

Turning Education into Action

Lawrence Mudford

The premise of the *Mission: Impossible* films is to carry out a task where success is seen as so unlikely or improbable that it is deemed impossible. Is there a similar experience in dentistry? I recently had the opportunity to be a part of a dental team tasked with raising awareness of oral health issues and providing practical training, including how to examine the mouth and chart teeth, give local anaesthesia and understand the principles of extraction. Whilst this may not seem, on first reading, an impossible task, the challenge comes from the fact that each group of students comprises between 60-100 general nurses who are studying a Diploma in Tropical Nursing, or 100 doctors taking the Diploma in Tropical Medicine & Hygiene (DTM&H). These clinicians generally have no dental experience and are going to be working in developing countries for aid agencies, where their skills are going to be in the front line of healthcare and will have a direct impact on the community that they are living in. Oh, and the teaching needs to be completed in half a day of study, as well as ensuring that the 'mission' is carried out in a safe, risk-managed and appropriate way! Mission... impossible?

The mission...

- The ratio of dentists to population in most African countries is 1:150,000, compared to 1:2,000 in the UK.¹
- 68% of the global total of people with HIV and AIDS are found in sub-Saharan Africa.²
- From World Health Organisation figures, 84% of the world's smokers are in developing countries.³
- 90% of dental caries in low-income countries remains untreated and decay levels are increasing as the diet becomes more westernised.⁴

The above figures are alarming. And yet, when read in the comfortable surroundings of a practice or home, the picture they convey may be so far removed from the reality that we have come to expect living within the UK that their impact is diminished or diluted.

In the same way, perhaps this is how the world saw the plight of thousands of children in Ethiopia before the BBC news crew reported on the famine that was ravaging the country in 1984. The reporter, Michael Buerk, told the

story of a Red Cross field nurse, Claire Bertschinger, who was running two feeding centres that could only take in 60-70 new children at a time, whilst thousands more were in need of food, medical care and support. As the saying goes, the rest is history. You may remember the result of that filming, which led to world recognition of a problem that existed thousands of miles away, and resulted in the Band Aid Christmas single and the Live Aid concert in 1985.

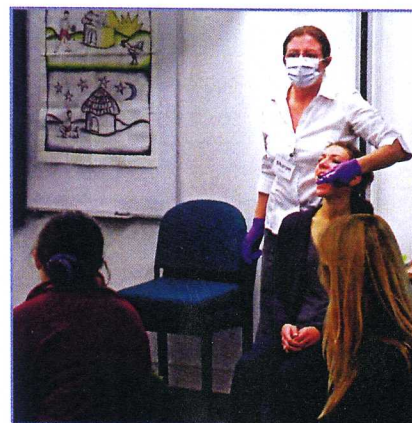
...should you choose to accept it

So what is the relevance of a story that is over 25 years old to the current statistics given at the start of this article? The answer is in the name of that same nurse, who since that news report, has continued to dedicate her life to providing healthcare training for developing countries as Director of the Diploma in Tropical Nursing, run at the London School of Hygiene and Tropical Medicine (LSHTM).

The charity Teeth Relief, under the direction of dentist Sharon Rankin, has been working with Claire, providing the oral health content of the diploma course, which runs twice a year, with 65 nurses studying for the diploma. They also work with Dr David Moore to teach 100 doctors on the DTM&H, which is a requirement to work for aid agencies in low-resource countries.

Training in relevant clinical skills for tropical and developing countries with low resources is provided, and oral care is recognised as an important part of this general healthcare. Using a specially developed teaching manual, the dental team give oral health advice and practical training, which includes how to examine the mouth and chart teeth, give local anaesthesia and develop awareness of the principles of extraction. This is the team that I had the privilege to join for its latest teaching module in January 2011.

So how do you approach a training situation where you are required to teach practical skills to non-dentists in the space of half a day that



Sharon Rankin demonstrating examination and charting procedure.

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members of a dental team in the UK will take years to master?

At the heart of any learning experience, whether it is a lecture, practical workshop, demonstration or a written assignment, there is recognition that a measurable outcome to learning is essential. For this to happen there needs to be a process in place for the participants to develop the skills they have learned to the full. This teaching therefore needs to be delivered in a way that is both immediate (ie. on the course itself), but has also the potential to develop skills away from the teaching day as a standalone learning experience. Is there a learning process that allows for this flexibility where the learner gains insight, develop awareness, and recognises when to refer a patient or when to extend their own learning?

One of the key theories of learning, and one that is used on the course, centres on experiential learning in the form of the Kolb learning cycle (see fig 1).⁵ When used in combination with a process of critical reflection, this can be a powerful tool to enhance learning.

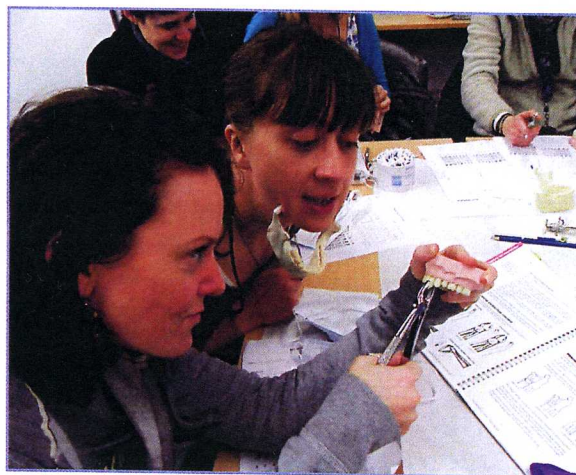
An insight job

The learning cycle can be started at any of the four points, and the cycle is a continuous process, though often, the learning process begins in earnest with the student carrying out a particular action and then seeing how the action affects the procedure, using both personal and peer reflection.

For example, following a session of interactive teaching to the whole cohort on charting of the teeth, smaller groups are encouraged to chart each others' mouths using disposable mirrors and simple torches, wearing appropriate personal protective equipment. From this initial **action**, the group members are asked to **reflect** on the procedure so that they can gain **insight** into carrying out a similar situation in the future so that they can **plan** how to carry out the action in a way that enhances the process, in this case to enhance patient care. This simple example can be used to

aid any educational episode and can be applied by members of the dental team to the chairside, to practice team training, or to CQC requirements.

This cycle is seen to work on two levels. Firstly, it allows students the chance to acquire and apply skills and knowledge in an immediate and relevant setting, where the student has an encounter with the subject being studied, such as charting other students or giving oral health advice, rather than a theoretical understanding based on didactic or lecture-style teaching. The second level builds on the first, by allowing the students to participate directly in the areas of nursing that they will encounter in developing countries, such as the need for a practical awareness of emergency tooth extraction and the giving of



Two course members gaining extraction practice.

such as: What did I do? Why did I do it? What was the effect? What did I learn? What would I do differently next time and why?

As part of the learning cycle, reflection should be a continuous process and is a skill which can be enhanced and improved as it is used. The FGDP(UK)'s modular approach to learning for DCPs is shown in the Key Skills in Primary Dental Care assessment. The Faculty has recently added a new standalone module which is dedicated to the skill of reflection;⁶ this is completed independently of the Key Skills assessment, and can act as an encouraging introduction to post-registration learning.

For example, consider a general practice situation where an appointment is overrunning by 20 minutes and the next patient is complaining to the reception staff. The learning cycle encourages us to reflect on the problem, analyse what went wrong and plan for the future so that a strategy is put into place for similar situations in the future. Perhaps the dental team could put a process in place to inform reception when an appointment is likely to overrun; or for the dental nurse to speak to the next patient personally if an appointment overruns by 10 minutes as an automatic action that is agreed with their dentist; or even to reassess the appointment times that are routinely given to patients. The outcomes of critical reflection can therefore be very practical.

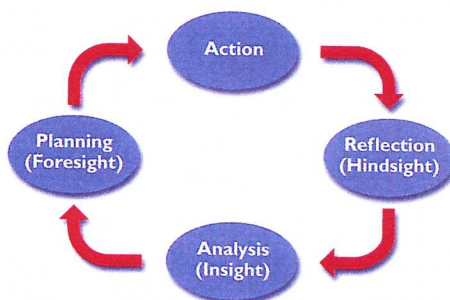


Figure 1: The Kolb learning cycle.

injections, in this case using real extraction forceps on plastic extraction models and the giving of injections using cotton buds as anaesthetic syringes.

This message will self-reflect in five seconds

The principles laid out in the above examples, using reflection and a learning cycle, can be directly related to a general dental practice situation to enhance patient care. In particular, reflection allows all members of the dental team to ask questions about their working practices

Lesson accomplished

So, having experienced the approach to teaching that was employed for these students, was this an impossible mission? Is it possible to teach the three large subjects of oral health advice, injection technique and extraction procedures in one morning to a group of nursing students? The answer is of course both yes and no, depending on your definition of the word 'teach'! Perhaps the real question relates to what the students have learnt during the session.

In terms of the application of the learning cycle and reflection, I was hugely impressed just how the practical skills related to the teaching given to the students were beneficial, and each student will certainly be able to continue their individual study using the oral health manual that was frequently referred to and explained as an integral aid to assist in their own awareness



Students role-play charting using disposable mirrors and a torch.

and understanding of oral health within general health.

Will these students, when they qualify, be able to make a difference within the communities and healthcare teams in which they will be working in Africa? Undoubtedly. The drive and expertise of the course directors at the LSHTM, coupled with the dedicated teaching of the members of Teeth Relief, will ensure that oral health and patient care will be

influenced in areas where the trained aid workers will often be the only health professionals available to the community.

More information on Teeth Relief and its oral health manual is available at www.teethrelief.org.uk.

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