

Training Students in A-V Operation

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THERE are many types of visual materials in use in the teaching field today. Some of these are objects, specimens, models, charts, graphs, maps, and pictures of many kinds, including those projected. Since the teacher of today is called upon to impart correctly, quickly, and efficiently those skills which young people need to serve best their country and themselves, he seeks the tools which will help him accomplish his job most effectively. Some of these take the form of projected pictures, with or without sound. Smooth and effective use of visual aids requires careful consideration of a large number of closely related problems. The adequate consideration of the problems in the selection of proper equipment, materials, and trained teachers or projectionists will solve a major portion of obstacles that go with poor and expensive presentation of visual materials.

Some of the reasons for the failure of teachers to use visual materials is that they have not been trained in the use of the equipment and there was no one in charge of coordinating the Audio-Visual program.

Audio-Visual materials are now recognized throughout public education as a vital means of teaching, and the main problem is to put the equipment and personnel into the schools.

In order to help solve this problem the Tom S. Lubbock High School has

a class of approximately thirty students, which is organized each semester on an alternating extracurricular basis. After the students have become thoroughly familiar with the operation of all types of Audio-Visual equipment



The Audio-Visual Department designed a portable cart with which to transport projection equipment up and down stairs. The picture above shows how easily this portable conveyance can be handled by one student. Note how conveniently all of the equipment that is needed to show a 16mm film can be carried on this cart, and how the very nature of its compactness assures the safe handling of the equipment.

used in the school, each student is given an assignment slip for some type of Audio-Visual service to be rendered during his study period. The student reports to the Audio-Visual office at the beginning of his study period, checks out the needed equipment, and goes immediately to the room in which the equipment is to be used. The student has the responsibility of transferring the equipment to and from the Audio-Visual office. After the teacher requisitions the Audio-Visual materials she desires and designates the date and time, her sole responsibility is to explain to the student projectionist the order in which the material is to be used. Should the equipment be used in the same room all day, the first period projectionist is responsible for picking up the equipment and delivering it, and the last period projectionist is responsible for returning it to the Audio-Visual office.

This department also offers a production service in the field of photography and visual materials. The students produce filmstrips, slides, and materials for all departments as requested by the teachers. An example of this is a series of 30 slides entitled "The Shakespeare Country" made for the English Department.

Audio-Visual students also operate equipment for Civic Clubs and earn \$1.50 per hour for their services. This is done quite often in the auditorium using the 16mm arc projector.

The following course of study was designed for use in Audio-Visual classes organized on an alternating extracurricular basis of high school level.

This course of study is written on a daily basis so that it may be adjusted to any type of class schedule.

FIRST DAY:

A general outline of the course should be presented giving the following points:

1. Credit (school).
2. Duties of projectionist.
3. Description of types of audio-visual equipment used by school.
4. Part of period used in observation of equipment.

SECOND AND THIRD DAY:

A general discussion of parts of 16mm projector. This is used to make operation and adjustment of 16mm projectors easier for operators. The instructor should use the machine itself for this purpose. After a general discussion of the parts of the projector, have each student orally name all parts. Through this procedure of repetition the group will get a good working knowledge of the 16mm projector.

FOURTH DAY:

Use the opaque projection and threading charts to discuss the principles of threading a 16mm projector. Project charts on screen and emphasize the following points:

1. Take care in determining whether the sprocket holes match with those in film.
2. Point out the size of loops and the reason for their being the correct size.
3. Explain the function of the intermittent gear.
4. Discuss the principles of the coordination of sound with picture through the sound drum.
5. Demonstrate the threading practice and the rewind practice.

FIFTH DAY:

Films to be shown:

"Facts about Films" followed by discussion period.

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SIXTH AND SEVENTH DAY:

Film to be shown:

"How to Splice," following by discussion and demonstration on the splicer. Each student should be given the opportunity to make at least 3 splices on the machine.

EIGHTH DAY:

Complete procedure should be practiced on setting up equipment in a classroom. Courtesy by the projectionist should be stressed throughout this procedure.

NINTH DAY:

Procedures of threading, operating, putting up screen, and operating amplifier should be reviewed and practiced.

TENTH DAY:

Continue practice on setting up equipment and threading machine.

ELEVENTH DAY:

Discussion and demonstration on the malfunctions of the 16mm.

EXAMPLE:

1. Breakdown of film during showing
2. Loose connection in speaker jack
3. Failure to turn on speaker button
4. Paper in exciter lamp
5. Speaker plug in mike jack

TWELFTH DAY:

A general discussion on parts of the arc projector. The opaque projector and threading charts may be used in discussion. Discussion on the operation of screen and equipment in an auditorium and general safety precautions should follow.

THIRTEENTH-FIFTEENTH DAYS:

During these three days not more than five students at one time should be taken into the projection booth. The time in the booth should be spent in demonstration of arc operation. Each student should go through the complete procedure of operation. (Safety precautions should be stressed at all times.) The following pages include the safety precautions to be used in a projectionist booth and a procedure sheet for operation of an arc projector. Include in one of these days a demonstration on the arc by a representative from a local company.

SIXTEENTH DAY:

The class should be assembled on stage and a demonstration of the operation of curtains and screen should be given with each student doing complete operation.

Safety Features for Lamphouse

1. Always be sure the douser is open when machine is running.
2. In case of a film break, close douser, then shut down the machine.
3. When starting off, never open

douser until machine is running at maximum speed.

4. Clean lamphouse with soft cloth after every day's showing. Clean reflector with soft cloth and glass cleaner before each day's show. Never put cleaner on reflector while it is hot. Keep all soot ash cleaned off of it thoroughly with soft cloth.
5. When striking the arc, move carbons away from each other as soon as possible, not jerkily, to prevent black soot and ash from collecting on reflector.
6. Never look at arc with the naked eye.
7. Always be sure the points of carbon are on the lines of the scope. Too much deviation can harm lamphouse, and it will prevent a poor picture on the screen.
8. Never touch a carbon that has just been taken out of the lamphouse as it is very hot.
9. Do not try to make adjustments in rate of speed, etc. (unless sponsor is present or at his orders.)
10. Pay attention to what you are doing at all times.

Procedure to Follow When Entering Booth

1. Turn on main booth switch.
2. Open window ports.
3. Dust off and clean machine.
4. Clean lamphouse good inside and out.
5. Clean reflector thoroughly with Windex and soft cloth.
6. Thread machine.
7. Turn on sound amplifier.
8. Check carbon to see if there is enough to burn the reel you have threaded.
9. Turn on rectifier.
10. Stride arc.
11. Start machine.
12. Open douser as soon as the machine has reached the maximum speed yet wait long enough to keep any numbers etc. off screen.
13. After reel is over close douser after "The End" has been on screen a reasonable length of time.
14. Turn off machine.
15. Turn off rectifier.
16. Rewind film.
17. Clean out lamphouse.
18. Clean off reflector with soft DRY cloth.
19. Clean off the machine.
20. Turn off the sound.
21. Close all window ports.
22. Be sure that the film has been put in the right can.

23. Turn off main booth switch.
24. Look back to see if you have missed anything.

NEVER TRY TO CLEAN THE REFLECTOR WITH ANYTHING SUCH AS WINDEX WHILE IT IS HOT. ALL CARBON DRIPPINGS SHOULD BE EMPTIED BEFORE THE SHOW. THE TRAY IS COOL AND MUCH EASIER TO HANDLE.

THE MACHINE SHOULD BE OILED AT REGULAR INTERVALS BY ONE PERSON.

CLEANLINESS IS PARAMOUNT AND SHOULD BE OBSERVED AT ALL TIMES.

NO SMOKING WILL BE TOLERATED IN THIS BOOTH AT ANY TIME BY ANYBODY.

THESE RULES SHOULD BE FOLLOWED TO THE LETTER UNLESS CHANGED BY THE AUDIO-VISUAL SUPERVISOR.

SEVENTEENTH AND EIGHTEENTH DAYS:

Since the recorder is the next most frequently used piece of audio-visual equipment, two days should be allotted to the recording machine. A general discussion of the parts would be satisfactory for the recorder. Each student should go through the complete threading, recording, rewind, playback, and P.A. Transfer of recording. (Specific instruction should be given on recording button and its use.)

NINETEENTH DAY:

The splicing of recording tape and a review of the recorder.

TWENTIETH DAY:

A general discussion of the parts of the filmstrip machine and its principles of operation. The opaque projector may also be covered on the same day.

TWENTY-FIRST DAY:

A complete day should be given on instruction on the operation of stage light and location of fuses.

TWENTY-SECOND DAY:

Field trip to a local theatre.

TWENTY-THIRD, TWENTY-FOURTH, TWENTY-FIFTH DAYS:

The basic fundamentals of Parliamentary Procedure should be covered so that student may have a working knowledge for club use.

TWENTY-SIXTH DAY:

Skill speed tests on 16-mm should be covered about this time to improve student skill in setting up equipment.

TWENTY-SEVENTH AND TWENTY-EIGHTH DAYS:

Student in this type of course will use the P.A. system very little during the year but since this type of equipment is very closely related to audio-visual, there should be about two days allotted to study the P.A. either before or after school. The group should be divided in half and report on separate days. Also some local company might

THIRTY-FOURTH, THIRTY-FIFTH, THIRTY-SIXTH DAYS:

Mid-term students will be enrolling in class about this time, and provision should be made to check them out on all audio-visual equipment. This may be done by assigning a projectionist to each new student for complete instruction. This will give the projectionist a good review of all equipment.

The rest of the year should be allotted to the production class with field trips, speakers, and demonstrations by local businessmen about every three weeks.

LUBBOCK HIGH SCHOOL AUDIO-VISUAL SERVICES REQUISITION			
Dept. _____	Teacher _____	Date _____	
Check One: Film _____	Filmstrip _____	Record _____	Tape Recording _____
Source: Name of Co. _____	_____		
Street _____	_____		
City and State _____	_____		
Title _____	_____		Catalog No. _____
Room number in which film is to be shown _____	Rental Price _____		
Preview date _____	and period _____		
Show date _____	and period _____		
Alternate dates for showing _____	_____		

This individual teacher requisition form gives all the information needed to order film, and this is all each teacher has to do to schedule a film. The procedure is systematic, efficient and time and trouble saving.

give a demonstration on the use of this equipment and each student should be examined on the use of this equipment.

TWENTY-NINTH DAY:

The projectionist at some time may be called upon to operate a portable amplifier and spotlight equipment. Each student should be thoroughly familiar with the use of this equipment.

THIRTIETH DAY:

Field trip to radio station.

THIRTY-FIRST DAY:

In order to make a course of this type more interesting, photography may be added in a minor way. This may be done by turning the class into a production class for audio-visual materials for the faculty. A general discussion should be given at this time.

THIRTY-SECOND DAY:

A general review of all equipment.

THIRTY-THIRD DAY:

Discussion of the theory of Intermittance with work sheets for each student.

PROJECTIONIST ASSIGNMENT

NAME _____
FILM _____ TAPE RECORDER _____
FILMSTRIP _____
FILM TITLE _____
SHOW DATE _____ PERIOD _____
RM. _____
SPECIAL EQUIPMENT _____
TEACHER'S NAME _____
AUDIO-VISUAL COORD. INITIAL _____
TEACHER'S INITIAL _____

The following forms are used in connection with our Audio-Visual Program. The Projectionist Assignment pass gives each projectionist all the information needed to carry out each assignment. Using this pass, assignments may be made weeks ahead.

Estimated use of the following Audio-Visual Equipment by periods for the school year 1954-55.

3 16 mm Projectors	1557 periods
2 Tape Recorders	634 periods
5 Filmstrip Projectors	558 periods
1 Arc Projector	207 periods
3 Record Players	414 periods
Total number films shown	519 periods
Slides (2x2) Construction	481 periods