ENGAGING AND PREPARING BUSINESS MAJORS

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ABSTRACT

As a participant in CSU Northridge's Consortium, CSULB has implemented the Hybrid Model in Business Calculus and a modified version of the Hybrid Model in Precalculus Algebra for several years. In both classes, we implement ALEKS, on-line and off-line homework, partially completed lecture notes and common exams. The infrastructure for this pedagogy is in place; we turn our attention to the content in these courses. In Business Calculus, we work to improve the relevance of the course to the perspective Business Majors, following the recommendations of the CUPM for Business and Management. Changes to the majors in the College of Business led us to redesign the curriculum of our course beginning Fall 2013, with a renewed focus on improving quantitative literacy and on including content that is relevant to the students' curricula and to their lives. Our current redesign includes 1) implementing group activities in the 1-hour breakout session, in which students solve word problems and answer contextual questions connecting mathematics and economic vocabulary, and 2) implementing three Excel Group Projects, in which students study real world data using spreadsheets to aid in the analysis and the presentation of results. From group activities, we expect to see student-success on exams for the content addressed in the breakout sessions. From the Excel Group Projects, we expect to see improved student satisfaction with the course, connection to future course work as well as proficiency with spreadsheets.

MOTIVATING PROBLEMS

Students take Business Calculus in preparation to apply to major in one of the Departments in the College of Business. As the students have largely not begun their study of business, we must develop business vocabulary and contexts from scratch, engaging students by projecting toward their future academic experiences rather than drawing on their pasts.

We have been implementing the breakout sessions since 2009 in Business Calculus. These sessions are taught by TAs who have little experience teaching at all, let alone with active and collaborative learning. As we change the curriculum, we restructure these breakout sessions and are challenged to find a balance between what the TAs can implement and the type of teaching that most benefits the students.

TECHNOLOGY ACTIVITIES AND CURRICULUM

Our current redesign includes 1) implementing group activities in the 1-hour breakout session, in which students prepare for our exams by solving word problems and answering contextual questions that connect mathematics and economic vocabulary, and 2) implementing three Excel
Group Projects, in which students study real world data using spreadsheets to aid in the analysis and the display of results.

**TIMELINE**

Business Calculus: We implement new group activities and Excel Group Projects in Spring 2014 in all Sections of Business Calculus. We will modify and then use our materials again in Fall 2014.

**OUTCOMES**

From group activities, we expect to see student-success on exams for the content addressed in the breakout sessions. We collect students' scores on individual problems on the exams to monitor their success, and improvement between the midterms and cumulative final. From the Excel Group Projects, we expect to see improved student satisfaction with the course, as well as improved proficiency with spreadsheets. We issue before and after surveys asking students about their attitudes and beliefs. Surveys from our first attempt to implement this type of assignment in Fall 2013 will serve as baseline data.

**BROADER IMPACTS**

Students successfully completing our program will have used vocabulary they see again in their required economics courses. They will have an introduction to regression analysis, which they study in their upper division Business Statistics, and to spreadsheets, which appear in various parts of all majors in the College of Business and throughout the workplace. Working in groups will provide experience with pedagogy used commonly in upper division business coursework, and prime students to become productive team members in the workplace. The 100-level statistics, macroeconomics and microeconomics courses students take along side Business Calculus in advance of applying to the business major combine to reinforce and reflect on similar topics in quantitative literacy central to the general education of the business majors.

**REFERENCES**
