A discussion of transformation in teaching through reflection on feedback

Context

I convene and teach a curriculum element called ‘Quality of Medical Practice’ (QMP). QMP extends across the 6 years of the integrated undergraduate medical program. QMP is taught fully blended, teaching students essential competency topics and skills for evidence-based practice (EBP) and medical biostatistics in the early years of the program. During the later clinical years, it introduces students to vital concepts of quality and safety in medicine.

When I first started designing QMP, timetabling meant that most of the EBP and medical biostatistics had to be taught mostly online and encountered intermittently within the various 1st and 2nd year program courses. Early evaluation of student feedback of the online content showed that there were major conceptual struggle points for students in both EBP and statistics. Additionally, a relatively high proportion of students were failing the QMP course exam question and the average mark for this question was low in the first 2 years that I ran it.

Tools

Fortunately, when studying for the Graduate Certificate of Learning and Teaching, I was introduced to the useful explanatory threshold concept framework (TCF) of Meyer and Land (2003, 2005). Threshold concepts are those troublesome concepts where students get stuck in their learning. However, once they finally understand a threshold concept, there is integrative, irreversible and transformative effect on their knowledge and in their disciplinary perspective. I used the TCF approach to focus my teaching on the troublesome sticking points in my students’ learning. Firstly, I identified the difficult concepts by triangulating where students were failing in the exam questions with their feedback on their learning experiences online, and my own experience of learning and teaching the concepts.

This was a similar method to a now recommended TCF approach for educational development, called ITCK (Timmermans & Meyer, 2017). Then, with the main transformative concepts mapped, I was able to re-design my curriculum targeting learning activities and developing clearer explanations and support around these threshold concepts (Quinnell & Thompson, 2010; Thompson, 2008). This included developing improved online tutorials with formative quizzes and more options in terms of explanations (visual, text and formula-based). Finally, evaluation of the new and improved online resources was achieved by reviewing the quiz results and requesting student feedback, initially using an adaptation of Brookfield’s Critical Incident Questionnaire. More recently I have been used
the new UNSW PULTS evaluation for online resources (see link below), as used by Herbert et al (2017), for each of my online learning resources.

**Results**

Student feedback have shown that students appreciated the resources and the quizzes as they helped their learning. There was less feedback received about the concepts being confusing or causing misunderstanding, and more feedback on what they found had helped their learning. The QMP exam results have improved to a current failure rate of under 8% compared to over 30% in 2005. In addition, the mean average mark has increased steadily over the years as I continue to improve the curriculum and resources.

**Impact**

Overall, using the TCF to direct my evaluation and identify the stumbling blocks in my students’ learning was extremely useful. Targeting these troublesome concepts has improved student outcomes. Additionally, the innovative tutorial designs with formative quizzes have improved the students’ perception of QMP so that they are more engaged with their learning of these concepts and their associated skills. These formative quiz results provide me with a good idea of where there learning has reached as a cohort and is useful for each individual student. I also learned that students are very aware of their progress in learning and knowledgeable about what is going right or wrong. I now harness this by employing students from 3rd year and above acting as partners in tutoring students in lower years and also to assist in developing and improving QMP resources.

**References**

https://www.ee.ucl.ac.uk/~mflanaga/thresholds.html


Recommendations

Watch video
Scholarly approach to evaluate teaching
Watch video
Evaluation of student feedback
An 8 step evaluation cycle to improve pharmaceutical courses

Flipping Student and Teacher Led Evaluations

 celebs video 18
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UNSW CRICOS Provider Code: 00098G
https://teaching.unsw.edu.au/celebs-video-18