Unit -11 : TELEVISION PRODUCTION

UNIT STRUCTURE

11.1 Learning Objectives
11.2 Introduction
11.3 Stages in television production
11.4 Basic components of television
11.5 Electronic News Gathering (ENG)&Electronic Field Production (EFP)
11.6 Different camera angles and movements
11.7 Let us Sum up
11.8 Further reading
11.9 Answers to check your progress
11.10 Model questions

11.1 LEARNING OBJECTIVES

In this unit, you will be able to

- describe the different television production stages
- familiarize with the basic components of television production
- list the differences on the shot, angles and camera movements

11.2 INTRODUCTION

In the previous unit, we have discussed about television journalism and various other concepts related to it. The present unit introduces you to the basic television production. The better understanding of camera movement and angles in accordance to the requirements of the production, basic components and the techniques utilized for the news gathering would constitute the unit.

11.3 STAGES IN TELEVISION PRODUCTION

In most of the video production, three main stages of productions are followed. They are:-

Pre-production

In pre-production, the movie is designed and planned. The production company is created and a production office established. This is the stage where an idea is fleshed out into a viable script. The producer of the movie will find a story, which may come from books, plays, other films, true stories, original ideas, etc. Once the theme, or underlying message, has been identified, a synopsis will be prepared. This is followed by a story outline, which breaks the story down into one paragraph scenes, concentrating on the dramatic structure. Next, a treatment is prepared for the program. The screenplay is usually written over a period of several months, and may be rewritten several times to improve the dramatization, clarity, structure, characters, dialogue, and overall style. However, producers often skip the previous steps and develop submitted screenplays which are assessed through a process called script coverage. This is a 25 to 30 page description of the story, its mood and characters, with little dialogue and stage direction, often containing drawings to help visualize the key points.

A film distributor should be contacted at an early stage to assess the likely market and potential financial success of the film. A production budget will also be drawn up to cost the film. One of the major goals of preproduction is to try to anticipate anything and everything that can go wrong during a shoot. When you plan a production, work with that assumption, and always plan for the worst-case scenario.

Preproduction is also the time to research and develop the idea, to build in all the elements instrumental to the foundation of your project, to design what it should look like, and to explore all of the variables needed to create a successful production. Most vitally, preproduction is the time to make sure the script is the very best it can be. All the effort we expend on preproduction will pay off during production. During preproduction you have an abundance of something you won't have when youstart shooting. Setting on an efficient game plan and solving potential production problems during pre-production will save precious money later.When we plan a production, work with that assumption, and always plan for the worst-case scenario.

Production

In production the movie is created and shot. More crew will be recruited at this stage, such as the property master, script supervisor, assistant director, camera man, stillphotographer, picture editor, and sound editor. These are just the most common roles in filmmaking; the production office will be free to create any unique blend of roles to suit a particular film. At this stage, the production is also called as the 'principal of photography'.

This is the industry term for the period during which the first, or principal, unit completes photography. Principle photography can be an intense and trying period. During the shoot, we will discover first-hand how important crew selection and casting can be. We will recognize almost immediately whom we can rely on and whom we can't. On the first day, must decide whether we want to give the person time to improve or replace him or her.

A typical day's shooting begins with an assistant director following the shooting schedule for the day. The film set is constructed and the props made ready. The lighting is rigged and the camera and sound recording equipment are set up. At the same time, the actors are wardrobe in their costumes and attend the hair and make-up departments. The actors rehearse their scripts and blocking with the director. The picture and sound crews then rehearse with the actors. Finally, the action is shot in as many takes as the director wishes. The director approves the next day's shooting schedule and a daily progress report is sent to the production office. This includes the report sheets from continuity, sound, and camera teams. Call sheets are distributed to the cast and crew to tell them when and where to turn up the next shooting day.

For productions using traditional photographic film, the unprocessed negative of the day's takes are sent to the film laboratory for processing overnight. Once processed, they return from the laboratory as *dailies* or *rushes* (film positives) and are viewed in the evening by the director, above the line crew, and, sometimes, the cast. For productions using digital technologies, shots are downloaded and organized on a computer for display as dailies.

Post-production

Post production is certainly a more relaxed phase than principal photography. Shaping the material one-on-one with an editor is an intense and heady adventure for the director. Time is still money in editing table, as it is charged on hourly basis. Each project has many variables, so it is difficult to estimate how long a project will take to edit. Here the film is assembled by the film editor. The modern use of video in the filmmaking process has resulted in two workflow variants: one using entirely film, and the other using a mixture of film and video.

The first job of the film editor is to build a rough cut taken from sequences (or scenes) based on individual “takes” (shots). The purpose of the rough cut is to select and order the best shots. The next step is to create a fine cut by getting all the shots to flow smoothly in a seamless story. Trimming, the process of shortening scenes by a few minutes, seconds, or even frames, is done during this phase. After the fine cut has been screened and approved by the director and producer, the picture is “locked,” meaning no further changes are made. Next, the editor creates a negative cut list (using edge code) or an edit decision list (using timecode) either manually or automatically.These edit lists identify the source and the picture frame of each shot in the fine cut. Once the picture is locked, the film passes out of the hands of the editor to the sound department to build up the sound track. The voice recordings are synchronized and the final sound mix is created. The sound mix combines sound effects, background sounds, ADR, dialogues and music.

In the video workflow, the edit decision list that describes the video-based answer print is used to edit the original colour tape (OCT) and create a high quality colour master tape. For all subsequent steps this effectively becomes the master copy.The next step uses a film recorder to read the colour master tape and copy each video frame directly to film to create the final theatrical release print.

11.4 BASIC COMPONENTS OF TELEVISION PRODUCTION

Television production is a process and as such a system approach must be taken. By system is meant a collection of elements put together to achieve a specific purpose. No individual element of a system can do the task alone. The equipment and the personnel who operate the equipment for the production of a particular programme constitute the components of television production.

The basic television system consists of a television camera, a microphone, a television set and a loudspeaker. However, a well-chosen basic system can be enlarged into an expanded system with one or more cameras, camera control unit or units, preview monitor, line monitor, vision mixer/switcher, video cassette recorder and a transmitter.

The production room

The production room or the studio room should be horizontally level and firm in order to prevent vibration or for the smooth movement in the studio. The studio floor should be quiet to walk on so that the sensitive microphone cannot not pick up unnecessary and the lowest sound made during the production. The walls of the studio should have acoustical treatment to control the reverberation and good sound quality. However, full sound proof studio can degrade the quality, as it may not sound natural to the ear. For the lights and other equipments, there should be proper insulations and support. There are pipe grids to hang different lighting instruments which should be atleast ten feet from the floor with free space above them. The cyclorama (CYC) is another important element in studio. It provides a neutral background.While in the Control Room, along with the Director and Producer there would be people who would handle the production equipments which consist of Vision Mixer/Switcher, Audio Console, Digital Character Generator, and tape recorder.



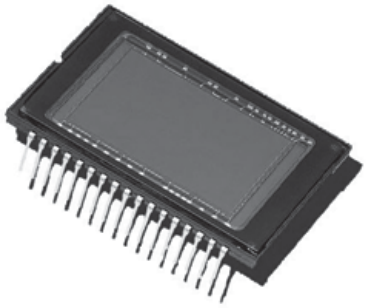
Studio Floor

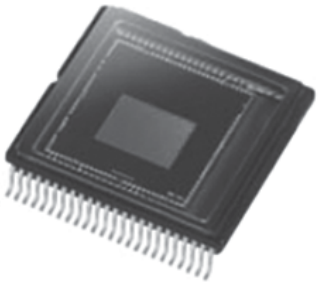


Control Room

Camera

Camera now comes in variety of shapes and sizes. Depending on the purpose, performance and its usability one can purchase for the production of film. You can use a video camera as standalone unit or can also use for multi-camera purpose. Earlier video camera comes with either a VCR(video cassette recorder) or a VTR(reel to reel system), which can be carried in a backpack or on a small wheeled cart. With the technological advancement, camera now has digital storage system in the form of memory stick or SSD (solid state drive) card. With the digital video capturing, the distinction between professional video cameras and movie cameras are getting blurred because of its working mechanism that has become the same.





Charge Coupled DeviceComplementary metal oxide semiconductor

The main features of camera consist of lens system that project the image of the scene onto the camera pick up device i.e., CMOS (Complementary metal oxide semiconductor) or CCD (Charge Coupled Devices). The sensitive pick up device is the principal camera element that would convert the lens image into a corresponding video signal.This signal

is amplified and processed so that it can be reconverted into visible screen images. The viewfinder displays the picture as generated by the camera. The microphone is often attached for the sound pick-up on portable camera, power supplies and the various supplementary controls that are available in camera which affect the picture quality.

The most common camera operations are as follows:-

a. **Zoom:** It allows to move your point of view closer or away from the subject. The two common zoom mechanisms are

i. Manual zoom (ring)

ii. Servo zoom (lever)

b. **Focus:** The most commonly available focus in semi-professional or professional camera is the ring focus at the front of the lens housing. There is an also an option as Auto-focus which is strictly for the amateurs.

c. **Iris:** This operation controls the amount of light coming through the lens. Once the iris is adjusted the picture in the viewfinder changes its brightness.

d. **White Balance:** Its function is to give true white reference which means overall colour balancingof the different elements in the picture frame.

e. **Audio :** All the consumer level camera comes with the built-in hi-fi stereo microphone. While in semi-professional camera will have an option for stereo jack for an external microphone.

f. **Shutter :** For the amateur it is seldom used. It basically help to control the exposure and mostly used for sports or fast-action footage.

g. **Effects:** Most consumer camera comes with the built-in digital effects giving option for still image, mix, strobe etc.

Mounting devices

In studio and sometimes in outdoor shooting, the camera has to set on a stand to have level adjustment or for the smooth movement of the camera. For better camera movement within a shot and to reposition the camera within a shot quickly are determined by the camera mounting

devices. There are different types of mounting devices used based on the requirement of the location and budget. The most common devices are Monopod which comes with a single leg is an inexpensive, easily carried and suitable for lightweight camera. The Tripod is an adaptable device for location cameraman. It has three legs which are linked or chained together to prevent from spreading out. The camera height can be adjusted by cranking. Tripod Dolly is used in studio floor as the tripod is attached with the wheels. The Studio Pedestal is specially designed for television production which has the capability to hold 500 pound camera. This device has three wheels connected with the bicycle chain which allow you to execute amazingly complex camera moves with ease.



Mounting plate



To connect the camera and the tripoda mounting plate is used. It is an interface thatcomes between two devices (camera and tripod) that can be connected to each other directly. The interface works like glue with the camera and that of a tripod. It should be able to handle both the devices and should able to provide sufficient friction for the easy movement. This plate makes it easier for the camera to insert and remove the rig from the tripod. All the tripod headwill also have a standard base plate that can be screwed on to the bottom of the camera.

Editing tools and techniques

Editing is the post-production process where different segment of programme put together either by physically slicing film tape or by the transferring the video footage onto the computer hard drive and arranging these segments. There are different types of video editing methods. They are :-

a. **Film slicing:** This is mechanical method which is edited by cutting sections of the film to rearrange the clips with the aid of slicing tape or discard. Technically, this method is the film editing and it is the first way to edit moving pictures which forms the basis of all video editing.
b. **Tape to Tape:** This is also called as linear method of editing and is the original method of editing electronic video tape. For the editing purpose two video machines are used, one machine is used as the source and the other as the recorder. The video clip is selectively copied from the source and paste or recorded into the other machine.
c. **Digital/Computer:** This method is also called as Non-Linear method of editing. The video footage is captured or transferred into the computer hard drive and edited with the editing software. This method is very flexible as it allows the editor to make changes to any part of the video.
d. **Live Editing:** This is the real time editing where multi-cameras are connected through the console which are edited live and recorded at the same time.

Few considerations should be made before you go for the editing computer system. The fast storage drive is required to access the footage from the system and as well to start the software. This also help to load, renderingand also to export the video before transferring into CD, DVD or any other output. Increased RAM will allow the editing to process faster. There should be minimum of 4 GB RAM in any non-linear system. The bigger the number of RAM, better the processing. Most of the video editing applications have their own recommended graphic cards which are required

in order to havebetter pictures and overall performance to the computer.A faster processor will help in faster rendering. However, overall performance does not depend on a good processor, the RAM, Storage system has also to be good to give better video output.

There isvarious type of video editing software program available on the market. But the most commonly used are as follows:-

a. **Premiere Pro :** This is the most popular video editing software around the world which is used for both large and small scale projects. The other good feature about the software is that it is integrated with its sister programs like After Effects, Audition, Media Encoder, Photoshop etc. which allows you to use the programs and bring it in the Premiere timeline.

b. **Final Cut Pro (FCP):** Final Cut Pro is industry standard application of Apple Inc. which means the software, OS, computer all are from same company. The software is quite intuitive and full of features. Ithas it's place in the professional world and has become much better since it's original release.

c. **Avid Media Composer :** Avid is the most popular non-linear editing software for feature length films and it is the choice of most Hollywood productions. To save time in post production the software is designed to work almost in keyboard shortcuts.

d. **DaVinci Resolve :** The Resolve started as a color grading and correction software. Later Blackmagic Design had up graded it into complete non-linear editing software. The best part of this software is that it is offer free Lite version which also allows you to do almost all sort of editing that the paid version does.

There are many other software such as Lightworks, Autodesk Smoke, and Sony Vegas etc. But the most common and popular are the above four programs.

11.5 ELECTRONIC NEWS GATHERING (ENG)& ELECTRONIC FIELD PRODUCTION (EFP)

ELECTRONIC NEWS GATHERING (ENG)

ENG is the process of reporting events and activities that occur outside the television studio.It started in 1970s and 1980s when the news crew required sendingthe live report directly to the studio for the broadcasting which ultimately change the face of television news around the globe. Before this concept developed, the news footage were recorded in film, brought into the studio and edited before it could broadcast for viewing.

A good news gathering report consist of getting the story and also able to present the information to the viewer. The reporter and the cameraman must be prepared for every situation that may arise at anytime and that would involve on camera and behind the camera skills.

ENG is basically a reporter who single handily does the recording of the news story or by the entire television crew or the satellite truck to conduct the live news for the newscast.The vehicle which is known as DSNG (Digital Satellite News Gathering) is used for fitting the electronic equipments for sending the video signals to the studio.

Electronic Field Production(EFP)

EFP is refers to the video production which takes place outside the studio in a chosen location of the story. The producer or the director gets more time to design their production such as news magazine or documentaries and sometimes docu-drama. The preparation for the production may include selection of camera, microphone, research on the topic, location screening, talents, interview scheduling etc. Some common area of field production includes awards shows, concerts, major newsmaker interviews, political conventions etc. Among all, sports event take the maximum number of coverage in field production. The typical production vehicle compose of a large video switcher/mixer, several cameras, microphones, tripods, zoom lenses, focal length of at 600 mm, video

recording and playback devices or hard disk recorders, video feeds which stored in specific deck as when something happens then the producer or the director would like to see to it by rewinding and can be shown on air as when required.



ACTIVITY 11.1

1) Prepare a small presentation on story/news report that required one camera setup and multi-camera setup.



CHECK YOUR PROGRESS

Q.1: Explain the main features of camera?

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Q.2: What are the different types of video editing?

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Q.3: What is the fullform of CCD, FCP?

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Q.4 : What do you mean by ENG ?

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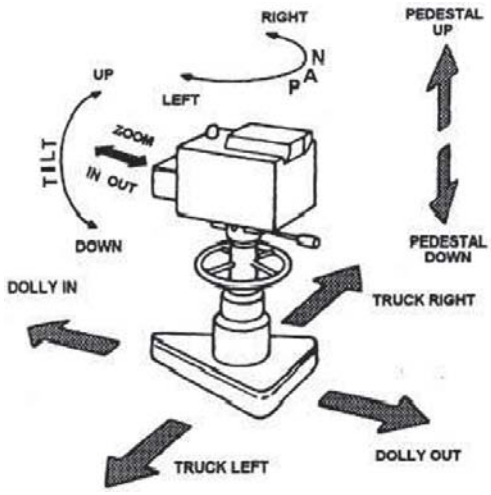
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11.6 DIFFERENT CAMERA ANGLES AND MOVEMENTS

Shot taken in different angles and camera movements has its own story to tell. There are basically two reasons for moving the camera from one shot to other. Firstly to show something that is not seen and secondly to create an emotional impact in the story.

The angle of a camera determines the state of mind to show whether the subject is inferior or superior. A normal angle is the one when the level of the camera and the subject's eye level are same. A high angle shot can be obtained by placing the camera above the eye level. The subject in this angle may depict that of a depressed or defeated as the camera is looking down to the subject. A low angle is where the camera is below the eye level and the camera looks up to the subject. This angle shows that the subject is a winner or powerful.

The different camera movements are explained in detailed:



Pan : It is called as 'Pan Left' or 'Pan Right' which is the sideways or the horizontal movement that is similar to looking left or right. This movement is used when the camera need to follow the subject.

Tilt : This movement is the vertical movement of the camera as the lens moves up or down. I is called as 'Tilt Up' or 'Tile Down'.

Zoom : This is one of the most commonly came movement that is used. It is usually used when the essential action of a scene need to show to the audience, then the camera changes its focal length of the lens to make the subject appear closer. Likewise, the camera needs to move out of the frame to show the entire action area. This movement is called as 'Zoom - in' or 'Zoom – out'.

Dolly/Track : This movement is called as 'Dolly – in' or 'Dolly – out' and it is similar to zooming. However zoom in/out is the focal length movement whereas the dolly will take the entire camera to or fro from the subject with the aid of a track. Changes of focal length may destroy the wide angle or in the apparent depth of field. For this reason dolly is preferable to use than zoom movement.

Truck : This movement is also similar to dolly but it moves sideways left or right as it is called as 'Track – left' or 'Truck – right'. This movement may used to reveal a character which is covered by another character or a subject that is in the foreground. The camera may Truck left or right to show the scene in a more interesting way than panning or tilting. However, 'Dolly' and 'Truck' is a little difficult to handle due to the track and other requirement for the movement and need a skilled camera person.

Pedestal : This movement is similar to tilting, however in tilting the camera lens moves up or down but in 'Pedestal up/down', the entire camera moves up or down. The camera is on a tripod and you are raising or lowering the tripod head.

Crane or boom : This movement lift the entire camera to a certain feet high. The effect is same as the pedestal up and down except that the camera is raised over a much higher position.

Crab : This is the sideways movement which is similar to 'Truck in/out', except the camera mount does not have to stay lateral to the scene all the time. As the crab moves, so the camera follow the same pattern of the movement.

Arc : Arc movement is similar to truck but in a curved path. The command for this movement is 'Arc in to the right' or 'Arc in to the left'.



11.7LET US SUM UP

1. There are three different stages of television production: pre-production, production and post-production.

2. Presently, an increase number of video cameras use a solid state CCD or a CMOS.
3. The most common camera operations are zoom, focus, iris, white balance, audio, shutter and effects.
4. Panning means moving the camera horizontally.
5. Dolly tripod is attached with wheels on its legs.
6. Premiere Pro is the most popular video editing software which is used for both in large and small scale projects.
7. The cyclorama (CYC) is another important element that provides a neutral background in studio.
8. A high angle shot can be obtained by placing the camera above the eye level.



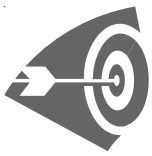
11.8 FURTHER READING

Zettl, Herbert, (2003), 'Television production handbook', Published by Holly J. Allen, R. R. Donnelley & Sons, Willard, USA.

Rea, Peter W, Irving , David K. (2010), Producing and Directing the Short Film and Video', published by Taylor & Francis.

Wordsworth, Christopher, (1979), 'The Home Movie Makers Handbook', published by Lutterworth Press.

Svanberg, Lasse, (2004), 'The EDCF Guide to Digital Cinema Production', published by Focal Press Publications.



11.9 ANSWERS TO CHECK YOUR PROGRESS

Answer to Q. No. 1: The main features of camera consist of lens, image sensor, the viewfinder, microphone, power supplies, and supplementary controls.

Answer to Q. No. 2: The different types of video editing methodsare Film slicing, Tape to Tape, Digital/Computer and Live Editing.

Answer to Q. No. 3: The full form of CCD- Charge Coupled Device, FCP – Final Cut Pro.

Answer to Q. No. 4:ENG is the process of reporting events and activities that occur outside the television studio. It is basically a reporter who single handily does the recording of the news story or by the entire television crew or the satellite truck to conduct the live news for the newscast.



11.10 MODEL QUESTIONS

A. Very short questions

Q1. What do you mean by base plate.

Q2. What is the function of graphic card?

Q3. What is the difference between dolly and zoom.

B. Short Questions (Answer each question in about 150 words)

Q1. Explain the different camera mounting devices.

Q2. Explain in brief the different camera movements.

Q3. What is the difference between ENG and EFP?

C. Long Questions (Answer each question in about 300-500 words)

Q1. Explain the different stages of Television Production.

Q2. Explain in detail the various types of editing software programmes.