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Educational support for specialist international medical graduates in anaesthesia

Niall S Higgins  Kersi Taraporewalla  Sisira Edirippulige  Robert S Ware  Michael Steyn  Marcus O Watson

Specialist international medical graduates (SIMGs) make a significant contribution to the provision of health care in Australia, most profoundly in designated “areas of need”. Working in areas of need is usually a necessary visa requirement, and means that SIMGs, like other international medical graduates, are often professionally isolated from their peers.1 This isolation may inhibit their professional development.2 Location and other cultural factors are known to influence learning opportunities.3

Specialist medical colleges administer specialist training programs and examinations, including those for SIMGs. The examination and assessment procedures for SIMGs are the same as, or closely based on, those for local specialist trainees.

In the case of anaesthetists, the Australian and New Zealand College of Anaesthetists (ANZCA) performs the assessment of SIMGs’ qualifications and experience, and compares these with the required standard for local specialist trainees at a similar level. The assessment is based on a paper application and an interview. Candidates’ specialist experience is assessed in terms of casemix, use of equipment and drugs, and compliance with standards of good anaesthetic practice.4 The ANZCA decides whether the doctor is deemed to be either (i) substantially comparable, (ii) partially comparable or (iii) non-comparable to a newly qualified Fellow of the college. The college requirement for SIMGs in anaesthesia is that they complete a period of satisfactory clinical practice and pass the performance assessment. Assessment for partially comparable applicants also includes a structured exam.

SIMGs in anaesthesia have traditionally performed poorly in the ANZCA specialist assessment process. To identify education-related reasons for this relative lack of success, a common metric is needed to quantify their preparatory efforts for the assessment.

In this research, we used content analysis techniques to measure candidates’ level of learning through participation in group discussion, including long-distance candidates’ participation through videoconferencing (VC). A key purpose of this study was to obtain an accurate representation of peer interaction to assess its quality and content. We chose an automated approach for this investigation to circumvent known human errors associated with traditional content analysis, such as inconsistent interpretation and application of units of measurement.5 We used concept analysis software that works with uncoded document text, avoiding the concern associated with reliance on a preconstructed data dictionary such as attributing an incorrect meaning to text and interpreting it out of context.

Our aim was not to assess the quality of the content discussed against criteria for academic achievement, but rather to measure the overall level of preparation for an academic assessment.

Methods

This study took place in Queensland, Australia, between 19 September 2007 and 23 August 2010. Remotely located SIMGs in anaesthesia were supported by adapting an existing Royal Brisbane and Women’s Hospital (RBWH) exam preparation program for its registrars. Through this program, SIMGs preparing for specialist examinations were invited to take part in weekly 2-hour VC sessions, delivered in two tutorial blocks per year over the period of the study. A tutorial block ended about 6 weeks before college exams, which are held each year in May and September.

Educational sessions were conducted from the RBWH and delivered through VC to participants at other locations. The program involved a facilitated tutorial, including exam question practice and
Regional location of those participating in college exam preparation tutorials

<table>
<thead>
<tr>
<th>State</th>
<th>Tutorial sites (n = 31)</th>
<th>Tutorial participants (n = 166)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qld (main site)</td>
<td>1 (face-to-face tutorial at RBWH)</td>
<td>74</td>
</tr>
<tr>
<td>Qld (distant sites)</td>
<td>14</td>
<td>61</td>
</tr>
<tr>
<td>NSW</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Tas</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>NT</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>SA</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Vic</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>WA</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

NSW = New South Wales. NT = Northern Territory. Qld = Queensland. RBWH = Royal Brisbane and Women’s Hospital. SA = South Australia. Tas = Tasmania. Vic = Victoria. WA = Western Australia.

successful ANZCA exam candidates are not informed of their mark by the college, and marks were not available for this research. To assess the impact on SIMG pass rates, summary examination results were collected from published data presented in the quarterly ANZCA bulletins. Those who did not sit the specialist exams at the end of a tutorial block were classified as not successful. The association between concept measures and exam success was investigated using the Mann–Whitney U test.

Discussion

VC tutorials were found to be a feasible method to assist SIMGs to become aware of the requirements of the exam and to prepare more effectively, helping them succeed. We developed an objective measure of exam preparedness using a software tool that can be used to meaningfully interpret participation efforts in any similar group discussion forum. The user interface of the software is relatively simple to use, and offers useful insight into the level of participant learning. The tool has the potential to provide an immediate formative assessment, should advances in voice recognition technology reach a point where rapid
and accurate transcription of discussion can be provided.

The content analysis software used makes contemporary use of information retrieval techniques that possibly may be considered out of step with accepted traditional content analysis techniques. The software may have potential for predicting outcomes from other medical educational methods that employ group discussion. Forum integrity can also be maintained by the ability to measure relevant content discussed (participation). A limitation of the VC approach is occasional audio lag that may hamper the flow of discussion and contribute to a shorter response from a distant site. This could have a follow on effect for analysable text from distant participants.

Participation was regarded as a more useful predictor of examination success than attendance because it may provide additional information which attendance alone cannot provide. That is, it can provide the educator with a means of simultaneously assessing multiple exam candidates’ understanding of concepts as well as allowing candidates to monitor their own level of preparation. A particular additional benefit is that it is feasible to use contemporary content analysis approaches to successfully provide ongoing assessment of geographically distant candidates’ performance. The use of content analysis in specialist training programs could provide better information about candidate suitability and receives consideration as a method to boost examination success rates.

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References