

Instructor Satisfaction With Courses

There's no getting around it: The educational research projects represented increased workload for faculty to prepare and conduct their courses. Nevertheless, 17 out of the 18 faculty who were interviewed expressed that they were glad they had taken on the new project, and that the results were worth the extra effort. The recurring theme around their positive attitude was the increased satisfaction they felt in teaching their courses due to the success of their projects.

Dave Westenberg, associate professor of biological sciences, redesigned his microbiology laboratory, and was pleased with a number of results, including the consistency it created across all of the sections of the lab and the improved student learning experience.

"I am much more satisfied in teaching this way. The student experience is very different, much more effective," he said. "It's the same content I had before but in a greater context, so it's going to stick with them longer. There is a continuity in what they do. I am much more satisfied with what the class is from that perspective.

"Now students do independent projects, and these are much better," Westenberg said. "More thought goes into them than in the past. Satisfaction with the process and what it's done to my class has been what I had hoped for."

For Ana Marie Ichim, assistant professor, who introduced a game project in economics principles classes for undergraduates, along with assistant teaching professor Sarah Steelman, "It was definitely worth the work. Many students that did the projects did wonderful work." Ichim and Steelman incorporated a team project where students used a known board game and re-made it with an economic twist. "It was fun to see what the students think about this," Ichim said. "Some of their projects actually taught me something!"

Beth Cudney, associate professor of engineering management and systems engineering, redesigned an undergraduate course on quality. "I was really excited because I was able to do more with the class," she said, such as more in-depth discussions. "I had less frustration."

Eric Showalter, teaching professor of civil engineering, used radio-controlled toys to enhance the learning experience in his construction operations class. "Lecturing is too easy for everybody," he says, referring to both the students and instructor. "I've been teaching 17 years, and I could fill up 50 minutes of time talking. I know that if I talk that long, the students don't get 75 percent of it.

"So we can do an activity where they are not 'learning' as much, but they retain it," he says. When he feels the students are retaining more, that increases his satisfaction with teaching. "Doing active learning 're-sets' me," he says. "It refreshes me to do more of those things in class."

Fiona Nah, professor in business and information technology, redesigned her e-commerce course to include a number of blended learning components and measured the impact on student engagement. "It was fun for me too! Students enjoy it and I enjoy it, because there was so much creativity and originality coming in with their projects; so much of their own perspectives of those concepts."

Greg Story, associate professor of physics, introduced an intervention around homework problems in his modern physics course when he found out that a third of his students were using online solutions. "It was depressing," he said. But after the intervention, which allowed him to develop his own database of

problems: “They *have* to do the homework now, and I know that they are really learning,” he said. “My satisfaction has gone way up because it is my goal for every student to get as much out of the course as they possibly can. Doing the problems themselves is really the only way they can learn physics.” He has since expanded the project to all of his other courses and plans to teach using this type of strategy for the remainder of his teaching career.

For Nick Libre, assistant teaching professor of civil engineering, developing an application to help students with prerequisite material was the beginning of several new innovations in his large lecture courses. “It was good,” he said of the process. “The total time to develop app, measurements and compare that with overall improvement, I can say that I am happy with that.”

Curators’ Teaching Professor of chemistry Yinfa Ma said he knows students are learning more in his redesigned environmental monitoring course, and that makes him happy. “It’s much more effective to teach students how to do environmental monitoring (out of the classroom). Every time I teach that class, it’s always so successful,” he said. “I would say that my level of satisfaction before was about a 3 to 4. Now it’s from a 9 to 10. I’m very glad I did it; I’m still excited about it.”

Xiaoming He, assistant professor of math, redesigned his mathematical foundation of finite element methods course for graduate students, and one result is that he is co-authoring a book with his mentor about the methodology. “I have good reflections on the course,” he said. “That’s why I’m writing a book so more students can benefit. The book is a very strong justification of my satisfaction (with the project). “Students now do much better work and have much better understanding,” He said. “I’m going to continue teaching this way forever. I’m not going to go back to the old way.”