Division III

Third Open Meeting Notes

August 21, 2014

Present: Tom Ball, Lynn Bedard, Dave Berque, John Caraher, Tim Cope, Bridget Gourley, Dan Gurnon, Jacob Hale, Jeff Hansen, Doug Harms, David Harvey, Mark Kannowski, Mary Kertzman, Alex Komives, Rich Martoglio, Jim Mills, Joyce Patrick, Selma Poturovic, Pam Propsom, Jackie Roberts, Michael Roberts, Henning Schneider, Maria Schwartzman, Daniel Scott, Naima Shifa, Fred Soster, Khadija Stewart, Brian Wright

Jackie and Pam began by reviewing what the group has done thus far and our goals for the year (see PowerPoint).

Assessment. We presented four assessment instruments that measure affective/self-efficacy responses to science and/or attitudes and views about the nature of science. We asked people to look at individual items on the surveys and see if there are any instruments or subscales they would find useful in their classes or for this project. There was small group and then large group discussion.

People gravitated to the ACS and SAI II. The former measures both attitudes about learning science and conception of science. The SAI II assesses beliefs about the nature of science. The drawback of the latter is that it’s rather long and has been validated on high school rather than college students.

It would be nice to give this to *all* incoming students. There is a concern that if we only do these as pre-tests and post-tests in single courses that there might be a confound because students are in multiple (and perhaps multiple science) courses, so it would be difficult to isolate a “cause” for any change.

“Big Ideas” courses. Michael Roberts presented his conception of a “Big Ideas” course. These courses would be interdisciplinary, addressing science and math general education learning goals, and ideally engaging for both students and faculty. There are multiple models for how these might be organized and taught (see PowerPoint). There was small group and then large group discussion.

Question: Could this be teaming up with faculty in another division for a course (e.g., teaching a cyber security course with someone in Philosophy)? Response: Maybe, but it might be more challenging to count as an SM course.

Discussion: One group thought the “Pivotal Ideas” model had more potential because it’s broader, but the unifying theme of “paradigm shifts” might be interesting. Another group had the exact same discussion and conclusion. A third group went a different way, by topic: climate change, food and water. Part of it just might be a matter of how you sell it (i.e., will students buy into “paradigm shifts?”). Mary’s idea for a course: “where does all this stuff come from?” Also, “Science and Pseudoscience.” One group got more tied up in the mechanism: how would this work logistically?

What are possible models or mechanisms for the course? Five faculty rotating through their modules? Or large group lecture with individual faculty having smaller discussion or lab sections? Are either of these appealing or are there other models that might work?

Discussion: Maybe modules, but 2-3 rather than 5. Some concern about how exams would work, so maybe instead there wouldn’t be exams but some other way to assess students’ learning. Another model suggested was having a common theme (like climate change), but then students could take a physics-related course or a geoscience-related course and they’d get together occasionally for speakers or discussion. The drawback of this is that it’s less interdisciplinary and gets away from the idea of transfer of skills and knowledge. Please talk with Michael if you’re interested in helping to develop a “Big Ideas” course.

Wrap up. Questions for the group: Where do we want this “Learning Community” to go? Reading group? Biweekly meeting where individuals share an activity or idea that they’re using or thinking of using in class and getting feedback from colleagues?

**Take home message.** Seemed to be gravitation towards using the ACS as “the” instrument to use this year as an attitudinal measure. A subset of the items is discipline-specific so faculty can adapt for their specific departments and interests. We will send follow-up email to department chars/liaisons so they can share it with department members, change relevant items to make them disciplinary specific, and get them back to people so they can use them during the first week or so of class.