

## APPENDIX 1 : BOOKS AND TRAINING MATERIALS

### TRAINING MATERIALS

A number of handbooks have been produced which will help guide or train those working in distance education. They include:

#### Administration

T Dodds (1983)

##### Administration of Distance Teaching Institutions

(International Extension College, Cambridge)

A detailed handbook based mainly on experience in the third world.

#### Writing

D Rowntree and B Connors (1979)

##### How to Develop Self-instructional Teaching

(Open University, Milton Keynes)

A long and thorough account, based on the Open University's experience.

International Extension College (1979)

##### Writing for Distance Education

(International Extension College, Cambridge)

A shorter training handbook, comprising a manual and samples of actual course material.

R Lewis and G Jones (1980)

##### How to Write a Distance Learning Package

(Council for Educational Technology, London)

Another shorter training handbook.

#### Radio

B W W Welsh (1973)

##### A Handbook for Scriptwriters of Adult Education

Broadcasts

(Friedrich Ebert Stiftung, Bonn)

This is based on experience of producing broadcasts and training broadcasters, especially in Africa.

## BOOKS

This is a short list of books on the topics discussed in the handbook.

### General

A Kaye and G Rumble (1981)

Distance Teaching for Higher and Adult Education  
(Croom Helm, London)

The book examines distance teaching as a system of education. It covers in some detail course production, the student services needed by different groups of students and the role of media in distance teaching.

Michael Young et al. (1980)

Distance Teaching for the Third World: The Lion and the Clockwork Mouse  
(Routledge, London)

The book is based on the experience of the International Extension College in developing distance education. It examines the ways in which print, broadcasts and group study have been used to train teachers, to improve classroom teaching, to teach by correspondence out of school and to support rural development.

Unesco (1970)

Better Teachers  
(Unesco, Paris)

A detailed case study of the use of distance education to train teachers in the Palestinian refugee camps.

Peter Kinyanjui (1974)

Training Teachers by Correspondence  
(International Extension College, Cambridge)

This short booklet presents some brief case studies and uses them to analyse the scope of distance education in teacher training.

ed. R Erdos and J H Clark (1971)

Correspondence Courses for In-Service Teacher Training at Primary Level in Developing Countries  
(Unesco Institute for Education, Hamburg)

A brief book which covers similar ground to this handbook. It is based on a 'meeting of experts' in 1970 and concentrates on administration.

J Jenkins (1980)

Correspondence Institutions in the Commonwealth 1980  
(Commonwealth Secretariat, London)

A directory of government, university and other non-profit distance-teaching institutions. Gives the address and function of each institution with a brief account of their courses, methods of study, and types of student.

### Organisation

R F Erdos (1975)

Establishing an Institution Teaching by Correspondence  
(Unesco, Paris)

Renee Erdos set up the Government correspondence unit in Tanzania and this is an administrative account of how you do that sort of job.

### Educational materials

J Jenkins (1981)

Materials for Learning  
(Routledge, London)

How to prepare effective teaching materials particularly through print, which take account of cultural and other differences between learners.

B Holmberg (1974)

Distance Education: a Short Handbook  
(Hermods, Malmo)

Includes a thorough account of the principles of writing correspondence lessons.

J Jenkins (1975)

Editing Distance Teaching Texts  
(International Extension College, Cambridge)

A practical guide for editors, concerned with both content and layout.

C S Morris (1983)

Equipping Small-Scale Printing Units  
(Commonwealth Secretariat)

A guide to the selection and use of equipment for organisations wishing to set up and manage a small-scale printing unit.

## Tutoring and counselling

Open University (1982)  
Teaching for the Open University  
(Open University, Milton Keynes)

Although this is designed for Open University tutors, its advice on tutoring and advising students is of more general relevance.

## Measurement, monitoring, evaluation

C K Knapper (1980)  
Evaluating Instructional Technology  
(Croom Helm, London)

A general account of techniques for evaluation many of which can be applied to teacher education and distance teaching.

R Mitton (1982)  
Practical Research in Distance Teaching: a Handbook for Developing Countries  
(International Extension College, Cambridge)

Based on the author's experience at Lesotho Distance Teaching Centre this book discusses survey research to learn about audiences for education, about teaching materials, and about their effectiveness.

## Costs

D T Jamison, S J Klees and S J Wells (1978)  
The Costs of Educational Media  
(Sage, Beverly Hills and London)

The key work on costing. How to do it, with seven case studies as examples.

H Perraton (1982)  
The Cost of Distance Education  
(International Extension College, Cambridge)

A shorter account which discusses both how to calculate the costs of distance education and the evidence on its costs as compared with orthodox education.

## APPENDIX 2 : CHARACTERISTICS OF EDUCATIONAL MEDIA

This appendix is adapted with permission, from the International Extension College manual Writing for Distance Education.

### 1. What are educational media?

An educational medium is a channel of communication which is or can be used in an educational programme. Our definition includes all and every form of communication, not just the 'mass media' of broadcasting and the press. For the sake of convenience we can divide the media into three main groups, consisting of printed, broadcast, face-to-face communication, and a fourth which comprises diverse forms such as cassettes, films, slides etc.

### 2. Characteristics of different media

#### 2.1 Print

- varied forms, including correspondence courses, instructional booklets, work cards, programmed texts, newspapers and magazines, posters, flipcharts, comic strips.
- permanence is an important feature of print. This can be both an advantage (useful as reference) and a disadvantage (goes out of date soon, mistakes can't easily be rectified once printed).
- print is of limited use to illiterates.
- print is cheap to produce and can take advantage of economy of scale.

- newspapers are specially useful for:
  - \* maintaining contact between scattered people (e.g. farmers, correspondence students)
  - \* providing varied and interesting reading matter where books etc. are scarce
  - \* providing a common focus of interest for a disparate group
  - \* teaching, especially where other forms of instruction are difficult to arrange (e.g. correspondence lessons in newspapers).
- posters and flipcharts may be the only visual media available for rural people. But these need to be used with care and to be well integrated with an associated verbal message.
- comic strips are a way of presenting a message in the context of a story. Because pictures and written story run side-by-side, comics are readily understood by people with limited reading skills. These can be very popular, and effective in getting people to think about their attitudes. But they are no use unless readers are familiar with comic strip style. Furthermore a verbal story-line is essential. Comic strips do not work with pictures alone.

## 2.2 Broadcast media

### Radio

- has enormous potential, can cover very large audiences and reach isolated spots. In practice, however, range is limited by technical problems and by social factors such as language.

- it has varied applications including:
  - \* support to correspondence students
  - \* classroom materials
  - \* basic education for rural families
  - \* information services of various kinds
  - \* information for listening groups
- it is ideal for communication with illiterates. Some evidence exists however that illiterates listen to educational radio less often than literates.
- radio is fleeting, in contrast to print. There is no permanence about it, but it is good for conveying impressions and for illuminating topics readers are already familiar with.
- radio is good at creating dialogue - either within a listening group, or between listeners and the programme organisers. Similarly, tutorial broadcasts can be made for correspondence students, responding to commonly felt difficulties.
- radio is important for breaking the isolation felt by many distant learners. And any sort of personal contact (even a voice on the radio) is crucial for bringing about changes in attitude.

#### Television

- problems of cost and maintenance inhibit the use of television in many areas.
- features of television are similar to those of radio, but visual element gives an added dimension, so
  - \* given a choice, people often prefer television to radio, find it more interesting

- \* television makes it possible to use broadcasting for visual presentation (e.g. in geography or science subjects) which would otherwise have to be done in print.

## 2.3 Face-to-face contact

- even small amounts of face-to-face contact make distance teaching more effective.
- face-to-face element is likely to be most costly, so needs the most careful planning.
- face-to-face contact can be a very sensitive area. Some learners actually prefer impersonally presented information. And most can be put off learning altogether if they react adversely to the person concerned.
- we still know little for certain about what factors affect the quality of personal contact. What sort of people make the best communicators? How can we identify them? And how should they communicate? But we can say with reasonable certainty that
  - \* people who are known and respected by the learners have the greatest influence when it comes to attitude change.
  - \* it's sensible to make use of channels of communication which already exist (whether formal or informal) where these are appropriate, in preference to setting up new ones.

## 2.4 Other media

Cassettes are similar to radio; they have various disadvantages however:

- recurrent costs are higher than radio, therefore economies of scale are not possible
- cassette players and tapes usually need to be provided and distributed, while radios are usually already available. Cassettes are useful:



- \* where the number of listeners is too small to justify expenses of radio broadcasts
- \* where radio transmission is not possible for technical or other reasons
- \* where the possibility of stopping and replaying tape is important for educational reasons
- \* in special cases such as language courses, where listeners can tape themselves.

### Slides

- these are a simple form of graphic presentation. The main item of cost is taking the photographs, but the slides themselves are easy and cheap to make and put together. However they are more expensive than flipcharts, over which they have no significant advantage.

### Films

- these are expensive to produce and difficult to get right for educational programmes. But they can add entertainment value when used alongside other elements.

### Flannelgraphs

- cut-out cardboard pictures which can be fixed to a felt board. These are cheap and easy to produce and useful for group study. Their advantage over flipcharts and posters is that the pictures can be changed to suit the occasion. Pictures can be moved about by learners as well as by group leaders. These have been used effectively to help rural people define their own educational needs and priorities.

## 2.5 New electronic media

Developments in electronics and communication, or in information technology, mean that educators may have the opportunity to use a variety of new media as these become more widely available. Although of limited value in many countries at present, a fuller list of media would include telephones, satellites and computers. While the costs, and practical difficulties, rule these out for many projects, the costs of all of them have been falling in real terms and are expected to fall further.

### Telephones

- have been used in rich countries to ease contact between student and tutor.
- where most students have access to telephones, it may be possible to set up a teleconference in which a number of participants can take part in a discussion over their telephones.

### Satellites

- have been used for educational links and exchanges in India, in the South Pacific and in Cameroon.
- are of potential importance in overcoming the isolation of small and scattered groups of students.
- are expensive. But they are much cheaper to use for narrow band width communication, needed for sound links, than for the broad bandwidth needed for television.
- permit two-way communication as in a teleconference.
- demand specialist ground equipment as well as access to a satellite.

## Computers

- have at least three roles in education: for management, for the production of teaching material, and for teaching.
- many educational bodies now use computers for management (e.g. to maintain records of students, their fees, and for financial control generally). These include distance-teaching institutions, and universities with distance-teaching departments.
- computers can be used for word processing where the text of printed matter is stored in the computer system. This makes it easy to revise and improve drafts, without the labour of continually retyping them: you need only retype the parts that have changed; the computer can remember and reprint the rest. This book was produced that way.
- some distance-teaching institutions use computer programs to mark students' work. Students' assignments can be designed for computer marking and, with some programs, the computer will print out comments about students' particular difficulties, as these are diagnosed by their answers to questions in the assignment. There is some evidence that students like this.

### APPENDIX 3 : LANGUAGE TESTING

There are various ways of testing a passage to see how easy it is to understand. Even if you do no formal tests of the language, it is worth reading the passage out loud. An exercise as simple as that will help you to improve the prose.

More thorough tests exist. The Cloze test discussed below, which is perhaps the best, needs a sample of your potential audience but has been tried, and found to work, in a wide range of different languages.

Simpler tests exist for English which do not require a sample of the audience. One of these is the Modified Fog Index. To test a passage follow these instructions\*:

1. Select a sample of 100 words from the text.
2. Count the number of complete sentences in the passage.
3. Calculate the average number of words in these sentences. This is the average sentence length (ASL).
4. Count the number of difficult words (DW) in the complete passage. Classify any word of three syllables or more as a difficult word.

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\* There are slightly different formulae, and other tests. This one has the merit of simplicity. Follow others if you are familiar with them, but don't mix different formulae:

5. Calculate the formula by adding together the average sentence length and the number of difficult words, multiply this by 2, divide the result by 5 and then add 5, thus:

$$\text{Index} = \frac{(\text{ASL} + \text{DW}) \times 2}{5} + 5$$

You will probably get a result between 8 and 30. The higher the number, the more difficult the passage. You can think of the result, for the lower figures, as representing a reading age for a mother-tongue speaker of English. The simplest educational prose will get an index figure of about 8-12. Editorials in the serious English newspapers have a score of between about 17 and 22. Scores above this will be difficult for many students. Scores as high as this may be difficult for some students. Aim low.

Repeat the test with several more samples.

For a Cloze test you need to prepare a sample from your text and then get together a group of students, potential students, or people of a similar educational background. Aim for 12-25 people. To carry out a test:

1. Select two or three passages of 200-250 words, avoiding passages with many proper names. Make sure the extracts have complete sentences - do not stop in mid-sentence as we did for the Modified Fog Index.
2. Retype the passage leaving the first and last sentence complete but omitting every eighth word in all other sentences. Leave a blank space of a standard size in place of each omitted word.
3. Ask your students to fill in the blanks. There is no time limit.
4. Count the number of correct words which they have put in the blanks. Treat as correct only the identical word to the one omitted but do not worry about spelling.

5. Express the number of correct words as a percentage of the total number of words omitted.

If your readers get a score of between 50 and 100% then you can assume they could understand the passage reasonably well. If they get a score of 35-50% then they could understand the text with some help; a score of below 35% is a frustration score and your readers will feel frustrated and be able to understand little or nothing of the passage. For distant learners aim for a score of at least 50% and preferably 70%.