

Product Used **MathXL**
 Course Names **Introduction to Algebra, Math Analysis I**
 Credit Hours **Three**



KEY TAKE-AWAY

MyMathLab's proven features—including immediate feedback and multimedia resources—helped Blinn students increase their time on task, improve their study habits, and helped the college increase its pass rates by more than 16 percent.

Textbooks in Use

Elementary Algebra, 2e, Tom Carson, Ellyn Gillespie, Bill E. Jordan

Finite Mathematics and Calculus with Applications, 8e, Margaret L. Lial, Raymond N. Greenwell, Nathan P. Ritchey

Course Implementation

Course Design

Fall 2006, Blinn College's faculty in the mathematics division selected one course offering and offered students homework using MathXL. Ron Hammond, division chair, was impressed with the increased pass rates that resulted—so much so that he decided to adopt online courseware and make it mandatory for every course in the division. After exploring other products, in Spring 2007 the division selected MathXL. Simultaneously, the college was beginning its Southern Association of Colleges and Schools–mandated Quality Enhancement Plan (QEP). A hallmark of the Blinn plan was the addition of enhanced academic support for high-risk courses. The mathematics division designated MathXL as the tool for delivering that extra support and committed to track data based on homework completion rates.

Introduction to Algebra students attend three hours a week of lecture and complete homework and quizzes outside the classroom by using MathXL.

Math Analysis I students, too, attend three hours a week of lecture and use MathXL to complete homework outside the classroom.

Assessments

Instructors' curricula and assessment values vary, but for all classes, homework is completed in MathXL.

Use of MathXL

MathXL is used by all instructors for homework. Many also use MathXL for quizzes, and some for tests. Students are encouraged to use the eTexts, video tutorials, and other teaching and learning resources provided on the school's custom Web portal. In addition, the Coordinator Course feature is used to ensure consistent course quality across all sections and all instructors.

Use of MathXL contributes 10 to 15 percent to a student's final course grade.

Results and Data

Table 1 and figure 1 illustrate semester success rates (a grade of A, B, or C) for all sections of Introduction to Algebra and Math Analysis I from fall 2005 through spring 2010. Data show that success rates in both courses significantly increased after implementation of MathXL in fall 2007.

- The average combined success rate for Introduction to Algebra increased 16.1 percent.
- The average combined success rate for Math Analysis I increased 16.2 percent.

Although subsequent success data was not tracked, the division-wide increase in success rates indicated by Figure 2 is no less noteworthy. Figure 2 shows that the combined average success rate for all courses in the division increased 8.9 percent.

As a result of the positive impact of MathXL on student success, Math Analysis I, which was at one time labeled "high risk" in the school's QEP, is no longer so labeled.

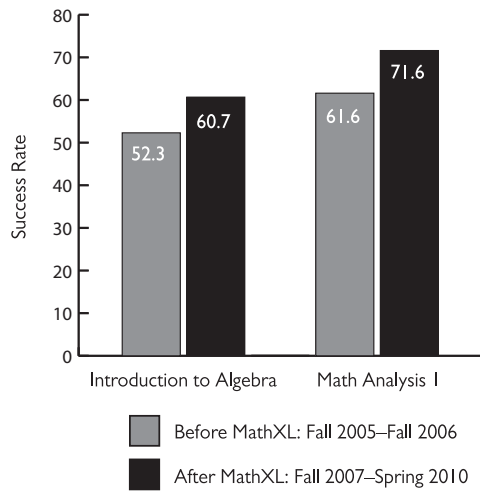


Figure 1. Comparison of Combined Average Success Rates in Introduction to Algebra and Math Analysis I with and without MathXL, Fall 2005–Spring 2010 ($n=47,505$)

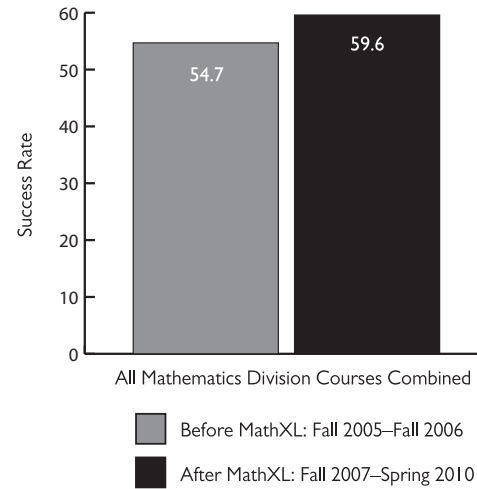


Figure 2. Comparison of Combined Average Success Rates in All Mathematics Division Courses before and after MathXL Adoption, Fall 2005–Spring 2010 ($n=47,505$)

	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010
Introduction to Algebra	52.6	45.1	57.4	53.9	50.5	58.8	65.7	59.3	68.7	61.1
Math Analysis I	61.8	61.2	61.7	61.6	68.4	71.4	68.8	73.8	70.3	75.5

Table 1. Comparison of Success Rates before and after MathXL Adoption, Fall 2005–Spring 2010 ($n=47,505$)

Note: Success rates are averages of all course sections and are weighted according to class size.

The Student Experience

According to Hammond, most Blinn College students prefer the MathXL homework system over the traditional paper homework that may or may not have been graded for correctness. Hammond attributes their preference—and increased success—to the added support provided by MathXL: more homework, immediate feedback, and multi-

media options. “Students work on problems until they get them right,” he says. “They get more practice and are more likely to master a concept before moving on to the next. That translates into better grades, but more important, it teaches students more-effective study habits that help them throughout their academic careers.”

Conclusions

MathXL not only works for Hammond’s students; it also works for him and for the school. “As an instructor, it enables me to be more effective; I now assign more homework and low-stakes quizzing and as a result, I’ve seen increased pass rates,” he says. “In addition, it helped standardize math sections and formed the backbone of our QEP.”

Being able to leverage the data obtained through MathXL also created needed buy-in from reluctant faculty. “Their comfort

levels have increased over time,” says Hammond. “Plus, they’ve had the opportunity to experience the pedagogical benefits of the program—including increased time for hands-on teaching, reduced worry about cheating, and increased quality control over class content and objectives.”

Submitted by Ron Hammond, Division Chair
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