Project Two – Teaching and learning; scaffolding and content

Title of case study/example of best practice:	**Interactive web-based applications to underpin clinical decision-making skills**
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Details of the activity undertaken

Interactive web-based applications are integrated with in-person teaching in the current BSc Hons Optometry/MOptom programme to encourage student engagement and formatively gauge understanding across all levels of learner. Students interact with the lecturer by providing responses using their mobile devices either to multiple choice questions (NearPod quizzes) or open answer questions (Mentimeter Mind Maps). This allows the lecturer to easily pose questions and very quickly have a response from each student encouraging participation with those who may not readily answer questions verbally and gauges the level of understanding of each student. Students also receive immediate formative feedback on their own knowledge. Interactive learning is embedded in year 1 of the programme to ensure students are familiar with the concept from an early stage and is built upon throughout the course. This approach has been successfully used to help students understand the process of differential diagnosis and clinical decision-making. Interactive activities are used alongside case scenarios at all levels using a spiral curriculum. In year 1 (level 4) the activities assess students' understanding of which clinical tests should be conducted in a range of scenarios to identify clinically significant findings, building in year 2 (level 5) to test knowledge regarding expected results from these tests and in year 3 (level 6) how to use these findings to differentially diagnose a range of conditions. In year 4 (level 7), the tools are used to probe learners' ability to use appropriate scientific literature and professional guidance to support diagnostic decisions and management plans.

These interactive approaches can be used individually and/or in group activities to encourage peer-peer learning and discussion.

Impact of the activity

Student feedback illustrates that interactive case scenario learning is helpful for "piecing together" the information that has been taught. Students also report they find the interactive quizzes enjoyable and a comfortable way to answer questions. Students report value in these exercises in identifying areas of weakness in a formative manner to prepare for summative assessment and examinations.

This case study relates to the following GOC outcomes:

Outcome 1. Person Centred Care ☒   **Outcome O1.7**

Outcome 2. Communication ☐

Outcome 3. Clinical Care ☒   **Outcomes O3.1, O3.2, O3.4, O3.5**

Outcome 4. Ethics and Standards ☐

Outcome 5. Risk ☐

Outcome 6. Leadership and Management ☐

Outcome 7. Lifelong Learning ☐

Scaffolding/Student experience & engagement ☐