

Authors

EA Hesketh
JM Laidlaw

Instructional Design
JM Laidlaw

Desktop Publishing
LE Bell
MC Gunn

Computing
NK McManus

Facilitating Learning



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Medical and Dental
Education

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Snippets on Facilitating Learning

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Research into learning has produced several theories which try to identify what actions might facilitate learning. Four key principles, drawn from more than one theory of learning, should be applied:



- **Feedback** ensure learners receive frequent feedback
- **Activity** include activities to apply the learning and make learning less passive
- **Individualisation** ensure learning is centred round a learner's individual needs
- **Relevance** ensure the learning is made relevant to the learner's goals.

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The problem

Reading about theories of learning is boring. Is it really necessary to know much about it?



The solution

Having some insight into what hinders and what helps people learn will allow you to maximise both formal and informal training opportunities. This will help to ensure your unit provides a rich learning environment for all trainees.

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Introduction to learning theory

There is no rigid difference between how adults and others learn, except that adults are often more self critical, likely to be more motivated, and have considerable personal experience to draw on. Much research has been carried out into learning theories and how teachers can influence learning. These have illuminated certain learning principles and approaches which either help or hinder learning.

We've chosen to highlight three approaches none of which are mutually exclusive. The three approaches are:

Behaviourism

Cognitive psychology

Humanistic approach



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Behaviourism

Cognitive psychology

Humanistic approach



The first approach focuses on giving the right stimulus to elicit the response you desire. It lays emphasis on reinforcing desired performance through feedback and activity. It is known as '**Behaviourism**'.

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Behaviourism

Behaviourism gives rise to the following principles for effective teaching and learning.

Activity

'Active' learning, eg simulation, applying the learning to a fictitious or real situation, learning by doing, role play, is better than 'passive' learning, ie just listening.

Repetition

Frequent practice or practice in varied contexts is important. Many new clinical skills centres have recently been set up to offer more opportunity for such practice in a non-threatening environment.

Reinforcement

Reinforcement of desired behaviour increases motivation and will encourage continued good practice. Reinforcement can be in the form of giving praise or ensuring the learner is able to see the results of a successful effort. Feedback too reinforces learning.



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Behaviourism

Cognitive psychology

Humanistic approach



This approach is about mental processes, ie what the brain does with information. It focuses on ensuring the learner can make sense of information through relating it to what has been previously learned, and can apply it to a new situation. This approach is based on '**Cognitive Psychology**'.

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Cognitive psychology

Cognitive psychology gives rise to the following principles :

- Understanding** New information must be made meaningful by showing how it fits in with what is already known.
- Organisation** Learning is seen as an active process where the learners themselves also make links between new and old information, identify common principles and link concepts, rather than simply absorb information in a passive way. This means that instruction should be well organised, and sequenced in such a way that the learner is encouraged to make the logical links.
- Feedback** Common principles should be identified and learners encouraged to learn by practice, eg exercises, simulation, real life, or through applying principles to specific problems, eg case studies. New information/skills are thus actively tested and, with feedback, the learners can see how they are doing.

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Behaviourism

Cognitive psychology

Humanistic approach



A humanistic approach centres on the fact that people have a natural propensity to learn. The teacher focuses on creating the conditions for learning to occur. This is known as the 'Humanistic Approach'.

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Humanistic approach

The humanistic approach gives rise the following principles:

Relevance

Learners are naturally curious - absorbing information and solving problems all the time. Significant learning will take place if the subject is seen as relevant to the learner's own need.

Choice

If learners can choose what they want to learn, and how and where to learn it, ie become responsible for their own learning, long lasting learning is more likely to occur.

Purposes and goals

Learners' own needs, goals and purposes are powerful motivators for learning.

Anxiety and emotion

Significant learning only takes place in non-threatening environments.

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The FAIR principles

Drawing from all three approaches to learning theory, the following four principles of learning will encourage deep, more lasting learning.

Feedback

allows the learner to assess their knowledge or proficiency, identify gaps and motivates them to rectify any deficiencies. It should always be constructive and given frequently.

Activity

encourage learners to engage in learning rather than be passive. Activities can take the form of practical exercises, case studies, group discussions, mini projects, simulations, role-play, games etc.

Individualisation

allows learning to be centred round the learner's needs which can vary tremendously between learners. Individualisation also caters for the learner's preferred style, method and pace of learning.

Relevance

ensures that the learner's educational needs are likely to be met. It also leads to more effective teaching because facts and information are more likely to be retained if they are made meaningful to the learner's situation, work environment and their ultimate aims and goals.



E

xamples in practice

The following three examples show some of the principles of teaching and learning put into practice in a range of teaching situations.

Teaching 'mechanisms of hypotension'

Teaching 'insertion of an intra-uterine contraceptive device'

Teaching 'breaking bad news to relatives'



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Teaching 'mechanisms of hypotension'



Teaching 'insertion of an intra-uterine contraceptive device'

Teaching 'breaking bad news to relatives'

This example involves teaching the students to understand and memorise concepts and rules, and to apply that knowledge to solve problems. It will require the teacher to:

- plan a logical sequence of presentation of the topic
- give an introductory overview as to how the topic relates to other aspects of the subject or their curriculum
- link the new concepts to information already known by the learners
- use appropriate audio-visual aids
- summarise the key issues.

The teacher would involve the learners in the session with questioning and discussion, and repeat and reinforce as necessary. This would assist the learners to check their own understanding throughout the session. The teacher might also have a practical activity, eg a case study, so that learners could apply the new information learnt, or an exercise that simply could check the learners' understanding of the topic. This would also ensure the session was less passive.

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Teaching 'mechanisms of hypotension'

Teaching 'insertion of an intra-uterine contraceptive device'

Teaching 'breaking bad news to relatives'



This being a practical task involves the teaching of 'motor skills' so a 'hands-on' approach is required.

The task would first be broken down into steps, eg positioning and preparation of the patient, preparation of the equipment etc. Teaching methods might include several of the following:

- watching experienced people
- looking at a video
- practising on models with feedback and discussion
- on the job experience - again with feedback from an observer to maximise learning.



Note...

Feedback need not always come from the teacher. Peer feedback should also be encouraged.

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Teaching 'mechanisms of hypotension'

Teaching 'insertion of an intra-uterine contraceptive device'

Teaching 'breaking bad news to relatives'



This type of 'attitude skills' is best taught through experience. Effective methods for 'breaking bad news' might include group discussion; an appropriate video; role-play; shadowing someone else or critically analysing a 'master performer'; doing oneself and then critically reflecting on the experience. Again feedback and discussion play an important part in many of these methods.

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Useful checklist



Can you say YES to most of these statements.

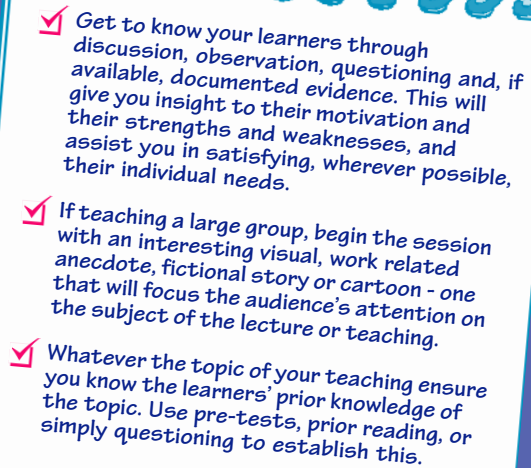
- I made the learners aware of the relevance of the topic to them.
- I informed the learners of the outcomes of the session, ie what they should know or be able to do by the end of it.
- I put the subject in context with other aspects they already knew.
- I presented the ideas in a logical sequence breaking it down into small stages.
- I did not overload them with information.
- I reinforced the messages by frequently summarising stages during the lesson.
- The learners did not just sit and listen. I encouraged questions, opinions, reflection on their own experiences etc.
- Wherever possible the learners' own experiences were brought into the lesson as a focus for the learning.
- I regularly checked the learners' understanding throughout the session.
- All learners took an active part in their learning through self-assessment exercises, or activities which allowed application of the learning etc.
- The learners interacted between themselves for part of the session.
- I gave opportunity to gain feedback on learning either during or shortly after the session.
- I tried to choose an appropriate pace of learning for the group and offered the opportunity for a change in pace. I was watchful for those who might not be keeping up.
- Learners were encouraged to raise points they found difficult to understand. They did so.
- With activities, good performance was praised. Poor performance was criticised in a constructive, encouraging way. Sympathy with any difficulties experienced was offered.

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ractical tips

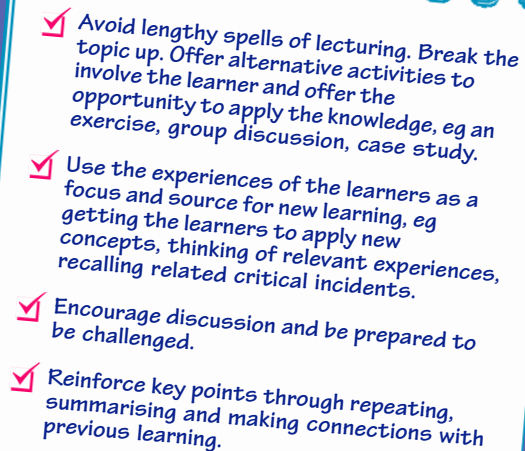
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- 
- ✓ Get to know your learners through discussion, observation, questioning and, if available, documented evidence. This will give you insight to their motivation and their strengths and weaknesses, and assist you in satisfying, wherever possible, their individual needs.
 - ✓ If teaching a large group, begin the session with an interesting visual, work related anecdote, fictional story or cartoon - one that will focus the audience's attention on the subject of the lecture or teaching.
 - ✓ Whatever the topic of your teaching ensure you know the learners' prior knowledge of the topic. Use pre-tests, prior reading, or simply questioning to establish this.

continued...

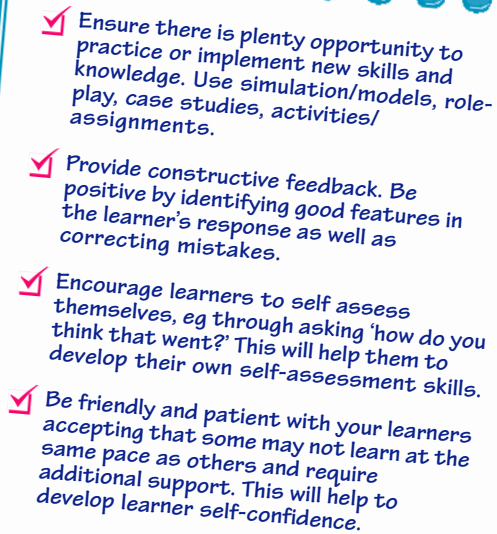
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- 
- ✓ Avoid lengthy spells of lecturing. Break the topic up. Offer alternative activities to involve the learner and offer the opportunity to apply the knowledge, eg an exercise, group discussion, case study.
 - ✓ Use the experiences of the learners as a focus and source for new learning, eg getting the learners to apply new concepts, thinking of relevant experiences, recalling related critical incidents.
 - ✓ Encourage discussion and be prepared to be challenged.
 - ✓ Reinforce key points through repeating, summarising and making connections with previous learning.

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- 
- ✓ Ensure there is plenty opportunity to practice or implement new skills and knowledge. Use simulation/models, role-play, case studies, activities/ assignments.
 - ✓ Provide constructive feedback. Be positive by identifying good features in the learner's response as well as correcting mistakes.
 - ✓ Encourage learners to self assess themselves, eg through asking 'how do you think that went?' This will help them to develop their own self-assessment skills.
 - ✓ Be friendly and patient with your learners accepting that some may not learn at the same pace as others and require additional support. This will help to develop learner self-confidence.

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Other learning opportunities

If you wish to read more about teaching and learning, there are many resources that look at the various aspects of the topic - some in considerable depth.



Click the appropriate button if you wish to find out more



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Centre for Medical Education (1997) Trends in teaching and learning Unit TL:1, Principles of teaching and learning Unit TL:2, Teaching methods Unit TL:3, Learning styles Unit TL:12 in the Diploma in Medical Education, Centre for Medical Education, University of Dundee, Dundee

There are a range of modules on the topic of teaching and learning including these above. All can be studied through distance learning. Each offers an opportunity to build up credits towards a certificate/diploma/Masters in Medical Education and will build on your learning from this unit.

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Newble D I, Entwistle N J (1986) Learning styles and approaches: implications for medical education. *Medical Education* 20: 162-175

Although perhaps more of interest to those involved in undergraduate teaching, this paper has something to say for all teachers in terms of teaching methods. The paper gives insight into the different ways students learn and how they approach their studies.

Eason FR , Corbett R W (1991) Effective teacher characteristics identified by adult learners in nursing. *The Journal of Continuing Education in Nursing* 22(1): 21-23

A short, no-frills paper which identifies 20 attributes of effective teachers as perceived by nurses with regard to their continuing education programme.

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Cotton J (1995) The theory of Learning: An introduction. London; Kogan Page

A very readable book for anyone involved in adult education who wants to know more about the topic of learning. The author bends over backwards to avoid educational jargon and uses activities and questions to make the reader have a good think at what the theory means in practice.

Brookfield S D (1996) Understanding and facilitating adult learning. Buckingham; Open University Press

A comprehensive book that starts off by reviewing many of the theories of adult learning. It then explores different approaches for effective adult teaching. The book, though excellent, is only for those who are keen and want to explore in more depth.

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The international database TimeLIT (Topics in Medical Education Literature) www.timelit.org gives free access to articles relating to education in medicine, dentistry, nursing, patient health and the professions allied to medicine.

Other useful websites for those interested in Medical Education are that of the Association for the Study of Medical Education www.asme.org.uk and that of the Association for Medical Education in Europe www.amee.org

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The *Developing the Teaching Instinct* units below are also relevant to facilitating learning. You might wish to look at them as well.

Feedback

**Questioning
& Listening**



Click the appropriate button to take you to a summary of the unit

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- Each choose a different type of teaching session that you have carried out recently. It might be a lecture, a practical demonstration, a group seminar, a one to one discussion over a case.
- Analyse the event using the checklist as your guide.
- Try to identify the teaching principles being adopted.
- See which principles are common to all the educational approaches.



Think

Each of you think of someone you considered a good teacher. What factors helped your learning with that teacher? Pool your findings.

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Give your students/trainees a **FAIR** chance to learn! Help your trainees to learn more effectively by:

giving them **F**eedback

building in **A**ctivities

Individualising their learning

ensuring the teaching is **R**elevant

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