advance.
- Be watchful of all activities taking place in the studio during rehearsals and final recordings.
- Listen carefully to the producer and carry out his instructions in toto.
- Do not take off your headset even for a short while during rehearsals or recording.
- Move to and line up the next shot immediately after you have finished the previous shot.
- Always keep an eye on your camera's tally light to avoid any on-shot moves or jerks.
- Rehearse and practise the move thoroughly if you are required to move your camera to new position during the show.
- Check your shots for proper headroom and looking room.
- Always maintain focus and offer pleasing shots to the producer.
- In case of any problems or suggestions, alert the producer during rehearsals.
- Lock and cap your camera only after the pack-up signal from the producer.

To sum up what we discussed in this section, it may be added that good camera work pre-supposes careful advance planning and creative visualisation on the part of the producer/director who devises the final camera script of the production. A good cameraman helps to translate the producer's through into effective picture sequences and embellish them with eye-catching, beautiful compositions through his artistic manipulation, dexterity, alertness and presence of mind.

1.3.3 Sound recording

In the preceding sub-section, we discussed camera work and video recording. We now turn to the audio component and sound recording aspects of video production. Although we earlier stated that TV is primarily a visual medium, sound does play a vital role in video production. While video programmes without sound may appear unrealistic and even meaningless, many video-programmes are doomed simply due to poor audio quality.

Usually sound performs the following functions in a television programme:

- Sound provides information. If you watch carefully, most of the information details are given through dialogue, commentary and sound effects.
- It provides entertainment and enhances impact. Songs, music and other rhythmic sound effects add to the entertainment and interest value of a programme, and enhance its appeal.
- It establishes locale, time and mood. Different kinds of noises and effects help establish the locale and time of the story and create the right mood.
- It can add to the intensification of action (as in a race), by using appropriate sound effects and music.
- It also helps to connect pictures or pictorial sequences in a meaningful way. It provides natural and interesting edit points at the time of editing.

In fact, sound is an integral element of the video programme and it needs to be given due attention right from the earliest stage of programme planning to recording and editing. A producer should be thoroughly familiar with the processes of planning, recording and integrating music effects with the programme to enhance its quality, interest value and over-all impact on the viewers. Of course, there are professional sound recordings and audio operators, and sophisticated equipment and facilities to ensure quality of sound, but a producer must have the knowledge of the basics of audio equipment and its use for sound recording in audio and video programmes.

Recording sound for video programmes

Broadly, the sound component has the following four elements:

- i) **Voice:** The human voice is by far the most important element of sound. It can take several forms, such as: dialogues, monologues, straight talk or narration, out-of-vision commentary, recital or rendition.
- ii) **Music:** It includes background music, theme music, other kinds of suggestive music — happy, hilarious, sinister, etc.
- iii) **Effects:** These include sound effects, both original and specially recorded ones such as atmospheric sounds, footsteps, traffic sounds, winds, fire, explosions, sirens, and other kinds of peculiar and sudden noises.
- iv) **Silence:** It includes sudden, abrupt silences conveying stillness, peace, death, doom etc. A combination or blending of several sound elements such

as music, effects, etc. is sometimes used to enrich and emphasize picture meaning and impact.

Most educational programmes generally contain speech, commentary, simple dialogue, questions and answers, songs and poems, besides background, theme and suggestive music and sound effects and noises of various kinds. All these audio elements can be recorded from the environment, on the location or in the studio using the right kind of microphones, recording equipment and techniques. In the whole process, however, the producer is guided by the professional advice of the audio engineer and the sound recordist, depending again, of course, on the kind of recording equipment available, the production requirements of a particular programme sequence, and the situation or setting in which it is to be recorded including the static or moving position of the sound source.

It may be emphasized that each sound recording situation is unique and various sound elements can be recorded, mixed and integrated with the visuals using a variety of recording equipment and techniques. In each case, producers have to make their own decisions and devise suitable strategies for recording sound and music for their television programmes.

One of the easiest ways of recording audio elements of a programme is to simply record all sound and music effects in the studio itself using microphones and/or by playing inserting and mixing sound, music and effects pre-recorded on discs and tapes. To make life easy for everyone, these pre-recorded music and sound effects are often sequentially transferred on to a single audiotape, which is then cued up, played back and integrated with the final video recording in the studio. Unfortunately, this method does not allow any further editing of the programme without losing its continuity. Alternatively, however, the mixing of music and sound effects can be done at the time of post-production editing. In this case, the pre-recorded music and sound effects tract can be mixed with the finally-edited video tape in a separate dubbing session. This method of post-synchronous sound dubbing is time-consuming but gives more flexibility. It is specially useful if the video programmes are required to be dubbed into multiple language versions, because the international sound track (containing all atmospheric sounds and music effects) can be preserved separately and used for making these other language versions.

Some operational tips for sound recording

It is not possible to prescribe comprehensive guidelines for sound recording because of the variety and multiplicity of audio equipment and related facilities available at various production centres. Therefore, a few general operational guidelines for sound recording are given here for simple audio-video programmes:

- ***Take a level:*** Whether recording in the studio or on location or during an ENG shooting, always take a voice level before actual recording, by asking the talent to speak a few sentences, adjusting the volume within the accepted range and then controlling it.

- **Use AGC:** While doing an ENG recording on location, use the automatic gain control (AGC) facility. It helps to boost low sound and moderates high volume sounds.
- **Rehearse and record:** A good rule to follow is that each time you record a sound or commentary sequence, you should first rehearse and then record it.
- **Match sound and picture:** Sound and pictures should fade in together and fade out together. Also use music and sound effects to suggest and enrich the desired meaning and communication.

Kinds of microphones

For the television sound recordist, there are a wide variety of microphones available today. What kind of microphone one should choose, depends primarily on the production requirements in a particular situation. Basically, there are three types of microphone:

- i) **Dynamic microphones:** These microphones are sufficiently rugged for most recording situations and can be positioned close to the source of sound. They can tolerate very high sounds safely.
- ii) **Condenser microphones:** These mics are highly sensitive to physical shock but give excellent quality sounds from a distant source. A condenser mic requires a power supply in the form of a renewable battery.
- iii) **Ribbon microphones:** These mics are also very sensitive to physical shock, but produce very high quality sound. A ribbon mic is suitable for recording controlled and static sounds of speech and music, and is quite rugged and compact.

Microphones are also classified according to their directional sensitivity to the incoming sound. They are of three types:

- i) **Cardioid mics:** A cardioid microphone is sensitive to sounds coming from half the environments to which it is pointing. Being unidirectional, these mics are useful in recording interviews because they reduce unwanted sounds from the background. Because they are 'heart-shaped' they are called cardioid microphones.
- ii) **Omnidirectional mics:** This kind of microphone is sensitive to sound coming from any direction. There are also bidirectional microphones, designed in a pattern of the figure of eight.
- iii) **Gun mics:** Also called rifle mics, these are sensitive only to a narrow angle of sound, ignore other environmental sounds in the studio or location. Fitted with a long pointed handle or boom, gun microphones can record sound from quite a distance and are generally used along with headphones to monitor the output and ensure the right position of the microphones.

1.3.4 Lighting

Lighting plays a very important role in television production. It allows the camera 'to see' and 'record' a subject or scene clearly and distinctly. It also helps to provide an illusion of depth, giving a three-dimensional effect to otherwise two-dimensional images. In colour TV productions, lighting assumes a more important role with regard to scenery and costumes. Generally, the following three basic lights or light sources are used for indoor shooting of simple TV programmes:

- i) **Key light:** It is normally a hard source of light and provides main illumination on the subject or scene. There should be only one key light to illuminate the scene.
- ii) **Fill light:** It is a soft source of light. Its main function is to fill and reduce shadows created by the key light.
- iii) **Back light:** Normally, it is a hard source of light, directed on a subject from behind. It separates the subject's body from the background and increases the three dimensional effect.

For complex productions, several lights of varied intensity may be required. Intricate 'light grids', with several lamps and light sources of varied intensity, are generally available in big television studios where it is possible to record a variety of programmes including dramatic presentations. The basic pattern of lighting, however, remains the same as that described above.

Aesthetic Considerations

The TV image is flat and two-dimensional. The angle of view is chosen for us by the director. The viewer sometimes finds it difficult to ascertain the shape, size and distance of an object. Proper lighting can indicate the shape, dimension, distance and texture. It is through the manipulation of light and its absence — shadows — that viewers can be helped to understand depth and thus discern the shape, size, texture and the relative distance of the object the camera picks up.

Proper lighting can provide the illusion of reality and when it is called for, fantasy. The time of day, and whether the scene is taking place indoors or outside, can be communicated by the length and depth of the shadows being cast. The physical setting of the scene can be suggested by off-camera lighting effects — such as sweeping of light if the scene is taking place in a light house. Shadows cast on the back wall through cutouts might suggest the inside of a church or prison or forest.

Proper lighting can establish and heighten the appropriate psychological mood. Low key, dim lighting might generate a sombre, eerie mood while high key, bright lighting might suggest happiness and light heartedness. For example, lighting a person from below — an unusual, unnatural angle for light — causes a mood of insecurity and mystery. Lighting alone cannot be expected to create and maintain the illusion of reality or of fantasy as well as psychological mood but when combined with other production elements

such as a set colour, music and sound effects, it can make a substantial contribution (Iezzi, 1984).

Check Your Progress 3

Notes: a) Space is given below for your answers.

b) Compare your answers with those given at the end of this unit.

- i) Name the three basic lights used for indoor shooting of simple TV programmes.
- ii) List the major elements of sound as used in television programmes.

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1.4 LET US SUM UP

Our discussion was devoted to some of the major aspects of production planning and organisation, such as: designing a production script, resource planning and budgeting, scheduling of various production events, designing a production schedule, booking facilities, fixing realistic targets and deadlines and assigning tasks and responsibilities to various people. Later, we presented a detailed treatment of each of the four major programme and technical resources viz. graphics, camera work, sound recording and lighting.

Beginning with graphics, it was pointed out that they are used in television and video programmes widely and in a variety of ways as two-dimensional illustrative materials such as title cards, super captions, pictorial illustrations, photo-captions, slides, charts, graphs, diagrams, tables, maps and animated captions. In educational programmes, a lot of information can be presented with one or a series of well-designed graphics in a few seconds. However, while making or selecting graphics for the television screen, the principles of (i) aspect ratio (i.e. fitting all graphics into 3:4 proportions of the TV screen), (ii) essential information within the safe area to avoid domestic cut-off of 10% around the edges), and (iii) readability (i.e. avoiding too much information written in too small-sized letters' must always be kept in view. All graphics should be short, simple and readable.

Dealing with camera work is of central value to video programmes. It was explained that the standard television camera has three main parts: (i) *the camera head* combining the zoom lens and its attachments, the camera pick-up tube, the viewfinder and the camera cable, (ii) *the panning head* consisting of the 'pan handle' and its attached rotating mechanism, and (iii) *the camera mounting*, consisting of a tripod or a leather clamp or a pedestal or a crane. It has several other features, connections and controls. Simply stated, all video cameras, however, work on the same basic principle of converting an optical image or a scene into video signals, transmitting or recording these signals on to a videotape; and then, using a reverse process, these transmitted or recorded signals can be re-converted by a television set or a video monitor into viewable screen images. The camera is aptly described as the producer's fountain pen, and different kinds of shots, angles, movements, and transitional devices then become the producer's 'language'. It is not at all difficult to operate a television camera. Using the operating manual (which is supplied with each camera unit) and a little bit of common sense, you can certainly use a television camera. However, just to let you have some theoretical insight into the process involved in camera operations, we have presented a brief account of how a portable (ENG) camera or a studio camera is operated. Since the equipment is highly sophisticated, delicate and expensive, you must learn to handle it with care and love and also observe necessary precautions. In case of complete failure or breakdown, there will be technicians around the studio to provide instant help. In most cases, you may not be required to handle cameras, but you should know as much about them as possible.

Sound and light are other important components of a video programme. Human voice, music, sound effects and noises and even silences on the audio track constitute the main elements of sound. Usually, sound provides information and entertainment. It establishes local time and rhythm and creates the right mood. Sound also helps to connect pictures and pictorial sequences in a meaningful way, provides natural edit points and enhances the over-all impact of the programme. There is a wide variety of microphones and recorders available for picking up and recording various sound elements. Most educational programmes contain speech, commentary, dialogue, songs, poems, questions and answers and are supported by background music, theme music, special suggestive music and some kind of sound effects and noises. There are several ways of recording and mixing audio components for television programmes. However, the producer always has the support and guidance of his technical counterparts — the sound recordist and the audio engineer.

Lighting allows the camera to see and record a subject or a scene clearly and distinctly. It also provides an illusion of depth. For indoor shooting of simple video programmes, three basic lights are used. These are (i) *a key light* which is a hard light and provides main illumination for the subject, (ii) *a fill light* which is soft and is generally used for filling or reducing shadows, and (iii) *a back light* which is hard and separates the subject's body from the background. For complex productions, several lights of varied intensity are required. Lights grids with a variety of lamps and light

sources are generally available in big studios where it is possible to record a variety of programmes including dramatic presentations.

1.5 CHECK YOUR PROGRESS: THE KEY

- 1)
 - i) A camera script is a blue print used for executing a video production in the studio or on an outside location. It breaks down all actions sequentially and meticulously, provides all necessary actions, movements, guidelines and technical instructions for floor staff, artists, performers, camerapersons, engineers, technical operators, assistants and all other associated with the actual production, including the director or the producers. It gives detailed information, mostly indicated in abbreviated form, in two columns for vision and sound, describing what is required, what should happen and who should do what at each moment of production. In fact, all production actions are planned and organised strictly in accordance with the camera script which is designed by the producer, discussed with all key personnel and circulated to all concerned in advance.
 - ii) The two major production resources which a producer has to plan, budget for and execute are: (i) programme resources and services, and (ii) technical resources and facilities. Budgets for video programmes are generally estimated on the basis of the concept of above-the-line costs (writing, performing, producing, directing, etc.) and below-the-line costs (technical services equipment, studios and other support services).
- 2) Graphics are generally classified in the following categories: (i) Title cards, (ii) key cards or super card, (iii) slides, (iv) maps, charts, diagrams and illustrations, (v) photo captions, and (vi) animated captions.
- 3)
 - i) For indoor shooting of simple video programmes, three basic lights are required. These are: (a) key light (b) fill light, and (c) back light.
 - ii) Major elements of sound used in audio and video programmes are: human voice, music, sound effects, noises, and silences.

UNIT 2 PRODUCTION OF TELEVISION PROGRAMMES: THE PROCESS

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Studio Recording
 - 2.2.1 Studio preparation
 - 2.2.2 Rehearsals
 - 2.2.3 Final production
- 2.3 Field/Location Recording
 - 2.3.1 Types of field recording
 - 2.3.2 Studio vs. field recording
 - 2.3.3 Recce or location viewing
 - 2.3.4 Shooting plan
 - 2.3.5 Other arrangements
- 2.4 Editing
- 2.5 Some Production Techniques
 - 2.5.1 Developing shots and introducing movements
 - 2.5.2 Techniques of cutting and mixing
 - 2.5.3 Crossing the line
- 2.6 Let Us Sum Up
- 2.7 Check Your Progress: The Key

2.0 INTRODUCTION

In this unit, we go a step further and discuss the process of the actual production of audio-video programmes. In the main, we shall discuss rehearsal, studio and location/field preparation, recording and editing TV programmes.

A word of caution here. As in unit 1 of this block and in the Block 3, the emphasis of our discussion in this unit too is on video programmes. Our assumption is that production of video programmes is more complex and subsumes the production process of audio programmes. This unit is the last one in the sequence of five units on audio and video production divided in 2 blocks, i.e. Block 3 & 4.

2.1 OBJECTIVES

The aim of this unit is to make you aware of the process of audio-video production. The theoretical knowledge presented in this unit will help you participate purposefully in the production of programmes for education and development. After going through this unit carefully, you should be able to:

- describe the process of studio preparation for producing audio-visual programmes;
- explain the importance of the process of rehearsals for producing quality programmes;
- describe and participate in the various stages of actual production process;
- enumerate three types of field location recording;
- differentiate between studio production and field location shooting;
- describe and participate in the process of editing;
- sequence shots in a logical and coherent way for editing; and
- describe and use various specific production techniques or formats.

2.2 STUDIO RECORDING

In this section we focus on some essential pre-requisites which a producer has to plan and work upon laboriously for days and weeks in his endeavour to reach the crucial stages of studio preparation and actual programme production. Beginning with the camera script (or production script), we now venture to trace the producer's crucial path to the studio where the production event finally takes place.

You will recall that we presented a sample camera script in unit 1 of this block. Let us now study the various stages (of the production process) on which you have to work before you can begin work on the camera script.

2.2.1 Studio preparation

- The set:** It refers to the scenery or the set that is erected in the studio to record a programme. It creates the desired physical environment and establishes the word and style for a TV show or programme to take place for recording in the studio. Depending on the programme requirements and, of course, the budget, the set could be very simple or very elaborate. In each case, the producer has to discuss this matter with the set designer who gives his opinions and suggestions. After mutual agreement, the set designer evolves a rough floor plan which is finally presented for discussion in the first planning meeting. Once approved, other floor requirements like camera positions, props and furniture, microphone placements, lighting patterns and actors's movements are planned and decided.
- The floor plan:** The floor plan is an outline or a plan of the studio floor. It shows the main features of the studio — its walls, the cyclorama, the entrance doors and the position of the lighting grid all drawn to scale. In common usage, the floor plan means a diagram of the scenery or the set to be erected along with the placement of props and furniture on the studio floor. In fact, the floor plan provides

essential guidelines for studio use, how to set up scenery and props, arrange lights, place microphones, plan various shots, angles, positions and movements of cameras and indicate the actions and movements of performers and actors on the studio floor. It provides a full picture of how the studio or the scene would look at the time of final recording. A floor plan is, therefore, of utmost importance for the set designer, the set erectors, the floor manager, the lighting technician, the audio engineer, the producer, the director and the talent. The set designer usually designs the floor plan after discussions with the producer.

- iii) **The camera cards:** Camera cards are prepared for each of the recording cameras. On the basis of shot divisions the producer does this while designing the camera script. A camera card shows shot numbers, type of shots, camera movements, camera positions and actions, as allocated to a particular camera. The camera card is fixed or pinned to the camera in front of the cameraman who is guided by it during rehearsals and actual production. Camera cards are prepared one or two days prior to the actual recording day.
- iv) **Initial production conference:** The initial production conference or the first planning meeting is an important step in studio preparation. Once the detailed camera script along with production treatment and the studio floor plan is ready, the producer convenes the first planning meeting which is attended by specialists from all the units concerned — scenic design, graphics, camera, audio, lighting, technical, etc. Copies of the camera script devised by the producer and the floor plan prepared by the set designer are circulated to all. In this meeting, the producer presents his production treatment and the set designer puts forward his floor plan and staging scheme. The producer also announces the tentative production deadlines and seeks suggestions on various aspects of the production. All technical and production issues are discussed, questions are asked and suggestions are offered to make sure that all requirements are met for production. Based on this discussion, a commonly agreed on production strategy is evolved, changes in script and floor plan if any, are decided, responsibilities are allocated and deadlines fixed for completion of various tasks. The date of the second production planning meeting is also fixed. In the consequent meetings the following components of the production process are discussed and appropriate decisions are taken jointly.

Graphics: The producer prepares a complete list of graphics along with a description of each. These graphics and their contents are discussed with the graphic artist in a separate meeting. If necessary, some references are also provided to the artist who begins working on the assignment against a deadline. Further, if some graphics are already available, these are identified, procured and spruced up for programme use.

Photo, film and animation: In case the programme requirements suggest the use of some photos, film or animation sequences, the producer should order these photographs and films to be procured or

shot afresh. It is time-consuming to shoot and print photographs and films. Adequate time should therefore, be suitable for collecting these resources. Sometimes, you may decide to use a set of slides in your programmes. These should also be planned, shot, processed and mounted well in time.

Props: On the basis of the script requirements, a detailed list of all properties (in short, props), furniture and other items for decoration, demonstration and other effects, needs to be prepared. This list may be discussed with the props assistant who is assigned the responsibility to provide the items through purchase or hire. Sometimes you may need a thing, which must be bought fresh and therefore, it has to be arranged on the same day. On the other hand, if your programme involves puppets, these may have to be specially prepared and sufficient time should be given to the puppet fabricator for this purpose.

Costumes and make up: You may need some special costumes for your artists or performers. These may have to be arranged through the costumes unit, which will require sufficient advance notice. Similarly, if a special type of make-up is required for one or more of your artists, the make-up in-charge should be notified in advance. This is especially important in the case of different kinds of moustaches, beards and other kinds of unusual make-up.

Sound effects and music: Subsection 1.3.3 of unit 1 has been devoted to a detailed treatment of sound recording and its various requirements and procedures. Here, let it suffice to say that the producer and his production team should ensure that all sound requirements of the programme — the opening music, background music, special sound effects, noises and songs, if any — must be identified, procured, recorded and preferably transferred on to a single audio tape. It should be kept ready, properly timed and cued, for use and integration with the programme during actual recording. The audio technicians are involved in recording music and other audio inserts.

Films and video inserts: If you have decided to use a portion of a film or a video clipping in your programme, it should be previewed in advance, cued and kept ready as an insert through telecine or a video tape source. Specially produced film clips or video recordings, with or without sound and commentary must also be kept cued and ready in the same way. In case of copyright materials such as films, videos, slides, photos, etc., advance action must be invariably taken by the producer to obtain necessary permission and clearance in each case.

Casting and direction: Casting is concerned with selecting suitable performers and actors for the programme. Performers speak directly to the camera or talk to another performer in the studio. They play themselves as announcers, teachers, anchorpersons and do not play the roles of other characters. On the other hand, an actor or an actress always assumes a persona and plays that role. In educational programmes, we need both types of cast i.e., performers as well as

actors and actresses. A producer must, therefore learn to direct actors and performers in the studio and on location.

- v) **Technical planning meeting:** After a gap of 8-10 days, the second planning meeting, i.e. a review meeting is called by the producer to review the progress of various production tasks assigned or initiated with the first planning meeting. In this meeting, all production partners and team members present their reports orally, and seek and get further clarifications. Problems and questions that may crop up in the intervening period are sorted out and some alterations and/or additions, if necessary, are made to the production strategy. The producer announces the final schedule for all activities and the recording date is confirmed. Written notes and instructions follow decisions taken in the meeting. Minor changes in the script or set design may be accepted at this point. Cameramen and technical personnel operating the video switcher, camera control unit (CCU), telecine, audio console, VT recording, etc., are invited to this meeting to plan and finalize technical resources for the production of the programme.

Booking of studios and other facilities: Tentative bookings of studios, technical facilities and other resources made earlier, are finally confirmed at this stage and all members of the production team are informed of the dates, time and duration of all events through written notes. Now is the time to check the bookings and execution of all the requirements, especially the following:

- booking of the studio and other technical facilities;
- booking of cameramen, floor staff, technical crew and talent;
- set construction (to be ready one day in advance);
- lighting (to be done 2-3 hours in advance);
- distribution of copies of final camera script to all concerned (2 days in advance);
- information to performers and artists about rehearsals and recording dates and time;
- arrangements for tea/coffee, refreshments, etc.;
- arrangements for payment of artists' fees soon after the recording; and
- arrangement for all programme inputs — graphics, photos, film and VT inserts, music and sound effects, costumes, props and make-up.

Set and lighting: Once instructed and properly briefed the personnel concerned will do the set and lighting on time. However, it is the producer's responsibility to check, supervise and ensure that these requirements are fulfilled well in time and the studio is ready for launching pre-production activities at the time agreed and communicated to all in advance. If set and lighting get delayed you

Check Your Progress 1

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

- i) Why is the camera script an essential first step leading to studio preparation?
- ii) List four inputs a producer has to organise before he/she can actually enter the studio for production.

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- ii)
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2.2.2 Rehearsals

Studio recording is a carefully planned event in which a large number of technical and other specialists operate a still larger number of machines and sophisticated equipment. This makes all studio productions a costly affair. We, therefore, cannot afford the luxury of holding rehearsals in the studio while everybody waits idly. To save on studio time, which is highly expensive, it is advisable to hold some rehearsals outside the studio. Simple educational programmes may not require much rehearsal, but complex productions and dramatic presentations certainly need rehearsals and the producer should hold more rehearsals if the programme so demands or if the cast members are not very confident. The following guidelines may be useful for rehearsing the programmes and producers can choose and follow one or more of these practices as the situation demands.

Script reading: This is the preliminary stage of any kind of rehearsal and it is a must to discuss and read the script with the talent, irrespective of the kind of programme involved. Script reading makes the artists' delivery easier in the final takes and the technique is highly suited to drama productions, as it helps the artists play their roles with confidence, ease and motivation.

Dry run: It is generally held to rehearse complex productions in a separate rehearsal room, and not in the studio. The producer works out the actor's movements and camera shots during a dry run. The positions and movements of the cameras and artists are rehearsed thoroughly and the producer can block his shots and camera angles using his viewfinder.

Walk-through: A walk through is a quick rehearsal of the whole or parts of the programme in the studio just before camera rehearsal and recording. A walk-through can follow soon after the individual shot blocking and staggering routines in which talent, cameramen and floor are acquainted

oriented with the programme nature and sequence. The main purpose of a walk-through is to block shots and actions of performers and try out the location and placement of cameras, microphones, zooms, lighting effects and shadows. It is a good practice to give a break of a few minutes after the walk-through and before doing camera rehearsals.

Camera rehearsal: Also known as final dress rehearsal, a camera rehearsal is done just before the final recording. There are two variations of conducting a camera rehearsal. One method is the un-interrupted run-through in which if a mistake occurs anywhere in the middle, you start again from the beginning. After satisfactory, fault-free camera rehearsal, the programme can be finally recorded on tape. The other method is to stop at the point where a mistake occurs and start again, not from the beginning but from a suitable connecting point in the script, taking care not to repeat the mistake. It is called the stop-start method. Both methods are thorough and time-consuming. The un-interrupted run-through method of camera rehearsal, however, is highly motivating because it involves everyone as a team and gives an exciting feel of the programme's impact before its actual recording. It is also a common practice, and wise too, to record un-interrupted camera rehearsals on the videotape which may sometimes prove to be better than the finally produced programme.

Timing the script: Script readings and rehearsals also provide the producer with a good opportunity to time their programme scripts more or less accurately. With a little bit of manipulation, the final programme can be managed to be slightly expanded or condensed to bring it to its exact or expected duration.

Final planning meeting

It is quite usual for producers to hold a brief final production meeting one or two days before the actual recording of the programme. The idea is to ensure that all tasks have been satisfactorily accomplished or are likely to be accomplished at the right moment and everything is in place and under control. Adopting a more personal approach, some producers make it a point to contact or meet all key production persons separately and have a quick informal review of their state of preparedness for the recording day. Some of the most important things the producer and his production assistant must ensure and double check are that:

- all graphics, photocaptions, film and VT inserts, slides, are ready;
- adequate copies of the final camera scripts are available;
- camera cards for all studio cameras are ready;
- all music and sound effects, finally recorded and cued, are available;
- set and lighting have either been ready or will be so well before the recording time;
- copies of recording schedule giving date, place, and time for various activities have been communicated to all concerned;
- artists, performers, musicians, etc., have been advised to reach the sets one hour ahead of the recording schedule so as to allow time for make-up and other pre-recording activities;

- all floor staff, cameramen, set supervisor, make-up man, set constructors, painters and helpers have been advised to carry out their jobs on time and be on duty during recording;
- all technical crew members — technical director, vision mixer operator, audio engineer, telecine and VTR operators, lighting supervisor, electricians, technicians and grips have been informed accordingly and put on studio duty;
- all video and audio tapes — recorded and blank — stop watch and programme notes have been acquired and kept ready by the production assistant; and
- arrangement for tea, coffee and light refreshments have been made.

It should be remembered that nothing would arrive in the studio unless the producer has asked for it in advance. He must make absolutely sure that he has put in his request or a proper requisition slip for whatever service or facility he needs in the studio on the recording day.

Having managed these tasks, the producer can certainly relax and get himself/herself ready to organise and see through the grand finale, i.e., the final recording of the programme in the studio.

Check Your Progress 2

Notes: a) Write your answer in the space given below.

b) Compare your answer with the one given at the end of the unit.

State, in brief, the types of rehearsal, which a video producer should ideally go through before recording a programme in the studio.

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2.2.3 Final production

And then, comes the final studio day — the day of final production. It is the stage where all the planning processes and pre-production tasks converge and the functioning of the full production team comes into sharp focus in the environment of the studio. On the production day, the producer and his/her production team must reach the studio between half and one hour earlier than the schedule recording time and approach the events in a relaxed and cheerful way, exchanging pleasantries and throwing smiles all around. On a normal recording day, everything should happen the way the producer has actually planned it. One should however, not rule out mishaps and emergency situations, which must be tackled as and when they crop up. The producer should particularly look to the following aspects before actual production begins making sure that:

- The set has been erected, painted and tidied properly.
- All props, furniture and demonstration items have been put in place.

- Lighting units have been rigged and the set and other areas have been properly illuminated.
- All cameras, microphones, monitors and other pieces of equipment have been correctly positioned.
- All graphics, captions have been placed on stands in front of cameras ensuring correct order and camera numbers.
- Camera cards have been fixed on each of the cameras.
- All audio and video tapes, blank and recorded, have been brought to the studio and handed over to technical operators to be checked and used.
- All cameras have been warmed and lined up.
- All production and technical crew members have reported for duty and taken up their respective tasks and positions.
- All artists and performers have arrived at the right time to change their costumes and put on 'make-up'.

It must be emphasized here that studio time is most precious. The producer must constantly keep an eye on the studio clock and make a good use of the tiny production item — the stop watch!

For directing a programme from the studio gallery, the producers and directors evolve and follow their individual styles and practices. The complexity of the production and experience of talent and crew members also determine the producer/director's style and approach. Here, we give some general guidelines for directing studio productions:

- i) **Studio rehearsals:** Rehearsals constitute an important part of all studio productions. When the producer is ready to begin rehearsals, he should ask the technical director whether he and his technical crew are ready. He should also ensure from the floor manager that every body on the floor including cameraman and talent, is ready. If everything and everybody on the studio floor and in the technical areas are ready, the producer can begin his show in the following manner.
 - **Blocking:** This means the blocking of individual shots by cameras one after the other. The producer gives specific instructions to each cameraman for each shot, its size, angle, duration, movements, etc.
 - **Staggering:** It means a 'bit-by-bit' rehearsal by actors performing their role in front of cameras and with actions and movements on the set or floor as directed by the producer, often repeating and correcting themselves.
- ii) **Walk through or run through:** It means a quick rehearsal, often uninterrupted, of a part or whole of the programme in the studio, using all the technical resources, actions, movements, effects, music, etc. In a walk-through, the producer tells his artists and technical crew what he wants in each shot and action. At this point, everybody gets fully acquainted with the programme and its requirements. After a complete walk-through has been accomplished in one go, the producer can pass

on to the next stage of full camera rehearsal. What is now required is a 10-minute coffee/tea break before the final rehearsal and recording.

- iii) **Full camera rehearsal or dress rehearsal:** After a 10-minute break, everybody returns to the studio and takes up his/her position. At this point, the producer can go for a full camera rehearsal. This means a continuous, uninterrupted fault-free performance by all the technical operators, the cameramen, the floor staff and the artists. After one or two full camera rehearsals, the stage is set for recording the programme finally.
- iv) **Final recording:** This is the stage where one is absolutely hopeful of getting the highest level of performance from everyone. With everything going well, the countdown begins and the producer often succeeds in making a final recording of his/her programme in just one attempt. However, he/she may sometimes need to make a second attempt to do the final production.

You have just gone through a detailed account of how a producer plans numerous production details, works hard for days and weeks to organise a series of different kinds of programme inputs, and interacts with a large number of people to finally get to the crucial stage of studio preparation and actual programme production.

2.3 FIELD/LOCATION RECORDING

During the early days of broadcasting, all audio-visual programmes had to be originated and broadcast from the studios. However with the advent of the portable camera, light weight VTRs and other mobile equipment, it has become possible not only to record programmes on location, but also to broadcast them simultaneously from the field itself. Today, we find that large numbers of audio and video programmes are shot on location, brought back to the studio for editing and sound mixing and then capsuled for broadcast or circulation by means of cassettes.

2.3.1 Types of field recording

When a TV programme (or part of it) is shot outside the studio, it is called a field location recording or a remote. These location recordings or remote can be classified into the following three types.

i) **Electronic news gathering (ENG):** ENG location recording is often done with a single portable camera and a VTR unit. The raw video footage is brought back to the studio, edited and used for transmission. It involves quick flexible operations, a very small crew and great mobility. With its lower quality but acceptable pictures, it is most suited for quick news gathering or even a live telecast from the location. Of late, however, ENG techniques are being increasingly adopted for producing educational programmes.

ii) **Electronic field production (EFP):** Electronic field production, while retaining some of ENG's flexibility and mobility, involves more careful planning and advance preparations. Of course, it involves multiple cameras,

more equipment, video switches, a mobile outdoor broadcasting (OB) van and a larger crew, but ensures better quality pictures. EFP technique may or may not involve direct telecast from the location, but it is suitable for recording different kinds of field programmes which may often require post-production editing.

iii) Big remotes: A field production operation aimed to record a big event which is not specially organised for radio or television, is called a big remote. Big remotes are organised for live coverage and direct broadcast of important events such as national or international sports events, conference/seminars, contests and pageants. Such remotes are generally planned several weeks ahead of the occurrence of the real event and involve elaborate arrangements in terms of several high quality cameras and associated audio-video equipments; a multiple VTR set-up for recording, instant replay, slow-motion playback and freeze-frame facility; a giant-size OB van housing a complete, first-rate control room, a mobile micro-wave transmitter and a large contingent of production and technical crew. It also needs 3-phase power supply and stand-by generator sets for automatic take-over in case of sudden power failure. Commentators and anchormen (also participating talent in some cases) are also required for big remotes and other types of field location recordings.

2.3.2 Studio vs. field recordings

In the present unit, we have mainly devoted our discussion to studio-based production. By now, you may have realized that the studio offers highly controlled conditions for production of video programmes. The whole operation is carefully planned and all outside interference is largely eliminated. On the other hand, in any kind of field location shooting, conditions are always less than ideal. One is never sure of weather and day-light conditions. Besides, there are several other unpredictable factors, which may go out of control and cause disaster to your programme. Producers on field shooting assignments must, therefore, plan thoroughly in advance, chalk out fail-proof contingency plans to meet unforeseen circumstances and also be ready to make small compromises to solve problems. Here, we mention give a few important points to which producers and all others associated with remotes, should pay special attention.

Production planning: Do all production planning, budgeting and scheduling in the same way as is done for any regular studio production. You may have to spend more time on dealing with people, booking facilities, seeking permission for shooting from police or other authorities, managing transport, meals and refreshments for your crew and scores of other such things. You should hold thorough discussions with your production and technical crew on each and every aspect of the production and delegate clear-cut responsibilities to the production manager, production assistants, members of technical crew and other associates.

2.3.3 Recce or location viewing

Recce is the abbreviation for reconnaissance, meaning preliminary survey of the location prior to actual shooting. In location shooting, recce or a visit to

the location is a top-priority item on the producer's agenda and must never be skipped or missed. The producer must do a detailed recce along with his cameraman, production assistants, engineers, and technical operators. During recce, the following points are taken into consideration:

- visit the location with prior information or an appointment with the people concerned to get their ideas and suggestions;
- look around the place from all angles and talk to the people who work there;
- check for power supply points and get a copy of the site plan or make one yourself;
- check for position of the sun during and after production time, including formation of shadows and brightness of the sun; and
- look for and plan appropriate camera position, possible camera angles and interesting shots.

2.3.4 Shooting plan

Draw up a shooting plan indicating camera positions and possible shot selection from each position. Also decide where to position the OB Van, transmitter, generator sets and other vehicles. Calculate the cable length for cameras, microphones and lights (if needed). Also check for any kind of disturbing sounds in the vicinity and take steps to prevent them at the time of actual shooting. While deciding the shooting plan, pay special attention to the following points:

- Make a list of all your shooting sequences and put them in the order in which you would like to shoot. For example, you can reach the place one hour early and take shots of the exterior and surroundings, which you can use in your programme while editing.
- Prepare a shot list for each of the sequences you have planned to shoot. Mark the most important shots which you simply can't miss either because they cannot be repeated or a retake is just impossible. For example, the shot of a VIP hoisting the flag or pushing the button for starting the new engine, etc. are not usually repeated.
- Do have a still cameraman to capture most important and interesting scenes on still photographs.
- Discuss all your shooting plans thoroughly with your team including cameramen and engineers.
- For capturing quality sound, involve the audio engineer and the soundman from the earliest stage.
- Double check for (i) shooting permission from various authorities, (ii) ensuring uninterrupted power supply from the nearest electric sub-station, and (iii) informing all the people concerned at the location about the day, date and time of the actual recording.

2.3.5 Other arrangements

There are several other important arrangements, which if not looked after properly, can create serious problems during recording/shooting. Some of these are mentioned here:

- i) **Transport facilities:** It is very important that all members of the production team are enabled to report for remote duty on time. Some of them may have to leave or reach their homes at odd hours. So, make firm arrangements for their transportation. In case of an emergency or any kind of delay, authorise them to travel by privately hired vehicles and get reimbursements later. Also provide 'how-to-get-here' instructions for all who wish to reach the location directly from their homes.
- ii) **Refreshment and meals:** If your production is likely to stretch over several hours, ensure arrangements for tea, coffee and light refreshments and even meals, if the situation so demands, keeping in view the interests of your programme and the human needs and convenience of the crew.
- iii) **Parking of vehicles:** Ensure that all of your vehicles are parked at a convenient place so that these are out of shots during recording. It is advisable to have one car reserved exclusively for emergency duty.
- iv) **Equipment checklist:** Ensure that your production and technical crew have prepared a detailed checklist for all pieces of equipment and props to ensure that everything needed is transported to the location and nothing is lost or left behind after the 'pack up' signal.
- v) **Actual recording/shooting operations:** The basic shooting techniques used in a field location recording situation are almost the same as those followed in a studio production. But there are also a few deviations and distinct practices which need special mention:
 - Remember that weather conditions can change suddenly and that you should be prepared for various eventualities. So, record the establishing shots, key covering shots, exteriors, surroundings and landmarks in the beginning.
 - Also ensure that one of your cameras records 'master shots' of each of the programme segments. Main action of event may be shot in CUs, MCUs, cutways and reaction shots by different cameras.
 - During a field production (which involves post-production editing to put the final programme together), you don't have to bother much about the shooting sequence. Take several possible shots from each camera position before shifting to a new set-up. Always be on the lookout for recording unusual and interesting shots that the situation may offer you spontaneously.
 - Delegate responsibility to your technical counter-parts for sound quality, lighting, and video recording, but keep a watch on all the details.
 - Ensure that you have control over your visuals to be recorded.

To sum up, it may be emphasised that a field location recording offers a highly demanding, yet challenging situation for the entire production team. It requires a great deal of homework, patience, tact, a sense of co-operation, presence of mind and little bit of luck on the part of everyone — the producer, the cameramen, the lighting engineer, the audio or sound recordist, the technical operators and the rest of the production team.

Check Your Progress 3

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

- i) List the three types of location recording situations. How is a big remote different from the other two?
- ii) What is meant by the term 'recce'? Why is it important?

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2.4 EDITING

Editing is the process by which the raw material is converted into a finished programme. It includes assembling and re-arranging already recorded video materials into a continuous meaningful programme. It includes both the mechanical act of choosing and assembling and the art of creating artistic effects by rearranging the rushes produced in the studio or on a location. These days, most video programmes are often recorded in film style using only one video camera and with little regard for sequential continuity of shots and sequences at the shooting stage. The editing process enables the producer to physically assemble these audio and video fragments into a coherent message on the videotape. Since the editing process takes place after (post) production (and not during production as in the case of a live or most studio productions), it is often called post-production editing. Editing equipment allows you to search frame by frame for exact edit points.

Post-production editing provides the producer with an opportunity to look at and manipulate the pre-recorded materials in a more careful and patient way. Advance planning is the key to good editing. Of course, it may sometimes take even more time than actual shooting. The basic purpose of editing is to put a video programme together with clarity, continuity and impact features.

To achieve this end, the following editing procedure may be useful:

- i) Preview your pre-recorded materials carefully and patiently once, twice, or even more often if you have time.
- ii) Make a proper 'log sheet' and note down all important points and precise details that come to your mind.
- iii) Take some time to ponder over recorded material and clarify your ideas about the over-all shape of the programme — its central theme, its objectives, style, pace, its organisation, its beginning and end, etc.
- iv) Take a decision about what is important and relevant to the purpose of your programme and what is not.
- v) Discard all such shots and sequences, however beautiful, that do not contribute to the theme of your programme. Select only the most effective, relevant and good quality shots.
- vi) Look for any missing gaps and re-shoot some more essential material, if it can fill the gaps and can add to the quality, relevance and purpose of your programme.
- vii) Now, you can have a clear idea about the final shape or over-all story of your programme and can develop the final 'edit-script'. That is: the precise order and continuity of shots, the mixing of sound and music, as well as the use of transition, cut-aways and reaction shots that can achieve a smooth flow and the desired effect.
- viii) At this point, you are ready to actually edit your programme. Estimate how much time you need for editing. Try to finish it in one go. While editing, stick to your final 'edit script' as far as possible. Avoid jump-cuts and remember the basic rule of progression of shots — LS, MS, then CU. Make good use of cut-aways and reaction shots.
- ix) There are many more things, which one learns during the actual process of editing with hands on the materials and the machines.

This flow chart (see Figure 1) shows the basic, step-wise procedure for video editing. Actual editing operations will, of course, slightly vary from machine to machine. Depending on the particular editing technique followed, some of the steps shown here can be omitted. For examples if 'edit preview' is not required, you can skip steps 4 and 5.

Remember that the initial portion of about 10 seconds of the tape is left blank.

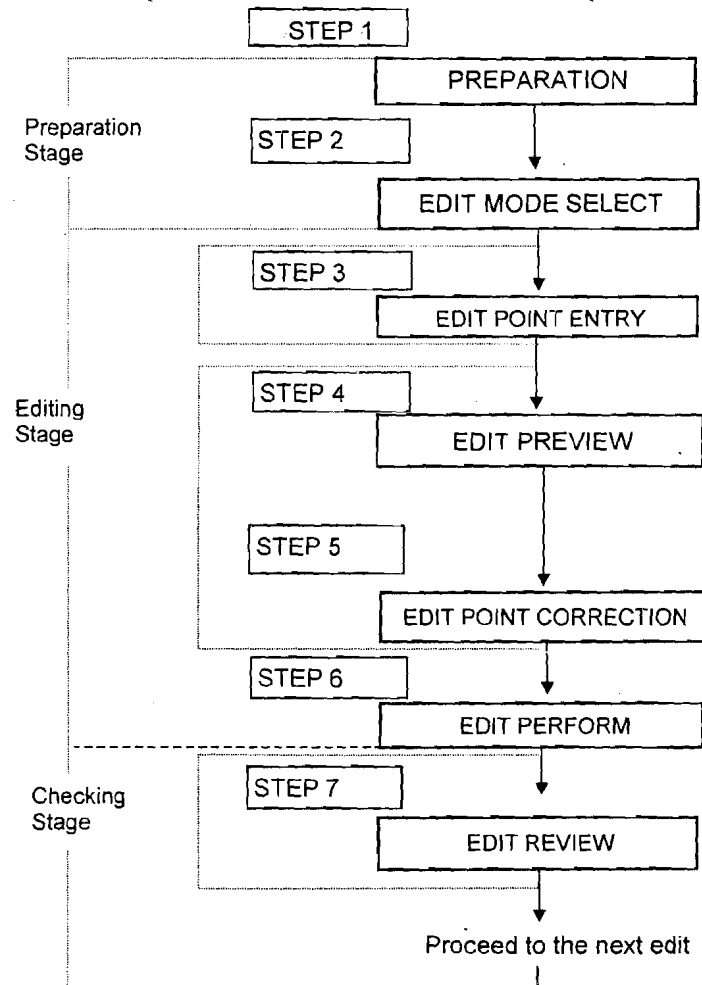


Fig.1: Automatic Editing (A flow chart)

Always prepare and use the 'log-sheet' as given below, for editing.

Log Sheet for Editing

Video Tape No.

Scene	Shot	Take	Length	Time code	Description	OK	No good or NG	Remarks
					Address			
					From To			

To conclude what we discussed in this section, editing is both a science and an art. Editing is used, besides assembling various shots in the most appropriate sequence, to create variety. Good editing can make dull shots interesting.

You have just read about the various field location shooting situations and the challenges they offer to a producer and his team before and during the

actual recording operations and also during post-production editing. Now, take a break and work on this exercise.

Check Your Progress 4

Notes: a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this unit.

Explain briefly what is meant by the term 'post-production editing'. What is its main objective?

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2.5 SOME PRODUCTION TECHNIQUES

In the beginning, television was just like 'radio with pictures'. Educational programmes used to be mere 'direct classroom telecasts' from the studio. TV plays were linked to 'televised theater', and film people had named TV programmes 'grade-z movies'. However, over a short span of just 50 years, TV has transformed itself into an independent discipline. It has, of course, borrowed and adopted most of its elements, practices and techniques from several other media like radio, theatre and film. Of late, television has surpassed all other media and has developed a unique personality of its own. In step with the great advancements in hardware technology, television has also developed, refined and perfected many of its production techniques. In this section, we shall try to explore and illustrate some of the common production techniques (ranging from simple to advanced) which successfully TV producers have developed and perfected over the years and which have since become part of television practice and usage.

2.5.1 Developing shots and introducing movement

In the unit 2 of block 3, we described the basic principles that govern picture composition namely organising screen area, creating screen depth and managing screen motion. A producer is, however, frequently required to organise and select various kinds of shots available to his camera set-up, single or multi-camera, in a particular situation which may offer itself for static shots or moving pictures. Static pictures or non-moving subjects are, however, boring and video programmes depend heavily on moving pictures for their impact. It is the producer's job to introduce visual variety in the treatment of static pictures. The static picture can be shown to be moving or an illusion of movement can be created in the following ways:

- **By making the artist move:** Suppose the scene is the interior of a kitchenette. The gas stove is on and something is cooking in a pressure

cooker. Suddenly we hear a sharp whistle coming from the cooker. The small side door opens and a young girl enters. She presses the cooker and the whistle stops. Here, the camera is stationed in a fixed position, but there is movement in the shot because we planned and developed a situation for the artist to move, enters the shot and performs some action. The whole thing appears logical, meaningful and interesting. It offers the producer an opportunity to take a shot of the girl changing from LS to MS to MCU, full of impact and interest.

- **By making the camera move:** With the same set-up, we can plan our shots by moving the camera and not the artist who may be already positioned in the kitchen. Now, we can, of course, take several shots by moving the camera to different positions and angles, but the result will not be as motivating and interesting as in the first case.
- **By making both camera and the artist move:** In this case, we can start with a shot of the girl entering the door and then pan with her towards the cooker. The arrangement is alright but it too is obviously not very motivating and interesting. There can be numerous examples of similar situations which offer possibilities for developing a variety of interesting shots by introducing movements either with the subject or with the camera or with both. However, to appear natural and logical, the camera movements as well as the subjects' movements must be motivated.

Activity

Here is an outline of a small situation for you to visualize and practice shot development for a one-minute sequence:

"An old man is sitting on a bench in a park. He is immersed in the morning newspaper. Few people (both old and young) are jogging in the park. A dog is moving near the old man reading the newspaper. Suddenly an explosion takes place. The dog runs towards the explosion barking continuously. The old man is shocked, drops the newspaper, gets up from the bench and starts moving towards the explosion site. Reaching the explosion site he finds a crowd surrounding a burning car."

Now, on the basis of the above outline, work out a list of possible shots, camera moves and artists' moves covering the entire action from (i) a one-camera set-up; (ii) a two camera set up, both in the field location shooting situation as well as a studio situation where a set is provided.

In fact, a producer/director should learn to convert a scene mentally into television images and the accompanying sounds. He should be positioned in relation to the cameras or know how the cameras should be placed in relation to the main event, which is to be shot. In this way, peoples' actions and movements can be worked out and camera positions and angles can be estimated.

Maintaining continuity

One of the primary jobs of a producer is to analyse each action breaking it up into a series of pictures or shots, record these shots in whatever order he likes and then re-assemble these shots in the right order so as to presents a continuous show. In other words, the producer must ensure continuity of action, dialogue, costumes, props and background from shot to shot and

from scene to scene. In case of discontinuous shooting, it is important to match such aspects of continuity as:

- *Technical continuity* for matching colour, brightness, contrast, light intensity, etc.
- *Video and audio continuity* for action, shot location, background, atmospheric effects, sound quality and volume and other effects.
- *Continuity of time, direction and movement.*

To give you an example, if the background in two or more successive shots of the same location gets changed, the viewer will be confused. Similarly when we show a shot of a man running from 'right to left' and join it with a pair of his legs running from 'left to right', the viewer will lose the sense of direction and will fail to relate the two shots. One therefore, has to look for and ensure continuity in the content of each shot and maintain this continuity while switching from one shot to the next. So long as the action of the story is continuous, we can continue to cut from one shot to the next. This will ensure continuity of action.

2.5.2 Techniques of cutting and mixing

Suggesting instantaneous and invisible change from one shot to the other, the cut is a very simple and dynamic device of transition. The cut is used in the following situations and for the following purposes:

- To continue action — by cutting between shots that show continuous action step by step.
- To reveal details — by cutting to a closer shot which shows event/subject's details clearly.
- To intensify or reduce impact — by cutting to a close shot, the action gets intensified, while by cutting to a longer shot, the impact is reduced.
- To establish event rhythm — by fast cutting or inter-cutting between parallel shots, we get an impression of excitement and vigour, whereas slow cutting denotes tranquillity.
- To change locale and time — by cutting to an outside or distant locale.

The technique of cutting is, in fact, concerned with the questions: When to cut and when not to cut? The producer should keep the following two considerations in mind while cutting.

- i) **Motivating the cut:** Cuts should always be made for a reason or on a motivation expressed either through the picture or the sound or both. For example:

“In a room we see a man working at his desk. Suddenly there is a gentle knock at the door on his right. As the man turns his face to look up towards the door, it opens and a young girl appears saying. “May I come in...?” Man stands up but drops his pen which breaks, looks at the broken pen and then the girl and mutters – ‘Oh dear...’ The girl

Now let us examine the situation mentioned above. Hearing the knock, the man turns his head and looks up (cut) the door opens and the girl enters asking permission to enter (cut) seeing the girl, the man stands up and drops his pen to the ground (cut) he looks at the pen (cut) he then moves to receive the girl (cut) the girl stands giggling. Here, we find that we cut every time when there is a good reason or motivation for the cut, i.e. “cutting on reaction”.

- ii) **Disguising the cut:** Yet another method of cutting is to cut on action. While cutting on action, we should always cut during the action or movement of the subject on the object. For example, the subject is in a CU, and is about to rise from his seat (or conversely he is about to sit in a chair), the best point to cut will be to cut when he has just about to perch himself on the seat. This kind of cut is quite smooth and unnoticed. This technique is called ‘disguising the cut’ or ‘cutting on action’.

Here, we give a few more points, which must form an important part of a producer’s repertoire while cutting or mixing various shots.

- Don’t cut from the CU of a person to another CU of the same person. Always look for something new in each shot you want to cut.
- Always change the angle of shot while cutting from LS to MS or MCU to CU (to ensure a natural effect).
- While cutting between shots, plan for more and more CUs, because close shots reveal vivid facial expressions and details and create more impact.
- Do not cut from a very long shot to a CU, because this sudden change confuses the viewer.
- Instead, use ‘dissolve’ or ‘mix’ to join a LS with a CU or vice versa. For example, a CU of a solo singer can be dissolved into a long shot of the whole group (or the other way round).
- Use a ‘mix’ to suggest lapse of time or change of locale, or to suggest strong association between two objects or events.
- Do not use too many ‘mixes’ or ‘dissolves’ because a frequent recourse to ‘mixes’ will slow down the pace of the programme and may hinder its continuity.

2.5.3 Crossing the line

While shooting a football or a hockey match or a public function on a location, the cameras have to be positioned to cover the event. The questions of maintaining continuity of screen direction and movement acquire great importance in such a situation, and the concept of 'crossing the line' comes in. Let us try to understand this concept.

Suppose we have two people facing each other and two cameras are positioned to shoot them as shown in the Figure 2. The imaginary line joining their eyes in this situation is called the vector line. Now, if we shoot these two people from the same side of the imaginary (vector) line and cut between cameras A and B, the two people will appear to be looking at each other as shown in Fig.2, (i). This is an accepted convention of television and is widely followed in interviews, matches and other set-ups. However, if we move one of the cameras to position X on the other side of the imaginary line, and cut shots between cameras A and C, the two people will appear to be looking in the same direction, as shown in Fig. 2, (ii). The result will be utter confusion for the viewers, since we have violated the principle of the vector line. If this principle of shooting from the same side of 'the imaginary line' is violated during the shooting of a football match, the viewers will fail to make out which team is playing in what direction. So, all cameras are invariably positioned to shoot from one side of 'the imaginary line' drawn straight up the pitch and joining the two goal posts.

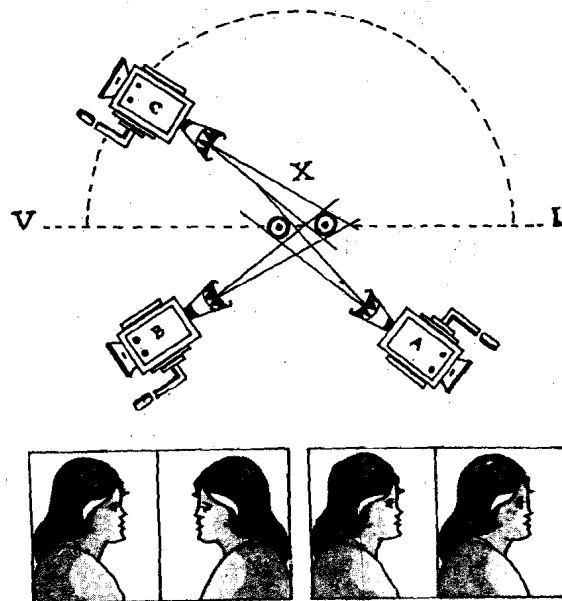


Fig. 2 : Example of crossing the line

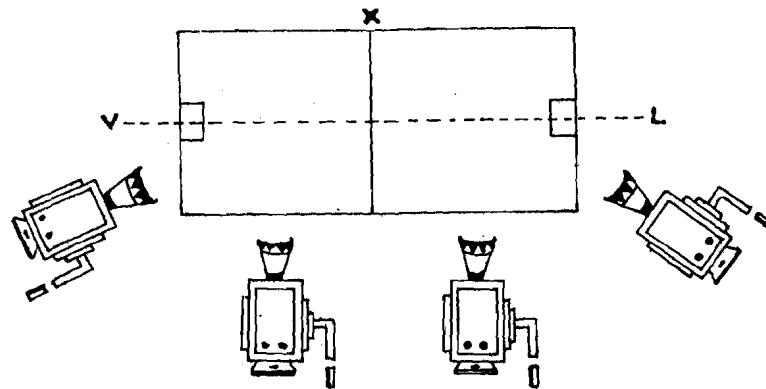


Fig. 3: Shooting of a Football Match

A more serious situation can occur in case of shots of moving objects. Suppose a car is moving along the highway or an athlete is running across the ground from left to right. If we inter-cut between shots taken by the two cameras, one of them positioned on the opposite sides of the motion, crossing the vector line, as shown in Figure 4, the car or the athlete will appear to have changed direction from 'left-to-right' to right-to-left. This reversal of the direction of screen motion is highly confusing and therefore not acceptable.

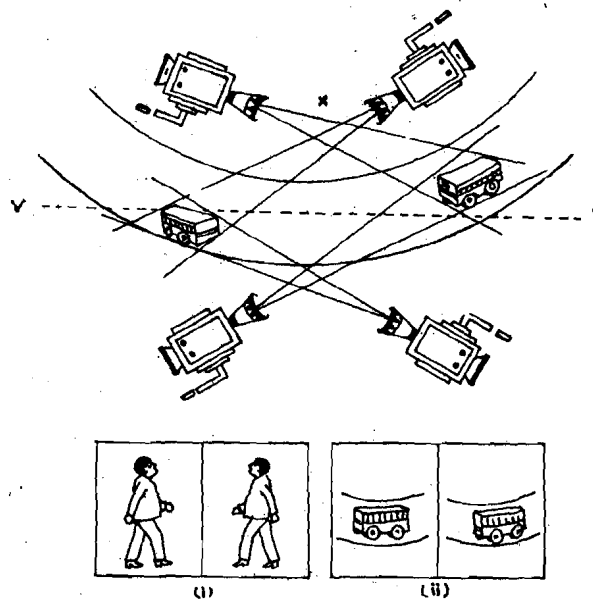


Fig. 4: Shooting of Moving Objects

However, there are two exceptions to this well-established convention of 'not crossing the line':

- During the course of a shot, if the camera is moved to a fresh position (across the vector line) and the location of the people or objects in the frame is re-established suggesting a changed direction, the principle of the vector line is not violated.

- Similarly, if the two people in the shot move to a different position, the vector line may be treated as not having been crossed.

This is a summary account of a few important techniques of television production. There are several other aspects of production where newer techniques are being developed. Computers have added an entirely new dimension to and have opened up new vistas in almost all the elements of media production. To name a few, we now have access to a wide variety of computer generated graphics, instant character generators for supering credits and titles, computer animation, computerized video editing techniques and several kinds of fantastic electronic effects and innovations, all offered by modern technology to help us master and refine the art of television production.

Check Your Progress 5

Notes: a) Space is given below for your answer.

b) Compare your answer with the one given at the end of the unit.

List some of the important production techniques a producer should learn and master.

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2.6 LET US SUM UP

To give a detailed description of the technical stage of a production, that is: studio preparation, rehearsal and actual programme recording, we began with the designing of the camera script, traced the producer's critical path to the studio, describing how the producer works for days and weeks, plans and organises various production tasks and activities and co-ordinates with a host of colleagues, co-workers and even unknown outsiders to finally get to the studio preparation, rehearsals and final recording of the programme. This includes organising graphics, props, floor plans, set construction, lighting, audio and video inserts, music and sound effects, costumes, make-up, camera cards, holding production planning and technical planning meetings, booking required facilities, holding rehearsals and dry runs and tying a host of other loose ends.

A field location recording situation is equally demanding. Whether it is a small ENG assignment, an EFP shooting or a big remote, a field location recording requires a great deal of homework, patience, tact, planning and presence of mind. Recce is the most important step, which no producer can skip when he undertakes a remote production.

Needless to say that a television programme, when recorded with a multi-camera set-up in the studio, does not normally require editing and it can be telecast straightway or recorded on tape in its final form. However, programmes, if recorded in film style, using only one camera with no regard for continuity, need to be edited. Since this editing is done after shooting, it is called 'post-production editing'. The basic purpose of editing is to assemble and re-arrange pre-recorded video materials into a continuous, meaningful whole so that the programme has clarity, continuity and punch.

To make television programmes flawless, sleek and full of impact, a few important techniques of production have been illustrated with examples. They are: developing shots, introducing movement into static or non-moving objects, maintaining continuity of action, time, direction, locale and other aspects, cutting and mixing of shots and observing the principle of 'imaginary line' while shooting.

At the cost of repetition, it may be emphasised that video production cries out for teamwork and co-operation from all the people concerned — the programme personnel, the technical crew and the talent. Always, however, it is none but the producer who, being the pivotal figure, initiates and co-ordinates all activities and not only with all the members of his own team, but also with outside agencies and individuals, if required. All members of the production team are inter-dependent and each plays an equally important role, which must be recognised. The producer or the director bears the utmost responsibility. She/he has, therefore, to be both firm and friendly, patient and tactful. Having said this much about the operational details of media production, we are in a position to move on to the next block, i.e. Computer and Communication Networks.

2.7 CHECK YOUR PROGRESS: THE KEY

- 1)
 - i) The camera script provides all the necessary guidelines and technical instructions for planning and organising various pre-production inputs for a programme. The camera script delineates detailed programme requirements in terms of various resources — visual, aural, artistic, technical, personnel and financial. In fact, if we analyse closely, we will find that all studio preparation activities emanate from the camera script.
 - ii) The producer has to organise a large number of inputs for doing a studio production. You may have included some of the following inputs.
 - a) *Visual inputs*: graphics, photos, slides, film/video inserts, etc.
 - b) *Auditory inputs*: Music, sound effects, pre-recorded commentary, tapes, etc.
 - c) *Physical inputs*: Set and lighting, props, furniture, costumes, make-up, demonstration items, etc.
 - d) *Technical*: Equipment, microphones, monitors, and other machines.

- e) *Personnel*: Technical crew, cameramen, floor staff, support staff, actors, performers, etc.
2. Usually, a producer may decide to go through the following types of rehearsal before recording a programme.
 - Outside the studio: Script reading, dry run,
 - Inside the studio: Blocking, staggering, walk/run through, camera rehearsal, final recording.
 - 3) i) The three type of location recording situations are: (a) An ENG assignment (b) An EFP situation, and (c) A big remote.
ii) 'Recce' means a preliminary survey of the location prior to the actual shooting. It allows the production team to visualise and plan their make-shift studio in the open and examine essential arrangements for a smooth field recording. Going for a field location recording without 'recce' can prove highly frustrating and disastrous.
 4. Post-production editing is the process of assembling and organising pre-recorded video materials into a continuous meaningful programme. Because the editing, in this case, is carried out after (post) production (and not during production as in the case of a studio production or live telecast), it is called post-production editing. The main purpose of post-production editing is to arrange a video programme so as to achieve with clarity, continuity and a strong impact.
 5. Some important production techniques are: (i) developing shots and introducing movement in pictures, (ii) maintaining continuity, (iii) cutting and mixing of shots, and (iv) observing the principle of the imaginary line.

REFERENCES AND FURTHER READING

- Bates, A.W. (1983) 'Adult Learning from Television: The Open University Experience' in Howe, M. (ed) *Learning from Television*, London, Academic Press.
- Bretz, Rudy (1962) *Techniques of Television Production*, 2nd edition. New York, McGraw-Hill Book Company.
- Burrows, Thomas D. and Wood, Donald N. (1980) *Television Production: Disciplines and Techniques*. Wm. C. Brown.
- Chester, Giraud; Garrison, Garnet R. and Wills, Edgar E. (1978) *Television and Radio*, 5th edition, New Jersey, Prentice-Hall,
- Izessi, Frank (1984) *Understanding Television Production*, Englewood Cliffs, Prentice Hall.
- Masterman, L. (1980) *Teaching about Television*, London, Macmillan Press
- Millerson, Gerald (1999) *The Technique of Television Production*, 13th edition, Focal/Hastings House, New York.
- Millerson, Gerald (1973) *TV Camera Operation*, Hastings House Publishers, New York.
- Millerson, Gerald (1975) *TV Lighting Methods*, Hastings House Publishers, New York.
- Moss, J.R. (1983) *Video: The Educational Challenge*, London, Croom Helm.
- Robinson, Richard, (1978) *The Video Primer*, Quick Fox Books, New York.
- Schramm, W. (1977) *Big Media, Little Media*, Beverly Hills, Sage.
- Stasheff, Edward; Bretz, Rudy; Gartley, John; and Gartley, Lynn, (1976) *The Television Programme: Its Direction and Production*, Hill and Wang, New York.
- Utz, Peter. (1980) *Video User's Handbook*, New Jersey, Prentice-Hall.
- Williams, Richard L. (1981) *Television Production; A Vocational Approach*, 2nd edition, Utah, Vision Publishing.
- Wurtzel, Alan (1979) *Television Production*, New York, McGraw-Hill Book Company.
- Zettle, Herbert, (1976) *Television Production Handbook*, 3rd edition, Wadsworth Publishing Company.