School of Science Steering Committee Meeting Minutes  
October 5, 2012

Voting Members present: Simon Rhodes (Dean), Snehasis Mukhopadhyay (President), Jiliang Li (Biology), Barry Muhoberac (Chemistry and Chemical Biology), Yuni Xia (substituting for Yao Liang Computer and Information Science), Gabe Filippelli (Earth Sciences), Vitaly Tarasov (Mathematical Sciences), Horia Petrache (Physics), Michelle Salyers (Psychology)

Non-Voting Members present: N. Douglas Lees (Associate Dean), Kathy Marrs (Associate Dean), David Skalnik (Associate Dean), John Watson (Past President, substituting as Secretary for Bethany Neal-Beliveau)

Invited Guests present: Dr. Ray Chin (Mathematical Sciences), Dr. Jacqueline Singh (Center for Teaching and Learning), Dr. Jane Williams (Psychology)

1. President Snehasis Mukhopadhyay called the meeting to order at 4:00 PM. He suggested modifying the agenda so that the discussion of the Student Satisfaction Surveys become Item 2 to accommodate the invited guests. The modified agenda was adopted unanimously (see page 4).

2. Mukhopadhyay told the Steering Committee (SC) passed a resolution last year stating that all courses in the SOS should have some form of formal student evaluation. He also pointed out a second resolution was passed that stated that the SC would evaluate the current Student Satisfaction Survey (SSS) used by most departments in the SOS. The SC’s invited guests were present to provide additional perspective and analysis to the SC. Mukhopadhyay introduced the 3 guests and then turned the floor over to Dr. Singh of the Center for Teaching and Learning. Singh provided informational packets to each person in attendance and then proceeded with a brief presentation. The packet included hard copies of the slides used in her presentation. As part of a campus-wide taskforce, she evaluated 15 of the end-of-semester evaluations used for student feedback on the IUPUI campus. These include all of the current surveys used by the SOS (included that used by Mathematical Sciences). She described the analysis methods used and the standard frameworks used in course evaluations. She briefly summarized the taskforce’s analyses of the surveys used on campus. Singh then focused the SOS lecture survey. The analyses indicated that most questions on this survey addressed student satisfaction (or reaction). Further, it was not obvious whether the instrument was intended for use in formative or summative fashion. Her opinion was that the current survey contains too many questions. She suggested that the SOS should determine what the primary purpose of SSS was to be. Coupled with this, the SOS needs to determine whether the SSS aligns with these purposes, what type of information instructors and administrators need from the survey, and whether a new instrument would be beneficial.

Mukhopadhyay next asked Jane Williams about her analyses of the current SSSs. She noted that the global score is part of determinations of merit raises and in P&T. When considering what the global measures, she noted that 9 of the 11 questions comprising the global score relate to the instructor. Williams’ factor analysis of the Fall 2011 data (6,800
responses) showed a 0.96 reliability, with a single factor for each of the 11 questions (meaning multiple factors are not contributing to that item). Williams stated that the existing SSS “is a measure of student satisfaction … not a measure of instructor of instructor effectiveness.”

Mukhopadhyay asked Ray Chen about his analyses of the global score based on mathematical and statistical considerations. Many SOS faculty recall the white paper he wrote on this subject several years ago. One issue is the use of a Likert scale, which is an ordinal scale, and a rational scale should be used to convert to numerical values for averaging. He concluded that the global score is a statistic, but that the Likert scale means the global score is an index and therefore not suitable for our current use. Chen contends that the global provides useful information at the high end, the low end, but making distinctions among global scores in the middle range is not justified.

Considerable discussion ensued. Jeff Watt noted the problem with bimodal score distributions. Singh stated that we appear to use the SSS results for summative decisions in P&T decisions. The parameter measured should then be teaching effectiveness, and therefore we need criteria for teaching effectiveness aimed at points that the students can actually answer. Barry Muhoberac asked what is the difference between teaching effectiveness and learning outcomes. Singh noted that the two are often confused. She also commented that she does not recommend having an instrument (survey) address more than one purpose, stressing that we need a design and purpose. Dean Rhodes asked Singh how our survey would differ from the current SSS if the use were summative (for use in P&T) and we wanted to measure teaching effectiveness. She responded that we would have a dramatically different list of questions. Rhodes posed an alternative: a formative use based on measuring teaching effectiveness. Singh replied that we would probably have a different list of questions. She encouraged the SC to delve into the existing banks containing survey questions that exist. If a new survey instrument is our goal, then one of three methods could be used: adopt (an existing survey), adapt (an existing survey), or create (a new survey). Watt noted that we need questions on teaching effectiveness but there is merit to assessing student satisfaction. Michelle Salyers suggested that there might be merit to using computer-adapted questions since the survey is moving online and away from paper. Mukhopadhyay noted that is worthwhile to go over the design process. He asked if there should be an ad hoc committee and whether each department should have a member. Muhoberac asked what is the purpose of the survey, and how will the global be used. Watt pointed to the need to think more broadly than student surveys to measure teaching effectiveness. He recommended checking the criteria for a national award sponsored by the Carnegie Foundation for the Advancement of Teaching. He noted that tracking students could be useful. Gabe Filippelli suggested that the SC weigh what it had heard before deciding how to proceed. Vitaly Tarasov expressed the view that the SC should form a separate committee to work on the survey. He also asked what the purpose of the survey was.

Mukhopadhyay thanked the guests and they departed.
3. Mukhopadhyay asked for any amendments to the minutes of the last SC meeting on Sept. 7, 2012. Muhoberac and John Watson each offered amendments. The amended minutes were approved unanimously.

4. Mukhopadhyay adjourned the meeting at 4:35 p.m.