

SECTION FOUR

Methods of Teaching

There are many different teaching methods used. Most teachers use a limited number of methods – ones that they are used to and feel comfortable with. Unfortunately, these methods may not be the best that are available. This section aims to give some guidelines about the methods that teachers should use.

Teaching the different skills and enabling factors

Let's return to our earlier example. How would we normally teach the skills, knowledge and attitudes needed here?

Teaching eye care workers to manage trachoma

Skill/enabling factor to be learnt	Suitable teaching method
Diagnosing a case of trachoma	<ul style="list-style-type: none"> Students see patients in an eye clinic, with an experienced clinician to check the diagnosis
Applying eye ointment Performing tarsal rotation	<ul style="list-style-type: none"> Demonstrate each skill, then let students perform it under supervision until they are competent
Educating people and communities to prevent trachoma	<ul style="list-style-type: none"> Let students practice educating people; give them feedback about the way they do it
Knowledge of symptoms, signs, stages, the organism, medication, anatomy, spread, prevention, etc.	<ul style="list-style-type: none"> Give a lecture covering these facts Refer students to pages in a textbook to study
An attitude of concern and caring	<ul style="list-style-type: none"> Point out examples of good and bad attitudes to the students and discuss these together

From this example a basic rule becomes clear – *for each of the domains of learning, we have to use specific and different methods to teach the objectives in that domain.*

Sometimes teachers do not understand this. This leads to the following mistakes:

- Using the wrong method altogether. For example, instead of learning practically how to communicate, students are given a lecture about communication
- Using a correct method in an incorrect way. For example, only one or two students perform a skill under supervision, while the rest only watch

A feast of methods

The generations of teachers who have gone before us have developed a large number of methods. All of these methods are now available for us to use. Here are some of the most commonly used ones, in relation to the domains of learning:

Teaching manual skills

There is really only one way to teach a manual skill, and that is to carefully demonstrate it first and then let each of the students perform the skill under supervision. Both teachers and learners can be guided by *checklists*. Students get feedback, which means that the teacher shows them where they have made mistakes. Sometimes students practise on a *model* first, before working with a real patient – for example, they can inject an orange or they can practise examining each other.

About checklists

A checklist is a step-by-step, written description of a skill that is excellently performed. Here is an example, for the skill ‘applying eye ointment’:

	Competent	Partly done	Not done
<ul style="list-style-type: none">• Greet the patient and explain what you are going to do.• Position the patient comfortably (sitting or lying down)• Check that the ointment and the prescription agree• Wash your hands• Open the tube of ointment and hold it in your dominant hand• With the index finger of the other hand, gently pull down the lower eyelid of one eye, to expose the lower fornix• With the nozzle directed toward the inner canthus, squeeze the tube slowly to allow about 1cm of ointment to emerge in a thin line inside the lower eyelid			

Checklists like this have several uses:

- Teachers use them when they demonstrate a skill, and to give feedback to students
- Students use them as a guide when they practise the skill
- Teachers use them to assess skills in an examination

Teaching communication skills

Communication skills can only be taught by making students practise them, after a demonstration, and giving feedback on their performance. We often use *role plays* to teach these skills – for example, one student gives a health education talk, while the others pretend to be a group of villagers. After the role play the teacher and the ‘villagers’ give feedback to the ‘educator’, again using a checklist of the skill.

Teaching decision-making or problem-solving skills

The most common decision that eye health care workers have to make is a diagnosis and what treatment should be given. We teach this as follows:

- We start by explaining to students how the problem-solving process works. There are two main methods that people use – the ‘**inductive**’ and the ‘**hypothetico-deductive**’ methods. Students have to know both.

Inductive method

- You collect as much information as possible about the patient or problem, and then come up with a list of possible solutions (or differential diagnosis)
- You use the information you have collected to exclude some of the solutions until you end up with the most likely one
- This is very time consuming. In real life clinicians only use this method if they really have no idea what is going on!

Hypothetico-deductive method

- You start coming up with possible solutions to the problem as soon as you have collected the most readily available information (e.g. what the patient tells you about their problem)
- You only collect further information which will help you to confirm or reject those solutions or diagnoses (i.e. 'directed' information gathering). As soon as you have a solution which is certain enough, you stop
- In real life this is the method clinicians mostly use. To use it well you have to be aware of the kinds of mistake you can make with it

- We then give students problems to solve (e.g. a clinical case), after telling them which problem-solving method to use. For the hypothetico-deductive method, we have to observe them as they work and ask them to explain, step-by-step, how their mind is working, as they collect information and begin to think of possible answers. We comment and give feedback on each step of the process, showing them where their reasoning is going wrong and why. Note that this takes time to do properly
- Such problems can also be written ones, such as *case studies* or *patient management problems*. Here we give students the information they need and ask them to diagnose the case and solve the treatment problem. Again, they have to explain, step-by-step, how they arrive at the answer so that we can give them good feedback

Teaching knowledge

Lecturing is the most common form of teaching knowledge. There are many other methods, most of which are probably better than lectures. Teachers may discuss important topics with small groups of students in *tutorials*. A group of teachers may present a *seminar* where they discuss different aspects of the same topic. Teachers may *discuss* a topic with students, drawing on what they already know about it. Teachers may arrange *educational visits* where students learn from what they see and experience. Teachers may give students *projects* to do, for which the students find the information they need themselves. If you are using a method requiring group work, it is important to keep the group size small, no more than 8-12, so that all can participate.

About lectures

There is no doubt that lectures are very popular with teachers – but are they the method of choice for teaching knowledge? Consider the following:

- Most students learn very little during lectures – they absorb the knowledge afterwards, by self-study
- It is surely a terrible waste of time to dictate notes to a hundred students, each having to take down the dictation by hand
- Studies have shown, without doubt, that lecturing leads to less retention than any other way of teaching knowledge
- The average attention span of people who sit listening to someone talking is around 10 minutes. This is why students get bored and go to sleep during long lectures.

What do you think? Perhaps it is better to 'teach' routine knowledge by giving good handouts, or referring students to pages in textbooks, for *directed private study*. Teachers should, rather, use precious classroom time to explain difficult concepts or to solve problems together. In any case there should be *interaction* between teachers and learners during lectures – the method should *stimulate* and *involve* learners, rather than boring them.

‘Teaching’ attitudes

Attitudes are relatively difficult to ‘teach’. All teachers can really do is to *help students develop suitable attitudes*. A very powerful way is by *example*, since students imitate the attitudes of their teachers. Another way is to point out examples of good and bad attitudes, and to *discuss* these with the students – why should a good eye care worker have this attitude, and not that one? You can also instruct students to reflect in writing about the attitudes that they see in other health workers and to make a commitment to themselves about what they would like their attitude to be. Teachers and supervisors observe students and can give them *feedback* on how their attitudes are developing. Another strategy is to let supervisors give students marks for the attitude they display in their work.

For those readers who would like to know more about these teaching methods, we recommend the following books:

- Abbatt, F. and McMahon, R (1993), *Teaching Health Care Workers*, second edition, London: Macmillan. The ideas in this book are more ‘formal’, in the sense that it emphasises the discipline of using the right method for the right domain.
- Werner, D. and Bower, B. (1982), *Helping Health Workers Learn*, Palo Alto, California: Hesperian Foundation. This book is a real encyclopaedia of ideas for less formal, interactive teaching.