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EDITORIAL

Learning on the job: developing an educational culture of trust

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Over the last 250 years or so, medical education has brought together one-on-one apprenticeship and academic tutelage.[1,2] The former may be intensely practical, if idiosyncratic, while the scientific basis of the latter may be remote from clinical application. Over the years, education, in general, has developed from an instructivist approach, with an emphasis largely on information imparted by the teacher, to a constructivist approach, emphasising that learners build up their own knowledge.[3]

After a full-time undergraduate programme, graduates who aim to specialise become full-time state employees and part-time students. Thus, added to the pressure of accruing both specialised knowledge and clinical skills is the employer's expectation of around-the-clock service delivery. Ward-, clinic- or laboratory-based specialties may have the luxury of grand rounds: clinical learning opportunities during dedicated times, when discussion of the nuances of presentation and management is relatively independent of the need for immediate intervention. The majority of clinical education in anaesthesia, however, occurs during the administration of anaesthesia, when the time-course of events does not lend itself to leisurely discussion, and attention is torn between patient and pedagogy.

Given that the operating theatre may not be a learning-friendly space, it is reasonable to assess the extent to which it does provide an educational environment. Khan et al.[4] in this issue present such an evaluation of the operating theatres in three hospitals affiliated to the University of the Witwatersrand. They took an instrument[5] initially developed and validated in Scotland and subsequently used and validated elsewhere in the world,[6-8] and added a question on racial discrimination. Considering the circumstances of operating theatre work, it is perhaps not surprising that an overall score of 67%, while comparable to scores in other countries, leaves 'room for improvement'. The relatively high score for 'autonomy' and relatively low score for 'workload, supervision and support' are likely two sides of the same coin: a chronic shortage of anaesthetists in the face of an unrelenting service load leaves trainees with the perception that they are bearing the brunt of the load and carrying the burden of responsibility for their own practice.

That the three highest-scoring questions relate to patient care is encouraging. That one of the lowest-scoring questions relates to release for out-of-theatre teaching is understandable, but nevertheless unfortunate. (The instrument used to assess the in-theatre teaching environment paradoxically, but logically, includes release for knowledge-based learning that is more appropriately delivered outside of theatre.)

Questions about racial or gender discrimination generated similar responses: while 80% of respondents were neutral or disagreed that discrimination occurred, it is important to note that one in five respondents perceived that it did. Here, too, there is 'room for improvement'. A qualitative study in the same setting[9] contributed a few specific comments on discrimination: female trainees particularly felt the tension of balancing their professional career with that of a wife and mother; a black African trainee felt the need to be unobtrusive and work hard to succeed in that environment, and there was a suggestion that black African trainees were given extra teaching in one hospital. Matters of race and gender are still sore points in South Africa – especially in the light of recent experience – and although we believe that we have worked through some of the attendant concerns better than other countries, there is no room for complacency.

Do these matters matter? Where teacher and tyro are trying to cooperate in the latter's learning, where there are both real and perceived discrepancies in the power and agency of each, where an understandably tenuous environment for knowledge construction is subject to subtle influences for good or ill, yes – they matter.

Part of the educational dialogue between expert and trainee is that of feedback. This concept is a relatively recent one (ca. 1983[10]), borrowed from engineering, and implies a closed-loop process of minimising the discrepancy between intended and attained performance, enhancing the learner's own judgement and facilitating that judgement on future occasions. It is not a one-way critique (whether positive or negative) and is not necessarily initiated by the expert; the trainee might request information on performance of a particular skill. Ideally, educational feedback is an interchange between trusted allies, appropriately timed and anticipated, based on direct observation. It is aimed at behaviour that can feasibly be changed – thus, action rather than surmised intent is described – relating to specific actions rather than generalised observations, the observer identifying subjective opinions as such.[11]

Naicker et al.[12] in this issue, describe anaesthesia trainers' feedback in the University of KwaZulu-Natal. Regarding their knowledge, the majority agreed with most statements they were asked to

respond to. However, 7% disagreed that objectives should be specified beforehand, and 25% disagreed that the trainee should first have an opportunity to assess their own performance prior to receiving feedback. One would have thought that specifying the educational endpoint was a basic requirement, and that the ability to self-assess should be encouraged on every occasion.

Attitudes toward the feedback process included the fact that 80% felt that the service load impedes the delivery of feedback, which might be expected. Despite this, 75% claimed to set aside time for feedback. Negative feedback was difficult for 48% (although 5% focussed predominantly on negative aspects); the difficulty may relate to the 16% who felt that their own knowledge and skills were inadequate to give feedback, and the 75% who would like to be trained to provide feedback. The trainee's ethnicity (18%) or gender (16%) influenced the way that feedback was given; given our diversity, this may have either positive or negative implications, depending on exactly how trainers interact with trainees.

In practice, 13% of trainers gave non-specific feedback. Claims were made by 77% that they allow time for the trainee to act on feedback, and by 63% that they follow up with their trainees – this in the face of an end-of-rotation 'feedback' exercise. Such an exercise is likely not to be timeous, based on immediate observation, related to specific actions, or allowing for remediation or follow-up. One must assume that the majority of trainers were in fact providing in-service, on-going feedback, which is more likely to be effective. Administrative needs for a summative 'feedback' session as the trainee exits a clinical rotation can be understood, but the implication that feedback is being offered during the course of the block is heartening, as is the authors' emphasis on the requirements for effective feedback.

How do these two topics of the theatre's educational environment and feedback intersect? The environment should establish the culture[13] of trust[14] in which the important, and sometimes emotional,[15] process of dialogical feedback can flourish. Carl Rogers,[16] an esteemed researcher and postgraduate teacher, wrote:

> "If I distrust the human being then I *must* cram him with information of my own choosing, lest he go his own mistaken way. But if I trust the capacity of the human individual for developing his own potentiality, then I can provide him with many opportunities and permit him to choose his own way and his own direction in his learning"

It is encouraging to see in both Khan et al.[4] and Naicker et al.[12] evidence of the developing two-way trust between trainers and trainees that fosters useful learning.

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