

Product Used **MyMathLab**
 Course Name **College Prep Math I and 2**
 Credit Hours **Three**

KEY TAKE-AWAY

A self-paced, modular redesign of the developmental math sequence allows students to learn at their own pace. Both success rates (A/B/C) and pass rates (A/B/C/D) have significantly increased. In addition, approximately 20 percent of students completed all modules in one term, thereby saving valuable tuition dollars.

Materials in Use

Developmental Math 101, 1e (Custom)

Course Implementation

Course Design

Seeking to increase student success in her developmental math courses, Janice Hubbard did some research: she attended Pearson Course Redesign workshops, watched Pearson's free redesign webinars, and visited community colleges implementing redesigns. Her result is a modular, self-paced, College Prep sequence that remediates weaker students while more quickly moving stronger students into college-credit courses.

Hubbard's redesigned sequence includes eight modules over two semesters, plus two additional modules for students going into College Algebra or STEM courses. Classes meet for two hours in a computer lab, during which time Hubbard gives minilectures and students work on MyMathLab. Hubbard and peer tutors are available for assistance during lab time.

After a MyMathLab orientation at the onset of module 1, each module begins with a MyMathLab pretest. Students who score 80 percent or more may skip the corresponding MyMathLab homework, but must complete paper-and-pencil notebook homework. These students may exit the module using their pretest score as their module score or may elect to take the posttest for a higher one. Students who score less than 80 percent on the pretest must complete MyMathLab homework with a score of at least 75 percent and complete notebook homework in order to take the posttest; they must score at least 75 percent on the posttest to proceed to the next module. Students who score less than 75 percent on the MyMathLab homework, as well as those who want more practice, are encouraged to take no-credit MyMathLab quizzes.

Flexibility is a key component of Hubbard's redesign. Although the typical student completes modules 1–4 during the first semester, and modules 5–8 during second; students may finish more than four modules a semester, thereby reducing tuition costs by applying a variable credit to their second semester. Students who don't finish module 4 by the end of the first semester may finish modules 4–8 during their second, rather than repeating—and repaying for—the entire first semester.

Assessments

70 percent	MyMathLab pre- and posttests
15 percent	MyMathLab homework
15 percent	Paper-and-pencil homework in notebook <i>A custom notebook including modular-specific key concepts and written exercises</i>

Use of MyMathLab

MyMathLab is used for pretest and posttests, and for homework (both including and excluding learning aids). Use of the eText and the quizzes is optional. Finally, the coordinator functionality supports the department's adjunct instructors and enables course sharing with its sister campuses.

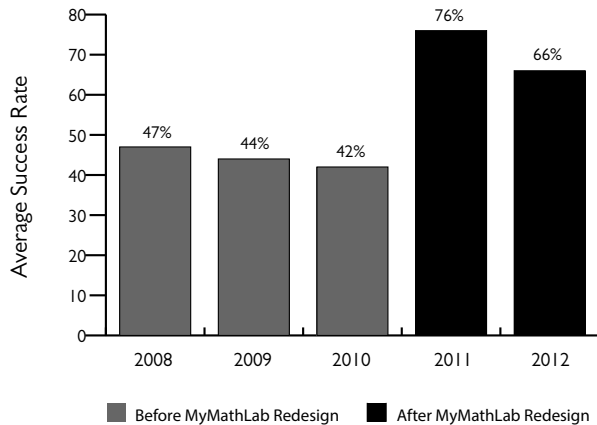


Figure 1. Success Rate (A/B/C) before and after MyMathLab Redesign, 2008–2012. (In 2012, changes were made regarding who earned a grade of D. Those students were put back in College Prep I to finish module 4, which may explain the 10 percent drop from 2011.)

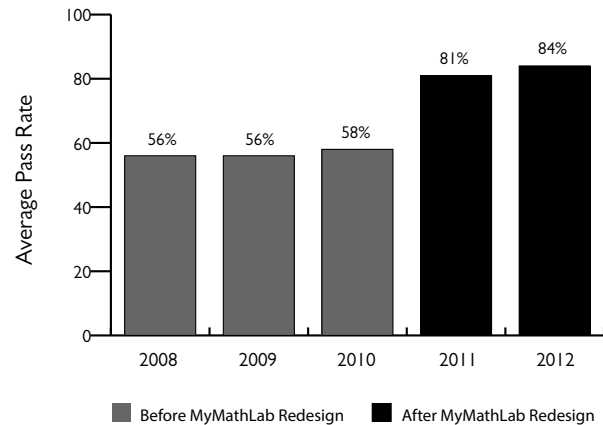


Figure 2. Pass Rate (A/B/C/D) before and after MyMathLab Redesign, 2008–2012. (Note that the majority of Ds are students who only finished three modules, but are still on track.)

Results and Data

Hubbard piloted the redesign in fall 2011 and immediately saw significantly increased rates:

- Success rates (A/B/C) increased from an average of 44 percent before redesign to an average of 71 percent in the first two years of redesign (see figure 1).

- Pass rates (A/B/C/D) increased from an average of 57 percent before redesign to an average of 83 percent in the first two years of redesign (see figure 2).

In addition, in 2011 and 2012 approximately 20 percent of students completed all eight modules within one term

The Student Experience

MyMathLab's Grader helps Hubbard identify and intervene with students who might otherwise fall through the cracks, such as students who miss the first day of class or earn low midterm scores. Students who don't actively work for three weeks in a row find their status changed to "inactive," which requires them to meet with Hubbard to regain access.

Student feedback indicates that Hubbard's students enjoy the redesign and MyMathLab's interactive features:

- "I enjoy this class so much. I stayed on task, and the freedom to go at my own speed was great."
- "I really like using MyMathLab. The step-by-step instructions make it easy to understand difficult problems."
- "MyMathLab is extremely helpful in showing how to solve problems. It helps me learn from my mistakes in a professional, encouraging manner."

Conclusions

"After 25 years of teaching, my success rates started lagging—the traditional format wasn't getting through to 21st century students," says Hubbard. "Pearson workshops helped me develop the content I needed in the modular format I wanted. In my pilot semester I nearly doubled my success rates."

The self-paced, modular redesign fits Marshalltown's wide range of mostly nontraditional students. "Those who need a slower pace don't get left behind, while accelerated students can forge ahead. Both eventually realize that the responsibility for their success lies mainly with them," says Hubbard.

Future plans include adding a basic arithmetic module to College Prep I, incorporating challenge assessments to both courses to help students progress faster, and offering pacing guidelines such as past-due dates to help students stay on track. Meanwhile, two other Iowa Valley Community College system campuses are currently implementing Hubbard's redesign.

Submitted by Janice Hubbard, Math Faculty
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