Techniques in medical education

Handbooks, learning contracts, and senior house officers: a collaborative enterprise

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Summary
Efforts to bring about improvements in hospital-based education and training for senior house officers over the last few years have raised issues which are gradually being addressed. One of these is the lack of understanding by many clinical teachers of educational principles and their application to senior house officer training. This study describes how volunteer consultants in five specialties in a North West District General Hospital worked together to develop an educational structure for senior house officers. An audit of education and training was carried out across the hospital to help identify problem areas. An education specialist worked with consultants to develop, implement and evaluate a handbook based on adult learning principles. The handbook incorporated a learning contract, formal review process and a curriculum of learning objectives for each specialty. In parallel, consultants created in-house videos which were used to raise awareness of clinical teachers in the hospital about these educational issues. Preliminary evaluation showed positive responses by both senior house officers and consultants to both the study and its outcomes.

Keywords: learning contracts, training, handbooks

Much has been written in recent years about the quality of senior house officer (SHO) education and training. SHOs have seen themselves providing a service which takes priority over their educational development. Inadequate knowledge of appropriate learning methods and teaching skills among senior medical staff have contributed to a situation where new approaches to traditional medical education are required.

Recent guidelines published by professional bodies recommend that trainees are provided with learning contracts to structure their training and allow them greater control over its direction and content. This case study illustrates how handbooks and learning contracts to support self-directed learning were designed, developed and introduced into SHO training in a North West England hospital.

Learning by contract is a way of providing a framework for independent or self-directed learning, and at the same time, meeting individual, institutional and professional requirements. An individually tailored learning contract is the most appropriate mechanism to use and is the outcome of a negotiation process between an educational supervisor and trainee. It sets out what must be learned to make progress (learning objectives), how objectives will be achieved (resources needed and methods to be used), how learning will be assessed and how the whole process will be evaluated. The process has a number of key features (box 1).

The programme

The main aim of the programme described in this paper was to develop an educational structure to support and improve SHO training. The strategy adopted was one of directly involving consultants and SHOs in decision-making about improvements, while bearing in mind the difficulties they already faced when balancing service and training needs.

Local funding arrangements enabled an educational researcher to manage activities on a day-to-day basis. The establishment of a good working relationship between the researcher and hospital medical staff was vital, to ensure that data collected would be useful for making changes. A general understanding by the researcher of the hospital environment was also essential.

The hospital selected was a 'typical' general hospital in a large town serving both an urban and semi-rural population. The hospital management and clinical tutor agreed to participate pending acceptance by medical staff and SHOs. Their acceptance was subsequently obtained through a series of consultation meetings. Participation of all those involved was voluntary. The aims of the consultation meetings are listed in box 2.

Three phases of development were planned to take place over a 15-month period and comprised a hospital-wide educational audit (Phase 1), the development of an education structure (Phase 2) and evaluation (Phase 3)

PHASE I - EDUCATIONAL AUDIT
An audit of current education and training practice was carried out across the hospital. Identical questionnaires were sent to all consultants (52) and SHOs (45). They included questions about personal characteristics, the learning environment, aspects of teaching and learning, and career intentions. Respondents were encouraged to add personal comments.

The majority of consultants (87%) and SHOs (83%) responded. Of these, 91% of trainees (34) believed that their service commitment prevented them from receiving an effective training. Just under two-thirds of consultants (61%, 27) disagreed. Nevertheless, half of both groups thought that training could be improved, even under existing conditions. Trainees wanted more systematic

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Key features of contract learning

- active involvement by trainees at all stages of learning
- learning objectives based on trainees' current levels of competence and experience
- participation by trainees in the evaluation of their activities and achievements
- the supervisor's role as facilitator of learning

Box 1

Aims of preliminary meetings with managers and medical staff

- to clarify aims and objectives of the work
- to introduce research group personnel
- to explain the role of the researcher
- to define the extent of medical staff involvement
- to discuss and define strategies
- to outline benefits to participants
- to identify possible obstacles to progress

Box 2

Impact of educational audit

- greater understanding of learning issues by both senior and junior staff using learning contracts
- increased participation by trainees in development and use of learning contracts and learning activities
- practical changes to timetable, rotas, hours, clinics
- staff development activities planned and implemented

Box 3

Handbook contents

- introduction
- organisation of the department
- learning agreement
- aims of the department
- curriculum
- learning experiences
- learning contract (framework for reflection and review of learning)
- evaluation of post by trainee

Box 4

feedback (65%), planned induction (57%), learning objectives (49%), and a more positive attitude towards study leave by consultants (71%). Trainees appreciated that it was difficult for consultants to find the time to teach them, both formally and informally, because of the many demands made on consultants’ time. However, nearly three-quarters of SHOs thought that consultants were interested in teaching (72%). By contrast, 62% of consultants and 70% of trainees thought that consultants needed to learn how to be better teachers.

PHASE 2 - DEVELOPMENT OF AN EDUCATIONAL STRUCTURE

Selection of specialties for involvement in Phase 2 was based on the level of enthusiasm for educational activities shown by their respective consultants, either through personal contact with the researcher, or from the questionnaire responses. Consultants in five departments, namely General Medicine and Elderly Care, Accident and Emergency, Paediatrics, Obstetrics and Gynaecology and General Surgery, agreed to continue to Phase 2. Interviews with SHOs in these specialties complemented the information obtained from the questionnaires. Detailed reports about education and training provision were subsequently presented to these departments for consideration. They provided information to enable consultants to make decisions about possible ways of improving education and training for their SHOs (box 3).

Consultants agreed that the reports contained few surprises, but they did provide “a springboard for discussion”, a “strong stimulus to try and improve education and training” and “a catalyst for change”. Initially, discussions were department-based and focused on individual aspects of training, some of which have been implemented. However, the similarity of departmental ideas highlighted the need for consultants to collaborate to develop a common learning framework across the hospital so that all aspects of education and training could be organised and integrated. A pocket-sized SHO handbook and training record evolved as a result of this collaboration.

The handbook has a core content and uniform structure common to all specialties and sections specific to each department (box 4). The aims of the handbook are listed in box 5. The handbook was immediately useful and in the future will help to identify where improvements to training can be made. It represents a major success of the programme and was introduced to trainees in the five departments. It was designed to incorporate the principles of adult learning (box 6), which recognise that adults require a different approach to teaching. They focus on participation in learning rather than the encouragement of rote learning.11

An educational supervisor (a consultant within the specialty concerned) is allocated to each trainee at the start of each new post. The supervisor is responsible for ensuring that training based on these principles meets the needs of both trainee and department. The handbook has the following features:

Introduction and department organisation

The handbook is prefaced with an introduction and information about the hospital and the specific department. It lists key medical and nursing staff and their availability, and a timetable of daily working arrangements in the department. Timing of other activities is included, eg, ward rounds, clinics and departmental meetings. The on-call rota and annual- , study- and sick-leave arrangements are explained in full. The provision of such information is necessary for trainees to make a smooth transition into their posts.

A learning agreement

This defines the roles of both supervisor and trainee by setting out their obligations and responsibilities towards each other in all aspects of the learning process. It includes the establishment of a respectful and supportive relationship and positive attitudes, and an acknowledgment that learning is a shared activity (box 7).

Departmental aims

Some of these are common to all specialties, eg, those relating to communication skills and the acquisition of professional attitudes. Others are specific to meet the needs of a particular department. Aims represent a broad range of competencies against which trainees can measure their progress at the end of the training period. They also ensure that learning goals are related to practical experience.

A system of formal reviews and assessment

This is the most important part of the learning process and the means by which trainees are able to achieve their own and the department’s aims. It allows
Aims of the SHO handbook

- to achieve a balance between education, training and service components of SHO posts
- to raise the status and profile of education and training of SHOs in departments and across the hospital
- to provide SHOs with a framework for reflection and review of learning
- to encourage SHOs to take control of their own learning
- to maximise the use of available learning opportunities by consultants and SHOs

Box 5

Principles of adult learning

Trainees need to:
- reflect on and build upon their own experiences
- identify what they need to learn
- be involved in planning their education and training
- evaluate the effectiveness of their learning experiences

Learning agreement

SHOs will:
- take an active part in setting learning objectives
- agree with Supervisors how learning objectives can be met
- make every effort to achieve these objectives
- keep a record of how objectives are achieved
- attend all formal teaching sessions organised as part of their training
- acquire the knowledge, skills and attitudes essential for a specialist department
- be involved in evaluation of their learning
- be reliable, punctual and presentable
- think what they can contribute to the department
- keep full and legible notes

Education supervisors will:
- encourage SHOs to set their own learning objectives
- involve SHOs in planning their learning
- ensure that objectives are realistic, achievable, and within the scope of the available learning opportunities
- ensure that SHO training reviews are organised and take place
- provide SHOs with regular and continuous feedback of their progress
- ensure that SHOs have access to appropriate career advice and support
- ensure that a 'climate for learning' exists by adopting positive attitudes towards SHOs
- encourage SHOs to evaluate the quality of their learning
- ensure that help and support are always available

trainees to be systematically supervised and continuously assessed, to receive regular feedback and to have opportunities for self-evaluation. The system has three main components:

- Each department handbook contains a curriculum of prioritised learning objectives. Each curriculum covers core and specific knowledge, clinical skills, professional values and attitudes, sensitivities and feelings.
- The framework includes a system of formal reviews of training incorporating a learning contract already in use in the region. Ideally, three time-tabled meetings take place between the educational supervisor and trainee during each six-month training post (box 8).
- Experiences to help trainees satisfy objectives in the curriculum are detailed in the section of the handbook relating to learning opportunities, ie, those available in the hospital and in each department. Learning opportunities are defined as formal teaching in dedicated time (including a variety of department meetings), patient-orientated learning (clinical practice), learning resources (eg, books, videos, slides, etc) and study leave. Although the majority of SHOs' experience is patient-orientated with rich opportunities for teaching and learning, these opportunities were not being optimised. It is this day-to-day practical experience which offers the potential for trainers to provide feedback to trainees and encourage them to reflect on their learning as and when the opportunity arises. Time set aside for formal teaching should use participatory teaching styles to build on the experience of trainees.

A personal record

Space is included for trainees to record the outcomes of review meetings and to add related activities and achievements which have augmented their training, eg, tutorials, research and examinations.

Departmental guidelines and protocols

Handbooks with a common educational core have been developed for five specialties. Although they have the same format and structure, their aims, departmental information and curricula are specific to individual specialties.

Helping trainees to learn by sharing responsibility for the learning process is fundamental, but is an approach which is new to many consultants. The hierarchical structure of hospital departments and the accompanying attitudes of many senior staff make it difficult to develop a climate in which shared and collaborative learning can be fostered. Supervisors need to learn about modern teaching methods if they are to establish stimulating and rewarding learning environments. During this programme, videos to improve training reviews and informal teaching at the hospital were produced by consultants for use in a training workshop. The large attendance by hospital specialists (50%), coupled with workshop evaluation, demonstrated their concern for improved SHO teaching and learning. They requested further training and support to understand more about teaching and learning techniques.

Phase 3 - Evaluation

Evaluation was carried out in three ways. First, all but one trainee in participating departments were interviewed approximately two months into their new posts using a structured interview questionnaire. Interviews concentrated on SHOs' understanding of the education process and on whether the handbooks were useful in supporting self-directed learning.

Fourteen of the 25 SHOs had met formally with their supervisors. Overall, trainees thought that more was being done to improve their training. For example, formal teaching and departmental inductions had been introduced where none had previously existed, out-patient teaching had been extended and improved in one department and two SHO rotas had been re-organised to use training time more efficiently. In another department, junior doctors' hours had been reduced and the training of clinical assistants and staff-grades was being planned to help them to understand the learning process. This would enable them to teach more effectively on the 'shop floor'. Trainees thought that formal reviews were more frequent and allowed them to participate in setting objectives and planning learning opportunities. Their comments also indicated a raised awareness by consultants of educational issues. At this stage, improvements were made to the content, format and design of the handbook for the next group of incoming SHOs.

A questionnaire was completed by SHOs in one department at the end of their six months training period. They were asked for their reactions to the handbooks and the learning process. Six of the seven trainees used the
Review meetings

At the start of training the supervisor and trainee meet:
- to establish a good working relationship
- to define and reflect on the trainee’s previous experience
- to clarify the trainee’s career intentions
- to negotiate realistic and achievable learning goals
- to identify ways of achieving goals

At the second meeting the supervisor:
- encourages the trainee to reflect on achievement of previously set goals by giving and receiving feedback on performance
- identifies with the trainee the reasons why goals may not have been achieved
- re-negotiates with the trainee new or re-defined learning goals
- identifies ways of achieving new or re-defined goals

At the final meeting the supervisor:
- encourages the trainee to reflect on the achievement of goals set throughout the training period by giving and receiving feedback
- evaluates with the trainee the overall success and difficulties experienced during training

Box 8

Summary points

- establishing learning contracts through collaboration between senior and junior health service staff can be effective
- the learning contract process differs from the appraisal process
- using learning contracts means one-to-one teaching and special skills are necessary for success

Box 9

curriculum regularly and all of them used the section on learning opportunities. The quotations below are examples of responses which show involvement of trainees and the commitment of consultants to meeting their needs.

"...I didn’t have learning objectives in my last post - you forget that you have to play a part - it encourages you to act together to sort anything out..."

"...it helped set an agenda for the job rather than drifting through it...sitting down and planning for the next six months..."

Finally, at the end of the programme, participating consultants completed a questionnaire to evaluate the effectiveness of the work. Two quotations below reflect the positive reactions of all consultants to involvement in the programme.

"... the programme confirmed deficiencies and acted as a catalyst for change..."

"...it made me examine my own contribution to training - I had thought it was quite good but it made me realise where change is necessary - I am now more aware of the needs of trainees, the necessity for continuous assessment and feedback, the value of different teaching methods, that all members of medical staff have different requirements - and we have an SHO handbook incorporating strong educational principles..."

Conclusion

The introduction of structured learning programmes into a district hospital has demonstrated that collaboration between hospital specialists and junior doctors is essential for the development of learning contracts. The programme discussed here has made consultants more aware of the benefits of working together to achieve an understanding of both their own and SHOs’ educational and training needs. Other factors such as planned staff development, management support and continuous evaluation are essential if further successful development is to be achieved and motivation and enthusiasm maintained (box 8).

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