SECTION THREE – Clear evidence of success and effectiveness in teaching and/or supporting learning

Example One – Leading a Seminar on 'Reading a Scientific Paper'

This was the second time I was teaching this seminar, the learning objectives of which focussed on critical reading and scientific methodology, but also compromise and the constraints placed on scientists by the publishing landscape. The paper to analyse had not been encountered before, and so was first introduced in small groups which then built up to class-wide discussion. As the learning objectives focussed on styles of thinking, I regarded this teaching as an exercise in 'Conceptual Change' and planned my content accordingly, with a greater emphasis on learner-focussed teaching (Trigwell and Prosser, 1996). This was not in line with my previous experiences of STEM teaching, where emphasis is typically on 'Information Transfer' (Lueddeke, 2003). Because the practical was assessed on the basis of input, and mindful of my desire to focus on learners, I assigned each a number, one of which was randomly called out at each stage of the class-wide discussion to prompt a new point, at least assuring each student could speak once and opening up opportunities for better performance. I was particularly keen to encourage personal interpretations and insights into how science should be done, as I considered the concept of phenomenography (Fung, 2006) critical to teaching this module. I then asked students to leave feedback anonymously at the end of the session, and the 'numbers' idea was well received, with many students commenting on it being easier for them to be given a specific chance to speak. I discussed this technique with my peers and module convener afterwards, commenting that I thought it worked well so long as I was mindful to prompt the student to expand on a point if their answer was timid or under-developed.

This technique did raise one issue however, in that a student with specific learning needs was (unknown to me) in my class. The student required extra time and specific equipment to read text passages, and was concerned at the idea of being randomly called upon. I did my best to adjust, speaking with the student outside the classroom and agreeing their number would be called when discussing the abstract, which they would have time to read. This seemed to work fine, although retrospectively I think I over-marked the student, simply because I was more attuned to notice when they spoke. I've since read on this type of 'halo effect' – particularly in Biggs (2011), and have modified my method for tracking discussion involvement to be less affected by 'noticing' frequency of student involvement. I discussed (with the student remaining anonymous and their permission) this incident with my peers also teaching these seminars, to find a more severe similar incident had occurred with a student who was partially deaf in another class becoming upset and leaving. As a consequence, we raised the issue with the module convener and the teaching co-ordinators, asking for the idea of PTAs being notified of when they were teaching students with special learning needs. I now check with conveners or the teaching lab before sessions.

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