



# EDUCATION FOR HEALTH

## BRIEF COMMUNICATION

### Helping Students Become the Medical Teachers of the Future – The Doctors as Teachers and Educators (DATE) Programme of Barts and the London School of Medicine and Dentistry, London

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## A B S T R A C T

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**Context:** In the United Kingdom (UK), learning about teaching is an integral part of the General Medical Council's recommendations for the undergraduate medical curriculum. Yet often, implementing this aspect of learning presents a challenge to curriculum organisers in terms of content, timing and student interest.

**Programme Objectives and Structure:** *The Doctors as Teachers and Educators (DATE)* programme was set up at Barts and the London School of Medicine and Dentistry specifically to meet the requirements for development in teaching. Although largely practical, the two-day programme offers an introduction to educational theory and the teaching requirements for junior doctors in training. The methods used are lectures and group work within plenary sessions, followed by small group micro-teaching sessions. The DATE programme has now been undertaken by over 900 graduates.



**Evaluation Methods:** We evaluated the Date programme by means of end-of-course questionnaires completed by two cohorts of students during the 2007/8 academic year and through the use of Nominal Group Technique in 2008/9. In line with the goals of the evaluation, the data on students' views were analysed to elicit self-reported learning and develop the programme.

**Results:** Response rates of the two cohorts to the surveys were high (80% and 98%). Nearly 100% of the students reported through the survey that they had gained confidence in teaching. In the nominal groups, students indicated that they had gained insight into educational principles like student-centredness and gained an appreciation for the nature of educational evidence and scholarship. They challenged the curriculum organisers to achieve an appropriate balance between theory and practice.

**Conclusions:** A programme about teaching at the undergraduate medical level can be well-received by students; the DATE model could be transferred to other international contexts.

**Keywords:** Learning to teach, teaching about education theory, teaching within the medical curriculum, teaching within clinical role, professionalism in teaching

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## Context

In the UK teaching is increasingly highlighted as an essential professional role for doctors. Teacher education should therefore be an important component of undergraduate education<sup>1</sup>. The General Medical Council<sup>2,3</sup> requires that students are prepared to undertake the role of teacher and mentor in their clinical careers, and their medical schools are charged with providing this preparation. Whether or not students intend to become medical school faculty members, in the UK they will be expected to demonstrate their effectiveness in teaching as part of their postgraduate training. All medical graduates progress on to a two-year training scheme (Foundation Programme) and their ability to teach is both self-evaluated and assessed by the faculty. Meeting this requirement to prepare students for their teaching role is a challenge for curriculum organisers in terms of finding time within a packed curriculum, managing the logistics of large cohorts, overcoming possible student disinterest and achieving a requisite balance in educational theory and practice. At Barts and the London School of Medicine and Dentistry, one institution based in the east end of London, we have tried to address these issues in our Doctors as Teachers and Educators (DATE) programme. What follows is a report on our experiences and some key messages based on our programme evaluation for others who are faced with the same challenges within their own national undergraduate and postgraduate training contexts.

## Programme Objectives and Structure

DATE is a two-day programme (see Table 1) taken by all of our final year MB BS undergraduates. The MB BS (or equivalent) is the five-year degree undertaken by medical students in the UK prior to continuing to their postgraduate Foundation Programme. Introduced in 2007, our programme has now been undertaken by over 900 graduates. We designed DATE as a short course so it could fit within an already busy final year timetable. It aims to provide a basic introduction to good educational principles – an initial building block for future learning and practice. Learner group sizes vary, but typically about forty students participate at any one time.



**Table 1: DATE programme**

<b>Session 1</b>	<b>Plenary (approx. 45 students)</b>
Foundations of Educational theory	<ul style="list-style-type: none"> <li>• Concepts of behaviourism, constructivism, cognitivism, social learning, teacher- centredness, student-centredness</li> <li>• The structure and function of memory, the role of prior knowledge and its activation</li> <li>• Educational climate</li> <li>• Feedback</li> <li>• The effect of assessment on learning</li> </ul>
Lesson planning	<ul style="list-style-type: none"> <li>• How to structure a session</li> <li>• Managing learning resources</li> </ul>
Quality assurance and evaluation	<ul style="list-style-type: none"> <li>• Different methods of evaluation, their pros and cons (interactive session)</li> </ul>
<b>Session 2</b>	<b>Plenary (approx. 45 students)</b>
Teaching and learning clinical skills	<ul style="list-style-type: none"> <li>• The special case of clinical skills referenced to the literature on skills learning</li> <li>• Bedside teaching and the importance of role-modelling</li> </ul>
Portfolios, recording and evaluating teaching	<ul style="list-style-type: none"> <li>• The why and what of educational portfolios</li> <li>• The minimum and the outstanding portfolio</li> <li>• Requirements for teaching and appraising within the foundation portfolio</li> <li>• How to record and collect evaluation from teaching both formal and opportunistic</li> </ul>
<b>Session 3</b>	<b>Small group session (5-8)</b>
Micro-teaching	<ul style="list-style-type: none"> <li>• Each student has 10 minutes to teach and about 10 minutes of feedback</li> <li>• Structured observation and feedback proforma</li> </ul>
<b>Session 4</b>	<b>Large group session (approx. 24)</b>
Presentation Skills	<ul style="list-style-type: none"> <li>• Finding your own presentation style and body posture, dealing with nerves, eradicating ‘ers’ and ‘ums’</li> </ul>

There are four half-day sessions, which include two plenaries focusing on an initial journey into the world of educational theory. As a team, we identified for inclusion those aspects of theory that we considered informed the current shape and content of the medical curriculum within our medical school, such as the concept of reflective practice. All sessions are interactive with an emphasis on active learning. Even during the plenaries, the students are involved in ‘unpacking’ their own learning experiences, giving feedback, practising teaching clinical skills as well as engaging concepts such as educational climate and motivation. Students are encouraged to challenge the way that they think about teaching and learning. For example they are introduced to the idea that there are different ways to conceptualise learning<sup>4,5</sup> – behaviourism, cognitivism, constructivism, and social learning. They are also shown the compromises required in the evaluation of teaching, such as how online evaluation is quick and effective but yields low response rates. These sessions round up with a focus upon the educational requirements of the postgraduate Foundation Programme on which they are about to embark. We focus upon the curriculum and portfolio integral to this training programme and give suggestions as to how they might evaluate and collect evidence of their teaching practice.

The third session is called ‘Micro-teaching’ in which the students are required to put what they have learned into practice by choosing a 10-minute topic to teach in a small group setting. It is facilitated in two ways - by an academic tutor who is trained for his role in DATE or by a student-peer who has studied education and earned a further, one-year degree during his MB BS<sup>6</sup>. Every student teaches and receives verbal and written feedback moderated by the facilitator, using structured observation forms. Since the start of the programme there have been a total of 150 micro-teaching sessions, with five to eight students each. Clinical topics are



allowed but we encourage students to choose a subject of personal interest so that we can better focus on their teaching skills rather than the topic in hand. Unsurprisingly, there have been an enormous range of topics, for example: languages, origami, and cookery.

The fourth session is on 'Presentation Skills' and is run by an external theatre group called 'Performing Medicine' that uniquely provides courses, workshops and events that use the arts to provide training to medical students and healthcare professionals. Their workshop aims to help students feel confident, engaged and inspiring in the workplace. It focuses specifically on teaching environments, but also on practical exam situations, professional interactions and public speaking. This workshop has been separately evaluated and will be subject to later report.

## Evaluation Methods

When DATE was first introduced, we distributed a short evaluation questionnaire at the end of the complete programme to the entire cohort (May/June '07) but then limited this to the first two groups (80 students) in the second academic year (Sept/Oct '07). The students were given time at the end of the micro-teaching session to complete the questionnaire which consisted of three items: (1) "Having completed DATE, I feel more confident about teaching." (Yes/No). (2) "The three most useful parts of DATE were..." (open-ended response); and (3) "Three pointers for improving DATE next time..." (open-ended response).

More recently, we have used Nominal Group Technique (NGT)<sup>7</sup> to canvas opinion with selected groups at the end of the plenary sessions. These groups were selected at random with approximately 25% of the groups in the year involved. NGT is a way of allowing students as a group to achieve some consensus about the relative merits and improvements desirable in an educational intervention. In adapting this technique for our purposes, we asked all students to identify one aspect of the course they enjoyed, one they were less sure about and any other element they felt needed to be improved. Once we had compiled a list, we gave each student three votes to establish overall strength of feeling about the DATE programme across the three dimensions of positive aspects, less positive and needing improvements.

For the purposes of analysis one of the authors (VC) read all the response forms and established a set of initial thematic categories for both items 2 and 3. For example, responses to question 3 were initially coded under three themes - timing/timetabling, course content and venue. These codes were extended and revised during assignment of text. All the data were included in the analysis. Two of the authors (VC and JF) individually looked at the outcomes of the assigned data and met to arrive at consensus of the main themes. We tended to note common themes, that is, where there were a high number of students making a particular response. We also noted individual comments when we considered that the view expressed was helpful and developmental for our purposes. The NGT data by the nature of its collection provided us with a sense of priority amongst student cohorts.

## Results

Because questionnaires were distributed in class at the end of the course we achieved a high response rate. In May/June '07, 223 of 228 students (98%) returned questionnaires and 64 of 80 students (80%) responded in Sept/Oct '07. Of those responding, 98% of students surveyed in May/June '07 responded "yes" to the first question, that their confidence in teaching had increased, as did 100% of students in Sept/Oct 07.



However, it was the qualitative data collected from items 2 and 3 through open-text comments on the questionnaires and through NGT that were most helpful in highlighting what students were gaining and how we might adjust the programme. Specifically in response to item 2 about what had they found most useful, the key themes were the introduction to theory and gaining an appreciation for how theory can inform practice, gaining skills in planning and delivering teaching such as lesson planning, micro-teaching and learning about future professional requirements in teaching. Students recounted how the DATE programme helped them to appreciate the nature and extent of educational scholarship – one commenting that he/she was “*enlightened about teaching. I did not realise there was theory, papers...*” (Final Year Medical Student, May '07). It also revealed to them the craft of teaching, the logistics and challenges...surprising for one student who pointed out that “*my whole family are teachers*” . They were able to appreciate the need to be learner-centred and consequently, that “*dialogue is better than monologue*” (Final Year Medical Student, Sept '07).

Another key theme was the perceived benefits of micro-teaching. This was seen as a high point in the programme, not just because students were able to practise teaching and receive feedback, but also because they observed the techniques of their peers. They enjoyed “*seeing different delivery styles of sessions and picking out the good bits*” (Final Year Medical Student, Oct '07). They also liked the small ‘safe’ group environment of the micro-teaching, together with receiving feedback from a trained facilitator.

In the NGT, students indicated that they also valued the interactive style of the plenary sessions with group work, Q&A (questions and answers) and the focus on the requirements of the Foundation Programme (outcomes of NGT in 2008/2009).

In response to questionnaire item 3, the main criticism from students was that that would have liked more teaching practice and less theory during the plenary sessions. Some would have liked the plenary day and micro-teaching half day rolled into one day, with only a half day spent on theory and practice. In response, we have kept the full day and a half but have introduced more teaching practice into the plenary sessions. Another issue that was frequently raised was the timing of when DATE should occur in the school calendar. Overall, students seem to prefer that it falls after finals when they are focusing on becoming junior doctors. Others would like to see some version of DATE come in their early training years because they describe it as helping them think about how they learn and how they might make the most of their own educational opportunities.

## Conclusions

This combined evaluation approach successfully illuminated students’ perceptions about DATE - described as Level 1 evaluation<sup>8</sup>. This evaluation has shown us that our final year students value the opportunity to learn and practise teaching skills. As of yet, we have not collected data beyond these perceptions and therefore are not able to make claims as to whether the programme affects their future practice. In the future, we aim to develop our evaluation strategy to look at the impact of DATE on the teaching practice of our graduates as junior doctors. Specifically, we intend to compare the perceptions and practice of graduates from Barts and the London School of Medicine and Dentistry with trainee doctors from other schools, who may well have had more or less exposure to training in teaching within their undergraduate programme.

The key challenge in developing a programme like DATE is to provide adequate opportunities for students to practise their skills whilst not omitting from the curriculum the evidence base for teaching. We found it useful to focus the programme on the teaching requirements made of junior doctors once they graduate and take on a teaching role. A key message in planning is to research and be informed by the requirements for physician-trainees to serve as teachers within specific national postgraduate training systems, to ensure that the content is as relevant as possible to students’ future needs.



Overall, we consider it logistically possible to put a large annual cohort of students through a two-day programme on teaching, and although their receptiveness may vary, students can overwhelmingly be positive about the benefits of the programme.

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## References

1. British Medical Association Board of Medical Education. *Doctors as teachers*. London: BMA; 2006.
  2. General Medical Council. *Tomorrow's Doctors*. London: GMC; 2003.
  3. General Medical Council. *Tomorrow's Doctors 2009: A draft for consultation*. London: GMC; 2009.
  4. Ertmer PA, Newby TJ. Behaviorism, Cognitivism, Constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*. 1993; 6(4):50-72.
  5. Kaufman D, Mann K. *Teaching and learning in medical education: how theory can inform practice*. Edinburgh: ASME; 2007.
  6. Barts and the London. BSc Medical Education. 2010. Retrieved 15th June 2010 from: <http://www.smd.qmul.ac.uk/undergraduate/intercalated/me/index.html>
  7. Lloyd-Jones, Fowell, Bligh. The use of the nominal group technique as an evaluative tool in medical undergraduate education. *Medical Education*. 1999;33(1):8-13.
  8. Kirkpatrick DL. *The four levels of evaluation : measurement & evaluation*. Alexandria, Va.: American Society for Training & Development; 2007.
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