Guest Column: UA Making Major Strides to Improve Quality of Teaching

Senior Vice Provost for Academic Affairs
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Several initiatives are underway to improve the quality of teaching at the University of Arizona.

Faculty members are developing courses that use active learning pedagogies to create more student-centered learning. Several units on campus are working to redesign classrooms for collaborative learning. As we work to offer more undergraduate online programs, we are also collaborating on assuring that we offer quality online courses that provide engaging instruction.

Each of these initiatives provides excellent learning opportunities for our undergraduates. Many across campus may not be aware of these exciting developments. My goal with this article is to share a few of the new activities, programs and projects underway at the UA.

Campus conversations are underway to develop a general education academy for outstanding online general education courses. This initiative from Vin Del Casino, vice provost for distance education and engagement, is just starting but is gathering a lot of interest among faculty who teach exceptional online courses.

In August 2013, the University of Arizona was selected by the Association of American Universities for funding through the Undergraduate STEM Education Project, one of eight universities in the nation to receive this award. Faculty from the Colleges of Science and Engineering are working to redesign five lower-division STEM courses that use student-centered and active learning pedagogies to engage students more deeply in their learning. The courses are general chemistry, physics with calculus, introductory biology, chemical engineering, and computer programming for engineering. (Read more in this UANews article[1].)

Thousands of science education studies have shown that students learn better when they are actively engaged in the learning process. To facilitate the use of these teaching methods, four of the faculty members involved in the AAU project—John Pollard in chemistry and biochemistry, Paul Blowers in chemical and environmental engineering, Ed Prather in astronomy and Lisa Elfring in molecular and cellular biology—are leading STEM Faculty Learning Communities to help faculty across campus use active learning pedagogies.

Furthermore, Prather has run two three-hour workshops titled "Workshop: Proven Methods for Implementing Active Learning Strategies." The most recent workshop was attended by 60 people, including UA faculty, Pima Community College faculty, high school teachers, postdoctoral fellows and graduate students. (Read more from Prather in this Lo Que Pasa guest column[2].)

In addition, Debra Tomanek, associate vice provost for instruction and assessment, and Ingrid Novodvorsky, director of teaching, learning and assessment, both in the Office of Instruction and Assessment
and members of the AAU STEM Project, are offering Teaching Talks to departments. Topics of these discussions include collaborative learning activities, the role of student prediction in promoting learning, the value of pre-post assessment and the value of daily assessment strategies on student learning. These presentations can be 20-minute discussions within a faculty meeting or a 50-minute departmental seminar. Please contact one of them to meet with your department.

Another workshop sponsored by the AAU STEM Project last week was focused on designing classrooms for collaborative learning. Collaborative learning spaces exist at most of our peer institutions and, as we planned the workshop, we hoped to build similar space at UA.

Remarkably, we were able to run a pilot project this month teaching in a collaborative learning space in the science and engineering library. The space, the previous journal reading room, was converted through a wonderful team process that included Dean of the Library Karen Williams, professionals from the library technology and facilities departments, professionals from UITS, and faculty and appointed personnel from the AAU STEM Project and the OIA.

Journal stacks in this room had to be moved and the space was outfitted with rented and borrowed furniture, loaned rolling whiteboards, loaned monitors and short throw projectors, a loaned teaching station and enhanced Internet capability. Stop by to see the room in action; eight classes are using the space until Nov. 21. The amazing thing is that this pilot started with an impromptu conversation among Pollard, Williams and me in August, and we were teaching in the space the last week of October! (Read more in this UANews article[4].)

Earlier this fall, Lynn Nadel, chair of the faculty, wrote a brief essay on ways to evaluate teaching quality. In it he states: "Bottom line, teaching is one of our core missions, and if we want to value it appropriately we must be able to evaluate it reliably." Actually, I formed a task force last spring to address these very issues. This group, composed of University Distinguished Professors, senior lecturers, teaching and assessment specialists, students and administrators will complete a report that will cover several suggestions for ways to evaluate teaching quality. The suggestions will include new questions for the Teacher-Course Evaluations, a rubric for use during the Academic Program Review by departments to assess teaching quality, and suggestions for using student-centered, active learning teaching approaches.

Lastly, a year ago in an initiative led primarily by Tom Miller, vice provost for faculty affairs, a set of new guidelines for promotion and tenure was approved that includes the requirement for peer review of teaching and a teaching portfolio in the P&T package of materials. Read more here[5]. (PDF) To facilitate the peer review process, Novodvorsky developed a protocol for peer review of teaching. The interactive website[6] can be used for formative or summative peer observations with little or no training needed by the observer.

Next spring, I will offer faculty and students opportunities to discuss and implement new and innovative teaching approaches. If you are interested in joining the group, please contact me at gburd@email.arizona.edu[7].

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