

**This pre-reading material has been adapted  
from the following program:**

# Teaching on the Run

**Establishing teacher training programmes in Australia**

A Commonwealth Department of Health and Aging funding project, through the Medical Training Review Panel

## *Pre-Course Preparation Package*

### **1) Clinical Teaching**

### **2) Teaching Practical Skills**

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**February 2006**



## Introduction

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The purpose of the *Teaching on the Run* course is to:

- Help clinical teachers recognise opportunities for teaching in various clinical settings.
- Encourage clinical teachers to do more incidental teaching as they work with junior staff.
- Build confidence so that senior doctors feel confident in sharing what they know and teach more effectively.

The programmes were initially developed in Western Australia for teachers at SCGH. Through funding from the Department of Health and Aged Care, the EdCent in the Faculty of Medicine and Dentistry at UWA and PTAC (WA) are able to make these programmes available for other groups around Australia, with the aim of increasing the number of teachers who have participated in such a course, as well as training facilitators who can continue to run the course in their own state.

Participants will already have some teaching experience and this course seeks to build on current teaching practice. By gaining a clearer understanding of how adults learn and putting this knowledge into action, there is a potential to markedly improve teaching.

A variety of teaching approaches are modelled in this course to maintain interest and motivation. They include small group discussion, interactive lecture presentation, micro-teaching, positive critiquing and evaluation. These approaches have been selected to facilitate participation in the course.

***Please note you will be asked to do a 5 minute presentation on a topic and a 5 minute demonstration of a non-medical practical skill. You will need to prepare these tasks prior to the workshop (see tasks sheet).***

## Adult Learning

Adult learning is substantially different from that of children for a variety of reasons. The teachers who have had the greatest impact on us achieved that effect not necessarily because they were the best surgeons or physicians in their fields; rather, they were good teachers because they may have made a difficult concept seem straightforward, a boring subject interesting or relevant, or even may have imparted a level of inspiration in those they were teaching.

Some of the key features to bear in mind in the development of successful adult learning include:

- Adult learners retain 90% of skills learnt by doing rather than by watching.
- Adult learning needs to be immediately relevant.
- Adults need to be actively involved.
- Adult learners have a surprisingly short concentration span.
- Adult learners need clear goals and objectives.
- Adult learners need feedback.
- Adult learners need an opportunity for reflection.

***The most important features of successful adult learning include the identification of clear goals, relevance to practice, and the opportunity for reflection.***

### Building on principles of adult learning

Adult learners are most successful when...	The teacher should therefore...
There is a high degree of personal motivation	Use the learner's enthusiasm.
The learning is within their capacity to learn	Avoid excessive use of jargon and/or showing off his/her own knowledge. Target the learning at an appropriate level, draw on previous knowledge and build on.
The learning experience is meaningful	Clearly relate the learning experience to practice.
There is active involvement	Involve the learner. The types of questions asked are of fundamental importance in promoting thinking and active learning during teaching.
The learning is experience-centred The learner can reflect on the experience	Clearly relate the learner's experience and his/her own experience, requiring the learner to ask and answer questions.
Clear goals are set	Identify the expectations of each learning experience.

Regular feedback is provided	Provide regular, timely feedback, which is specific, both for positive features and suggestions for improvement.
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## An Approach to Clinical Teaching

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Every planned learning experience can be broken into three key elements.

**Set**  
**Dialogue**  
**Closure**

**SET** refers to getting ready for the teaching session.

The four main points to the SET are:

<b>Roles</b>	The trainer's role, the learner's role, the patient's role.
<b>Objectives</b>	What they are going to learn.
<b>Linkages</b>	How it links to previous or future teaching episodes.
<b>Environment</b>	The physical aspects of the room.

- In the clinical setting the patient must be prepared as well as the teacher and learner. The patient must give their consent prior to the teaching episode.
- Take a few minutes to consider what you expect the learner to achieve. Objectives will vary for individuals depending on their seniority and background. Ask yourself what exactly is to be achieved and then a rough estimate of the time it might take.
- Don't forget to make clear linkages where relevant to past or future teaching episodes.
- Consideration should be given to the physical aspects of the room – are the surroundings warm and comfortable for the patient? Is there sufficient privacy for the patient? Do you need to be standing or is it possible to arrange seating? Is the number of people present appropriate for the learner?

**DIALOGUE** is the crucial part of the planned learning experience and involves interaction between the learner and the teacher.

A useful acronym for DIALOGUE is:

<b>Questions</b>	These should be used as often as possible using a combination of closed and open questions
<b>Understanding</b>	Clearly a key focus of any interaction
<b>Eyes</b>	Two way contact
<b>Stimulation</b>	Making it interesting
<b>Timing</b>	Finish on time

Remember that the adult learner's attention span is about 10-15 minutes. Patients also get tired in encounters where they do not have an active part. So, anything longer needs to be broken into parts either by a change in activity or by a summary, a pause, or a question. Think about the sort of questions you are going to ask. Try to involve the learner rather than just talk to them. This means getting them to think and reflect.

**CLOSURE** should involve three main elements:

<b>Review</b>	Ask for any questions, check that all is understood
<b>Eyes</b>	Again, maintain eye contact with the learner
<b>Summary</b>	A short concise summary of what has been covered
<b>Termination</b>	A definite end

Learners should have the opportunity to bring up any questions they may have. This should then be followed by a positive critique. The whole process should be summed up and a clear termination given – for example, by thanking the patient for their cooperation. It may also be appropriate to spend some time explaining to the patient what they heard during the session.

### **Application to Opportunistic Teaching**

How do you apply the SET, DIALOGUE, CLOSURE approach to opportunistic teaching moments in a clinical setting?

The approach is still relevant but will vary depending on the situation. You may not be able to consistently plan a teaching episode in detail but you can still pay attention to certain aspects.

#### **SET**

Is the patient comfortable?

Do you know the knowledge base of the learner? If not, then you may need to use questions to probe their level of understanding.

Do you know exactly what you want to learner to achieve?

#### **DIALOGUE**

All the aspects outlined previously are still relevant and should be possible in almost any clinical setting.

#### **CLOSURE**

This stage is of critical importance in the clinical setting. The session will be left hanging if you don't offer the opportunity for questions, discuss what needs to be followed up and establish whether there are any outstanding tasks to be addressed.

Spend a few moments now thinking about how you could apply the SET, DIALOGUE, CLOSURE method to your next clinical teaching episode.

## Asking questions

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Dialogue is the most crucial stage of a teaching session. Interaction between the teacher and learner during this stage depends on the types of questions asked. The questions you ask will promote thinking and active learning during teaching.

There are three types of questions.

### Yes/No questions

A question that requires an answer that is 'yes' or 'no' does not stretch the learner. However, if you have a learner who is shy or lacking confidence, this is a basic type of question that will get the talking going.

### Closed questions

A closed question is the sort of question for which there is a specific and correct answer. For example, what are the most common causes of difficulty in swallowing? This type of question is useful because it enables you to check the learner's knowledge base, but not necessarily their level of understanding.

### Open questions

An open question usually begins with 'why' or 'how'. There are generally no right answers and the questions allow you to probe the reasoning process of the learner. Open questions usually require some evaluation, comparison, and/or problem solving. They can also be used to allow and encourage divergent thinking or novel responses.

### Types of Questions and Examples

<i>Testing questions</i>	Checking knowledge	These mainly begin with words like: what, where, when, how, which, how many/big. (Eg What is the name of ...?)
	Comprehension and interpreting	Compare, distinguish, show, find evidence, try to prove, interpret, re-arrange, restate, and explain differences (eg Which are more alike? What do you infer from these results? How are these common? What is different?)
	Applying/Analysing	Specify conditions for, arrange, demonstrate, make use of, illustrate/ give and example, explore, discover, form and hypothesis. (Eg What are the consequences? What conclusions? What is necessary? Under What circumstances? What are the problems? What are the causes? How could you? What relevance does that have in...?)

	Synthesis	Solve this, think of an approach, create, devise, speculate, imagine, design. (Eg What do you suggest? If the...changes? What alternatives? How many different ways? What would happen if? Can you summarise...?)
	Evaluation	Check the results to prove a point, evaluate data against standards, rank, argue from all sides. (Eg What do you think will be best? Why do you think that? Was it good/bad, right/wrong? Will it work?)
<i>Clarifying questions</i>	To help the learner clarify their thinking on a point or topic.	Can you rephrase that? What did you mean by...? Can you give me an example of...?
<i>Elaborating questions</i>	These help students express themselves more fully.	Can you tell me more? Can you elaborate on that? Uh-huh, what else?
<i>Reflecting and deflecting questions</i>	Use these questions if the learner wants an answer from you or wants to know what you think – and you do not wish to give the answer.	Well, what do you think? Do you have any ideas about what it means? (If applicable) What do others in the group think?
<i>Supporting and valuing questions</i>	Use these questions if the learner has gone off the track and you need to bring them back without making them appear foolish.	Could you think about that again? How does that fit with what you said before about...?
<i>Checking and building questions</i>	This could be used if the learner is having difficulty formulating ideas for the first time.	Let me just check that I understand you, are you saying...' How does that connect with what you said before? (If in a group) Would anyone else like to comment on what Jo has said?

### **Pauses**

Once you have asked a question be prepared to wait for an answer. Short silences are not necessarily a bad thing – they often get the learner to talk more freely if they know you require and are prepared to wait for an answer.

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## Positive feedback

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Feedback is an essential part of the learning process, and critiquing a learner's performance on a task is a skill in itself. Positive critiquing is very valuable to a trainee's outcome whilst arguably a negative critique may markedly reduce the value of an educational experience.

Critiquing using a participant-driven method will allow the learner to reflect on their performance. After the participant has completed the skill, presentation or teaching episode the following four step approach to critiquing is applied:

1. What the learner thought went well.
2. What the other learners thought went well (if applicable).
3. Opportunities for improvement identified by the learner.
4. Opportunities for improvement identified by the other students/instructor.

Tips to think about when developing your positive critiquing skills might include:

- Think of three specific items when critiquing a performance - a learner is unlikely to walk away remembering more than three points.
  - Avoid use words like "but" and "however" in a critique as these tend to turn the critique "upside down" converting your comments from positive to negative. Medical people tend to be self-critical and may focus on the negative aspect of a comment than the intended positive aspects.
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## Teaching practical skills

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As clinicians we are frequently involved in teaching skills. As “experts”, we perform these skills subconsciously and because of this, may skip important components of the sequence when teaching someone else. Teaching skills involves breaking skills down into structural steps. Consider the last time you taught someone a new skill outside of the medical field. It may have been relatively simple like changing a tap washer or it may have been a more complex task. When new skills are taught we innately break the skill down into a series of steps. You might have demonstrated the skill in real time first and then demonstrated the skill in slow motion whilst commenting on the important steps.

The successful teaching of skills can indeed be broken down into the following steps:

PHASE	TASK	ACTION
1	Demonstration	Instructor demonstrates the skill at normal speed.
2	Deconstruction	Instructor demonstrates the skill by breaking it down into simple steps.
3	Formulation	Instructor demonstrates the skill whilst being “talked through” the steps by the student.
4	Performance	Student performs the skill and describes the steps.

**This approach takes a little practice in real life and the tendency may be for the teacher to “talk themselves through the first demonstration”.**

It is very important to give constructive feedback to the learner. It may take several attempts to get it right. Always correct mistakes at the time they occur (don’t wait for the learner to get to the end before correcting an error). Remember to leave time for questions at the end of a session and if appropriate, plan the next learning experience at the end (closure).

Here are two questions that you might like to think about before you come to the training session or do additional reading on:

- How can the four-step approach to teaching practical skills be applied in a busy clinical setting?
- How is the four-stage approach modified depending on levels of expertise?
- How can the approach be modified when what you plan to teach may be a procedure for a rare condition and one where you are unlikely to have another chance to practice again in the near future?

**Bring any questions you have to the training session.**

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## **Suggested further reading**

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There are many references on teaching and learning but the ones listed below will give you a good overview to the area.

1. Newble, D & Cannon, R. 1996. *A Handbook for Medical Teachers*, 3<sup>rd</sup> Edition. London: Kluwer Academic Publishers.
2. Peyton, J.W.R. 1998. *Teaching and Learning in Medical Practice*. Great Britain: Manticore Europe Ltd.
3. Cox K. 1993. *Planning Bedside Teaching*. MJA;158:493-495.
4. Hays R. 1999. *Practice-Based Teaching. A guide for General Practitioners*. Eruditions Publishing, Melbourne, Australia.