

Students assessing each other - why and how?

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Assessment drives student engagement in learning and is a powerful tool available to academics in their teaching. Assessment practices should align with the teaching activities and the learning outcomes. However, in the design and structuring of assessment practices academics have an opportunity to use assessment modalities that not only drive learning and student engagement but also develop personal and professional skills. Peer and self assessment are forms of assessment that can contribute to these skills. We have been studying the use of different types of assessments and the outcomes of these in terms of student engagement and learning. Two cases of assessment practices, one on peer assessment and the other on the use of pre and post practical tests were evaluated.

In the first case we explored the use of peer assessment in tutorials carried out as part of the formal assessment procedures in a Peer Assisted Learning (PAL) program in a second year biology unit. An anonymous questionnaire utilizing a 5 point Likert scale (5 = strongly agree, 1 = strongly disagree) was used to evaluate the student experience of the assessment regime. Forty-seven students (89% of cohort) completed the questionnaire. Analysis of their responses revealed that 83% of students agreed that peer assessment encouraged them to listen more attentively to their peer's tutorials, 79% of students agreed that because of peer assessment they were more conscientious in contributing to their own group's tutorial. In general 70% of students thought that peer assessment was valuable, 77% thought that peer assessment gave them a greater sense of involvement and responsibility, however, only 60% of students enjoyed performing peer assessment. The results have shown that peer assessment can modify a student's approach to learning activities, promoting student engagement, and can provide an opportunity for students to develop peer appraisal skills, skills that can be transferred to the workplace and to other aspects of life.

In the second case we used a short survey and pre- and post-practical tests to examine the effect on student learning in a first year practical class. Class results of the pre-test showed a mean mark out of 20 of 13.52 ± 2.67 . We asked students in the survey whether the pre-test, by alerting them to the theory underpinning the practical activities, altered their approach to the practical class. Fifty-eight percent of students agreed that thinking about the pre-test changed the way they approached the practical class. One student commented that *"it made me think about what I wasn't sure about then was able to subconsciously be more attentive to these points raised in the class"*. The average class mark for the post-test, 16.01 ± 2.28 ($P < 0.001$), was significantly higher than that on the pre-test. Sixty-five percent of students agreed that retrieving and restructuring the knowledge gained during the practical in the post test further consolidated their learning. One student commented that *"[post-test] helped me reflect on what I learned during the prac and helped me figure out what I know and what I don't know"*. When asked if it would be a good practice to include a post-test at the end of each practical class, 61% of students agreed with this statement. The results of this short survey in a first year practical class highlights the cognitive benefits of pre- and post-tests for student learning.

The two cases discussed above demonstrate the power of assessment to alter student approaches to learning and accentuates the need for academics to consider the cognitive benefits to student learning when designing assessment tasks.