

## **Multi-campus faculty collaborations lead to shared insights for course redesign**

April, 2008

Twenty-five CSU faculty from seventeen institutions are collaborating on two multi-campus initiatives in *Transforming Course Design*, one in Developmental Mathematics and one in General Chemistry. This Program Update describes the shared insights about course redesign emerging from these collaborations.

### **Increasing Diagnostic Value of Placement Tests**

One method identified to improve the efficiency and effectiveness of instruction was to enhance current placement tests with additional diagnostic content. For example, one campus was concerned about students who are placed in a developmental course in which the first several weeks covers material they already know: if they disengage from the course during this time, they may not re-engage when the content becomes vital to them. Some CSU institutions already use standard disciplinary tests or software such as ALEKS for enhanced placement information.

### **Optimize Instructional Time by Course Redesign**

Rethinking how students and instructors use course time can optimize this scarce resource. The methods listed are being pursued by various team members:

#### ***Encourage “time on task” with online homework:***

*Having students complete assigned work for credit prior to class can allow an instructor to target class time efficiently*

#### ***Use student assistants for supplemental instruction:***

*Undergraduate learning assistants can be used effectively to supplement class instruction; costs can be aligned to track successful course outcomes (see right hand column).*

#### ***Replace some lecture time with small group work:***

*Time in moderated group work and discussion with peer learners may be more effective than similar time in lecture, especially where larger classrooms are a limiting resource.*

#### ***Individualize pacing with computer-based tutorials:***

*Open educational resources and online interactions with course content address individual learning styles & pacing*

#### ***Focus on mastery learning of fundamental concepts:***

*Mastery learning helps students fill in all gaps in their knowledge. Students mastering specific course content can receive partial credit, increasing momentum and retention.*

### **Explore New Methods for Specific Content Issues**

Specific content issues known to be challenging for students are being studied, to determine if alternate methods would better support student learning. For example, the General Chemistry team is studying the use of pre-lab computer tutorials to optimize student time in laboratories, and examining research on student understanding of troublesome topics such as Atomic Structure. For Developmental Mathematics, the team is considering research about student misconceptions of fundamental concepts in Algebra and what is known about how to best debug them.

### **Address Instructional Costs for Course Success**

The team members attending the national [Redesign Alliance](#) conference in March concluded that many CSU institutions have already implemented the [cost reduction strategies](#) used in Course Redesigns led by the [National Center for Academic Transformation](#). (At some campuses, it did appear that the number of course sections offered might be reduced – if appropriate instructional enhancements could be introduced to retain or enhance course outcomes.)

A more promising approach identified by the teams for the CSU was a focus on the “cost per successful outcome” for a course, rather than the traditional “cost per student” enrolled. This approach is also being used in the campus-based stream of the *Transforming Course Design* program, where reducing the number of students repeating a course is being examined as a way to produce reductions in the number of course sections required.

Similar approaches are also being studied in other systems\*: “If these alternate developmental education programs are successful, they produce not only higher rates of success in individual courses but also increased retention, persistence, progression...and degree/transfer rates...these outcomes are desirable from the standpoint of the mission of the college...but there are also tangible economic benefits to be realized for campuses.”

\* [Basic Skills as a Foundation for Success in California Community Colleges](#). July 2007, p. 140.  
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