



24 November 2014



Essential Skills in Medical Education

SIMEC – Kingdom of Saudi Arabia

Qassim University College of Medicine

- What should the learner learn?
 - learning outcomes
- How can the learning be organised?
 - curriculum planning and implementation
- How should the learner learn?

The principles of making learning more effective

- How do we know if the learner has learned?
 - assessment
- Scholarship in medical education











ESSENTIAL SKILLS FOR A MEDICAL TEACHER

An introduction to teaching and
learning in medicine

Ronald M. Harden
Jennifer M. Laidlaw

Foreword by
Steven L. Kanter

CHURCHILL
LIVINGSTONE
ELSEVIER



**A teacher is a
professional not a technician.
An understanding of some
basic principles about
learning can inform the
teacher or trainer in their
day-to-day practice as a
teacher or trainer.**

Essential Skills for a Medical Teacher.
Ronald M Harden & Jennifer M Laidlaw (2012)

Be **FAIR** to Students



Feedback



Activity



Individualisation



Relevance

Case Study



At a meeting of the curricular committee the student representatives raise what is seen as a significant problem in the curriculum. Given the complex nature of the curriculum, students complain that they find difficulty in establishing what they have learned or have still to learn. The same problem is identified in the student evaluation questionnaires.



Two solutions are suggested and subsequently implemented

A more detailed syllabus is prepared indicating clearly what are the expected learning outcomes at each stage of the course.

It is arranged that at the end of each week, students will have the opportunity to assess their understanding of the subject using a set of MCQs and feedback is provided relating to their responses.

Case Study

1

QUESTION

In the following year's student evaluation what approach attracted favourable comment from the students?

A more detailed syllabus is prepared indicating clearly what are the expected learning outcomes at each stage of the course.

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Feedback

Activity

Individualisation

Relevance

Feedback

**Feedback is information
communicated to the learner
that is intended to modify his or
her thinking or behaviour
in order to improve learning**



Classroom MANAGEMENT that *Works*


Research-Based Strategies for Every Teacher

Robert J. Marzano

with Jana S. Marzano & Debra J. Pickering

“...academic achievement in classes where effective feedback is provided to students is considerably higher than the achievement in classes where it is not.

Marzano (2003)



“ The most powerful single modification that enhances achievement is feedback. The simplest prescription for improving education must be ‘dollops of feedback’.

Review of 8,000 Students. John Hattie (1992)

Review of Educational Research
March 2007, Vol. 77, No. 1, pp. 81–112
DOI: 10.3102/003465430298487

The Power of Feedback

John Hattie and Helen Timperley

University of Auckland

Feedback is one of the most powerful influences on learning and achievement, but this impact can be either positive or negative. Its power is frequently mentioned in articles about learning and teaching, but surprisingly few recent studies have systematically investigated its meaning. This article provides a conceptual analysis of feedback and reviews the evidence to its impact on learning and achievement. This evidence shows that feedback is among the major influences, the type of feedback that is given can be differentially effective, and a model of feedback is presented that identifies the particular conditions for effective and

Aim of feedback

Feedback can be used to...

Provide a basis for correcting mistakes or gaps

Reinforce good performance

Clarify goals / expected learning outcomes

Support the student at times of difficulty

Providing effective feedback

- Give an **EXPLANATION** and not just a grade or mark
- Ensure feedback is **SPECIFIC** against learning outcomes
- Feedback should be **NON EVALUATIVE**
- Feedback should be **TIMELY** and **FREQUENT**
- Feedback should **GUIDE FURTHER STUDIES**
- **PREPARE** adequately in advance
- **GUIDE** the student for the future - pastoral support

Providing effective feedback

- **HELP THE LEARNER** to appreciate the value of feedback and how to interpret it
- Encourage learners to provide **FEEDBACK TO THEMSELVES** and to **OTHERS**

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| [-] Archive Start | 00:00 |
| [-] Title | 00:05 |
| [-] Q: What is your role with regard to feedback? | 00:52 |
| [-] Poll Results, Mon Jun 21 16:06:24 2010 | 01:37 |
| [-] Q: Familiarity with feedback literature? | 01:55 |
| [-] Poll Results, Mon Jun 21 16:07:27 2010 | 02:18 |
| [-] Session Overview | 02:46 |
| [-] Session Overview | 02:46 |
| [-] Session Objectives | 03:33 |
| [-] Session Objectives | 03:34 |
| [-] Section 1: What is feedback and why is it important? | 04:01 |
| [-] Section 1: What is feedback and why is it important? | 04:02 |
| [-] Giving Feedback | 04:07 |
| [-] Giving Feedback | 04:08 |
| [-] What is feedback? | 04:19 |
| [-] What is feedback? | 04:20 |
| [-] What is feedback? | 04:22 |
| [-] Q: Frequency of feedback? | 04:55 |
| [-] Q: Frequency of feedback? | 04:55 |
| [-] Poll Results, Mon Jun 21 16:10:27 2010 | 05:25 |

Practical Guidelines for Effective Feedback Sessions

Sharon K. Krackov, Ed.D.
Director of Medical and Dental Education
Associated Medical Schools of New York
New York, New York, USA



0:00:09 -- 1:02:54

Exit - Lobby - Help

Connecting to server...
You have connected successfully!

You have entered 'Webinar: Practical Guidelines for Feedback Sessions - 06/21/2010 16:05'.
Your media format is WimbaMedia.

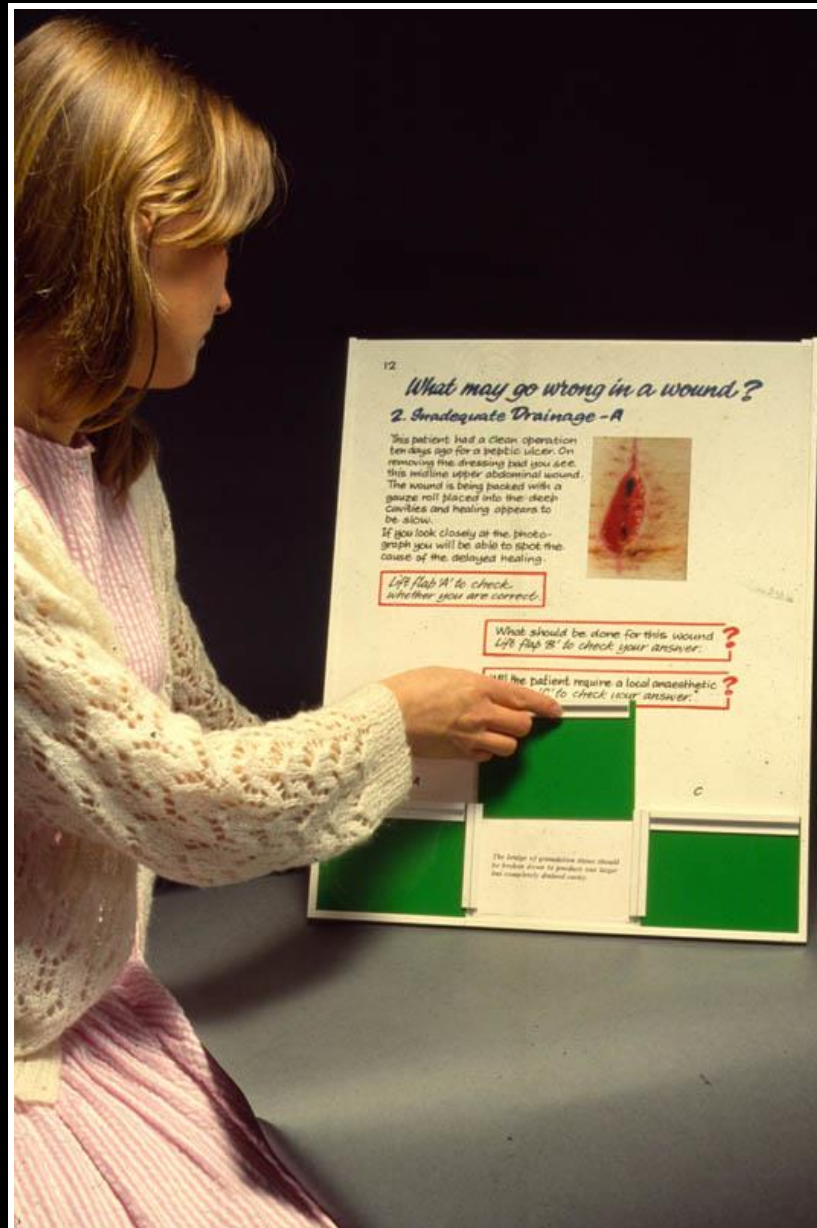
People (1)

sysadmin

Wimba Classroo...



To: Main Room



12

What may go wrong in a wound?

2. Inadequate Drainage - A

The patient had a clean operation ten days ago for a peptic ulcer. On removing the dressing pad you see this midline upper abdominal wound. The wound is being packed with a gauze roll placed into the depth cavities and healing appears to be slow. If you look closely at the photograph you will be able to spot the cause of the delayed healing.



Left flap A to check whether you are correct.

What should be done for this wound?
Left flap B to check your answer.

Will the patient require a local anaesthetic?
Left flap C to check your answer.

The border of granulation tissue should be broken down to produce a larger and completely drained cavity.

[Question](#) [Examine](#) [Investigate](#) [Prescribe](#) [Refer](#) [Case History](#) [Your Notes](#) [Leave Patient](#)[Intro](#)[Challenge](#)[Exit](#)[Facilitator](#)[Mon 09:00](#)[Vital Signs](#)

Your challenge

As a locum GP you have 5 working days to get your patient pain free.



If your management decisions are inappropriate it may result in your patient being hospitalised and the case will end.

Click on the Forward arrow

Forward



Intro

Challenge

Exit

Facilitator

Index

Vital Signs



Feedback.....

You have now completed your management of Terry.

Although you have succeeded in getting Terry's physical pain under control and helped him overcome his fear of morphine addiction, he is still slightly anxious.

Terry's level of anxiety should have been noted in the vital signs summary and from the possible responses Terry made to the questions offered during the visits you made during your locum.

You did not deal with the non-physical causes of pain as fully as one might have liked and make the appropriate referrals.

For more detailed feedback, click on the **Forward** arrow.

Back

Forward





BEME Guide

4

Features and uses of high-fidelity medical simulations that lead to effective learning

S Barry Issenberg, William C McGaghie, Emil R Petrusa,
David Lee Gordon & Ross J Scalese

Best Evidence Medical Education (BEME)
Tay Park House, 484 Perth Road, Dundee DD2 1LR, Scotland, UK
Tel: +44 (0)1382 631967 Fax: +44(0)1382 631967 Email: p.m.lilley@dundee.ac.uk
<http://www.bemecollaboration.org>

Ten features identified:

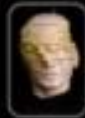
1. Feedback is provided during the learning experience
2.
3.
4.



Does pass or fail grading affect standards? - p565
Students fail to seek feedback - p580
Using qualitative methods to evaluate faculty development - p592
Discrimination in academic medicine - p601

Editor: J. McLachlan

medical
education



www.mededuc.com



**Higher
achievers were
significantly more
likely than lower
achievers to seek
their feedback.**

Sinclair & Clark,
Medical Education, 2007, 41: 580-592



LECTURER 1 has to explain to students the principles of measuring pH. Under her guidance, the students use a pH meter to measure the pH of a number of solutions.

LECTURER 2 gives a tutorial to a small group of students on the principles of osmometry. The lecturer clearly explains the functions of the components of the equipment used.

Case Study



After one year...

During an oral examination, a student is asked about the two subjects - osmometry and pH measurement. The student can only remember one.



QUESTION

Which subject did the student remember?



pH measurement

Principles of osmometry





Feedback

Activity

Individualisation

Relevance

Active learning

**Almost all learning
situations can be
transformed from
passive to active**

Active learning

The student:

- reflects
- builds on what they already know
- applies their knowledge
- tests their understanding
- carries out a procedure
- shares their knowledge

The Professor's Guide to

Teaching

Psychological Principles
and Practices



Donelson R. Forsyth



Student achievement is enhanced by the use of active, experiential methods in college teaching.

Forsyth, 2003



**Activity
must be
meaningful**



At a curriculum planning meeting when the results in a recent examination are reviewed, a problem was raised. It was reported that about 1/3 of the class failed to give a satisfactory answer in a question on drug pharmacokinetics — a core topic in the curriculum.



An interactive computer programme was developed covering the topic. This was made available as a supplement to the lecture course and offered to students who had failed to grasp the essentials of the subject at the lectures.

In another school a similar problem had been identified. At this school because of the importance of the topic the lecture course had been re-structured and a further two lectures on drug pharmacokinetics had been added.

Case Study



The following year, students at one school performed well in the examinations in the questions on drug pharmacokinetics.

At the other there remained a problem.



QUESTION

In which school had the students improved?



School 1: Optional computer programme

School 2: Additional lectures





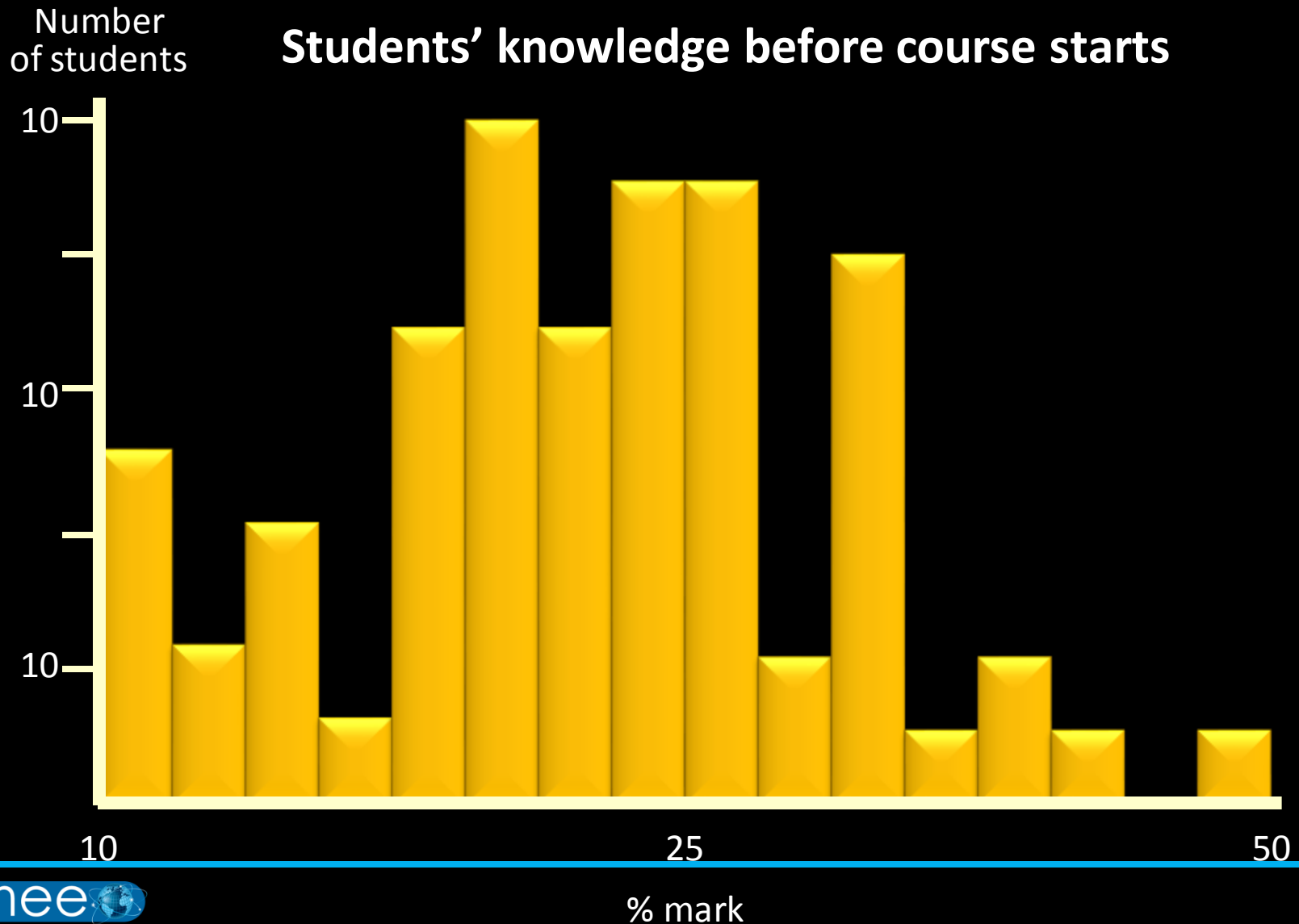
Feedback

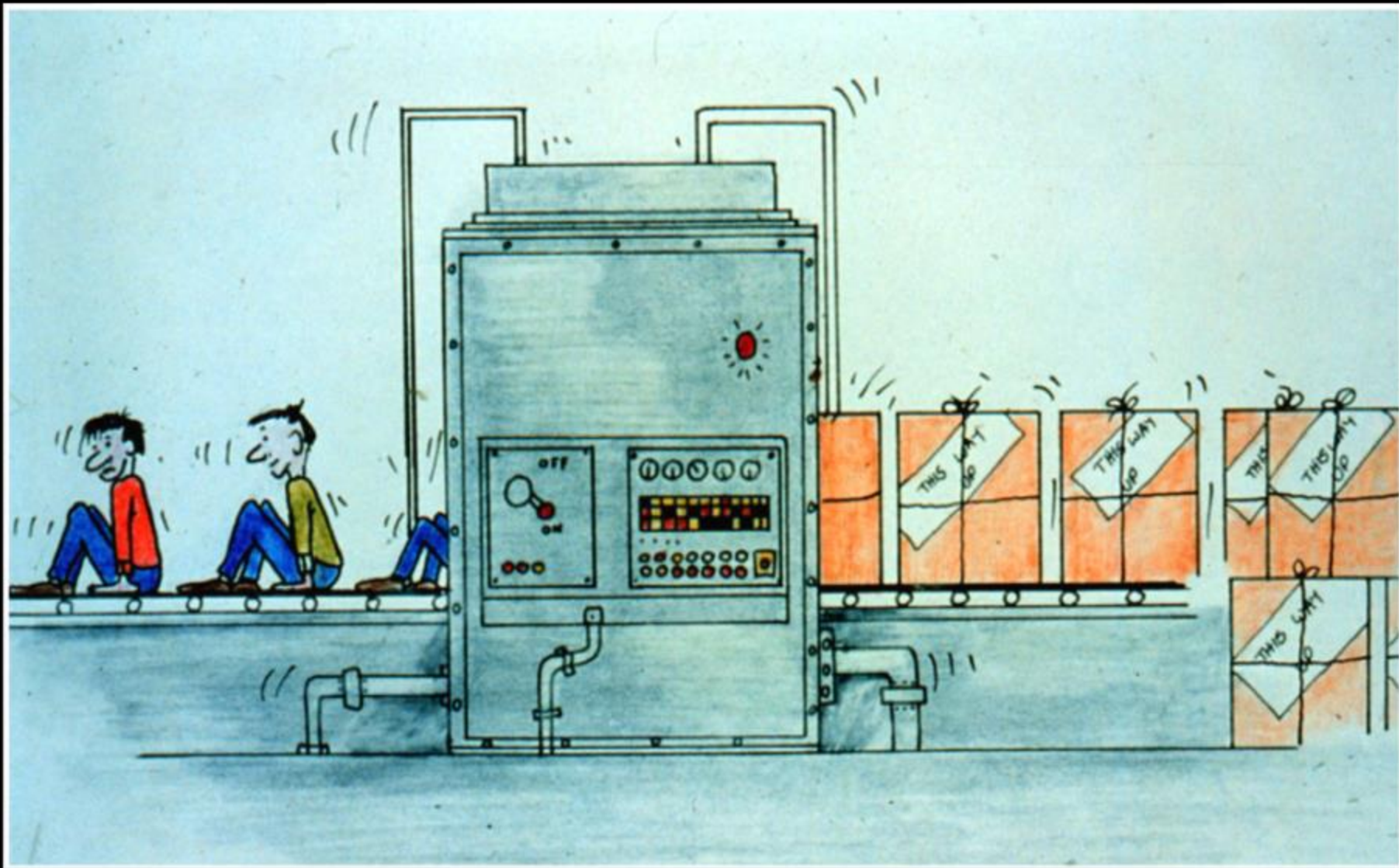
Activity

Individualisation

Relevance

Endocrinology questions







**Individual
Requirements**

**‘Just for you’
Education**

The individual learner

- Prior experiences
- Prior knowledge, skills, & attitudes
- Aims and goals
- Learning style and strategies
- Learning opportunities available
- Ability

In the Haemopoietic System course:



LECTURER 1 describes the structure and function of erythrocytes and leucocytes, and how the cellular components in a blood film can be identified.



LECTURER 2 discusses the basic principles of coagulation. During the discussion he gives examples of patients with clotting defects in whom it is appropriate to perform bleeding times and clotting times.

Case Study



Both subjects are covered in the end of term examination.



QUESTION

In which area do the students perform better?



Structure and function of blood cells

Principles of coagulation





Feedback

Activity

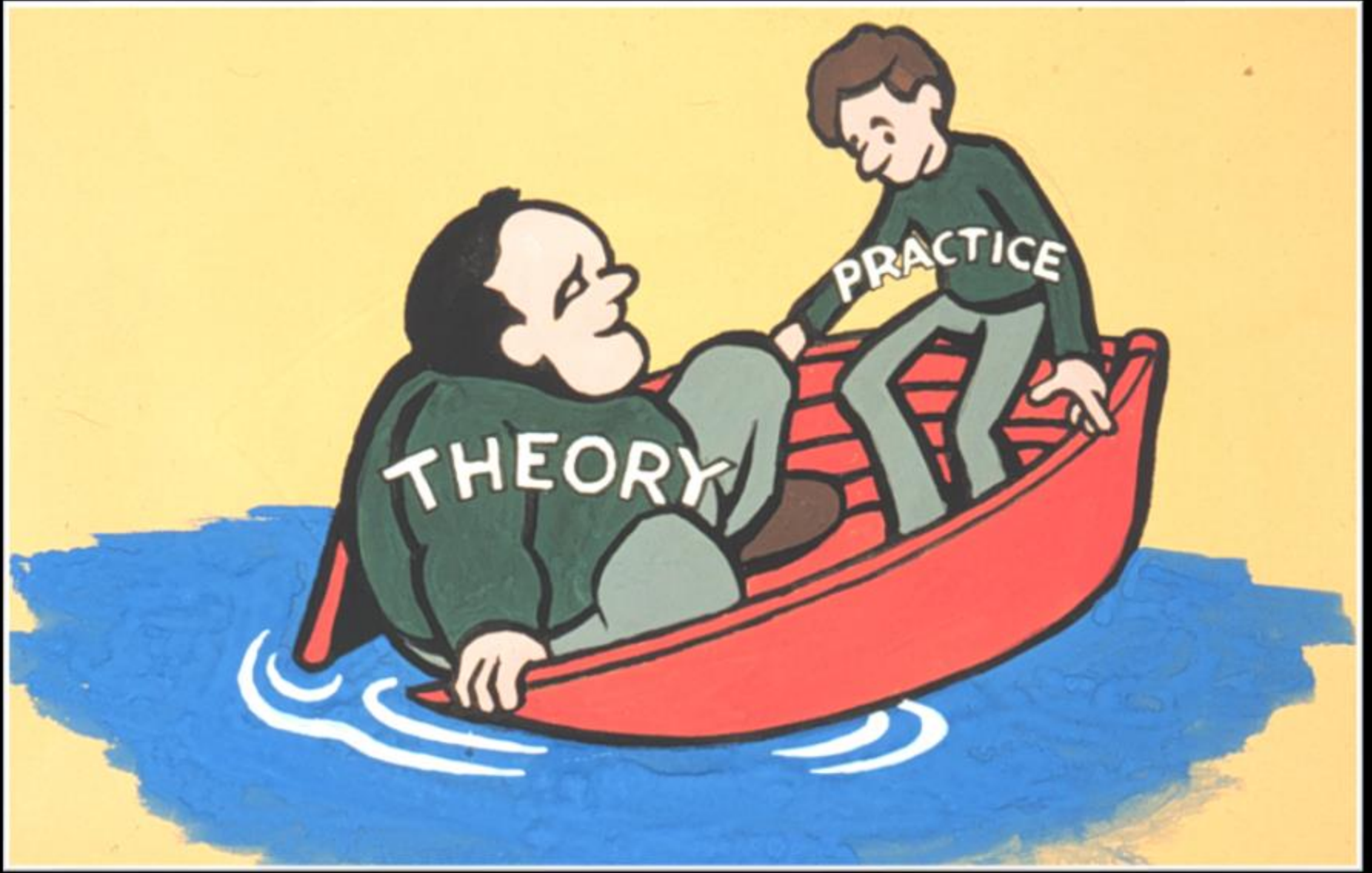
Individualisation

Relevance

Relevance

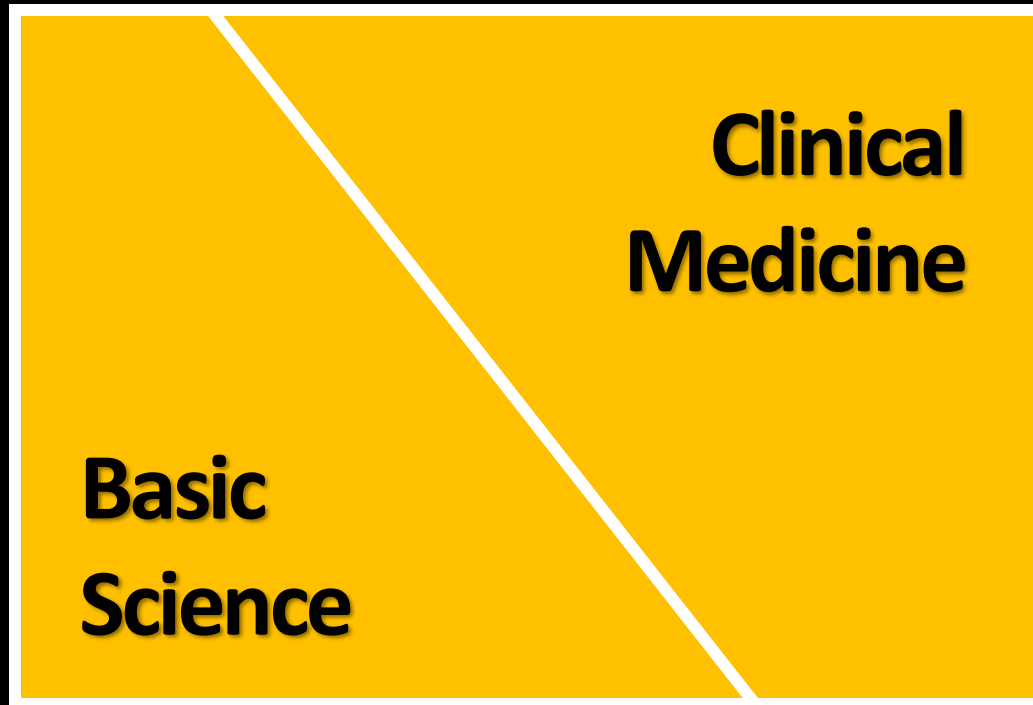
- Not 'inert' knowledge
- Meaningful to learner

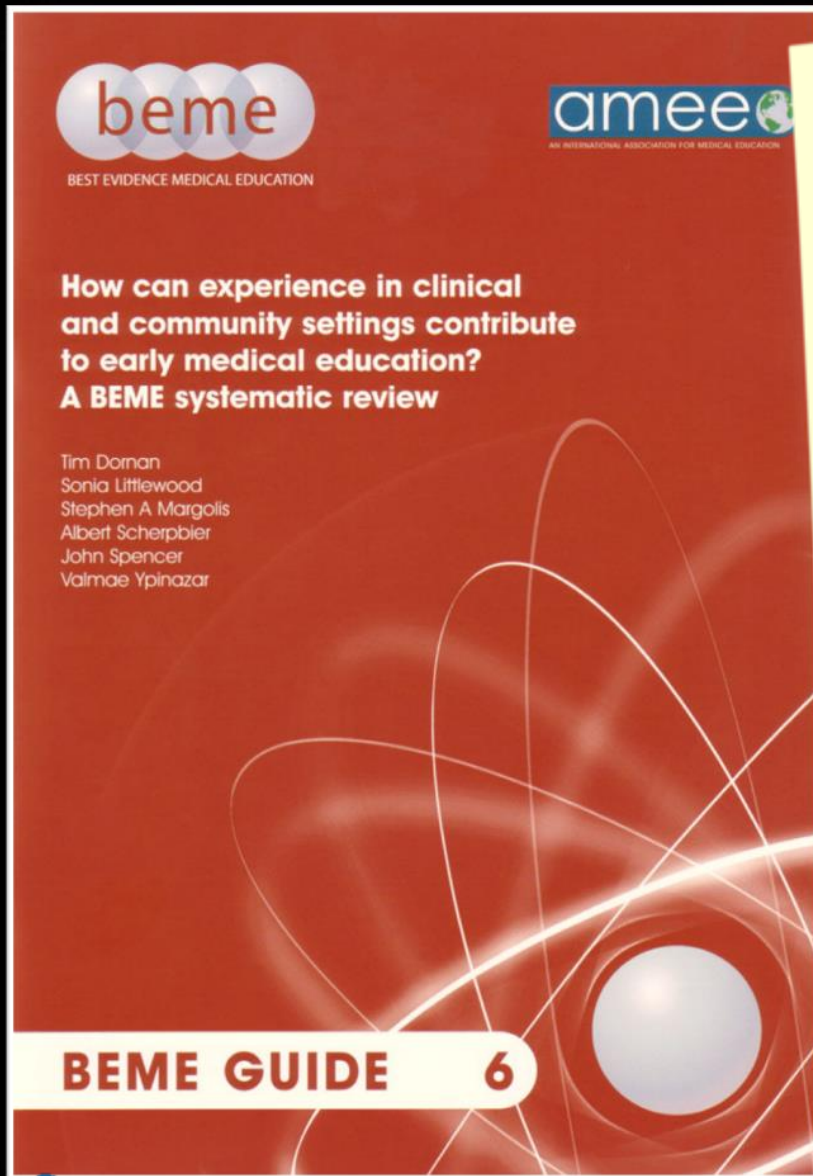




Later years

Early years

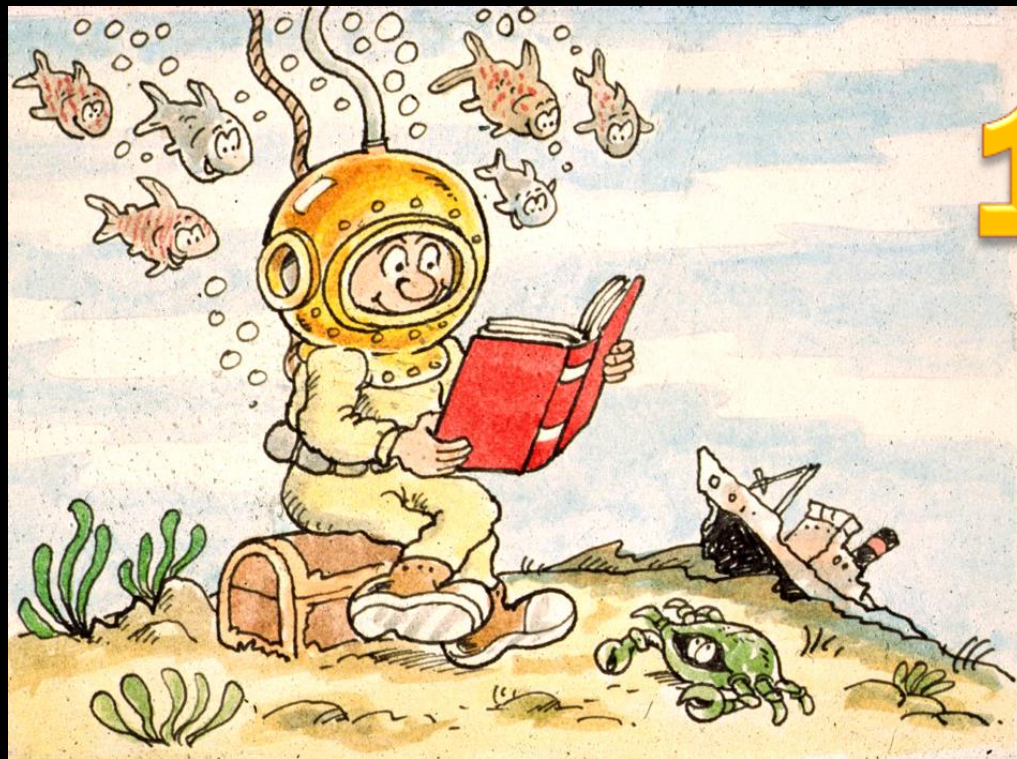




“Early experience helps medical students socialise to their chosen profession. It helps them acquire a range of subject matter and makes their learning more real and relevant.

It can influence career choices.

Dornan et al. (2006)



1



2