Developing a Course Curriculum

Detlef Prozesky
MBChB MCommH PhD
Professor
Community Based Education
Faculty of Medicine
University of Pretoria
South Africa

In the last article in this series we looked at the different teaching methods that we can use. Now that we have some ideas on how to teach, the question arises: what do we need to teach? How do we decide what students need to learn? How do we decide what to include in a course, and what to leave out? Fortunately, there is a clear path that we can follow (Abbatt and McMahon, 1993) which is shown in Figure 1.

Describing the Job

In health care the reason for training is clear: we expect those who are being trained to do their work well. This means that we have to define exactly what the job is, and what we want the learners to perform. If we think carefully about it, we will see that a job is made up of tasks. We, therefore, have to start by listing the tasks that our health worker should be able to perform competently. How do we arrive at this list of tasks? Here are some ideas:

- We watch skilled health workers at work, and write down what they do every day
- We ask the health workers themselves to tell us which tasks they perform in their daily work. We ask other health team members (e.g., managers) the same question
- We consult official documents, such as job descriptions for that category of worker
- We look at available health statistics, and from that we work out what the health worker should be able to do.

Some tasks on the list will be more important than others. This may be because they are done more frequently, or because there will be serious consequences if they are badly done.

It is important to think widely at this stage. Some people think that the only task that health workers have is to treat sick people. However, they have many other important tasks as well. Here are some of them:

- Management tasks – e.g., maintaining the drug supply; keeping financial records; managing time properly
- Tasks related to preventing disease and promoting health – e.g., health education
- Tasks related to teamwork – e.g., resolving conflicts
- Tasks related to communication – e.g., writing a referral letter.

Such tasks must also be included in the task list.

Analysing the Tasks

What do people need to learn, to perform a task competently? In a previous article we saw that they need to learn both skills and enabling factors. This means that we have to look at each task, and work out the knowledge, attitudes and skills that the worker needs to learn to perform that task properly. Table 1 provides an example for an ophthalmic assistant. After this analysis we know exactly what the students have to learn. In fact, the items in the right hand column become our ‘learning objectives’. We simply rewrite them as follows:

When you have analysed a couple of tasks you will notice that some tasks share the same ‘learning objectives’. This is especially true for the communication skills and the attitudes, but also for basic subjects like anatomy and physiology.

Making a Course Plan

When you have finished analysing all the tasks, you will have a large number of learning objectives (Table 2).

Table 1: Task–Diagnosing and Managing a Patient with Primary Open Angle Glaucoma (POAG)

| Manual skill | • Fundoscopy with an ophthalmoscope  
|              | • Measuring intra-ocular pressure using a Schiötz tonometer  
|              | • Recording visual fields. |
| Decision-making skill | • Deciding when to treat  
|                        | • Deciding how to treat  
|                        | • Deciding when to refer. |
| Communication skill | • Explaining to a patient how to take treatment  
|                      | • Explaining the need to continue with treatment. |
| Knowledge | • Anatomy of the eye  
|           | • Physiology of the aqueous humour  
|           | • Pathophysiology/ course of the disease (treated/ untreated)  
|           | • Epidemiology of the disease  
|           | • Drugs used (mode of action, dosage, side-effects)  
|           | • Problems experienced with treatment. |
| Attitude | • Encouraging and supportive. |

Fig. 1: The Process of Curriculum Development

Table 2: At the End of the Course the Students Should Be Able To:

| • Examine the optic nerve head with the ophthalmoscope  
| • Measure intra-ocular pressure using a Schiötz tonometer  
| • Decide when to treat a person with POAG  
| • Explain to a patient how to take treatment for POAG  
| • Describe the anatomy of the eye  
| • Demonstrate an encouraging and supportive attitude towards patients with POAG – and so on. |
These now have to be fitted into a timetable. As you do this, you have to keep the following in mind:

- The material must be presented in a logical sequence. This means two things:
  - Firstly, we need to group things together that belong together. For example, we group everything around trachoma together: the causative organism, epidemiology, prevention, treatment, etc.
  - Secondly, some things have to come before others. For example, students need to learn basic optics before they learn to do refraction.

- You have to fit into the time available for the course. Somewhere there is always too little time – which means that you have to prioritize. Some learning objectives have to be left out, or made shorter. You also have to avoid unnecessary duplication and repetition.

Problem Based Learning (PBL)

In traditional training courses the teachers work out what the students need to learn, and systematically make sure that they learn it. PBL is different. As its name says, this method bases all learning on problems. It works like this. There are no lectures. Instead, the students are presented with a problem – usually a clinical one. Working in small groups, and under the guidance of a tutor, the students work out that they need to learn about the clinical course of trachoma; the causative organism, epidemiology, prevention, treatment, etc.

- You will notice that the first letters of the six words spell ‘SPICES’. This is a good checklist, to evaluate our present curricula and to see where we may have to change.

Curriculum Reform and the ‘SPICES’ Model

Curricula are always changing, as teachers try to remain up-to-date and to eliminate problems. Over the last 20 years, however, there have been strong movements in many countries, to improve the quality of training of health workers. Harden et al. (1984) describe these changes as follows:

- **Student centred:** The most important consideration is that students should learn excellently. Teacher convenience and status come second.
- **Problem based:** Students learn to solve problems (clinical and management ones) rather than just memorising facts.
- **Integrated:** We now teach many subjects together - all those parts which deal with a specific problem. We no longer teach separate ‘subjects’.
- **Community based:** Students learn new knowledge and skills in community settings, and not just in large hospitals as in the past.
- **Electives:** The curriculum is not completely fixed – students get some opportunities to pursue their individual interests.
- **Systematic:** We make sure that students learn to manage all important problems, by planning practicals carefully. We no longer just put them into the ward (or clinic) and hope for the best!

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In the next article in this series we are going to discuss the assessment of our students - how can we find out if they have learnt what they should learn? Watch this space!

References


CORRECTION

TeachingandLearning

Detlef R Prozesky


TheEditorapologiesthatinthetwo

last issue of the Journal (13: 62), referred to the uncertainty facing the DU-AL Corporation.

This company has now been acquired by:

RestoredSightProjectsLtd.,

Singleton Court,

Wonastow Road,

Monmouth, UK.

Fax: +44 01600 716 744

The DU-AL Corporation

John Sandford-Smith, in his letter in the last issue of the Journal (13: 62), referred to the uncertainty facing the DU-AL Corporation.

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