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Crowdsourcing medical education

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What problems were addressed?

A central challenge of medical education, across all disciplines, is keeping up with rapidly evolving – and expanding – foundational knowledge. It may be particularly difficult for programmes and departments with relatively small numbers of core teaching faculty staff to design and maintain their own comprehensive curricula.

One approach to assist programmes with this challenge has been to create and disseminate shared curriculum resources. This approach, however, still requires significant faculty effort that may exceed what any individual or small group may be able to provide.

What was tried?

The National Neuroscience Curriculum Initiative (NNCI; www.nncionline.org) represents one approach for sharing resources.¹ The NNCI is designed around a series of ‘modules’ that represent specific teaching methods built on principles of adult learning. Within each module are individual sessions that focus on neuroscience content. Initial feedback on the NNCI has been extremely positive with regard to the teaching approaches: for example, in the 1.5 years since its inception, at least 40 residency programmes have implemented NNCI materials. The primary request from end users has been for the development of more specific content.

To facilitate expansion of content, the NNCI pioneered ‘crowdsourcing’ events at two separate conferences with a combined attendance of over 200. Each was a specialised event for educators who were interested in improving the teaching of neuroscience at their host programmes. At each event, an expert faculty member demonstrated a sample class from the Neuroscience in the Media (NITM) module. In a second session, participants were divided into small groups and asked to write their own sample sessions with new content following the NITM format. Moderators were available to assist anyone with questions. Responses were submitted online and recorded directly into a database.

What lessons were learned?

In total, these events generated 100 new submissions across a range of neuroscience topics (and according to participants’ areas of interest). By leveraging the strengths of our audience, we were able to exponentially increase productivity.

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Feedback from the experience was generally positive: 75% of participants rated the session as effective. Many individuals reported initially feeling scared or intimidated by the prospect of teaching this module and then empowered by having written their own material. For example, one participant wrote: ‘This was my favourite session of the day. It was so great to know that I could actually do what you are teaching.’ Another described the session as a ‘revolutionary experience’.

The biggest limitation has been the need to edit the large amount of content generated. The majority of submissions were in relatively rough form, necessitating both copyediting and review for scientific accuracy. As one response to this, we are posting some of the more promising submissions as ‘rough cuts’ with the caveat to readers that they have not undergone expert review.

To the best of our knowledge, this is the first time that crowdsourcing has been used in graduate medical education. We believe this is a creative and effective approach to collaboratively develop shared curriculum resources.

References

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