

DIGITAL CAPABILITIES CASE STUDY

DENTISTRY REVISION SESSION USING NEARPOD



[https://www.staffnet.manchester.ac.uk/
/umitl/resources/delivering-blended-
learning/digital-capabilities/](https://www.staffnet.manchester.ac.uk/umitl/resources/delivering-blended-learning/digital-capabilities/)



teaching.learning@manchester.ac.uk

Purpose

Innovative yet simple to adopt method to increase student satisfaction and promote active learning and deeper understanding through use of clinical case studies as revision.

Context/Scope

This approach addresses the Undergraduate Dentistry Student Experience Action plan (SEAP) through the following:

- Supporting ‘face to face contact with students’ (particularly final year). Enabling ‘effective mechanisms to provide appropriate feedback on all aspects of student work, and in particular students’ reflection on clinical work.’
- By ‘sharing good practice on how to give good student feedback, i.e. sharing feedback that is considered good practice or allow staff to moderate feedback before it is sent to the student (to raise the standard of academic feedback provided).’

Drawing on knowledge gained across their studies, dental students consider case studies individually and as small groups to make clinical decisions. This method is not only well-received by students but enables them to go beyond testing knowledge/recall to facilitate deeper levels of learning and synthesis. Students are challenged by their peers to refine their critical thinking skills, thus simulating situations arising in the clinical setting.

The process, including practical advice about how to implement, resources needed, etc.

Subjects covered included:

Oral Medicine incorporating Oral Pathology, Pharmacology, Surgery and General Dentistry

Cohort:

This is comprised of 3rd and 5th year Undergraduate Dentistry students. This learning experience scales from the individual to the small group and the whole cohort. For 3rd years, the session is delivered in groups of 12 and for the 5th years as a whole cohort revision session of 80. There is the potential to be adapted for use with greater student numbers.

Setting:

To date this session has been delivered face-to-face, in a classroom setting, using iPads. Other tablets, mobile devices, laptops can be used. Wi-Fi is essential.

How the Sessions Run

Preparation:

How these sessions are prepared and run has evolved over time. Originally students were given clinical cases on paper and used Turning Point handsets (clickers) to vote individually (without conferring) on MCQ answer options. Now, clinical scenarios are prepared in PowerPoint with MCQs in Nearpod. For each clinical scenario a selection of likely outcomes and corresponding treatment options are presented. For each question, five answer options are given. The choice of answer options is important, featuring plausible distractors representing commonly made mistakes, wrong turns or almost-correct responses – these present a learning opportunity in themselves.

Debating and Deciding:

iPads are distributed to students and the clinical scenarios are presented. Students use the Nearpod app to choose and submit a response when they are ready to vote. To reflect constraints on time, students answer the first set of questions on their own. For the last few questions students are encouraged to discuss possible answers with their neighbour or in small group before voting – students tell us they really enjoy this group activity.

Voting:

Although students debate the appropriateness of each answer option, they then vote as individuals. Sometimes a group will all vote the same way; at other times students will strongly disagree and vote differently from their peers. This makes for further intense debate and detailed exploration later.

Revealing the correct answer:

The tutor then reveals a pie chart showing the percentage of students giving the different answers.

Discussion and Feedback:

The tutor then goes through each of the answer options in turn and challenge “why did you select A rather than B or C?”. In this way they hear from the students which aspects of learning require greater clarity or correction – this can be addressed in session or later via online resource. The tutor scaffolds students through group discussion to arrive at the correct answer.

Benefits/Challenges

Benefits of small group discussion and decision making

We have observed that consideration of the clinical cases helps students develop debating skills, strengthening their ability to defend an argument backed up by robust body of evidence. Strong personalities can hold sway and sometimes guide colleagues down the either the right or wrong path (Peer Instruction). In a sense, this can be a useful simulation, recreating situations that could be encountered in the clinical workplace.

Benefits of using Nearpod data to guide students through conversation towards the correct answer

The dialogue between students under the guidance of the expert helps students learn how to sift for trusted sources and when to discard misinformation and, underpinning this, the importance of applying clinical reasoning. The way the revision session is structured multiplies the feedback students receive from each other as measured against their own perceptions and understanding, whilst maximising any much-treasured 'grill the expert' quality time available for detailed feedback. Students emerge with a deep understanding of the topic at hand. Student survey feedback bears out the success of this approach from the students' point of view. Deeper learning takes place – students are observed to make mind-maps showing connections between different facets of the curriculum.

Technical challenges

- For Nearpod to work successfully Wi-Fi needs to be reliable and ubiquitous in the physical learning space.
- Availability of iPads (or alternative devices)
- Our Plan B would be to use Turning Point Mobile – using students' own mobile devices and Wi-Fi. Some students are uncomfortable with sharing phones due to perceived loss of privacy. Others find it difficult to use a laptop for voting at the same time as making notes (Nearpod can be used via an app or in a browser).

Other considerations

At the moment there are around 17 or 18 questions in the question bank.

There are plans to increase this number through:

- Seeking questions from other oral medicine staff
 - Asking students
-

Quick Wins

1. Sign up for a free Nearpod account: [com](https://nearpod.com). Using the free version will limit the number of students who can attend, we suggest seeking advice from your Faculty eLearning team.
 2. Attend a Faculty eLearning training session: e.g. 'Interactive classrooms made easy with Nearpod'
<https://elearning.bmh.manchester.ac.uk/staff/book-training/>
-

Longer-term Goals

In the longer term, we would like to capture further data on student perceptions of this method and explore any relationship with performance in final examinations.

Which of the '6 elements' from the [Jisc Building Digital Capability Framework](#) does this case study relate to?



ICT Proficiency



Information, data and media literacies



Digital identity and wellbeing



Digital learning and development



Digital creation, problem solving and innovation



Digital communication, collaboration and participation

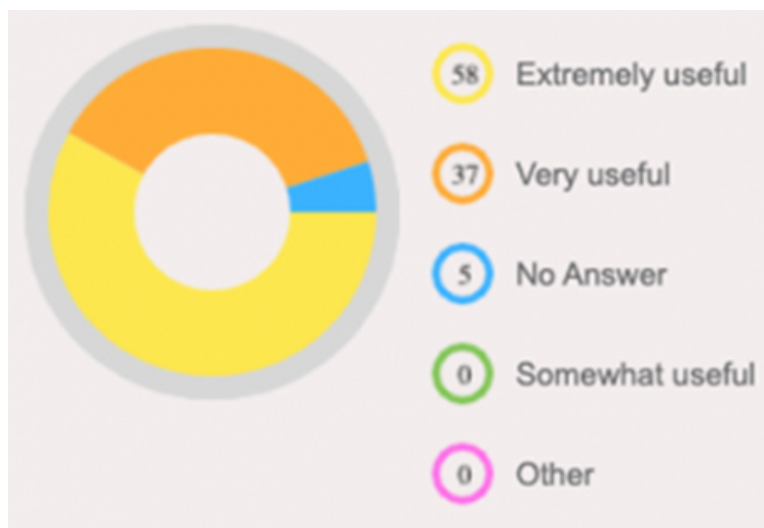


Feedback

Student Experience:

Example feedback from students rating their experiences of the revision session and using Nearpod are shown in the following pie charts.

Overall, how useful was this revision session?



Overall, how do you rate your experience in using Nearpod?



Author/s

Dr Raj Ariyaratnam

Document Date

18 February 2022