Collaborative Learning in Online Tutorials – Regaining the interaction of face-to-face learning

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The Idea
We employed the flipped classroom in our online Anaesthesia tutorials to improve engagement and collaborative learning during the Covid-19 pandemic.

Background
At the University of Aberdeen Medical School, 90% of the online tutorials delivered during the pandemic involved a PowerPoint™ presentation and attempts at promoting discussion were largely met with silence. This didactic model does not translate well to online delivery and fails to encourage collaborative learning.

Our Anaesthesia teaching uses a flipped classroom approach, where pre-class information is provided as homework, and class time is spent facilitating discussion of case problems amongst students. The flipped classroom is a well established method shown to result in greater student engagement and significantly improved learning. However, the online learning environment brings its own challenges when trying to encourage the group discussion that is integral to this teaching method.

Participation levels drop with groups larger than 5-6 students. We have found a 2 stage discussion process, using the Breakout Room feature of Blackboard Collaborate™, valuable in helping us to move the flipped classroom online.

Methods

<table>
<thead>
<tr>
<th>Students</th>
<th>4th year medical students (equivalent to Year 3 of US MD)</th>
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<tbody>
<tr>
<td></td>
<td>6 week Surgery and Critical Care clinical placement</td>
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<td>4 Anaesthesia tutorials with 25-28 attendees</td>
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<td>Tutorials</td>
<td>Pre-tutorial videos (10-20 minutes in length)</td>
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<td>Pre-tutorial case problems</td>
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<td>1 hour tutorial on Blackboard Collaborate™</td>
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<td>Small group, student only discussion of case problems in breakout rooms</td>
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<td>Small groups assign spokesperson to represent their ideas at:</td>
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<td></td>
<td>Whole group, tutor facilitated discussion</td>
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<td>Feedback</td>
<td>Post tutorial questionnaire</td>
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Feedback

- I WOULD RECOMMEND THE FLIPPED CLASSROOM TO OTHER SPECIALTIES
  - Strongly Agree: 53%
  - Agree: 47%

- THE FLIPPED CLASSROOM IMPROVED MY UNDERSTANDING AND HELPED MY LEARNING
  - Strongly Agree: 63%
  - Agree: 37%

- THE BREAKOUT ROOM FEATURE ENCOURAGED ME TO PARTICIPATE IN GROUP DISCUSSIONS
  - Strongly Agree: 21%
  - Agree: 11%
  - Neutral: 63%
  - Strongly Disagree: 5%

Evaluation
We surveyed 62 students and achieved a 30.6% response rate. Feedback gathered from the students demonstrates greater satisfaction with the flipped classroom model in comparison to the traditional didactic tutorial. Students enjoy the flipped classroom approach and feel it is beneficial to their learning.

Lessons Learned
In the new normal of online learning we must deliver effective and efficient tutorials to our students. Collaboration enhances learning and platforms with features that encourage this, such as Blackboard Collaborate, are valuable tools to promote effective online learning.

Given how positive the student feedback is, our next steps are to encourage more surgical specialities to adopt a flipped classroom approach to their tutorials.

References
1) https://journals.sagepub.com/stoken/default+domain/10.1177%2F1046496417721627/full  
2) https://cft.vanderbilt.edu/guides-sub-pages/flipping-the-classroom/