Science & Math Brown Bag

Meeting Notes

3/11/15

Present: John Caraher, Sharon Crary, Bridget Gourley, Dan Gurnon, Jacob Hale, Jeff Hansen, Matt Hertenstein, Mary Kertzman, Selma Poturovic, Pam Propsom, Jackie Roberts, Michael Roberts, Dan Rusu, Naima Shifa, Fred Soster

ACS results. Jackie described the data we collected with the Attitudes and Conceptions in Science (ACS) survey administered in many science and math classes during last fall, pretest in August and posttest in December. Overall, students have pretty positive attitudes about science. When we aggregate the data across all classes, there was significant change from pre to post on only one item. When the data are presented by department, one can see that there are different populations of students in some departments/courses (pretest scores are lower in some departments than others).

We had some discussion about the appropriateness of some of the items, especially for math compared to science classes. Someone suggested that we might we want to develop some of our own questions to get as issues we’re interested in. We also might want to examine which courses or departments were most successful in changing individual students’ attitudes; have these instructors talk about how they structured the course. We could tease out the truly gen ed courses from major or upper-level courses. As it is now, the data are kind of messy (e.g., combining many different courses within one department, some students took this in multiple courses.). In the future, we could track students, their major, performance on TOSLS (Test of Scientific Literacy Skills).

Given that there were not many changes overall, might we want to target specific courses, such as those intended to get general education courses. Seems like we have two populations: students who like science and those who are afraid of it.

What is our gen ed science requirement doing to address the population of students who are afraid of science?

Each faculty member who gave the ACS in class will get his or her own results. Mary reminded us that we looked at four different instruments and selected this one, so maybe it would be worthwhile to look at those other instruments again and see if they might give us different kinds of info. What if we gave this to students not in science classes, maybe to all incoming first-year students? Might this be good to give to seniors to chart the cumulative change over the course of their educational career?

“Big Ideas” course. Michael gave an update on the “Big Ideas” course. One goal of this course is to attract some students who are less comfortable with science and change their minds. The current name of the course is Discovery Process and Paradigm Shifts in Science. There will be hands-on activities during classtime, but it’s not a lab class at this time. There will be two sections in the fall, five faculty (bio-heavy this first time). Next time might be a good idea to see if we could make it more physical-science “heavy” to see if any effect it has generalizes. The faculty involved have worked to make it a “cohesive” course, but maybe too cohesive; will also try to show disciplinary differences. Each faculty member will teach approximately 2 ½ weeks in each course. Also want to have some days where all or most of the faculty can be together in the class. Someone asked if students want to take it again with a different set of topics, can they? Not right now.

“Senior Day.” Friday, May 8 (study day), 11:15-12:30. This event is primarily structured so that we can have students take the TOSLS and get post-DePauw contact information from them, but we’re trying to make it more “festive” to draw students in. Lunch will be provided, students will take the TOSLS, get prizes and cup for Keg Walk and cap and gown, Hubbard Center will give brief survey and get post-graduation contact info. Someone suggested that some departments already use this day for thesis talks or picnics, so give departments a “heads up” so they can plan for this.

General Education Revision. John said that the feedback he’s gotten so far is that there are departments that want to address the whole general education package and others who only want to deal with Multicultural/Diversity & Difference component. If we do add a laboratory requirement to the Science and Math requirement, will it be met with our existing lab courses or would we ultimately want to revise these? What is it we want our students to get out of a lab requirement?