

OVERHEAD PROJECTOR

THE OVERHEAD PROJECTOR is a device for projecting matter written (or drawn) on a transparent plastic sheet (25x20cm) on to a screen. It uses a lamp, lens and mirror arrangement. The versatility of the overhead projector has made it a powerful teaching tool and it has largely replaced the blackboard in the classrooms of affluent countries. **It has several advantages over the blackboard:**

- i) The surface area is limitless.
- ii) Material (including illustrations) can be prepared well in advance.
- iii) The teacher faces the class all the time and eye-to-eye contact is not lost.
- iv) The prepared transparencies can be preserved for future use.

The overhead projector also has several advantages over slides:

- i) There is no need to darken the room (the students may stay awake!!)
- ii) Progressive disclosure is very easy.
- iii) The services of a projectionist are not required.
- iv) Material can be prepared at short notice by the speaker himself.
- v) The material on the stage of the overhead projector can be manipulated, added to, or altered in a way that is not possible with slides.

A little effort and imagination greatly improve the effectiveness of the overhead projector. A few hints and suggestions are given below:

- 1) The projector-screen arrangement has to be such that every student in the class can see every part of the projected image with ease.** The screen may be placed at a higher level than the speaker (directly behind him) or in one corner of the room with the projector diagonally in front of it
- 2) Ensure that the smallest letter on the screen can be read comfortably by the persons in the last rows.** Each letter or character on the transparency should be **at least 8-10mm.** high. There should be no more than six words in each line and **no more than eight lines in each transparency.** Your normal handwriting is just not enough. The use of a **template is strongly recommended.**
- 3) It is best not to project the entire transparency at the very beginning.** Optimal **'progressive disclosure' of information** achieves the same objective as the sequential presentation of information on the blackboard.
- 4) A hexagonal pencil, a slide with an arrow drawn on it and plastic or cardboard arrows all make good pointers.** It is important that the pointer does not roll off the stage of the projector. **The pointer must be laid flat on the transparency and not waved around.**

- 5) Addition of material such as a label or an insert in a previously drawn diagram is very effective in driving home the information. Such a technique should be however used sparingly.
- 6) Three or four transparencies can be used as overlays on the original transparency. This technique is a very effective method of 'building up' or 'dissecting down' a complex diagram.
- 7) **Notes or cues written on a piece of paper and clipped to the mount of the transparency** will not project but can be read easily by the speaker, obviating the need to refer to separate notes. Alternatively, lecture notes can be written on large (25x20cm) sheets of ordinary writing paper which can then be used to progressively disclose the matter on the transparency. **The matter on the paper will not appear on the screen, but will be clearly visible to the speaker.**
- 8) **Opaque objects laid on the stage of the projector are silhouetted.** For instance, a Smith-Petersen nail can be placed over a rough sketch of the fractured femoral neck when the fixation of these fractures is being discussed.
- 9) Many radiographs can be projected successfully with the overhead projector. For this purpose, the classroom must be darkened. It is important to 'mask off' any bright patches of light beyond the area of interest. Dense radiographs are not suitable for use with the overhead projector.

Acetate (plastic) sheets are available in different thicknesses. The thicker the sheet, the greater is its durability, but so is its cost!!. **Felt-tipped pens specially made for use with overhead projector transparencies should be used.** Water-soluble ink can be easily removed by a damp cloth or by washing, but tends to 'rub off' during preparation or storage. Water-indelible ink is better although a little more time-consuming to erase. Alcohol (methylated spirit) can be used to erase water-indelible ink. Acetate sheets mounted on cardboard frames are very useful as the transparency does not 'fly off'. Mounting also makes alignment of overlays easy.

Never leave a visual on the screen after a point has been made and, equally important, turn off the projector light, keeping the fan running, when you are not actually projecting a transparency. The bright screen can be a distractor and the projector gets overheated if the light is left on for too long.

THE BEST COLOURS to use to write on transparency are BLACK, BLUE AND GREEN. Use red sparingly. It is not a colour that projects well.