

Student Peer Assessment: An efficient assessment method to enhance critical evaluation?

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We convene a second-year neuroscience course for 80-100 students, that is structured into self-contained fortnight blocks on a "hot topic". The content is examined in a quiz in the following week to encourage students to maintain engagement with the material throughout the course. To improve the timeliness of quiz feedback, a few years ago we switched these end-of-topic quizzes to an online multiple choice or drag-and-drop format that enabled immediate results and feedback. Students reported that they appreciated this continuous assessment and feedback, although it became apparent that they felt under-prepared for the end-of-course exam which includes longer written answer questions.

To address this issue, we examined the literature on peer assessment and used this as a basis to design an additional assessment task around written answers. Topping (1998) identified several possible benefits of peer assessment that include: increased quality reflective time spent on the task leading to deeper understanding; and clarity around application of assessment criteria focusing the student on crucial elements. Features that improve the quality of the peer review are anonymity of the reviewer, rewards for quality assessment, and tutor oversight of the process (Davies, 2006). Another attraction of peer review was the idea of sustainable assessment, which has been defined by Boud & Soler (2016) as a move from assessment *of* learning to assessment *for* learning, so as to prepare learners for assessment of tasks they will likely encounter in their later careers.

This peer review practice exam had the following structure:

1. A written quiz, consisting of 2 questions, each dealing with one of the fortnight topics. The quiz was completed in class time under exam conditions. Thirty minutes writing time was allowed: the same allowance as for two questions in the final exam.
2. Students wrote their answers on the exam paper, and only identified themselves by writing their student number in the "writer" space.
3. After the exam was completed, the papers were taken and straight away randomly distributed to students in the other half of the room. Students were asked to write their student number in the "marker" space on the paper they received. This preserved anonymity in the peer review process.
4. Marking criteria were provided, and students were asked to use these criteria to provide a mark out of 10, as well as detailed comments to justify their mark and to indicate strengths and weaknesses about the answer. The convenors were available to assist during the marking process. The papers were subsequently marked by the convenors, but no comments were given.
5. The final student grade (5% of course mark) was based 50% on their mark as a writer and awarded by the convenor, and 50% on the agreement between their awarded grade as a marker with that of the convenor, together with an assessment by the convenors of the quantity and quality of comments. This rewarded students who took the task seriously, and clearly signalled that academic staff were engaged in the quality control process.

We found that the task achieved its aims of providing students with timely feedback on a writing task. Students reported improved understanding of the material covered by the questions and of the way to effectively approach these assessment tasks. The agreement between the student markers and the convenors was generally very good. For example, for the two questions assessed in 2017, 37 and 39 peer marks (about 45%) were within 0.5 marks of that given by the convenors. We believe this represents a useful way to deepen learning and to potentially provide immediate feedback without overly increasing the academic assessment workload.

Boud D & Soler R. (2016) *Assess Eval High Educ* **41**: 400-413.

Davies P. (2006) *Innov Edu Teach Int* **43**: 69-82.

Topping K. (1998) *Rev Edu Res* **68**: 249-276.