



Letters to the Editor

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LETTERS TO THE EDITOR

Cost in assessment – important to examinees who are paying to sit and governments who are paying to set

Dear Sir

Norcini et al. (2011) are to be congratulated for putting together an excellent summary of the state-of-the-art in medical education assessment. If there is anything missing in their summary, then it is in the field of cost. They mention costs but only twice and only briefly – as a feature of feasibility that is important to both examinees who are paying to sit and governments who are paying to set (cost unsurprisingly is important to those who foot the bill). We know an increasing amount about what constitutes a high-quality assessment – for example, to mention just two features, the need to use multiple methods in assessment and multiple occasions to assess. However, we know less about cost in assessment. According to government figures, the UK spends £4.8 billion annually on healthcare professional education but we do not know how much of that is spent on assessment. Nor do we know what constitutes value in assessment – that is, higher quality in assessment at lower costs. We do however know that there are likely to be cost inefficiencies in certain exams. Let us look at Objective Structured Clinical Examinations (OSCEs): a common error in setting OSCEs is to have two examiners per station (Schuwirth & van der Vlieten 2010). Two examiners per station seems sensible but “the added value of the second in terms of reliability is quite limited” (Schuwirth & van der Vlieten 2010). So it adds a small amount to the value but doubles the cost of supplying examiners. This is likely to be the case but there are no evaluation studies that look at cost and value that can definitively prove it. Has the time for such studies now come? Should we also abandon the term feasibility and replace it with cost. Surely, everything is feasible in this context if you have sufficient funding?

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An OSCE remediation experience focused on diagnostic reasoning

Dear Sir

Our medical college requires that end-third-year students demonstrate competency in communication, history-taking and physical examination skills using an Objective Structured Clinical Evaluation (OSCE). In 2009, 33 of 96 students failed to meet College competency-based standards. Failures occurred because students took an incomplete patient history, excluded key physical exam components, or both. We designed a successful two-session remediation curriculum aligned with assessment standards and minimally disruptive of student schedules.

Students prepared for the first session with individual learning plans based on self-assessment of their videotaped OSCE performance. This session began with a discussion of diagnostic thinking, specifically, that novices require a systematic approach to the patient to avoid errors, while experts can make more intuitive diagnostic decisions based on pattern-matching.

We provided an explicit strategy of using the differential diagnosis to determine key history and physical exam components. In small groups, students considered complaints aligned with commonly failed OSCE scenarios. For each complaint, they generated a differential diagnosis. For each possible diagnosis, they discussed and recorded important interview questions, physical exam maneuvers, and testing to consider. Students then practiced these skills with direct faculty supervision and feedback using simulated patients. At the close of the first day, students updated individual learning plans for skill-building during their clinical rotations over the next month.

The second remediation session was a one-day OSCE-like experience. Students interviewed, examined, and formulated plans for simulated patients with complaints aligned with the examples used in the first session. Faculty directly observed the students and gave formative feedback.

A retrospective pre/post questionnaire was administered after the second session. Students improved in their self-assessed ability to take accurate and organized histories ($p < 0.01$), perform useful directed physical examinations ($p < 0.01$), and generate a differential diagnosis ($p < 0.01$). Written and verbal qualitative feedback was also positive. Many students felt the curriculum should be offered to all third-year students.

We believe that our curriculum addressed student difficulty in planning diagnostic encounters. By linking the differential diagnosis to the history and physical examination, we helped novice learners systematically organize their approach to patients. This makes the intuitive diagnostic reasoning process of clinical preceptors more explicit. The curriculum was well-received and positively evaluated by

students who required remediation during their clinical clerkship years.

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Infectious diseases teaching for medical students: do podcasts work?

Dear Sir

Infectious diseases teaching is complex as it comprises bacteriology, virology, mycology, parasitology and immunology and because it requires instruction in history taking, examination of signs and symptoms, use and interpretation of a range of investigations, management, prevention and control. Small group teaching is recommended over didactic lectures to facilitate problem-based learning; however, tutoring more than 350 students every year with existing cadres of staff is difficult. Podcasts are a versatile medium and can combine text, microscopic and radiological images, animation and sound (Rainsbury & McDonnell 2006). Complex concepts are made available to students quickly and efficiently (Chodorow 1996).

This study was undertaken in 2009–10 to evaluate the students' use and rating of six small group tutorials (skin and soft tissue infections; gastroenteritis; lower respiratory tract infection; meningitis, antimicrobial chemotherapy and a 20-stong case conference) converted to podcasts and uploaded on to the student web page at University College London (UCL). Totally, 162 (42.2%) responded to an electronic evaluation questionnaire.

Student evaluation was positive with 85.1% rating all podcasts as 'excellent', 31% noted that the podcasts improved revision capabilities, 29% commented on easy accessibility and 25% said they improved time management. The most common concern was: no facility to ask questions (21%).

One limitation to our study was the relatively low response rate (42.2%). We believe that we had a good sample size of respondents who had clearly spent time listening to the podcasts and their opinion was unbiased as it was an anonymous survey.

Besides being a useful learning resource, respondents found the podcasts to be most beneficial for revision purposes. It is well recognised that students learn in different ways and podcasts offer flexibility with different learning styles. They offer the advantage of being able to look at slides and films over and over again enhancing ideas and interpretation hitherto unavailable from live lectures. Students were able to learn at their own pace and in their own time without being influenced by peer pressure or stress within the classroom.

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A new lecturing method in nurse-anesthesia teaching

Dear Sir

There is a huge gap between theory and practice in medical and paramedical education, and in the field of anesthesia practice. Along with the improvements in medical and paramedical technology and practice, new methods of active learning are needed to close this crucial gap.

Our study was performed to compare outcomes of an innovative new lecturing method in which the lecture-based teaching (LBT) was incorporated within clerkship course of nurse-anesthesia students. The study was carried out during the second term of the academic year 2008–2009 at Shahrekord University of Medical Sciences in Iran. Twenty-four second-year nurse-anesthesia students were included in the study. Course contents of the "Anesthesia 2" course were divided into 23 topics totally, based on the course curriculum. Four topics were assigned randomly for traditional LBT method, and the 19 remainder topics for incorporating lecture within clerkship course (ILCC) method as a new one.

During the clerkship course, students were divided to 4 six-student groups. In ILCC method, the day before presenting a lecture, all groups of students were supervised to discuss about the problems of the real patients scheduled for elective operation in the operating room, emphasizing that all groups of students were conducted to discuss about the same patient at his/her bedside during the same day shift of their clerkship. At the same time the lecturer was informed about the topic related to the patient's disease and operation towards preparing for lecturing, adaptively. Before commencing the LBT-lecture, a 15-minute time was considered for questioning; thereafter the lecture was presented by the same method and the same lecturer. Then students' knowledge was tested by a final exam at the end of the semester. Finally, the students' grade points were analyzed statistically between two methods of teaching.

We hypothesized that along with discussion about the topic related to the patient's disease in the operating room, the new teaching method would conduct the students to perceive the content of the lecture more valuable than a didactic lecture and engage the students more interested in the lecture session.

We believe that once the students are engaged with the topic, particularly when the topic had been already discussed in the operating room, the participants' perception about the contents would increase unexpectedly and we hope that the gap between nurse education and anesthesia practice could be bridged.

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Undergraduate publication in Latin America: Role of Medical Students' Scientific Societies

Dear Sir

As all around the world, most medical schools in Latin America include research and methodology subjects in their curricula; however, these do not include (or do so poorly) scientific writing and publication topics. As assessed by Molina-Ordóñez et al. (2008) only a minimal amount of medical students think that they were well-prepared in this matter by their universities.

This scenario led Latin American medical students to form organized associations known as Medical Students' Scientific Societies. In an effort to combat these academic deficiencies and to increase their scientific productivity, two major strategies have been employed:

- (1) Development of students' scientific journals (Cabrera-Samith et al. 2010), which provide adequate frames for them to perform valuable research and achieve final publication goals, not only by publishing original articles, but also by communicating their clinical/learning experience by publishing case reports or letters to the editor. These journals have been indexed in important regional databases, such as SciELO, LILACS, IMBIOMED, Latindex and others. These journals motivate and stimulate students to carry out and publish their research, whose quality is constantly improving.
- (2) Implementation of frequent training programmes and permanent consultancies in research methodology, biostatistics, ethical issues, critical reading, scientific writing and publishing; in which medical students feel they learn more than in their schools (Molina-Ordóñez et al. 2008).

Latin American medical students are working together in these scientific societies to improve their scientific productivity and

through this gain experience in order that they may be protagonists of the change that Latin American health systems urgently need. However, in spite of their good efforts and the potentially beneficial outcomes, there is not enough support and investment in these associations. We hope this situation will soon change due to the key role these students are playing in developing a culture of the binomial 'research and publishing'.

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Bedside teaching

Dear Sir

Students like bedside teaching because it is patient-centred, contextualises knowledge and provides direct contact with experienced practitioners. Fifty years ago, three quarters of clinical teaching was at the bedside, but by 1978 one estimate suggested it had already decreased to less than a fifth (Collins et al. 1978), and a glance at many current student timetables indicates that it has declined even further since. This reduced exposure in undergraduate years may be partly responsible for declining clinical skills (Alam et al. 2010).

Bedside teaching opens the mind to the reality of clinical medicine that perhaps cannot be mimicked with an actor. The balance of being efficient with time, yet establishing a rapport with patients can be learned. Although some clinical signs and experiences can be simulated, many cannot (e.g. the tactile experience of hepatosplenomegaly or joint effusions).

The progressive decline of bedside teaching is the consequence of several factors. In increasingly busy hospitals, the availability of teachers is reduced as well as the availability of patients, who spend less time in hospital and have a generally 'busier' in-patient stay. Teachers, despite an interest in bedside teaching, now find themselves with broader roles in the hospital. There may also be a perception that the bedside teaching, as it was formerly practiced, is intruding or demeaning to patients.

We advocate the following guidelines as a means of preserving the bedside learning experience:

- Greater emphasis should be placed on bedside skills in the undergraduate curriculum, through, for example, student log books, and more formal assessment of student performance at the bedside.
- Communication should be improved by using medical school ‘web-based’ forums to organise teaching. Rapid exchange of information in this arena caters for the often unpredictable clinical timetables for both medical students and doctors.
- The development of bedside teaching skills should be incorporated into undergraduate curricula.
- Protected time should be allocated to teach, for example, by incorporating it into job plans. Currently, doctors are expected to teach, with limited opportunities.

- Hospital teaching guidelines should be written to minimise disruption to ward work, and to ensure preservation of patient autonomy.

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