Parallel Session 1

Time: 11:20 - 11:50
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Location: Room 2

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A Methodology that Makes Self-Assessment an Implicit Part of the Answering Process –Results from a Year Long Study

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Conference Themes

Assessment for learning: feedback and the meaning and role of authentic assessment

Presentation

Evaluation or Research Presentation

Abstract

For a number of years we have employed an active learning approach (Team Based Learning) that involves a multiple choice quiz (MCQ) on material that will have been studied prior to class. The answer format for this MCQ has been designed so that students distribute 5 marks across the answer options in a strategic manner based on their confidence rather than tick a single box (there is only one correct answer).

It is our hypothesis that each answer strategy gives a clear, implicit rather than explicit, indication of a student's confidence. Whereas the student's primary motivation in this scenario is to maximise their grade. The methodology employed here allows us to gather self-assessment data without explicitly asking our test subjects. This opens-up the opportunity to embed pedagogical research into our teaching and gather large amounts of data simply by adapting conventional MCQ tests. In our classes, we also use instant feedback assessment technique (IF-AT) scratch cards to facilitate group discussions immediately after the individual MCQ tests. This strategy has been derived from Team Based Learning (TBL) pedagogy[1].

In a year-long study we initially validated this approach as a way to measure learner's self-assessment accuracy by comparing results from a series of undergraduate

workshops to those of a conventional Dunning-Kruger study[2]. We then applied this approach to the development of clinical decision-making skills in a cohort of pre-registration trainee pharmacists. We will share insights gained from our quantitative analysis of test answers as well as qualitative evaluation of student experiences gained from focus groups. We will contextualise our results through a discussion of the way we have used repeated formative assessment and item level feedback[3,4,5] alongside our confidence marking methodology to improve learning outcomes. We will also discuss the merits of this approach in developing learner's metacognitive skills by encouraging reflection on the calibration between confidence and actual measured performance.

Key References

[1] Michaelson, L. K., Bauman-Knight, A. and Dee Fink, L., Team Based Learning: A Transformative Use of Small Groups in Teaching, *Stylus Publishing*, **2004**, ISBN: 157922086X.

[2] Kruger, J., and Dunning, D. 1999. Unskilled and unaware of it: How difficulties in recognizing one's own incompetence leads to inflated self-assessment. *Journal of Personality and Social Psychology*, 77, 1121-1134.

[3] Callender, A. A., Franco-Watkins, A. M., and Roberts, A. S., Improving Metacognition in the Classroom through Instruction, Training and Feedback, *Metacognition Learning*, 2016, *11*, 215-235.

[4] Renner, C. H. and Renner, M. J., But I thought I Knew That: Using Confidence Estimation as a Debiasing Technique to Improve Classroom Performance, *Appl. Cognit. Psychol.*, **2001**, *15*, p23-32.

[5] Huff, J. D., and Nietfield, J. L., Using Strategy Instruction and Confidence Judgements to Improve Metacognitive Monitoring, *Metacognition Learning*, **2009**, *4*, p161-176.