

Case study: Students guiding students – integrating student peer review into a large first year science subject

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The following case study on **student's guiding students: integrating student peer review into a large first year science subject**, is drawn from a University of Technology Sydney (UTS) First Year Experience (FYE) project. It outlines an approach to engaging students in their discipline (science), their peers, and the wider university community and support services.

Issue/Context:

Cell biology and Genetics is a large first year science subject at UTS and the student cohort have different experience in: (i) engaging with and understanding scientific research articles and conference posters, both of which are pivotal communication skills needed by scientists, and (ii) the process of peer review (both giving and receiving feedback), which occurs regularly in both the workplace and in scientific practice. As part of this subject, students are given as assessment task which asks them to create a scientific conference poster based on a published research article. In order to support this task and develop the aforementioned skills, we rely on the teaching associates for this subject have varied experience in teaching at a university level.

Aim: The aim of this project was to:

1. Support first year science students in engaging with professional scientific practice (research articles and conference posters)
2. Develop students' capacity to give and receive peer feedback
3. Support the teaching associates in supporting students through scaffolded training and provision of resources
4. Engage students with the UTS library as a student support service

Method: Using the concepts that underpin the engagement principle in transition pedagogy, this case study demonstrates an approach to build students' awareness of scientific practice (research articles and conference posters) in a safe environment that is fostered by their teaching associates.

Along with the redesign of the assessment task, workshops were embedded to support this task for both students (Figure 1) and teaching associates (Figure 2).

The workshop for teaching associates centred around professional development in the new workshop content and structure and the provision of workshop content and run sheets to ensure a consistent approach was taken. Students then took part in workshops at the UTS library across the teaching semester – these workshops introduced students to scientific articles and conference posters, explicitly taught how to use search engines and databases to find articles and taught students how to give and receive feedback. Finally, students were encouraged to obtain feedback on their draft assessment, from tutors and peers, against the assessment rubric.

Students and staff were both surveyed at the conclusion of the workshops to gauge the success of the project.

Outcomes:

The following outcomes were observed from this project:

- Training and resources provision for the teaching staff was crucial to the integration of peer review activities
- Supported teaching staff were able to engage with and support the students, and the students valued this engagement and guidance
- Student survey results showed:
 - 78% of students agreed that peer review developed their ability to give constructive feedback
 - 80% of students agreed that the workshops helped them understand the importance of peer review and reflection in science

The engagement principle of Transition Pedagogy was at the centre of this project, where students were encouraged to engage with the science discipline and the professional practice of scientists and engage with their peers and the wider university community and support systems.



Figure 1: The process developed to support students with their assessment task (adapted from Dowse et al., 2017).

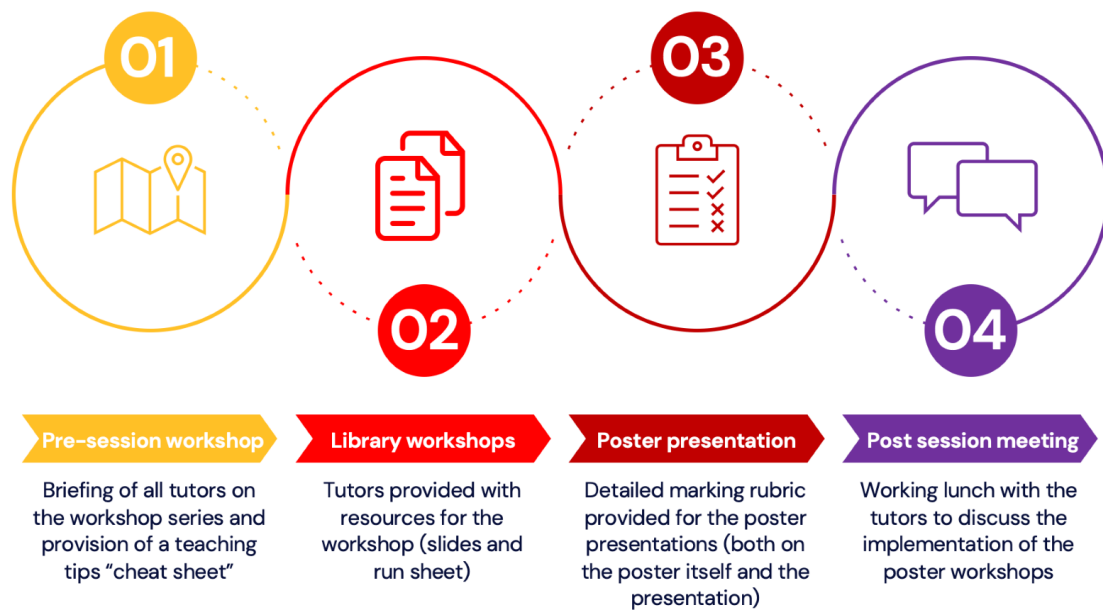


Figure 2: The resources developed to assist the teaching associates (adapted from Dowse et al., 2017).

References

Dowse, R., Melvold, J., & McGrath, K. (2018). Students guiding students: Integrating student peer review into a large first year science subject. A Practice Report. *Student Success*, 9(3), 79-86. doi: 10.5204/ssj.v9i3.471

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