

SEMINAR ON PROJECTED AIDS

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DEFINITION OF AV AIDS



- Audio visual aids are anything by means of which learning process may be encouraged or carried on through the sense of hearing or sense of sight.
 - Goods ,Dictionary of education.
- Audio-Visual Aids are those devices by the use of which communications of ideas between persons and groups in various teaching and training situations is helped. These are also termed as multi sensory materials.

-Edgar Dale

DEFINITION



- “Audio visual aids are any device which can be used to make the learning experience more concrete , more realistic and more dynamic”

-KINDAR S JAMES

- Audio-Visual Aids are those sensory objects or images which initiate or stimulate and reinforce learning.

- BURTON

PRINCIPLE'S IN THE USE OF AV AIDS



- Principle of selection
- Principle of preparation
- Principle of physical control
- Principle of proper presentation
- Principle of response
- Principle of evaluation

Values of AV-Aids



- Best motivators
- Antidote to the disease of verbal instruction
- Clear images
- Variety
- Opportunities to handle and manipulate
- Retentivity
- Helpful in attracting attention
- Helpful in fixing up new learning
- Saving of energy and time
- Vividness
- Meeting individual difference

Values



- Encouragement to healthy class room interaction
- Spread on education on a mass scale
- Promotion of scientific temper
- Development of higher faculties
- Reinforcement to learners
- Positive transfer of learning and training
- Positive environment for creative discipline

Characteristics



- They should be meaningful and purposeful
- They should be accurate in every aspect
- They should be simple
- They should be cheap
- They should be up to date
- They should be easily portable
- They should be according to the mental level of students
- They should be motivate the learners
- They should be large enough to be properly seen by the students for whom they are meant
- They should be improvised.

ADVANTAGES OF PROJECTED AIDS



- Provides greater enjoyment in learning
- Stimulates more rapid learning
- Increases retention: larger percentages and longer retention
- Compels attention
- Enlarges or reduces actual size of objects
- Brings distant past and the present into the classroom

ADVANTAGES



- The mental reaction of the pupils to audio-visual experience is both intellectual and emotional.
- 86 % of our sense knowledge is attained through seeing and hearing and hence is the use of audio-visual aids
- A-V Aids provide first hand experience to the children and hence the learning becomes interesting real and durable.
- A-V Aids help the learner to grasp quickly and retain the experience so received longer.
- They make a lasting impression on the minds of the learners.

“one picture is worth a thousand words”



- **They make learning**
 - realistic,
 - permanent,
 - natural and
 - easy.

FUNCTIONS OF projected AIDS



- They supply a concrete basis for conceptual thinking and hence, reduce meaningless word response of students.
- They have high degree of interest for students.
- They make learning more permanent.
- They offer a reality of experience which stimulate self activity on the part of pupil. 5. Develop continuity of thought; this is especially true of motion pictures.
- They provide experience not easily obtained through other materials and contribute to the efficiency, depth, and variety of learning.

NEED AND IMPORTANCE



- Motivate students mental and physical activity
- Save time
- first hand experience by looking at concrete things, living specimen, handling apparatus and actual demonstration etc. Pupils to have clear conception of ideas, information, facts and principles.
- Help to bring a change in the atmosphere of the class.
- Provide a congenial atmosphere in the class.
- Help to develop scientific attitude and get a training in scientific method.
- Large number of students can taught at a time.
- Most convenient, easy and natural way of learning.
- make learning effective and durable

CLASSIFICATION OF **AV AIDS**

- 1. PROJECTED AIDS**
- 2. NON-PROJECTED AIDS**



PROJECTED AV AIDS



- **Opaque projectors**
- **Slides**
- **Film strips**
- **Overhead projectors**
- **LCD panels**
- **Slide projector(magic lantern)**
- **Epidiascope**
- **Slide cum film strip projector**
- **Films (video materials)**

NON PROJECTED AIDS



- **Cartoons**
- **Charts**
- **Comics**
- **Diagrams**
- **Flash cards**
- **Graphs**
- **Maps**
- **Photographs**
- **Pictures**
- **Posters**
- **Printed material**
- **Black board**
- **Bulletin board**
- **Flannel board**
- **Magnetic board**
- **Diagrams**
- **Models**
- **Puppets**
- **Specimens**

PROJECTED AIDS



1. OPAQUE PROJECTOR





OPAQUE PROJECTOR

- a device which displays opaque materials by shining a bright lamp onto the object
- A system of mirrors, prisms and/or imaging lenses is used to focus an image of the material onto a viewing screen

Opaque projector

- projectors require brighter bulbs
- larger lenses
- Care to be taken to prevent material damage
- Not very common

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Opaque projector WORKING

-CONT



- Opaque projector, built of large black
- Consists two mirrors at top & bottom; 1000w bulb
- Light rays passes through the first mirror, then to the object, light rays from the illuminated picture then focuses to the second mirror , then it is projected to screen by using a convex lens
- then the picture want to project is placed on the plate and handle is fixed again , then switch on light

OPAQUE PROJECTOR

-CONT



- PAXISCOPE
- Project images or printed matter or small opaque objects on a screen
- Works as epidiascope and diascope
- Principle
 - Horizontal straight line projection

PRECAUTIONS THAT SHOULD BE TAKEN FOR OPAQUE PROJECTOR



- handled carefully
- Protected from breakage
- away from moisture
- kept clean
- preferably kept in a cool room
- switched off when not in use.

ADVANTAGES



- graphic aids are projected with magnification
- tracing enlarged images
- no need of clipping picture from book resources
- Flat specimen like coins, cloth pieces, leaves etc. can also be projected
- seen conveniently by a large number of students
- Teaching material of various sizes can be used
- language reading lessons
- stamp size to that of 20cmx250cm size pictures.
- helps in preparation of graphic aids

DISADVANTAGES



- Demands total darkness
- Bulky machine
- Electricity required
- Difficult maintenance

PROJECTED AIDS

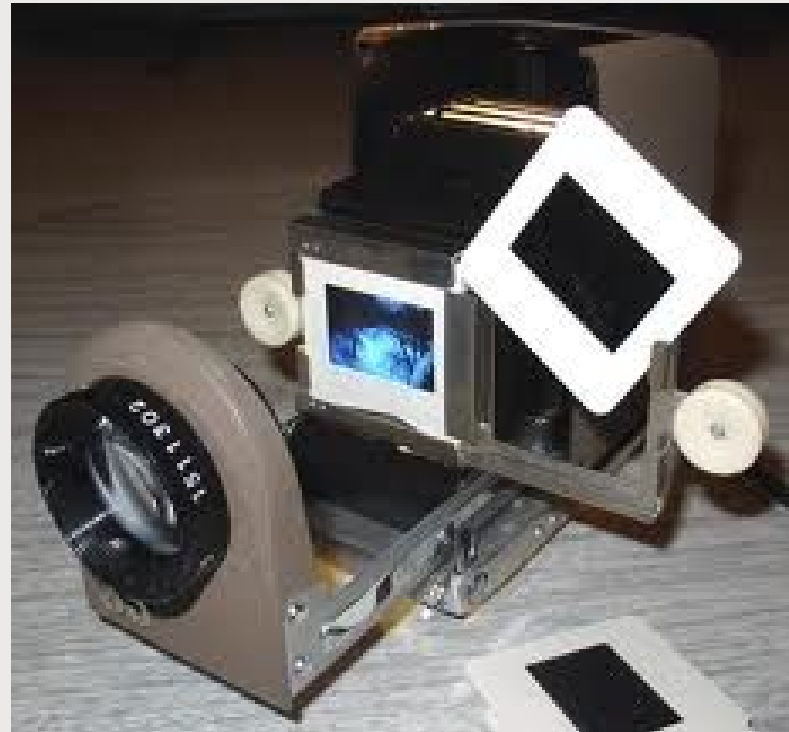


2. SLIDES



SLIDE

A slide is a still transparency of 70mm, 35mm or 6mm size which is optically enlarged and projected on a screen as a real image



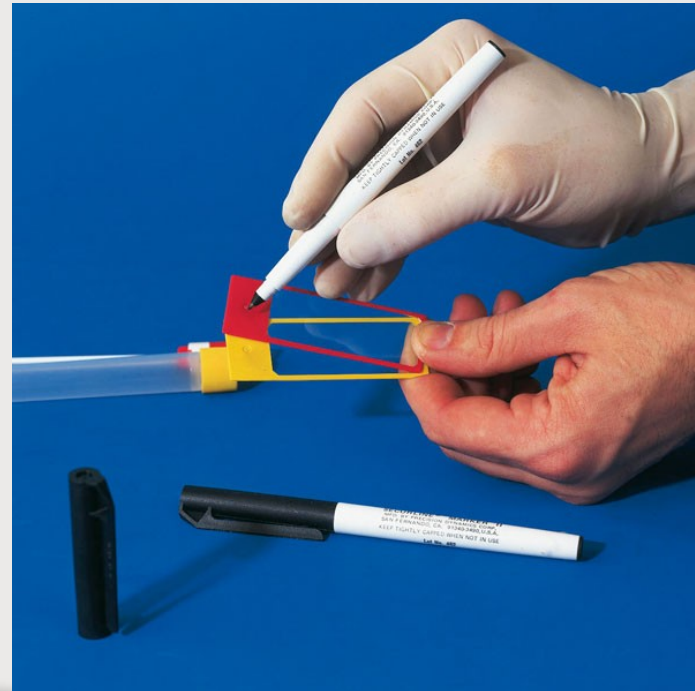
4 KINDS OF SLIDES CAN BE MADE BY TEACHER



- Marker slides
- Cellophane slides
- Silhouette slides
- Etched glass slides

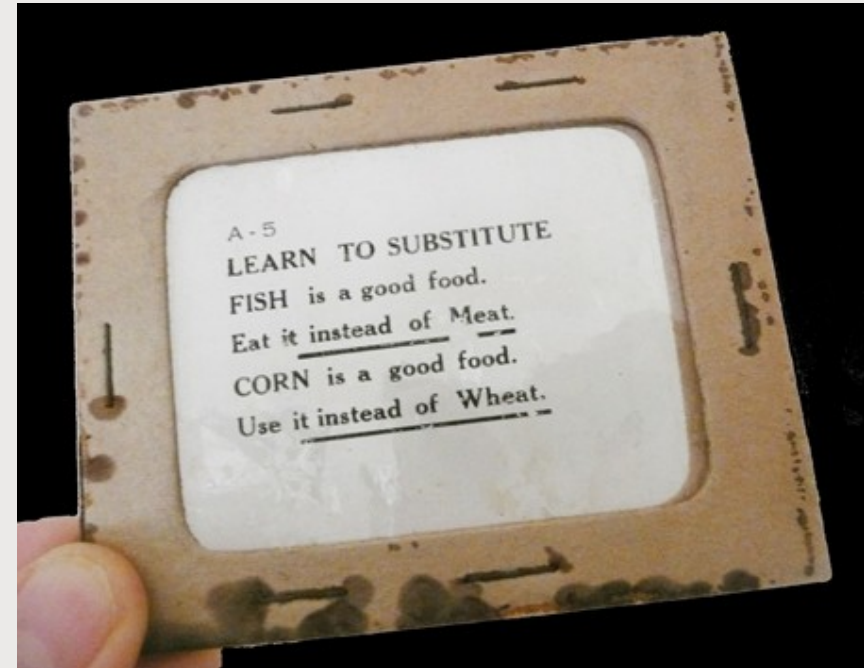
Marker slide

- a clean glass piece of right size
- Draw picture or a diagram is with a fine tip marker pen
- Hold glass piece in cardboard or wooden frame



Silhouette slides

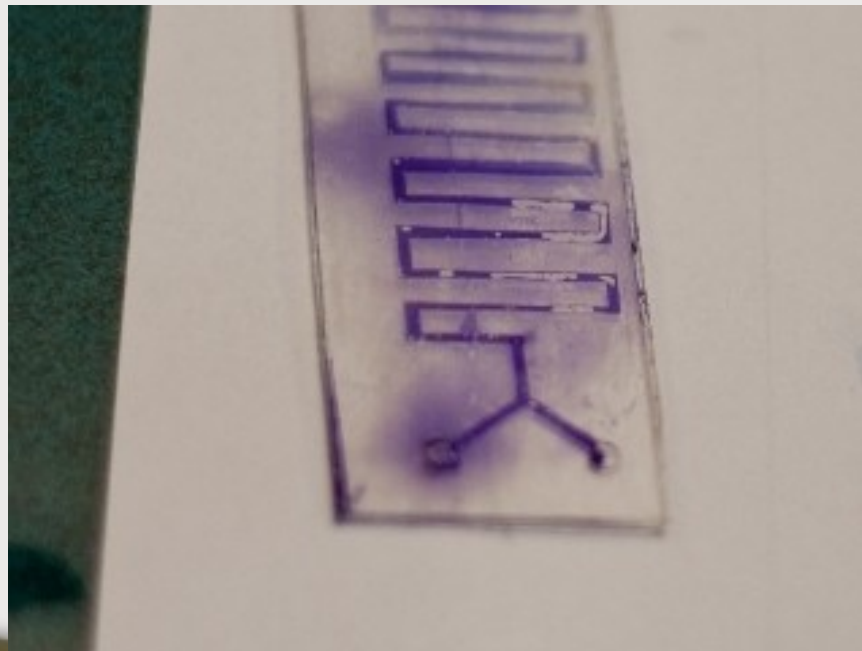
- small cut outs from colour cellophanes are plated on the glass piece
- another glass piece is plated over it
- two are taped together
- Or by drawing on cellophane piece and sticking it onto the glass piece



ETCHED GLASS SLIDE



- clean a glass piece thoroughly
- rinse it with kerosene
- Draw the diagram with crayon glass marking pencil





ADVANTAGES OF SLIDES

- They attract attention
- They arouse interest
- They assist lesson and development
- They test student understanding
- They review instruction
- They facilitate teacher student participation

DISADVANTAGES OF SLIDES



- More time consumes for preparations of slides
- They can only be seen with the help of slide projectors
- Students can't see the slides with the naked eyes
- Expensive material is used for making the slides
- Many errors occurs during preparation



Projected aids

3. Film strips



FILM STRIP



- A filmstrip is one of the projective audio visual that a fixed sequence related still on a roll of 35 mm film.
- The filmstrip can be projected backside of the map as convenience of the teaching situation demand.
- A large number of subjects come with in the range of filmstrips.
- The teacher only needs to tap the right type of strip for his teaching purpose.

Preparations of Film strips



- Filmstrips can be prepared either by employing photographic methods or by drawing picture by hand on the film itself.
- The steps in preparation are
- Select a suitable topic from the syllabus after considering the possibilities of depicting the subject matter by drawing photographs.
- Prepare a detail script describing the contents of each frame indicating the method of preparing it.
i.e. whether by at work or by photograph.

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- Make rough sketches of the figure on the paper so as to serve as guide when final sketches are drawn
- Draw the sketches in suitable size
- Arrange the drawings & enlarged photographs
- the material in correct sequence thus arranged using 36mm film camera & prepare negative.
- Prepare the guidebook, which is to follow the filmstrips explaining the details of each frame.

PRECAUTION WHILE USING FILM – STRIP



- The Film strip, because of its fixed sequence, is not as flexible for individual stills as the slides, which can be in any order.
- The film strip is a “skill” medium .It cannot portray effectively and is not intended to do so.
- The film strip is easily damaged and is not easy to repair.
- For presenting film strips in the class room teacher need to analyses the significance of the use of strip for educational purpose.

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- Determine the lessons that could be effectively illustrated with a strip.
- Preview film strip before using them.
- Show again any part of the film strips needing more specific study.
- Use film strip to stimulate emotions built attitude and to point out our problem.
- Use a pointer to direct attention to specific details on screen.

Advantages



- It is an economical visual materials
- It is easy to make and convenient to handle and carry.
- Takes up little space and can be easily stored.
- Provides a logical sequence to the teaching procedure and the individual picture on the strip can be kept before the student for a length of time.
- Film –strip can be projected on the screen or wall or paper screen as the convenience and the teaching situation demands.
- It is available both in color & blank & white.
- Good to use – afterward, have a discussion to see whether people have understood the subject.

DISADVANTAGES

- Its frame connect be remove or substitute .
- It this becomes necessary them the strip can be cut into slides & mounted

Projected aids

4. Slide cum film strip projector





SLIDE CUM FILM STRIP PROJECTOR

- The slides and film strips are projected on a screen using an optical instrument called slide cum film strip projector
- Technology same as opaque projectors
- Cannot project 3 dimensional image
- makes use of small photographs mounted on a slide

STRUCTURE



- consists of a metal case having a concave reflector
- 500 watt or 1000 watt straight filament bulb
- set of concave lens called condenser to illuminate the slide
- slid able set of convex lenses have objective which focuses the image of the slide on the screen.
- The metal core is fitted with as small exhaust fan to blow out the excess heat.
- a slide frame or a film strip carrier

Using common slide cum film projector



- Place the slide projector on a rigid and stable table.
- Place the screen at an appropriate place
- Insert the slide projector or film strip carrier in its place after opening the tube.
- Mount a slide or film strip on its carrier
- Insert the projector cord plug into the wall socket.
- Darken the room



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- Switch on the cooling fan first and then the projection bulb.
- Focus the image
- Show the slide and explain
- Insert the next slide
- Present the slides or frames sequentially
- switch off the bulb first then the cooling fan
- unplug the slide projector and store it back in its box.

PREPARATION OF A SLIDE SHOW



- Collect all the available slides
- check them thoroughly
- Choose the slides
- Arrange the chosen slides in a proper sequence
- Darken the room
- Make proper seating arrangements for students
- start teaching
- interruption during the slide show will result in the loss of interest

CARE OF SLIDES AND FILMSTRIPS



- they require care in handling and storage
- store vertically in cardboard trays of right size
- trays should be covered
- they should be catalogued subject wise
- film strips can be placed in rolled up positions in cylindrical container
- container should be properly labelled

ADVANTAGES OF SLIDE PROJECTIONS.



- Requires simple skills
- convenient aid for making classroom teaching interesting.
- small in size
- can be stored and also carried around easily
- quite cheaper
- a logical and sequential order of presentation
- image in the screen can be held for any time interval

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- save time in teaching
- Capture attention and interest of students
- Interaction with students and group participation is possible



ADVANTAGES OF FILM STRIPS



- economical
- easy to make
- convenient to handle
- Takes up little
- can be easily stored
- Provides logical sequence
- Can use AC/DC power, batteries, or rechargeable batteries with solar panels.

DISADVANTAGES OF SLIDES AND FILM STRIP



- Need a darkened room.
- Require equipment and power that will need to be maintained.
- Sequence cannot be changed.
- Visual media only; it requires audio or printed text.
- Require professional assistance for final production.

CARE OF THE FILMSTRIP



- Keep free of dust and dirt which can scratch the filmstrip
- Keep dry because moisture can cause the emulsion to become sticky.
- Then the film will stick together and be destroyed.
- Keep oily hands off the film as they can leave residue on the film.
- Keep away from excessive heat which can cause the film to warp.

STORAGE OF THE FILMSTRIP



- Store in containers away from heat, dust, moisture
- When winding up the filmstrip, hold onto the edges
- Do not pull to make it tighter as this can leave scratches on the film

CARE OF THE EQUIPMENT



- Don't handle projector while the bulb is still hot as the bulb filament is fragile.
- Pack equipment carefully for safe transporting.
- Protect from the environment, dust, dirt, moisture

PROJECTED AIDS

5. OVER HEAD PROJECTOR



OHP



- An OHP is an important electronic teaching aid.
- This machine projects an image from a transparency
- It will be advisable to switch off the bulbs of OHP for 5 minutes after every 10 minutes of use.



PREPARING TRANSPERENCIES



PREPARING A TRANSPARENCY



- prepared by writing on cellophane sheets with the help of an OHP pen
- Coloured pens
- Xeroxing from any printed material
- besides single transparency can be used on a roll

RULE OF SIX FOR PREPARING TRANSPARENCIES



- Six lines per transparency
- Six words per line
- Six mm smallest letter size
- Six cm (3+3 on each side) margin

SCREENS FOR PROJECTIONS



Effective utilization of projection material necessitates careful selection of the screen. Types of screen are

- aluminium coated
- glass board
- flat white screen
- Screens should be mounted properly and at a proper angle

USING AN OHP



- Place the OHP on a stable table with the objective lens facing the screen behind the teacher.
- Put the cord plug into power wall socket.
- Switch on the blower first and then the bulb.
- Place transparency on the glass top.



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- Move the objective lens and mirror assembly up and down to get the image in focus on the screen.
- Explain about the material on the transparency from behind OHP with a strong pointer.
- The handle of the teacher should not come on the slide.
- Make your points short and simple
- Remove what is not needed.

ADVANTAGES OF OHP



- teacher can face the class without any difficulty.
- The teacher can maintain eye contact and observe the reactions of students.
- Small objects can be shown on the machine simply by placing them on projection slide.
- The graphics and writings can be shown very clearly and colourfully.
- It does not need as darkened room as compared to other projectors

SOME DO'S AND DON'T'S WHILE USING THE OHP



DO'S



- Focus and position image before presentation
- Stand to the side of the screen
- Turn off projector when not in use
- Letters the larger the better
- Use colour to attract attention
- Put captions on top.
- Have images in to two-thirds of visual position image at the top of the screen
- Use pen or ruler to point
- Use upper and lower case letters

DON'T'S



- Walk or stand in front of the screen.
- Leave the projector on when you've talking about something
- Write closely on the whole of the transparency sheet
- Have images type-written or too small
- Use black and white visuals only
- Use finger to point
- Use only capital letter

PROJECTED AIDS



6.

SLIDE PROJECTOR



SLIDE PROJECTOR OR DIASCOPE OR MAGIC LANTERN



- It is used to project slides.
- Used for projecting pictures from a transparent slide on a wall or screen.
- It helps in showing the magnified image of the slide.
- If the slide is coloured it would be more attractive.

Construction of slide projector



- Source of light (projection lamp)
- Reflector (concave mirror)
- Condensing lens
- Slide carrier
- Objective lens

Working of a slide projector



- When a figure or illustration is very small and it is required that whole class should see it clearly , a transparent slide of small figure is prepared.
- slide is placed inverted into the slide carrier part of the projector.
- The light rays emitted by the source of light and reflected by the concave mirror lying behind the lamp, are directed forward to fall on the condensed lens.

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- This lens shatters and bends these rays into strong beam of lights , which passes through the slide CD and comes to the point at the centre of objective lens.
- The objective lens spread the light rays and directs them on screen surface.
- than the image produced on the screen is enlarged, sharp and clear.

advantages



- Arouse attention and interest of the students
- Variety of educational information can be given
- Easy to transport
- Easy to use
- Economical in time
- Not costly
- Non – fragile
- Non- inflammable

disadvantages



- Not suitable for all types of educational material.
- Transparent slides can't be put to excessive use.
- Not to use for longer duration.

Projected aids

7. epidiascope



introduction



- It is the combination of episcopes and diascope.
- It projects transparent as well as opaque materials.
- It can be used conventionally in the class room.
- When it is used to project slides it works as diascope
- When it is used to project an opaque object it serves as episcopes

construction



- Projection lens
- Episcopo lens
- Body containing lamp and mirror
- Diascope attachments
- Base
- Removable top covers and ventilation vanes

working



- Source of light falls on opaque body
- Plane mirror reflects the light so that it passes through projection lens
- Forming a magnifying image on the screen , it works as episcopes
- By the movement of lever,projector can be used to project slides, thus it acts as diascope.
- In this way, there is a change from episcopy to diascopy.

ADVANTAGES



- Projection of any material.(films, film strips, slides)
- Can be used for magnification purposes.
- Can be used to deal with big classes
- Convinent use
- Motivation
- Clarification and better retention

DIS-ADVANTAGES

Its very heavy and can't be moved easily

Very costly

It requires dark room



precautions



- Material to be projected should be wisely selected
- Do not use too many pictures or things, it may confuse the students
- Items should be presented in the systematic way.

Projected aids



8. Video materials



introduction



- The video cassette recorder helps to enhance the educational and entertainment values of the television.
- The video lessons are more effective than the conventional lessons and serve as a better models as they are given by more efficient teachers.

Precautions while Using Videotapes



- Preview the videotape
- Check to be sure that the videotape is compatible with the videotape player
- Cue the videotape to the beginning of the program
- Arrange the room so that all participants can see



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- State the session objective
- Provide an overview of the videotape
- Ask participants to look for a number of specific points during the videotape
- Discuss the videotape after it has been shown
- Prepare test items based on the videotape content if appropriate

Advantages of Using Videotapes



- Source of entertainment
- Source of information
- Stimuli for discussion
- Animation can be used to show an abstract concept
- TV monitors tolerate fluctuations in voltage much better than projectors
- Video players are less expensive and easier to maintain than slide projectors

Disadvantages of Videotapes

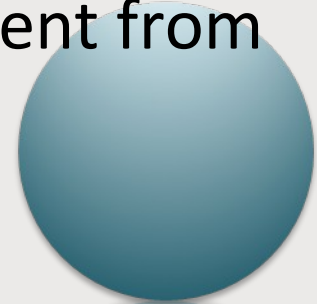
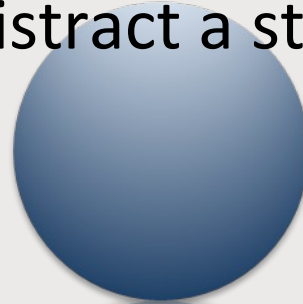
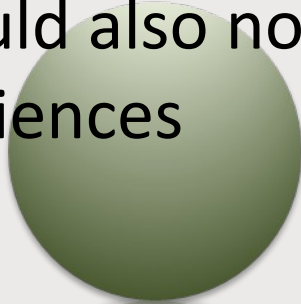
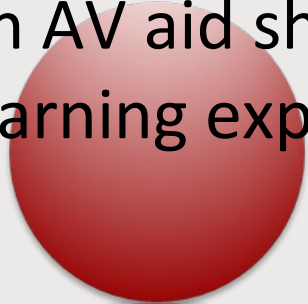


- Commercially prepared videotapes are often outdated
- Videotapes may have been edited and omit or rearrange key training steps in the procedure
- Participants may be distracted by cultural differences

CONCLUSION



- Audio Visual Aids are very useful for the teaching process
- audio-visual are great tools to catch the audience attention
- It is important to use variety of teaching methods for students with varying preferences
- An AV aid should also not distract a student from learning experiences



Thank you !

