
Teaching psychiatry to medical undergraduates

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There is now a greater awareness among academics that teaching skills, like clinical and research skills, must be acquired and practised, usually over an extended period of time. In addition, teachers have a great responsibility in ensuring that medical students develop the knowledge, skills and attitudes to enable them to become competent and effective doctors. Although teaching theory is complex, attention to a few simple techniques and careful planning of teaching sessions and courses can greatly improve the experience for both students and teachers. This article discusses some of the theoretical aspects of teaching medical students and is followed by three articles which specifically address the teaching of child and adolescent, general and old age psychiatry to medical undergraduates.

How students view learning

Teaching is concerned with providing students with opportunities to learn. Learning, on the other hand, is concerned with gains in knowledge, skills and attitudes, deepening of understanding and the development of problem-solving skills (Butcher, 1995a). Underlying the approach students take to learning is their understanding of what learning itself consists of. This is important, since if one knows how students view learning, it can be helpful when teaching students. This understanding is not static; it changes over time and it can be influenced by the context students find themselves in. Some of the areas students perceive to be essential components of learning are detailed in Box 1. If we know how students learn and which developmental stage they are at, this should facilitate the teaching process.

Box 1. How students view learning (adapted from Butcher, 1995b)

<i>Activity</i>	<i>Explanation</i>
Increase in knowledge	The student will often see learning as something done to them by teachers rather than as something they do
Memorising	Information is memorised but not transformed
Applying	Learning is seen to include knowledge and skills which can be applied
Understanding	Learning is about understanding
Understanding reality	Learning enables the student to perceive the world differently and is sometimes termed 'personally meaningful' learning

How students learn

This is an important topic which needs to be taken into consideration. There are, broadly speaking, two major ways in which students learn: surface and deep learning. The intention with surface learning is memorising, whereas with deep learning it is understanding (Marton & Saljo, 1976). When students use a surface approach they tend to reduce what is to be learnt to unconnected facts to be memorised. The learning task is simply to repro-

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duce the subject matter at a later date. With the deep approach, the student attempts to make sense of what is to be learned. This involves thinking, seeking integration between components and between tasks and developing ideas. With superficial learning students tend to focus on content; they try to remember as much as possible and the main outcome is rote learning. With deep learning students focus on the content as a whole, they try to see connections, they think about the structure as a whole and try to understand it. Another important distinction between superficial and deep learning relates to teaching. In the former the teacher does all of the work and makes all the decisions. However, with deep learning the student does most of the work and makes most of the decisions.

Although there may be some examples of teaching situations where a superficial approach is acceptable, in most situations the teacher should be fostering a deep approach to learning. Nevertheless, the surface approach among students is very common. It can be argued that a full understanding is not always required, and an ability to memorise without understanding is sometimes enough. However, although a surface approach may produce marginally better results if students are tested immediately after studying, this small advantage is very quickly lost. In addition, students who adopt a surface approach gain lower marks and poorer degrees and are more likely to fail (Butcher, 1995a). There are therefore good reasons to encourage students to adopt, at least some of the time, a deep approach to learning.

A number of course/teaching characteristics promote a surface approach to learning (Box 2) and teachers need to be aware of these. In contrast, deep learning is fostered by generating motivation, involving (active) students in the learning process, allowing and fostering interaction with others and providing a well-structured knowledge base (Box

Box 2. Course characteristics associated with surface learning (Butcher, 1995a)

Heavy workload
 Relatively high class contact hours
 Excessive amount of course material
 Lack of opportunity to pursue subjects in depth
 Lack of choice over subjects
 Lack of choice over methods
 Threatening/anxiety-provoking assessment system

Box 3. Fostering a deep approach to learning (Butcher, 1995a)

Develop student motivation and a desire to learn
 The student is involved in the learning process
 Interaction with others
 A well-structured knowledge base

3). However, there is a complex interaction between personal and situational factors which influence whether students adopt a deep or superficial approach to learning. Personal factors include student abilities, previous knowledge, motivation and views about learning. Situational factors relate mainly to the teaching context and includes the subject matter, the nature of the task, the teaching methods used, students' workload and the assessment procedures. For example, if the assessment at the end of a course simply requires students to regurgitate information, students will tend to adopt a more superficial approach to learning (Biggs, 1987).

Different types of students

It is useful to recognise that students have different learning characteristics. One important distinction is between 'holist' or 'serialist' students. Holistic students tend to be global learners. They like to have an overall picture of the problem and see relationships between different elements at the beginning. In contrast, the serialist prefers a more step-by-step approach. Although they are happy to have an overview of the problem they prefer to have this overview at the end after they have had an opportunity to review all the elements that make up the whole. They prefer information or ideas to be given in small manageable 'chunks'. These two factors are important since students that belong to one category usually find the alternative approach frustrating and difficult. Unfortunately, in an average class there are likely to be both types of student (Pask, 1976). Another group of students are known as 'strategic'. These students are motivated to obtain the highest grade and their behaviour is directed to this end. They may use a variety of approaches to achieve this including cues from lectures, and they tend to be very well organised. They also expect their teachers to be well organised (Entwistle & Ramsden, 1983).

Cultural considerations

Increasing numbers of medical students are from overseas and this may bring with it a number of challenges. First, all students who have come away to study, but especially those from abroad, are likely to experience a degree of home-sickness, especially during the first year. When extreme, this will be associated with 'disintegration' and 'depression' which will significantly impair the student's ability to work and learn (Lago, 1991). Also, some overseas students may feel under enormous pressure to succeed (for family and financial reasons). There may also be language difficulties and gender issues. In addition, the relationship between students and teachers in their own country may be very different to the approach being fostered in this country, and foreign students may be particularly unfamiliar with problem-orientated/student-led learning methods. This is a complex field but teachers should be aware of some of the cultural issues when teaching medical students. Such knowledge will help teachers to foster greater understanding; trust and respect for their students will also improve student learning.

What do medical students need to know?

The Education Committee of the General Medical Council (GMC; General Medical Council, 1993) has published recommendations on undergraduate medical education which provide a useful framework and a starting point for the design of courses for teaching general, old age and child and adolescent psychiatry. These recommendations apply to the whole of undergraduate education and are therefore rather broad in nature. The GMC guidelines recommend that there should be a core curriculum encompassing the essential knowledge, skills and attitudes required by the future doctor by the time of graduation. The core curriculum should be system-based with integration of both clinical and pre-clinical specialisms. In addition, learning should be encouraged through curiosity, the exploration of knowledge and critical evaluation, and the burden of factual information should be reduced. Attitudes of mind and of behaviour should be fostered which are appropriate to new graduates' future responsibilities to patients, colleagues and society and there should also be emphasis throughout the undergraduate course on communication skills. Clinical teaching should

adapt to changing patterns of health care, and learning should be informed by modern educational theory and should draw on a wide range of technical resources. Assessment procedures should be adapted to the new-style curriculum, with reduced emphasis on the uncritical acquisition of facts. Finally, there should be effective supervisory structures in place with inter-disciplinary membership and adequate representation of junior staff and students. Although it is the responsibility of individual departments, via course committees, to ensure that the recommendations are implemented in relation to a particular course, the Education Committee will ensure that these recommendations are being implemented through regular progress reports from medical schools.

General aspects of course design

Teaching and learning cannot occur in a vacuum. It is therefore important to have a framework within which high-quality teaching and learning occur (Box 4). Although these general principles are especially applicable to course design, they also apply to a single teaching episode such as a lecture (Newble & Canon, 1989).

The aims and objectives of the course (or teaching episode) should be clearly defined. Aims are broad and general statements of educational intent and should inform students about the overall purpose of the course or teaching episode. On the other hand, objectives are focused and indicate what students should be able to do at the end of the course or teaching episode, and they should be 'SMART' (specific, meaningful, appropriate, realistic and testable; Butcher, 1996a).

The course content should be explicit. When teaching medical undergraduates, in part because of limitations of time and pressure from other

Box 4. General features to consider when designing teaching sessions or courses

- Aims
- Objectives
- Course content
- Teaching and learning methods, including the environment
- Assessment
- Evaluation/review

courses, it is important to consider what is essential, what is desirable and what can be left out. Once the content has been decided, this should then be checked against the aims and objectives to ensure that the two are compatible, by producing an objectives–content matrix (O'Connell *et al*, 1977).

Teaching and learning methods should be planned well in advance of teaching and should be consistent with the aims, objectives and content. A variety of learning and teaching methods should be used to maintain student interest and motivation. This can be achieved using a variety of audio-visual aids (Box 5), using different techniques (e.g. lectures, small group teaching) with a range of staff (academic staff, clinicians, patients, other health care professionals) and in a number of different settings (classroom, ward, etc). Students appreciate it when teachers are imaginative.

Whichever audio-visual aids are used, they must satisfy a few basic criteria. They should usually be prepared in advance and must reinforce, simplify or enhance the learning process. They should be clear and as simple as possible. It is also helpful to use diagrams where these can replace a detailed explanation.

There are also a number of techniques for teaching and the two broad distinctions are between small and large group teaching. Large group teaching usually refers to lectures. They are more information-oriented and can involve groups as large as 250 students. Some of the most common weaknesses in lecturing are detailed in Box 6. Clearly an important aspect of this involves attention to presentation skills and teachers should be encouraged to read about these and attend appropriate courses to develop and improve these skills if they are regularly asked to undertake lectures.

Small group teaching is a generic term for tutorials, seminars and problem-solving classes.

Box 5. Some audio-visual aids (adapted from Ellington & Race, 1993)

Printed material
Overhead projector transparencies
Slides
Various marker boards, including flip-charts
Wall charts/posters
Photographic material
Models
Television and radio programmes
Audio-tapes
Videos
Interactive video

Box 6. Common weaknesses in lecturing (Butcher, 1996b)

Saying too much too quickly
Assuming too much knowledge
Not providing a summary
Poor timing
Not leaving time to make notes
Not stressing key points
Not indicating reservations
Lacking confidence
Not linking sections together
Poor organisation
Too much technical language

The main goals of small group teaching (usually involving approximately eight students) include the development of problem-solving and reasoning skills, to evaluate information critically and to share observations, experiences and feelings. To achieve these goals students need to feel secure enough to talk. However, it is not sufficient to talk. This must be meaningful and directed towards the aims and objectives of the session. The key skills of small group teaching include questioning, listening, responding and explaining. Questions are used to seek information, explore feelings and attitudes and encourage thinking. Questions should be unambiguous, relevant and pitched at the correct level. They should not be asked in a threatening way and the teacher should avoid answering his/her own questions. It is also important to build on the answers obtained, and for tutors to listen actively and respond appropriately. Responding is perhaps the most difficult skill. Students should be praised. Where possible, short summaries should be reflected back to students. A temptation in tutorials is to explain too much too early. Explanations should have a clear structure: diagrams can be very helpful (Brown, 1982). For both large group and small group teaching, sufficient time must be spent in preparation, usually at least as much time as the actual teaching session.

The setting is also important. This should provide as wide a range of environments for learning as possible and should include both the clinical and the non-clinical. There should usually be some teaching in the university department, including lecture-room teaching, library work and self-directed study. Students often greatly appreciate the clinical component. A central feature of this is one-to-one contact with patients (and relatives), supplemented by involvement in out-patient clinics, ward rounds and community visits. Students should also be encouraged to liaise with

(and learn from) other health care professionals including nursing staff, community psychiatric nurses, social workers, occupational therapists, general practitioners and other hospital specialists. Although the consultant is a key figure for the student to relate to, it is often the senior house officer who gives day-to-day supervision to medical students during their clinical attachment. However, senior house officers need adequate support and training if they are to be effective as teachers. Journal clubs and case conferences are other settings which offer potentially valuable learning experiences.

Assessment is an important component of the teaching and learning process. This can broadly be divided into informal and formal assessment. Informal assessment is usually done continuously, particularly during the clinical attachment, and gives immediate feed-back to the student. Formal assessment is usually concerned with university examinations. The formal assessment should be consistent with the aims and objectives of the course and students should know in advance how they are going to be assessed. A variety of approaches can be used including multiple choice questions, essays, short answer questions and clinical examinations.

Assessment stimulates students to learn, provides feedback for both students and staff and provides quality assurance for both internal and external bodies. It is important to consider when to assess medical students: continuously, at regular intervals or at the end of the course (each method having a number of advantages and disadvantages).

Finally, courses should be appropriately supervised and feed-back sought from students on a regular basis. This information can then be discussed at the appropriate committee/sub-committee that has responsibility for the course.

Summary

The broad structure of teaching sessions or courses must be planned in advance. Aims and objectives must be carefully thought through and the content of teaching sessions needs to be consistent with the

aims and objectives. Teachers need to get the message across by using a wide variety of audio-visual aids, settings (especially clinical) and teaching techniques. Learning from direct contact with patients is particularly important. Every effort should be made to encourage deep rather than surface learning, and the enthusiasm of the teacher is an important component of this. Students should also be appropriately assessed since this will indicate whether the aims and objectives of the course have been met. It is also important to involve students in the teaching and learning process, first by actively involving them in the teaching sessions, and second by getting feedback from them. Although teaching (and learning) is complex, careful planning and attention to several simple issues can ensure that it is a valuable experience for both students and teachers.

References

- Biggs, J. (1987) *Student Approaches to Learning and Studying*. Sydney: Australian Council for Educational Research.
- Brown, G. A. (1982) On explaining. *Medical Teaching*, 4, 23–26.
- Butcher, C. (1995a) *Active Learning and Teaching: Researching Learning and Teaching*. Leeds: Staff and Departmental Development Unit, University of Leeds.
- (1995b) *Essential of Learning and Assessment: Understanding Student Learning*. Leeds: Staff and Departmental Development Unit, University of Leeds.
- (1996a) *Managing and Evaluating Teaching: Approaches to Course Design*. Leeds: Staff and Departmental Development Unit, University of Leeds.
- (1996b) *Essentials of Teaching*. Leeds: Staff and Departmental Development Unit, University of Leeds.
- Ellington, H. & Race, P. (1993) *Producing Teaching Materials; A Handbook for Teachers and Trainers*. London: Kogan Page.
- Entwistle, N. & Ramsden, P. (1983) *Understanding Student Learning*. London: Croom Helm.
- General Medical Council (1993) *Tomorrow's Doctors; Recommendations on Undergraduate Medical Education*. London: GMC.
- Lago, C. (1991) *Working With Overseas Students*. London: British Council.
- Marton, K. & Saljo, R. (1976) On qualitative differences in learning. I: Outcomes and process. *British Journal of Educational Psychology*, 46, 4–11.
- Newble, N. C. & Canon, R. (1989) *A Handbook for Teachers in Universities and Colleges*. London: Kogan Page.
- O'Connell, S., Penton, S. & Boud, D. A. (1977) A rationally designed self-service laboratory mini-course. *Programmed Learning and Educational Technology*, 14, 154–161.
- Pask, G. (1976) Learning styles and strategies. *British Journal of Educational Psychology*, 46, 4–11.