Evaluation of the transformative impact of Peerwise as a learning tool

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Background and Aims: Students' perceptions and lack of satisfaction with feedback is an ongoing challenge, yet increasing student numbers combined with expanding staff workloads make frequent, personalised, formative feedback unsustainable. However, the importance of this process to academic progression has been well documented and thus one solution is to engage students themselves in providing more self and peer feedback (1).Summative multiple choice examinations are useful as a means of assessing student knowledge and reasoning but providing additional practice MCQs is very labour intensive for staff. Writing good MCQs that necessitate higher levels of learning rather than just information recall, requires an in depth understanding of the topic
(2). Therefore, involving students in writing these, addresses both the issue of generating a large number of practice questions, whilst also engaging them in deeper learning.

Summary of work and outcomes: Peerwise, a free, online resource that enables students to compose, answer and rate MCQ style questions, has been embedded into a number of our units for the past few years. Anecdotal evidence had suggested that it was a useful tool to support learning but the transformative impact had not be quantified. To address this, a cohort of second year students were voluntarily recruited to a study and subdivided into two groups of equivalent academic ability. Each group were set assignments to write and submit questions on alternating topics which were then answered and commented upon anonymously by their group peers. In-class quizzes were carried out throughout the semester to assess the impact on learning of topics in which the students had been instructed to engage with Peerwise compared to the alternative topics covered by the other group.

Discussion: Analysis of the results from the study showed that students generally scored higher on topics supported by Peerwise engagement than on the other topics (27% vs 18% correct). This was most evident at the beginning of the semester but student engagement declined over the semester reducing the validity of the later results.

Conclusion: Peerwise is a very useful and time efficient tool to encourage students to self and peer assess and inspire a deeper approach to learning. Following this pilot study with a larger multi-unit study would provide a much more accurate evaluation of the learning gain.

References:
1. Sadler DR (1989). Instructional Science 18(2): 119-144
2. Bloom BS et al (1956) In:Taxonomy of Educational Objectives. New York McKay.
3. Peerwise https://peerwise.cs.auckland.ac.nz/ (accessed 08/17)