Thinking about the SHO curriculum

Stephen Brigley, Michael Golby

This discussion of the reform of senior house officer (SHO) training draws on important evidence from the evaluation of a pilot curriculum for basic surgical education. Variations and anomalies in SHO teaching and learning were detected, many related to the service context. They highlight the need for explicit curriculum frameworks that build on, and are consonant with, current best practice in SHO education.

INTRODUCTION

The first steps in a long-awaited reform of the curriculum of senior house officers (SHOs) are underway. Implementation of the new Foundation Year 2 with its generic training has required new educational structures and technologies to be put in place, along with the training of consultants as supervisors. This major reorganization presents an opportunity for the deaneries, Royal Colleges, Trusts and General Medical Council to engage in fundamental thinking about the SHO curriculum. This article develops the discussion with evidence from the evaluation of a pilot curriculum for basic surgical education: General Professional Practice of Surgery (GPPS).

The GPPS curriculum document set out a structured and coherent design for learning (De Cossart and Fish, 2004; Fish, 2004). It construed practice-based learning as a partnership between surgical SHOs and their supervisors. Reflective learning was the crucial underpinning of professionalism and professional development in the scheme. A portfolio was used by SHOs as a learning tool and record of their developing practice, reflection, progress and assessments. Assessment in GPPS covered generic and specific procedures, underpinning knowledge, attributes and values, and was integrated with the context and process of learning. It included those 'triggered' by SHOs: of their patient management, operative practice and associated reflection on the process. Learning and assessment importantly focused on the 'tacit resources' that surgeons employ to inform their professional judgments.

Dr Stephen Brigley is Senior Lecturer in Medical Education, Wales College of Medicine, Biology, Life and Health Sciences, Cardiff University, Cardiff CF14 4XN and **Professor Michael Golby** is Professor of Education, Faculty of Education, University of Plymouth.

Correspondence to: Dr S Brigley

THE EVALUATION STUDY

The evaluation, commissioned by the Royal College of Surgeons of England (RCSEng), focused on how this novel programme was translated into action. It was to generate information that would assist further development of GPPS, while at the same time embracing the nuances of health-service environments (Hoof et al, 2004). The latter included the cultural symbols, styles and traditions of surgical practice that contribute to the 'hidden' SHO curriculum.

The evaluation team, comprising mainly general educators, followed surgical SHOs at two trusts in the north, and two trusts in the south of England (in 2002–2003). Initially, pairs of evaluators jointly observed interactions across the sites of 20 SHOs with their supervisors in ward rounds, outpatient clinics and operating theatres. Semi-structured interviews were then used to gather these participants' views on surgical education. In a further round of visits to each site, employing similar methods, case studies were mounted of six SHOs in GPPS posts. An equal balance of SHOs in orthopaedic and general surgery was maintained throughout. The accumulated evidence from over 315 hours of fieldwork was subjected to qualitative analysis.

TEACHING AND SUPERVISION

The prevailing view of surgical education as an apprenticeship concealed varied, and sometimes uneven, educational practices in the trusts. Some surgeons emphasized the need of SHOs to learn technical skills in operating procedures. Others believed there was more to being a surgeon than technique; SHOs should learn the professional attributes needed to be an effective SHO at ward work, patient management, team work and 'people' skills. Surgery was even described as a complex art, not always amenable to scientific agreement.

Different styles of teaching and supervision were observed. Few surgeons were witnessed 'bawling out' or publicly humiliating juniors, but it was equally rare for supervisors to offer pastoral guidance. Nevertheless, relations between surgeons and SHOs were mostly cordial. Informal chat with seniors was felt to give SHOs a sense of acceptance and to facilitate teacher–learner interactions. SHOs typically received 'an opportunity to simply observe what's going on, ask appropriate questions and, you know, interesting questions come up.' (Surgeon). This ad hoc approach worked well when surgeons could listen to trainees, ask them open questions and provide constructive feedback, '…helping people to think through problems and (asking) questions that lead them along the line of providing their own answer to the problem...' (Surgeon).

For the most part, teaching was didactic and assumed a transmission model of learning. SHOs refrained from asking too many questions of sur-

geons, probably out of deference to their status. Questioning – often in terse style – was the prerogative of supervisors and contributed to a climate of informal testing. It was easy to be cowed by such interrogation, although some SHOs claimed to have become inured to it. The requirements of the RCSEng membership examination dominated SHOs' formal teaching sessions, reinforcing a transmission and 'testing' culture.

SHOs participated in RCSEng courses and personal reading that would assist their passage to college membership. Both SHOs and surgeons remarked on the divide between learning in surgical practice and learning geared to the college exams. Experiential learning was engendered from SHOs' reflection on clinical experiences and subsequent adaptation of their surgical knowledge and techniques (see Kolb, 1984). Some SHOs were tutored in evidence-based practice by their supervisors, but self-directed learning was interpreted as that solely initiated and conducted by the SHO.

Some surgeons actively fostered a mutually-supportive 'team' culture in which learning was stimulated by continuous sharing of expertise. This ethos was stronger when they were prepared to voice uncertainties and encouraged team members to see mistakes as learning opportunities. Individualist surgeons and rivalry among team members – for example, over access to operative procedures – were associated with a less positive learning climate.

LEARNING IN PRACTICE

By general consent, the leap from cognitive attainment to skilled and professional performance could only be made in practice. SHOs were said to learn very much 'by example' from surgeons. Trainees needed to see experts interacting with patients, to become involved themselves and receive supervision. Only then would they synthesize clinical knowledge in practice and learn surgical skills. A central aim of most surgeons was to introduce SHOs to '…this sort of computerized process that we all use, being fed information from a patient, interpreting it yourself, and trying to make logical management plans and come to a diagnosis and then decide on the treatment' (Surgeon).

There was a tacit teacher–learner contract in surgical training: '… I suppose I'm his apprentice, I'm helping him to get through his workload and the by-product is that I'm sort of getting some educational training out of it' (SHO). The SHO's access to learning depended on how the consultant-as-expert chose to balance benefit to the patient with benefit to the trainee. Undoubtedly, the service role presented an enduring challenge: 'The SHOs are doing a lot of service work and they don't get a lot of educational opportunities…' (Surgeon). Service areas were sometimes noisy, busy and distracting. What is more, national changes in doctors' working hours, shifts and 'on-call' were disrupting SHOs' opportunities to experience continuity of patient care and be part of a surgical and clinical team (McKee, 2002).

CONSTRUCTING A CURRICULUM

Given such conditions, there were distinct advantages in being located with a sympathetic supervisor and efficient trust organization. Indeed, some SHOs were clearly proactive in seeking posts with consultants, departments, rotations and trusts of high repute, and in competing for the best learning opportunities in the current caseload. This magpie-like approach resulted in a self-generated curriculum. However, where induction, appraisal and supervision were followed through GPPS-style and the local environment was conducive, something like a negotiated curriculum could result (Brew and Barrie, 1999).

While finding much to admire in surgical education, SHOs seemed vulnerable to the constant pressure of the service connection, complex demands of their role and their need to pass membership exams. The principal merit of GPPS, according to SHOs, lay in its explicit understandings of what it is to be a surgeon and in its structured curriculum that seemed more likely to guarantee them comparable learning experiences.

TOWARDS AN SHO CURRICULUM

From this evaluation, it is clear that the SHO curriculum will have to be codified in terms of the educational and clinical principles that guide:

- The balance between theory and practice and how these terms are to be understood
- The relationship of specialist and generic components of knowledge and competence
- The sequencing and structuring of learning
- Approaches to teaching, both in formal sessions and in informal and opportunistic situations
- The criteria governing assessment and progression through the various stages of SHO education.

Integration of the above in a systematic programme may be accomplished by a behavioural approach that defines the observable skills, techniques and performances to be expected of the trainee. Alternatively, a reflective practice approach would foster deliberation that unites the many activities of professional practice under a humane, self-regulating and developmental perspective. A mature curriculum will embrace diverse approaches with the overarching aim of producing practitioners of ever-increasing quality.

Whatever the approach, it must not be forgotten that the medical specialties embrace a host of practical arts. The SHO curriculum must capitalize on the strengths of apprenticeship learning and retain its essential connection with the service. It must similarly acknowledge the importance of theoretical knowledge. Service demands and assessment-driven study, however, must not overshadow the learning in practice that is the *raison d'être* of the whole curriculum.

CHANGE ISSUES

Any curriculum is subject to interpretation as it is put into practice. Preparation of participants and the environment will be crucial to changes in the SHO curriculum. Teacher development has been observed as fundamental to curriculum development (Stenhouse, 1975), but SHOs bring

educational expectations to their training and will also need careful induction to new educational practices. On the other hand, it is difficult to legislate for SHO–supervisor relationships.

To sign up to new systems and structures is not necessarily to understand or accept their deeper import. Any innovation that departs too far from good practice, as recognized by practitioners, will be liable to derailment and corruption. One approach would be to identify key professionals, and perhaps key institutions, as change agents in the educational process. Basic teaching quality and willingness to teach will need to be established. Indeed, some teachers may become curriculum experts who advise and support their peers.

Formal debriefing and reflective discussions are best conducted in calm and uninterrupted settings (Lyon and Brew, 2003). Service work relies on rapid cognitive and technical responses, but often excludes the affective and social dimensions of learning. Professionals need to feel safe and unconstrained when considering what they know (and do not know), what they feel and value. The practicum – a private and secure professional place within practice, but away from its immediate demands – is a valuable measure here. The provision of side rooms, teaching lists and sessions in skills laboratories have developed along such directions.

CONCLUSIONS

Informed discussion of what the SHO curriculum should be is needed to ensure that change is by design, not default. Change of the kind looked for in the SHO curriculum – change that is qualitative and in some respects radical – will not be achieved overnight. It will require a gradualist approach that takes account of the best of existing educational practice. **HM**

The authors wish to acknowledge the contribution of members of the evaluation team, without whom the project would not have been possible – Cindy Johnson, David McCallan, Brenda Mountford, Rosemary Richardson, Iain Robbé and Rosemary Viant – and the support of the Steering Committee of The Royal College of Surgeons of England.

Brew A, Barrie S (1999) Academic development through a negotiated curriculum. *International Journal for Academic Development* **3:** 34–42

De Cossart L, Fish D (2004) A first curriculum framework for surgical SHOs designed by The Royal College of Surgeons of England. *Ann R Coll Surg Eng* **86:** 309–11

Fish D (2004) The educational thinking behind The Royal College of Surgeons of England's first curriculum framework. *Ann R Coll Surg Eng* **86:** 312–5

Hoof J, Phol H, Bartfield J (2004) Creating a learning environment to produce competent residents. *Acad Med* **79:** 532–9

Kolb D (1984) *Experiential Learning as the Science of Learning and Development.* Prentice Hall, Englewood Cliffs NJ

Lyon P, Brew A (2003) Reflection on Learning in the operating theatre. *Reflective Practice* **4:** 51–66

McKee A (2002) Working and learning in hospitals: junior doctors adrift in fragmented communities. *Learning in Health and Social Care* **1:** 158–69

Stenhouse L (1975) *An Introduction to Curriculum Research and Development.* Heinemann, London

KEY POINTS

- Current reforms of the senior house officer (SHO) grade tend to overlook the accompanying need for structured curriculum frameworks.
- Reported variations in the learning and teaching of surgical SHOs suggest that there is no guarantee of a comparable quality of learning experiences across training posts.
- Basic surgical education raises issues of relevance to other specialties; in particular, how to arrive at balanced and coherent designs for SHO learning that will safeguard the best of existing learning in practice.
- A change in professional consciousness, service environments and organization will be required to ensure that the aims and intentions behind SHO curriculum frameworks are properly understood and fully implemented.