Lecture Case Study 3: Quectures – Teaching Through Questions

Second year Genetics students have been trialling new interactive "Quectures" in a project led by senior lecturer Dr Heather McQueen.

Quectures are flipped lectures with two design alterations. First, the knowledge content is divided between provision before and during the lecture, reducing the task of preparation and allowing for the introduction of more difficult concepts during traditional lecturing. Second, (and crucially) students are invited to formulate and discuss *their own questions* relevant to each learning objective, by being asked to "think, type, then talk" at set points during the lecture. This mimics the peer instruction technique yet, using a text entry personal response system, allows for discussion and re-visiting of the students' own questions during and between lectures.

Quectures are divided into blocks, defined by learning objectives, that each consist of traditional lecturing, peer instruction style questions, and students' pausing to reflect upon, then submit and discuss their own questions about the material. Submitted questions are then re-visited by students between lectures as a focus for independent study, while selected common questions are re-visited in a later lecture.

Recently, during a large second year genetics quecture, students fed back that they strongly favoured quectures, over traditional or flipped delivery. Course questionnaire feedback (including those not present during the session) was less enthusiastic. Clearly lack of engagement or even surface engagement in this type of learning simply doesn't work. Setting engagement issues aside, there was also some understandable discomfort over the challenge of engaging with ones' own question and, unusually, being asked to do this during the lecture slot. Worthwhile learning is rarely comfortable. However, 73% of students present did acknowledge that asking their own quecture questions helped their learning either "a little", "more than a little" or "a lot".

From *Teaching Matters*: http://www.ed.ac.uk/staff/teaching-matters/focus-school/biological-sciences/experimental-interactive-learning-quectures and http://www.teaching-matters-blog.ed.ac.uk/?p=888

Questions for discussion:

- What do you think of quectures? What barriers to engagement might this method of lecturing overcome?
- How might you turn your lectures into quectures? What aspects of this idea might you adopt?
- In what ways might quectures not work in your context?