

## Faculty Reflection

[Insert Faculty Name and Date]

Last year I spoke about continuously working to engage students during each class period. Some lectures segue nicely into short activities that we can break out into small groups and engage in discussion or hands on practical. I continue to accommodate these experiences from previous years, introducing students to dichotomous keys, circadian rhythms and floral models to name a few. I have also employed the use of clickers, with pop up questions to ensure understanding which allows me to implement some “just in time teaching”. While students seem to enjoy this format, it still feels a little too droll and didactic for my liking.

Last year I had the opportunity to peer evaluate Kristen Oja’s Anatomy and Physiology class, where she employed a guided problem based inquiry approach. Most of the lecture contained data figures and students had to draw conclusions in small talking groups, report in and then follow up lectures would teach to their findings. It is something that I greatly would like to employ to my Majors level class. While I wrestle with the notion, because much of their college experience (undergrad and graduate) will be based heavily on lecture and providing them the experience to navigate that terrain, judge what is useful and study from it is a godsend, I also want them to be able to think critically, to rely on their judgement, and to not burn out- science is FUN. I am hoping to employ this, at least on a small scale this upcoming spring term with BI 213... and then work on it more so that my entire majors sequence (211 and 213) will involve more personal inquiry instead of students hurriedly jotting notes.

Another task for future modification is the scaling up of labs in the BI213 sequence now that I have a working greenhouse. One of the projects I plan to implement is having students design their own experiment utilizing some fast growing plants. We all knows, students enjoy the ownership they have over these types of assignments. While I anticipate some complaints about not knowing what to do, or difficult it can be designing their own testable hypotheses. I believe including more of these types of experiments will help them overcome this hesitation. Plus, teaching plant biology is often difficult as it is an area of life often taken for granted and overlooked (plants aren’t nearly as charismatic as baby hedgehogs, or deadly as microbes), so having to care for their plant for the length of term will help to foster an appreciation for nature.

The implementation of clicker questions in lectures have worked well. I record all my lectures so students can review material at their leisure prior to exams, however the clicker “pace” is not conducive to an engaging second watch. Research shows that they typical lecturer speaks 100 words per minute, when normal dialogue is upwards of 175 words per minute, which in fact we

rely on that speed to keep up engaged. To that end, I hope to have time in the coming months to edit the recordings of lectures without the pauses (for students to finish writing notes) and with pop up video questions (so that the “clicker segment” can be active versus just a passive recording) to increase the usability of this medium.

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