UNIT 14   NON-BROADCAST MEDIA: AUDIO AND VIDEO (PART II)

Structure

14.6   INTRODUCTION

In the first part of this unit you have studied about audio as non broadcast medium. We have discussed its advantages over the broadcast mode. In this part we shall continue with non broadcast media and discuss video as the non broadcast medium. You know that visuals have their own importance and a thing seen is better retained than something heard. Hence, learning demands not only audio but also visual inputs. We shall bring forth to you in this unit a discussion on the importance of recorded video programmes in the field of education. You will also study about the different video formats, their utility, equipments necessary in a video recording studio and other such aspects.

14.7   OBJECTIVES

After studying this unit, you should be able to:

● discuss the important features of video as educational medium;

● explain the different video formats for teaching -learning;

● describe the various programme production processes in the video medium;

● identify and discuss various types of the equipments used in video production centers.

14.8   VIDEO AND EDUCATION

Video can complement the classroom instruction as well as distance mode of teaching in a variety of ways. It can make the invisible world visible, for example, undersea photography, deep space photography/photographs of distant places, microscopic things, etc. It can enable students to derive visual experience of phenomena not commonly seen in everybody life. It can also explain complex processes in a condensed manner, provide concrete illustrations for abstract concepts and thus facilitate better comprehension and retention. Video has proved its effectiveness/supremacy in teaching

certain subjects such as agriculture, science, geography, oceanography, astronomy, medicine, etc. For other disciplines too visuals always help in learning.

Video promotes learning by making it more enjoyable and also understandable. It can increase the effectiveness of instruction and cut down dropout rates. Video programs if well planned/organized and presented, may provide situations that are better than classroom situations that provide instructions without using videos. At times the student can learn through video through his or her own effort, even without much intervention from the teacher. The photographic memory of human beings enables retention of larger quantities of information and speeds up the learning process. It plays an invaluable role in accelerating the learning process in children as well as adults. With video it is possible to combine narration with pictures that depict the subject and this makes the learning process faster as it involves both the senses of sight and sound.

Though video in the classrooms is comparatively new and is yet to become popular in teaching-learning process, the video in the non-broadcast mode is considered as a more effective medium than the television broadcast due to its certain advantages over the television. Students have full control over the pace, time and place of learning. The replay facility makes it more suitable for individualized learning. Educational videos are therefore gaining popularity. IGNOU produces videos fro supplementing the print mediun. .n various disciplines. TV channels of UGC, NCERT, IGNOU and even private channels provide instructions through video.

14.8.1 Distinguishing Features

Human beings are blessed with several faculties and one of them is the faculty of sight. The ability to memorize visual and aural information, recall and express it makes human beings superior to other forms of life on this planet. Primitive man used visual forms of communications by drawing on stone; cave walls and even using sculpture to communicate his experiences to his fellow human beings through visuals thus made. As human beings developed they used leaves, paper, wood as medium for visual communications.

Human beings learn from experience. A point to note is that much of this is visual. We learn to read by visually identifying alphabets and attributing sounds to them. We experience visual phenomena, like rain, lighting, fire, etc. and learn from these visual experiences to take appropriate action. We are able to learn from watching others and emulating them. Video can record these events and play them back to us repeatedly. However, it has been found that such retention and internalization of information and its recall is much better when a thing is seen than when it is only heard or only read. Hence, video is of great help in the field of education . It can enhance the effectiveness of a classroom lecture in many ways besides facilitating distance education. The invention of Video has enabled man to transmit, store and reproduce visual information for use on demand.

With the invention of video recording techniques, its potential as tool for learning was realized. Video now plays a vital part in the education process, bringing experiences from all around the world through television programmes, video cassettes, digital video discs (DVD) and Compact Discs (CD) , Internet, cell phones, etc. This medium has a vast impact in that it can be transmitted across great distances making the same material available to a much larger section of people.

Video recording technology has enabled human beings to capture and store visuals and aural experiences and deliver it to the masses thus making the range of experiences larger and richer. Through television we can experience events live as well as recorded even if they are at remote places. Video along with the audio medium is enabling teachers to teach in a more effective way in classrooms and also in teaching in the virtual classrooms. As mentioned for audio, video recordings too can be accessed by the learners at the time and place of their choice unlike telecasts at fixed hours. They

can also be stopped, skipped and started at will and this happens to be an advantage over the ones telecast.

Today portable handy cams and even the cell phone are used for capturing, storing, editing, and exchanging visuals and data in other forms. Also, the process is easy and even a lay man can perform all these activities. In view of the importance of educational videos for educational purposes and entertainment, today there are courses on videography, digital still photography, non-linear editing, sound recording, etc.

14.8.2 Video Studio

The video studio is used for both the broadcast as well as for the non-broadcast mode. In the broadcast mode the productions are transmitted from the studio. On the other hand video programmes can also be recorded and then edited to make the master program. These master programmes can also be transmitted in the broadcast mode. In the non-broadcast mode the master program after the final preview is mass duplicated into the analog or the digital video format. These recordings are then sent to the students, who can play them back at their home/ workplace or can access them at study centers with audio-video library. In this section you will come to know about the video studio used for the recording. The video studio is divided into the following two parts:

Studio floor: The video studio floor is the main activity centre for the video program. Depending upon the format of the program sets, microphones, lights, and camera etc. are placed in the studio floor.

Control rooms: The control room has various equipments installed such as those for vision mixing, audio mixing, lighting control, video recorders/playback, camera control units, video type writer, caption scanner, computer, video monitors, waveform monitors (used to measure and display the level, of a video signal with respect to time, amplifiers, speakers, etc.

The size of the studio depends upon several factors such as the equipments used, the number of the cameras to be used and also depends upon the format of the program it is expected to handle. In major television organizations, video studios of requisite sizes are earmarked for specific programming needs. The video studio sizes in the range of 75 to 200 sq. m floor areas are suitable for educational program production. Studios of still larger sizes would find more utility for the public television and entertainment programming.

A rectangular shape for the studio floor rather than exact square is preferred in order that the floor area may be best utilized for camera movement and set erection. A square shape tends to give rise to unfavorable acoustics. The ceiling height is a critical requirement for the video studios. The minimum height required is governed by the considerations like vertical space needed for air conditioning ducts, proper angles for studio lighting in the vertical plane, etc.

Check Your Progress 1

Answer the following questions briefly:

1. List two advantages which video cassettes have over television broadcast.

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2   Explain any two video tape recording formats.

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14.8.3 Main Equipments in Video Studio

There are several types of equipments used for a multi camera video production , some of the major ones are discussed below:

Video Camera: Video cameras meant for use in studio or outdoor functions contain CCD (Charge couple device) chips to convert light into electrical signal. It stores and displays the data for an image in such a way that each pixel in the image is converted into an electrical charge. With suitable changes in accessories, it is possible to use the same video camera in studio and for outdoor shooting. Nowadays the camcorder (Camera plus recorder in a single casing or as a removable attachment) has become the preferred system for outdoor shooting. Its advantage is that a single person crew may carry out the shooting, which may also include audio as narration, music, etc.

Production switcher (Vision Mixer): It is the control to any video studio set up and most of the post production situation. It is a device used to select among different video sources and in some cases mix them and add special effects. A significant special effect that professional grade production switchers provide is the "Chroma Key", with the help of which the plain background of a person (usually blue colored background) can be electronically replaced by any other video content-live or pre-recorded.

Digital Video Effect (DVE): Digital video effect equipment can be used either as a stand alone unit or in conjunction with the production switches, although the latter method is preferred in most production houses. The common terms to describe this class of effects are: compression, expansion, split screen, freeze, perspective, rotation, reversal, posterization, page turn, roll and slide.

The consideration that can be kept in view while choosing digital effects equipment are – the range of effects that it can provide, whether the effects are easy to set up and repeat at will, whether the picture edges and movements are sufficiently smooth, resolution and other specification determining picture quality.

In general it is desirable to locate DVE facilities at the postproduction stage rather than at the studio, as to operate the required effects in live situations would be rather difficult. Also, beware of the fact that any overuse of these effects in educational programming can be visually distracting and counter productive.

Video cassette recorder (VCR): VCR provides facilities for recording and playback of removable video tape cassettes containing magnetic tape used for recording audio and video .

Lighting: Lighting plays a very important role in television. It illuminates 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. For complex productions, several lights of varied intensity may be required.

14.8.4 Videotape Recording Formats

The invention of magnetic tape developed the ability to store audio and video. Technology further advanced and now we have economically priced machines that could easily record video and audio at low cost.

Video Home System (VHS): It is used for recording and playing analogue video cassettes. It is quite popular in homes as well as educational institutions. Educationists began producing programs on VHS and distributing them to learners Government bodies have also used video and audio tape recorders to impart education to villagers and disadvantages group of society on issues like hygiene, sanitation, cooking, caring for children, treatment of diseases, advanced farming methods, cottage industry and many other issues.

VCD: New technology has resulted in the Video Compact Disk (VCD) and the (DVD). VCD is a standard digital format for storing video on a compact disc (CD) and are played through dedicated VCD players, computers, etc. VCD is cheaper, compared with the DVD. It displays Video quality similar to VHS but is more robust. The VCD being a non-contact medium minimizes damage caused by dirt, dust, etc. It also allows for interactivity between the viewer and the program unlike the VHS with little or no scope for interaction. Interaction with the program gives the viev :r opportunity to get involved with the subject and enhances the learning process.

DVD: This is an extension of the VCD format. DVD stands for Digital Versatile Disc or digital video disc. DVD can be used to record video, audio, store data, keep records and be used for any purpose that requires the storage of data or information in digital format. DVDs have higher recording densities up to many times more than VCD and the newer ones have several times more storage capacity. DVD's produce higher quality pictures, they can handle multiple sound tracks making it suitable for education across many languages. DVDs are also interactive and can combine text graphic and video information. DVD will soon become the choice of educationists due to the rapid fall in its price and the fact that it is less prone to damages.

CDs and DVDs for educational purposes are today readily available. Even teachers are being trained to use certain softwares like macromedia to prepare (author) educational programmes with content in multi media such as text , which may be hyperlinked for providing a lot of information, visuals that are still and animated to explain processes, voice and scope for simulation. Assessment is also possible through quizzes. Scope for navigation is also inbuilt.

Tape as a medium of play out and storage, has certain disadvantages over the modern disk technology and these are presented in the following tabulated comparison form (Table 1).

Table 1

Tape	Disk
Larger in size	Smaller
Cost of tape mo ɔ than DVD	DVC disk cheaper than video tape
Reasonable quality of video and audio	Excellent quality of video and audio
Tape is a contact medium and hence prone to tape damage, which is an irreversible phenomena	DVD and VCD being non contact medium have a longer life
Significant time taken to fast forward and rewind tape	No time taken as random access possible
Multilingual capabilities are limited	Multilingual capabilities are excellent
Interactive programs are not suitable for video tape due to its linear play out characteristic	Interactive programs are highly suitable for DVD and VCD due to its non-linear play out characteristic
Storage requirements are large	Storage requirements are small
Indexing and searching of content is difficult	Indexing and searching of content is very easy as the content can be labeled

14.8.5 Video Programme: Presentation Formats

There are various presentation formats of the video programme. Some of them are:

i) **Talk shows:** A single person may talk/lecture. There can be also be those who express their 'dissent' to the speakers with two or more speakers and one who anchors. For instance, debates among people holding conflicting views, panel discussions where each panelists presents his/her views, etc.

ii) **Discussion:** It covers all talk shows like interviews, panel discussions, etc. and even the audience may participate in such discussions.

iii) **Demonstrations:** These can be used to show a process, actions and reactions. For example how to provide first aid to an accident victim, or a show that teaches horticultural skills. Videotaping has the advantage that the 'perfect' version is recorded and shown and ensures a convincing and controlled demonstration. You can even present action in a speeded-up or slowed-down form, or stop it in a "freeze-frame" to study a particular feature.

iv) **Interview:** A wide variety of situations can be termed interviews. Personality chat, formal round-the-table discussions, explanatory discussions, reminiscences, etc. may be presented through interviews. Famous TV interview programme like the question time, hard talk are the typical examples.

v) **Illustrated talk:** In addition to the talk there are visuals illustrating it as for example, a person working in a laboratory, museum, etc.

vi) **Game shows:** Competitions that could be academic as quizzes or those involving physical strength and stamina, etc. comprise game shows.

Besides these there are many other formats like drama, musical programmes, etc.

14.8.6 Video Programme Production Stages

Now let us study the different stages involved in the production of videos. There are three stages- preproduction, production and post production stage.

Preproduction Stage: The preproduction stage deals with the preparation of the program proposal, academic note, idea, premises, synopses, treatments, script development, script breakdowns, production schedule, and storyboard. The program proposal is generated after research and extensive discussion with the producer and the academic experts. The proposals should contain the title, the target audience, the justification, the program objectives and an outline of the content and the treatment.

Research is undertaken at the initial stages of the program proposal and a synopsis, which briefly describes the basic story line/theme is prepared. The treatments are longer descriptions with summaries accompanied with pictures depicting a premise.

TV Script: A script is then written for the video program. It relates words (which may be a simple summary or a detailed script of the commentary and / or the presenter's words) to the storyboard. It should contain carefully researched material and should be complete as far as possible to prevent tedious time consuming editing at a later stage. The TV scripts \differs from the audio script in the fact that it contains comments for video and audios as well. This is normally divided into two halves. Left side of the sheet for video related descriptions and the right side for audio.

In the preparation of the script and its associated documents, various individual styles are used. The following are the typical example that are most commonly used in script preparation:

Synopsis: This is general outline of the program idea. In a drama, it may accompany the script to give a rapid summary of the plot, action, character, etc.

Break down shot/ show format: It lists the items or program segments in a show in the order they are to be shot. It may show duration of the participation, shot numbers, etc. The program may start with the opening titles and music for few seconds. It will then show the program introduction followed by the detailed program and in the end it will show the end titles.

Story board: The storyboard is presented on specially designed paper with areas representing a TV screen and a place below the screen for Video and Audio cues. The areas appearing like TV screens will contain rough drawings of the camera shot

as planned and how the frame would look to the viewer. The storyboard will also contain issues like backgrounds used, characters, lighting descriptions, dialogue. etc.

A storyboard helps put your ideas across, before undertaking the shooting of the program. It helps the whole team visualize the complete production. Another use of the storyboard is that it gives all the personnel involved with the production, a clear understanding of the events that are to take place and the sequence of the shoot. Cameramen understand what angles they have to position their cameras, whether they need to take a close-up shot or a medium shot or a long shot. Lighting people understand the lighting needs according to the kind of shot. Character generator personnel also come to know about the captions to prepare, etc.

Scouting talent, guests, planning for sets, etc. are also undertaken. Locations will need to be identified, permission for shooting in these locations will have to be obtained from the local municipal or governing bodies, sets and furniture will have to planned and manufactured, TV recording studios or equipment will have to be checked up and booked to ensure that they have the right kind of equipment for the recording of the program. Floor plan may have to be made and it involves drawing out the whole floor if the production is shot in a studio giving a bird's eye view of the placement of furniture and other things. Planning for lighting, graphics, audio specification, boom microphones, etc. are also done at this stage.

Production Stage: At this stage all the planning processes and the pre-production tasks converge and the functioning of full production team comes into play. The producer holds the production meeting before the actual recording of the programme. It is attended by the production assistants, cameraman, lighting supervisor, technical director, sound engineer, vision mixer operator, VTR operator, property designer, etc. The producer discusses the production script and the floor plan prepared by the set designer, which is then distributed among all the members. The detailed camera cards are also circulated to the cameraman. All the technical issues (lighting and the selection and the placement of the microphone etc.) are discussed with the technical director and the other technical operations staff and finalized with the producer.

Before the actual recording the producer should supervise the following aspects:

● Set has been properly erected and placing of all the things, like furniture, decorative pieces, etc. as required for sets are completed.

● The lighting in the studio are done as per the requirement.

● Cameras have been aligned properly with the help of CCU and are positioned in the studio floor. Camera cards have been fixed on each of the cameras.

● All the necessary Audio/Video tapes used for the playback and recording are being handed over to the VTR engineer.

● Microphone and the other technical equipment checked by the technical director are put in the proper places.

● The credits (name of script writer, editor, producer, etc.) have been entered in the Video type writer (VTW) or computer.

● The production and the technical crew members have taken up their respective tasks and positions.

Reading and rehearsal: This stage involves the reading of the script, timing the length of the program, correcting for pronunciation, articulation, language and experimenting with camera angles. Rehearsals are important as they save valuable TV production time by identifying possible errors and correcting them. The producer will concurrently assesses his production, guides cameras into the shots he is seeking, and works out substitute treatment where necessary. A proper reading and rehearsal is rewarding as it minimizes studio costs.

Video recording: Once the program has been thoroughly read and rehearsed it can be recorded. This involves the producer, production assistant, cameraman, floor manager, vision mixing engineer, sound engineer, microphones, video recorders, etc. Recording is carried out under the direction of the producer who is ably assisted by the production assistant and the floor manager. The video production is shot as a sequence of takes with a crew member logging good and no good takes using time code as a reference. This will be used in the editing process.

Post-production: Postproduction begins after the audio and the videos have been recorded in the tape. It now requires proper editing to make the master program.

Editing: Once the recording process is over the video and audio recording material is moved into an editing room. Editing rooms can comprise of linear type editing suites or the more modern Non linear editing workstations depending on the availability and costs. Here mistakes, improper takes, unwanted visuals and sounds that were recorded in the recording process are cleaned up. Additional elements like graphic elements that could not be added at the time of the shoot are inserted here. Video could be acquired from a multi location shoot and these are then pieced together using the storyboard as a reference. Sound effects and music as needed by the program are added and mixed to form the composite audio track.

Preview: At the end of editing the final program a preview is held to evaluate the program and carry out changes if found necessary. If there are changes necessary the program will go back for editing. The master tape now ready is used for broadcast, duplication or is stored in a suitable library.

14.8.7 Storage and Archival Considerations

Storage: Proper storage of audio video materials produced is important. Proper environmental conditions should be ensured in the place where they are stored. Humidity, high temperature, dust, textile particles, harsh chemicals, strong magnetic fields, direct sunlight, lights of certain frequencies, can be harmful. It is better to put the tapes and CDs, DVDs, etc. in their cases to prevent mechanical damages, especially scratches. Dropping them or shaking them can also damage them. Tapes are especially delicate and should not be meddled with. Rewinding them should be done carefully. Misalignments and careless fitting while playing them could damage them severely. Finger prints from touching them leads to sticky patches that attract dust. It is important to ensure that the storage space is fireproof, thermally insulated and is not vulnerable to water and dampness. The storage area should be air conditioned. Nowadays the racks and vaults used for storage are metallic and not wooden. The cassettes and discs should be stored upright. The master copies should not be easily accessible to one and all but should be in the custody of trained people. The replay equipments should be properly maintained. However, in spite of all precautions, data carriers could be damaged. Even digitally stored data may be lost. Replay instruments could also damage the data carrier. Even normal replaying on repeated occasions may damage them. Hence, it is always better to maintain backup copies. It is also important that replay machine and the recorded formats are compatible with each other. With obsolesce of replay machines, the new machines may not be able to read the data stored in the older formats which then become useless. Let us discuss a simple example. New models of computers may not be able to read the data we had stored in floppies. Hence it is necessary to keep pace with obsolescence and transfer data in a format that the new machines will replay.

Archiving: Archiving audio/video means they would be stored for a long time. We see some old films that have now poor audio and video quality. But good films, audios, videos have to be stored properly for future generations. The data may be stored in analog or digital form. Unless storage is done properly the archived materials may lose quality. Nowadays computers help in the processes related to the preservation of

data i.e. archiving. To ensure the retention of quality and allow subsequent replay, the data (audio /video) is digitized, compressed and then stored in an intermediate archive format (IAF). Indexing and cataloguing are also required for subesequent searching of the audio/video content. This is because as the archive grows in size, searching the data becomes difficult. Indexing helps us to create path to the data stored. Conventionally, creating a few key words for annotating the data is done. But today more advanced techniques that make retrieval of the data stored easier are available.Cataloguing as is done in libraries for printed materials, is the process of sytematically listing the items available. It includes preparing a formal description of the audio-video tapes and titles. This could include a title, a brief description of the content , the location of recording, etc. These information help in easily locating a particular audio/video from those stored.

Check Your Progress 2

Answer the following questions briefly:

1. Briefly explain the role of the scriptwriter.

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2. Explain the importance of floor planning in video production.

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3. Briefly explain the editing process.

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14.9 STRENGTHS AND LIMITATIONS OF NON-BROADCAST MEDIA

In the two parts of this unit we have been discussing about non-broadcast media. In this section we shall discuss the strengths and limitations of these media (both audio and video) :

Strengths of Non-broadcast Media

● Non-broadcast media can overcome many of the limitations of radio and television broadcasts. It provides considerable freedom to the learners who can use it any time and place at their convenience. Also the pace of delivery can be controlled. The viewer can review the program many times and take their own time to understand the subject.

● The cassette player is comparatively inexpensive, simple to operate, flexible and portable.

● It is a flexible medium. Sufficient time can be allocated to a topic that can be taken up in details.

● Video is effective for course materials which need demonstration/visual illustrations which cannot be taught effectively through radio and audio cassettes.

- To hold attention and motivate the students, the content can be presented in interesting formats, which can help the student retain and recall information presented through the programs.

- Programs of a sensitive nature can be used effectively with targeted students through the non-broadcast mode by virtue of the fact that the non-broadcast mode gives them the necessary privacy by limiting the target group to a few individuals or even a single person.

- Educational broadcast is not accorded priority in the radio/television set up. The technical staffs concerned with the planning and production of radio programmes often lack adequate knowledge of the relevant pedagogical needs of the learners and their characteristics. The subject expert at times may not have any deep acquaintance with the complexities of programme production. Hence good quality videos can be assets for learners.

Limitations of the non-broadcast media: The following are the main limitations of non-broadcast media.

- With the increasing use of phone-in methodology used in today's broadcast, interaction with the student is easy. The student can clarify the doubts on the spot. With live interactions the program becomes more interesting. Whereas in the non-broadcast mode response is via letters or phone calls or emails asking for clarifications.

- It provides fixed rate of presentation of information. Hence it is very difficult to update the programme once the audio/video cassettes are dispatched to the students.

- Due to the availability of the variety of format (Analog/Digital) and systems, which are essentially incompatible, the choice of any particular format to record the audio/video programme is very difficult, thereby increasing the complexity of the inventory that has to be maintained for any program.

- It can be expensive if the audio/video cassettes are sent to very large number of students. The logistics of the distribution system is cumbersome. There is also no surety if the materials reached the students on time.

- Audio/video cassettes require costly recording and presentation equipment.

- For an educational programme, they are better as part of an integrated package with print, and other modes of delivering instructions rather than being sufficient in themselves.

14.10 SUMMARY

A wide range of media is now being applied in the field of education and distance education is revolutionized by the use of their use. Non broadcast media have become popular because they help us overcome some of the weakness of the radio and television broadcast-like the availability of broadcasts only during the scheduled times. Videocassettes enable students to view the material at a time of their own choosing with as many pauses and as many replays as necessary. This increases learner control over the technology.

Video production is a team work involving academics or subject experts, a script writer and a producer as core members of the production team. There are many activities involved in production such as designing the camera script, developing production and technical plans, booking the studio, organizing various production tasks and activities and co-ordination with a host of colleagues for studio preparation, rehearsals and dry run and final recording of the programs. This also includes taking care of graphics, making floor plans, set construction, lighting, audio and video inserts, music and sound effect, costumes, make up, camera cards, etc. and dry runs.

Non broadcast media (video) can be of many types like talk shows, interviews, discussions, game shows, drama, etc. The modern CD and DVDs are today replacing the video cassettes because of the many advantages they have such as they are more sturdy, economic and light in weight. Teachers are today trained to prepare multimedia CD and VCDs and amateurs can also preparing educational videos through handy cams.

14.11   UNIT END ACTIVITIES

1. Go for a virtual trip to a radio and TV studio. For this you may use:

Google images. Download a few images related to this unit and prepare notes on them.

For radio, visit Websites like : http://www.heritage.org/Press/radiostudio.cfm

http://radio.about.com/od/funradiothingstodo/ss/blVirtualTour2_6.htm

For TV , visit Websites like: http://en.wikipedia.org/wiki/Television_studio

http://www.bbc.co.uk/norfolk/senseofplace/forum_tour.shtml

Remember websites are prone to be changed or withdrawn.

14.12   REFERENCES AND SUGGESTED READING

You may visit websites on topics discussed in this unit, like the following:

http://en.wikipedia.org/wiki/Camera_control_unit retrieved on 11.6.07.

http://en.wikipedia.org/wiki/Lavalier_microphone retrieved on 11.6.07.

http://en.wikipedia.org/wiki/Microphone retrieved on 11.6.07

http://en.wikipedia.org/wiki/Loudspeaker retrieved on 11.6.07

http://en.wikipedia.org/wiki/Waveform_monitor accessed on 13.6.07

http://searchstorage.techtarget.com/sDefinition/0,,sid5_gci295633,00.html accessed on 13.6.07

http://www.scphoto.com/html/studiolight.html accessed on 13.6.07

http://en.wikipedia.org/wiki/Video_CD accessed on 13.6.07

14.13   CLUES TO CHECK YOUR PROGRESS

Check Your Progress 1

1.   Can be accessed at time and place of choice.

2.   VHS, DVD, etc.

Check Your Progress 2

1.   The scriptwriter designs the script for the programme, suggests visuals, graphics, music and effects

2.   It involves drawing out the whole floor to give a bird's eye view of the placement of furniture and other things.

3.   The editing process constitute, selecting and combining the suitable sounds and video after they have been recorded and adding the special effects in the postproduction. In the digital recording editing can take place both in production as well as in the postproduction. Editing process enables the producer to physically assemble the audio and video fragments into a coherent message on a master video tape.