

SECTION SIX

**Teaching and Learning
Resource Materials**

This section will deal with the criteria for selecting materials, advise on accessing teaching resources and suggest strategies for continuing education.

The Oxford English Dictionary defines the word 'resource' as 'the means of supplying a want or a need'. The *Community Eye Health Journal*, with its theme-orientated approach, has attempted to inform readers of current relevant educational materials in each issue. Readers regularly request learning and teaching resources, but are these always appropriate and used effectively?

Selection criteria

Context and relevance

Choosing material because someone has recommended it as 'a really good resource' does not ensure it will be effective. It is therefore important to consider:

- **Who** the users will be

Are they health workers, professionals, Ministry of Health officials, schoolteachers, or patients? Are the materials needed for eye care education for those working at primary, secondary or tertiary level?

- **Where** the materials will be used

Will it be in a lecture hall, classroom, community room?

- **What** facilities will be available

Will there be suitable seating arrangements, a projector, flipcharts, computer, videotape player, good lighting, blackout blinds?

- **How** the materials will be used

Will the teaching method used be didactic, interactive, group work, project assignments?

Format

Many formats are now available. Photographs, slides, overhead transparencies, videotapes, DVDs and CD ROMs are useful visual aids to complement didactic teaching or written text. The best way of teaching the subject may however be face-to-face teaching, where the teacher conveys her/ his experience by means of demonstration, practice and supervision in a clinical situation. Posters are very popular for teaching purposes but care must be taken to display them in appropriate places – stairways can prove unsafe and nervous patients will not appreciate clinical or pathology pictures in a waiting area!

If we make teaching materials for ophthalmic patients to use (e.g. patient information leaflets for health education and promotion) it is vital to prepare these in accessible formats such as large print. Audiotapes are particularly appropriate for reinforcing verbal information given to ophthalmic patients.

There are many advantages and disadvantages to consider when choosing formats.

Teaching and Learning Resources – Uses, Advantages & Disadvantages

Format	Uses and advantages	Disadvantages
Video	<ul style="list-style-type: none"> • Shows real situations • Demonstrates skills, attitudes and behaviour (good and bad!) • Can be stopped to allow discussion • Self-teaching 	<ul style="list-style-type: none"> • Screen must be large enough for the size of audience • Equipment may be expensive or unreliable and should be transportable • May need room blackout
Slides	<ul style="list-style-type: none"> • Can convey complex information e.g. bar graphs, pathology • Uses large screen – good for lecture halls • Easily transportable • Teacher can be selective and flexible in choice of image and message • Often supplied with supporting text 	<ul style="list-style-type: none"> • Equipment not as easily transportable as the slides • May need room blackout
Overhead transparencies	<ul style="list-style-type: none"> • Cheap and easy to produce • Overlays can build up information. Flexible – useful for any size of audience • Equipment available in transportable size and reasonably priced 	<ul style="list-style-type: none"> • Spare bulbs should always be available • Teacher can obstruct view • Written information must be large enough to be read by all the audience • May need room blackout
DVD / CD ROM	<ul style="list-style-type: none"> • Interactive • Sophisticated and complex text • Easily transportable 	<ul style="list-style-type: none"> • Requires expensive equipment • Prohibitively expensive connection charges in some countries • Potential for information overload Skills needed to access only appropriate material
Internet	<ul style="list-style-type: none"> • Up to date information • Free availability of many materials – can be downloaded 	<ul style="list-style-type: none"> • No guarantee of quality
Textbook	<ul style="list-style-type: none"> • Familiar and trusted reference tool • May reflect specific course content • Durable 	<ul style="list-style-type: none"> • Individual user only • Expensive to buy and deliver in bulk
Booklets Leaflets Handouts	<ul style="list-style-type: none"> • Home-made versions can be produced cheaply • A good handout will reinforce important points of a topic 	<ul style="list-style-type: none"> • Teacher sometimes tempted to photocopy full articles to act as a handout, which are not applicable • Commercially produced items can be expensive and contain advertisements • Usually produced in bulk – can be wasteful
Posters Charts Displays	<ul style="list-style-type: none"> • Raise awareness • Conveys information on other sources – contact details, etc. • Home-made versions can be produced cheaply 	<ul style="list-style-type: none"> • Can be difficult to transport • Needs lamination • Written information must be large enough to be seen at a distance • Need to be changed frequently • Commercially produced version may contain advertisements

Cost

Cost may be an important constraint. In an attempt to be helpful and meet the needs of users, suppliers will sometimes offer surplus, out of date materials, free of charge. Be careful of this kind of material – it is not always appropriate to your actual requirements. Similarly, many commercially produced teaching materials (posters, booklets and videos etc.) are now available from pharmaceutical and equipment companies. Offered free of charge, they attract users with limited financial resources. The content will often, understandably, reflect the sophisticated materials they produce – and may even carry advertisements, which may result in inappropriate messages in certain situations.

Accuracy

If they are to achieve their aims, teaching materials must be up-to-date, applicable, and cover the required scope of the subject. Health practice is ever-changing and this is reflected in the rate at which medical textbooks appear in new editions.

Language and culture

Teaching resources, first and foremost, need to be understood. Availability in the local language makes any learning resource more attractive and valuable and increases its demand. Sadly, most materials are available in English only. Where English is not the user's first language, but is the language used in the workplace or educational institution, the materials must be produced in plain English. Applying a 'Gobbledygook Test' will help decide if the text contains plain English before purchasing in bulk, e.g. books for a whole class (Ewles and Simnett, 1998).

The Gobbledygook Test

- Count a 100 word sample.
- Count the number of complete sentences in the sample.
- Count the total number of words in the complete sentences.
- Divide the number of words by the number of sentences.

This gives the average sentence length.

- Count the number of words with three or more syllables in the 100 words. This gives the percentage of long words in the sample. Numbers and symbols are counted as short words; hyphenated words are counted as two words; a syllable, for the purposes of the test, is a vowel sound. So, 'advised' is two syllables and 'applying' is three.
- Add the average sentence length to the percentage of long words to give the test score: the higher the score, the lower the 'readability'.

It is usual to do this three times to three different samples, one from the beginning of the text, one from the middle and one from near the end. These scores can then be added and divided by three to give the average score.

This test is based on R.Gunning's FOG (Frequency of Gobbledygook) formula as adapted by the Plain English Campaign.

The content of teaching material should not assume that all target groups are the same. At the same time it needs to be culturally appropriate and reflect local practice, conditions, available health services and the values and concerns of users.

Accessing teaching resources

Ordering from a supplier

When placing an order, don't assume that the supplier will know exactly what material is needed! It is wise first to ask a supplier to provide a publications list on which you can indicate the title and quantity required. When you place an order and there is no printed order form, the following details will help the supplier to provide the correct publication:

- | | |
|--|---|
| <ul style="list-style-type: none"> • Full title of publication • Author(s) name(s) • Edition • ISBN (international standard book number) | <ul style="list-style-type: none"> • Price • Publisher • Date and place of publication |
|--|---|

It is important the purchaser and supplier agree the amount and method of payment beforehand. Full name and address must be included in the purchase order. Ordering via the Internet requires advance payment by credit card. Some suppliers only deliver to a physical address, not a post office box.

A second edition of the *'Directory of Teaching and Information Resources for Blindness Prevention and Rehabilitation'* is available from the International Resource Centre, ICEH. This publication lists some 27 organisations which supply teaching materials on many topics, at varying levels and in selected formats and languages (Stevens, 2004).

Basic guidelines for producing teaching materials

Many excellent teaching materials are 'home-made', unpublished and unavailable through a supplier. Remember – this does not make them inferior! Indeed, materials produced specifically for local use are often more effective. When producing materials, whatever the situation, the following guidelines are recommended (Ewles and Simnett, 1998):

- Consider the educational background of your users.
- Test materials on a sample of users and modify the material accordingly. It is unwise to assume that users will find your first efforts helpful.
- Use plain English or local language(s) in the active tense.
- Keep the message brief, to the point and avoid irrelevant material.
- Emphasise key messages using bold, appropriate size and style fonts and colour.
- Use pictures when the message can be conveyed in this way – but make sure this approach is field tested to check for misunderstandings.
- Apply the Gobbledygook Test to your own materials too!
- Use words that reflect the reality of the situation – e.g., don't use the word 'ophthalmologist' if there isn't one working in the project.
- Inclusive language (including women and men) will help to avoid offence and feelings of inadequacy.

You will also need to consider who will write the draft, who will edit it, where you can field test it and what it will cost to produce. Also consider if it will involve desk top publishing, a designer, illustrator, translator and printer. This will apply to whatever format you aim to produce.

Strategies for continuing education

Resource centres

Core teaching materials must be accessible to learners. Increasing health information is potentially the most cost-effective measure for improving health care in developing countries (Pakenham-Walsh et al., 1997). Any project or teaching centre can set up a 'resource centre'. The International Resource Centre at the International Centre for Eye Health (ICEH) in London started life as a shelf in the Journal editor's office! It is advisable to keep learning materials in a central point with someone responsible for their cataloguing, allocation and safekeeping (Giggey, 1988).

In September 2000, the International Resource Centre launched a three-year project supporting the setting up of Regional Resource Centres in Africa, Asia and Latin America. This was done with financial support from *Sightsavers International* and *Christian Blind Mission International*. As a result six new Centres were established: in India, Pakistan, South Africa, Colombia, Nigeria and Tanzania. These now aim to help meet the educational and information needs within their regions:

Motswedi Information Centre	South Africa National Council for the Blind PO Box 11149, Hatfield 0011 Pretoria, South Africa	hope@sancb.org.za www.sancb.org.za
Raja Mumtaz Regional Learning Resource Centre	Pakistan Institute of Community Ophthalmology PO Box 125 Hyatabad Peshawar, Pakistan	rlrc@pico.org.pk www.pico.org.pk
Centro Oftalmológico Latinoamericano de Recursos Informáticos en Salud	Fundación Oftalmológica de Santander Apartado Aéreo 3128 Urbanización el Bosque Autopista a Floridablanca Bucaramanga, Santander, Colombia	saludpublica@foscal.com.co www.foscal.com.co
International Centre for the Advancement of Rural Eye Care	LV Prasad Eye Institute Post Bag No.1 Kismatpur BO, Rajendranagar PO Hyderabad 500 030 Andhra Pradesh, India	murali@lvpei.org www.lvpei.org
Ophthalmic Resource Centre for Eastern Africa	Kilimanjaro Centre for Community Ophthalmology, PO Box 2254 KCMC Moshi, Tanzania	orcea@kcco.net www.kcco.net
VISION 2020 West Africa Resource Centre	West African Postgraduate Medical College 6 Taylor Drive Off Edmund Crescent Yaba, Lagos Nigeria	V2020_rescentre@yahoo.co.uk No website

Human resources

Information technology (IT) is the newest development contributing to health communication. Through it, health workers everywhere can easily be linked, and IT makes available to them a wide range of resources. Most sites are 'read only' but some are interactive with some health libraries providing 'touch screen' facilities. But the best way of meeting learning needs undoubtedly remains people – the 'human resource'.

Following local, national or international courses, participants can be supported by means of peer networking and the organisation of 'alumni' meetings. Lists of delegates at conferences are a useful way of facilitating follow-up and for providing relevant resource information. We can easily share information with like-minded colleagues, even at a distance, through the ever-increasing use of electronic newsletters.

As individuals we all can contribute in some measure to learning and spreading information. By sharing our own knowledge and experiences, however limited, with others, we help to make 'VISION 2020: the Right to Sight' a reality.