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Module V

Audio Aids

Unit 4

Sound Recording Principles  
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Instructional Objectives:

1. State the reason for avoiding taping (recording)  
near fluorescent light or high voltage power lines.
2. Suggest methods to improve accoustic conditions  
of a room which is not otherwise accoustically  
treated.
3. Distinguish between monophonic and stereophonic  
recording.

## AUDIO VISUAL EDUCATION

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INTRODUCTION:-

Recorded sound can be used as individual tape recordings, disc recordings (records for playing in a record player) or in conjunction with visuals with a slide series or with filmstrips, or in a motion picture. You know that motion pictures sound is either magnetically recorded or optically recorded sound on the film itself. The tape recording can be either on a reel-to-reel tape of a tape recorder or in a cassette tape of a cassette tape recorder. In any type of recording, you must prepare the matter to be recorded in advance. The sentences should be simple, easy to understand and clearly recorded with a voice that could be heard alike by one and all in a classroom.

THE NARRATOR AND SCRIPT:-

The narrator should speak clearly and read the script in a conversational tone while still communicating with proper feeling and expression. It has been said many that men's voices are more easily understood on a recording than are women's. Have the narrator study the script carefully. The script should be marked with indications where points are to be emphasised. You should verify the pronunciation of proper names and special terms, and indicate it in the script. The script should have all cueing places plainly marked.

MUSIC AND SOUND EFFECTS:-

There is a feeling that we must have music with narration. But it has been reported by Jerold E. Kemp in his book Planning and Producing Audio Visual Materials (1975) that background music is not essential to effective communications with audio visual materials. It is also said that in some instances, it interferes with the message. But music as background for titles will assist projectionists to set

the volume level of the narration that follows. If for any reason, you use music under narration, be careful that it is set at a low level, so it does not interfere with your commentary or compete with the picture for the viewers attention. When you select any musical background do not select one with too much pop music or classical music in it. Maintain an even tempo and volume that are more desirable than popular or classical selections, which may dominate than your narration or visuals. Though we have cassette recordings to go with any audio visual aid, you normally record in a reel-to-reel tape with a higher fidelity and transfer on to the cassette. For 16 mm magnetic sound recording also you transfer the recording to the film from a reel-to-reel tape.

Here are some tips before you record sound, of good quality.

1. Use accoustically treated and sound proof room.
2. Alternatively you may use draperies and carpeting for your room.
3. Avoid metallic, stone, or other hard surfacings on walls, or floors.
4. Any extraneous noise like fan, air-conditioner, projector, tape recorder, motor, should be avoided.
5. Close proximity of flourescent lights or high voltage power lines can cause hum and this may be picked by microphone.
6. If you cannot separate the microphone from other parts of the recording system, try to use a blanket other sound absorbing materials between them.

#### TIPS FOR RECORDING:-

##### TAPE RECORDER:-

Even though you may ultimately use a cassette recorder, for better quality recording you may record the sound on a reel-to-reel tape and edit the tape if required, before transfer to cassettes or on a magnetic recording on 16 mm film.

##### MICROPHONE:-

A dynamic microphone is better than ceramic or crystal types as it is capable of reproducing wider range of tones. Set it on a stand, table or a pillow or blanket, and keep at least 30 cm away from it.

SPEED OF RECORDING:-

A speed of  $3\frac{3}{4}$  " per sec, is good enough for voice. If music of higher fidelity is required,  $7\frac{1}{2}$  i.p.s. is preferable. Some professional educational tapes  $7\frac{1}{2}$  i.p.s. also record on. You may also transfer this to another tape at  $3\frac{3}{4}$  i.p.s. or a record (disc), using a patch cord, directly than through the microphone to avoid extraneous noise.

STEREO RECORDING:-

A better way of recording is to use the stereo recording system. You may record voice on one channel (track) and sound effects or music on another, in the same direction. That is you record your narration on the first, go back again to beginning and record music and sound effects on the second or you may give cues or directions also in the second track. If mistakes are there, or revision is to be done, only one track has to be changed and erasing and re-recording can be done with less difficulty. Then the two tracks can be played together as a single composite sound track, but you require separate control for recording and playback for each channel (track).

PREPARATION FOR RECORDING:

The quality of recording depends primarily on

1. Proper microphone use.
2. Regulating volume level.
3. prevention of extraneous noise on the tape.

You are advised to follow these practices:-

- \* Attach microphone to a stand or
- \* Place it on a table with sound absorbing tower or blanket under.
- \* Speak at 12" distance from the microphone.
- \* Check for volume level each time and select moderately high volume setting.
- \* turn off fans and other apparatus that make noises that will have picked up by your microphone.
- \* Keep script such that narrator shall not change position of head much lower or higher while talking.
- \* Change pages without making noise; it is desirable to paste pages to cardboards to avoid this.
- \* Lubricate with a glass of water once in a way, while you use microphone.

AUDIO VISUAL EDUCATION

CRITERION TEST

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Sound Recording Principles

1. For monophonic reproduction we require a minimum \_\_\_\_\_ speakers. (one, two, three, four)
2. For stereophonic reproduction in a tape recorder, we require essentially \_\_\_\_\_ tracks to record. (one, two, three, four)
3. It is said that fluorescent lights within the vicinity of tape recording should be avoided. State the reason..
  - a.
4. You are to produce a good quality audio recording and do not have an accoustically treated room. Suggest an alternate simple and economical way to improve the room condition for recording purpose.
  - a.
  - b.
5. When you select a stereo system, in addition to its use as a normal stereo recorder, can you from what you have learned on the potentialities of the system say which one of the following is not a possible additional use of stereo system in teaching learning process.
  - a. Instructional sequence can be recorded on one channel and confirmation of answers in the other channel.
  - b. Stereo on second channel can be used for adding echo effects, multiple recordings like machine sound, cutting sound, water or oil dripping sound, or other similar relevant sound effects separately without disturbing the main recording on the first channel.
  - c. Question and answer sessions from two sources can be recorded easily and without compilation with two separate voices on two channels on two or more different occasions.
  - d. Simultaneously recording of the same voice on both channels so that you can hear from both speakers kept in the class the same voice clearly.

## AUDIO VISUAL EDUCATION

KEY TO  
CRITERION TEST

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1. For monophonic reproduction we require a minimum of one speaker.
2. For stereophonic reproduction in a tape recorder, we require essentially two tracks to record.
3. It is said that fluroscent lights within the vicinity of tape recording should be avoided. State the reason.  
Causes hum.
4. You are to produce a good quality audio recording and do not have an accoustically treated room. Suggest an alternate simple and economical way to improve the room condition for recording purposes.  
Carpeting; draperies.
5. When you select a stereo system, in addition to its use as a normal stereo recorder, can you from what you have learned on the potentialities of the system say which one of the following is not a possible additional use of stereo system in teaching-learning process.
  - a. Instructional sequence can be recorded on one channel and confirmation of answers in the other channel.
  - b. Stereo on second channel can be used for adding echo effects, multiple recordings like machine sound, cutting sound, water or oil dripping sound, or other similar relevant sound effects separately without disturbing the main recording on the first channel.
  - c. Question and answer sessions from two sources can be recorded easily and without compilation with two separate voices on two channels on two or more different occasions.
  - \*\* d. Simultaneously recording of the same voice on both channels so that you can hear from both speakers kept in the class the same voice clearly.