



Breaking *down* Roadblocks *Through Course Redesign*

A Commentary by Jonathan C. Gibralter

Improving graduation rates. Making teaching more student-centered. Incorporating more instructional technology. It seems every day there is a new solution that surfaces in the sea change surging through higher education to help institutions respond to today's students, keep costs in check and improve the educational experience. The challenge we face is identifying the best solutions and then hoping they will be accepted within the culture of our university campuses.

Course redesign is increasingly seen as a potentially powerful solution for institutions looking to improve their graduation and retention rates; the University System of Maryland (USM) has embraced it as a key strategy.

In 2006, Chancellor William E.

Kirwan kicked off USM's Maryland Course Redesign Initiative, which issued a call to its member institutions to take at least one of their "bottleneck" courses—those introductory classes that tend to weed out freshmen early on—and revamp it so it embraces more technology-based, student-centered principles. The goal was to make learning more innovative and efficient. USM was selected as the first-ever state system in higher education to put this recommendation into practice through a partnership with the National Center for Academic Transformation (NCAT).

A Campus Pilot Project and Leader

Frostburg State University (FSU), a University System of Maryland

institution, has experienced tremendous success with course redesign. Our efforts were initially led by Dr. Megan E. Bradley, a psychology professor who, along with her colleagues, spearheaded FSU's course redesign effort by creating two pilot sections for a general psychology course. The redesigned sections shared a common syllabus with the traditional sections for measurable objectives.

Bradley and her team placed a portion of the class' instruction online, adding online exercises that focused on mastery learning, which she compares to an SAT prep course: Students get self-guided online quizzes that allow them to test their knowledge over and over again, with different questions each time, until they master the material. Students receive immediate feedback on their performance

through online assessment. The redesigned course sections also included more interactive activities and decreased the time students spent listening to lectures during the class.

The results of the general psychology's pilot course redesign effort? Students in the redesigned sections performed better on their final exams, with a mean test score of 75 percent (compared to 68 percent for the traditional sections). At the same time, the instructional technology component allowed the psychology department to reduce the number of instructors needed to teach the course and triple the capacity in class, reducing the cost-per-student by 71 percent. In other words, students performed better while the class cost decreased.

"Results ... that's what really convinces people," Bradley says. "I think once they see and hear about other courses very similar to theirs or exactly like theirs going through course redesign and having success, that really helps. That's how math got involved."

It All Adds Up

FSU's improvement with developmental math (DVMT), which at one point was the 11th most highly failed course on campus, is another success story. The program had relied on student instructors and instructional technology software for years, but in spring 2011 changed the class format by combining the best practices of instruction with computer-mediated practice. With the redesigned format, participants attended a lecture once a week in a large setting, and then met twice weekly in smaller groups in a computer lab to work on online lessons. Redesign initiative funding allowed the DVMT program to double its professional staff, including adding an instructional coordinator to cover challenging topics. This, in turn, freed up more student instructors to provide one-on-one assistance during labs. The redesign team also added more content to help students pass their next math course.

By spring 2012, DVMT saw a decrease by 50 percent in the number of students who had not successfully completed the course—by withdrawing, failing or otherwise not receiving credit. The redesigned course also eliminated the gap in achievement in which male students failed at a higher rate than females, and it helped all the students do better in their subsequent math course. The math department is now in the stages of redesigning Math 102 (College Algebra), one of the math courses students take after completing developmental math.

Faculty Creativity and Collaboration

Course redesign, if done well, can also have positive, far-reaching outcomes for the humanities.

"If we can improve the way we teach students to write [through redesign], this will not only benefit the English

department, but the university as a whole," says Dr. Rochelle Smith, professor of English at FSU.

Smith and her course redesign team for Freshman Composition created a standardized syllabus for the course that collects best practices. It also features an online course repository that collects model units, sample lessons and course materials, all emphasizing student-centered, active learning. "It's been a wonderful collegial experience," Smith says. "We've reviewed everything that has gone into the course repository very carefully and, as a result, all of the materials have improved because of the critical judgment of the six people on the redesign team. You put six minds together and you end up with something better than what you started with."

A key part of the Freshman Composition redesign will be incorporating instructional technology to give students supplemental instruction through tutorials and self-directed practice on what Smith calls "lower-level or sentence-level concerns," things like grammar and punctuation. Moving some of the curriculum out of the classroom through instructional technology opens up more time for Smith to meet with students to talk about more challenging aspects of writing, such as thesis organization and how to build an argument.

"We all use instructional technology, but course redesign has encouraged us to think about how to make better use of it," Smith said. "Good educators are always looking at whatever resources are available and imagining making their courses better. Course redesign simply formalizes this process in a positive way."

Frostburg's success with course redesign has largely been based in its faculty sharing results with one another about how well it works, which has inspired departments who were initially skeptical to try it. The campus has also seen the benefit of raising awareness about the various course redesign models available through NCAT; departments can pick and choose how they upgrade their course content, preserving the incredibly important and creative autonomy they bring to their teaching and departments. Deciding how to implement course redesign also creates opportunities for faculty members to share resources and best teaching practices, which can be a meaningful collegial experience for them that reignites their passion for what they do.

If FSU's progress is any indication, course redesign can really empower our educators to take charge in making course content relevant to how students learn, freeing up more time to focus on the important face-to-face discussions and mentoring students need. It's not about making everything online; it's about devoting time and attention to students in a strategic way and making them more responsible for their education. **P**

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