



Evaluating student essays using an innovative moodle based tool

Context

Patricia Arthur

In my Stage 2 Optometry course, the students must research and write an essay about the personal, social and national impacts of various types of vision impairment. There are only approximately 100 students in the course and an essay is somewhat of an individual effort, but I was looking for ways to include peer review in the process and to spread the workload across the semester in the hope of improving the quality of the work and enhance student learning. Not only that, but reading several hastily and, in some cases, poorly prepared submissions is disheartening and frustratingly difficult!

Anne Galea

This initiative describes a fully online reflective essay writing task with peer review component that aims to introduce first year biology students to scientific literature. I facilitated this activity in 2013-15 in the large (1000+) first year biology course, BABS1201 Molecules, Cells and Genes. Previously existing as a simple, single essay submission task, I drew on expertise from within and outside the Faculty of Science to lead the conversion of this task into a 7-week fully online activity with calibration and full cycle peer review components. The learning outcomes of this task included being able to locate and search scientific literature, differentiate between primary and secondary literature, and describe a range of features, styles and requirements of scientific literature. Another major objective of this task was the early identification of students who have difficulties writing clearly and concisely so that they could be directed to the appropriate University support services, as required.

Tool

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Moodle's 'Workshop' tool. I first split the essay into 3 sections. When the student uploaded their work, their submission was sent to 2 other students to review and they then received 2 submissions to review themselves. 'Workshop' was set to 'blind' review so that each student was not aware of who's work they were marking nor who was marking their work. Detailed rubrics are set up in the tool – these took quite a long time to put in place – but enabled the process to tick over quite effortlessly. The final essay was then completed using the peer feedback and submitted for summative assessment.

Anne Galea

The BABS1201 reflective essay with peer review was implemented and managed via the UNSW Workshop tool in

Moodle. The Workshop tool facilitates peer review in online assessments by allowing students to submit their assignments and then review one another's work either anonymously or with authors' names revealed. To help train students to become better and more consistent peer markers, a calibration component was also incorporated into this task. This required students to mark exemplar essays of different standards so that they could receive personalised feedback on their understanding of the assignment learning objectives and marking instructions. The calibration exercise was also used to train sessional staff (tutors) to become thorough and consistent 'expert' markers of this assignment.

Result

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The essay was the same as that of previous years, as were the rubrics. The mean and the spread of the marks remained largely unchanged, but what did alter was the *median*. Consequently, the work was, overall, of a higher standard than in the past and much more enjoyable to mark!

Anne Galea

I used both student evaluations and my own reflections on the running and outcomes of this assignment to refine and improve as many aspects of the overall process as possible. In the final iteration of the BABS1201 reflective essay with peer review, students:

1. submitted a draft essay;
2. completed the calibration marking activity with exemplar essays;
3. marked 4 peer essays;
4. used peer feedback to improve their essay; and
5. submitted a final version of their essay for marking by their tutor.

The Workshop tool in Moodle proved to be an effective means for facilitating an anonymously peer reviewed assignment within a very large course. I observed the overall process to be easier and more efficient compared to previous attempts at implementing peer review in large courses without using this online tool. Furthermore, the internal algorithms employed by the tool were found to allocate fair and accurate grades to students for both their essay submissions and peer reviews.

Impact

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Initially, the students begrudged the perceived 'extra work' involved in writing an essay in this format. However, student feedback at the end of the assessment indicated the following:

1. The students experienced less stress when writing the final submission
2. They appreciated the work being spread out over the semester
3. Some students were even completely on the wrong track in answering the essay question and were corrected by their peers' feedback
4. Were able to overcome their fear of putting their work 'out there' because it was reviewed anonymously

5. Students helped one another with grammar and citation issues

Future iterations of this process will include marking of the feedback. This will encourage more thoughtful and engaged feedback from those of the student body who participate minimally.

Anne Galea

The BABS1201 reflective essay with peer review is a powerful first year learning activity because it:

- develops information literacy skills
- provides faster and greater feedback on a large scale
- develops analytical and critical thinking skills
- empowers students and enhances their sense of belonging
- strengthens reflective skills
- allows students to engage with and practice professional skills in science (the peer review process).

In student feedback gathered via in-house surveys and lecture polling, ~84% of students indicated that the peer review component of the essay assignment successfully helped them to better understand and achieve the learning objectives of this task. And ~89% of students surveyed indicated that the complete assignment significantly enhanced their abilities to search, discuss, and understand the basic features of scientific literature.

References

Galea A.M. Advantage points: Engaging different student perspectives to enrich learning. *The Festival of Learning and Teaching (FOLT), The University of Adelaide, South Australia, 2014* (invited speaker).

Galea A.M., Waldron, R., Wilson, J.E. and Cox, J. The Moodle workshop activity facilitates and enhances a peer-reviewed essay assessment task in a large Year 1 biology course. *Moodleposium, UNSW ADFA, Canberra, 2014* (oral presentation).

Galea A.M., Delaney, S. and Wilson, J.E. Using peer assessment to help students understand scientific literature. *First Year Biology Educator's Colloquium (FYBEC) 4, Lincoln University, New Zealand, 2013* (oral presentation).

Galea A.M., Wilson, J.E. and Delaney, S. Enhancing student motivation and participation in large biology courses through peer assessment, group work and novel incentive-driven assessment strategies. *ComBio Perth, WA, 2013* (oral presentation).

Recommendations



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Assessing novel teaching tools that assist student learning in online health studies courses



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Evaluating undergraduate research experiences



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A discussion of transformation in teaching through reflection on feedback



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Document Version Date 14/05/2019

UNSW CRICOS Provider Code: 00098G

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