

Product Used **MyMathLab**
 Course Name **Prealgebra**
 Credit Hours **Four**



KEY TAKE-AWAY

By combining a highly motivating student contract with MyMathLab's immediate feedback and interactive features, Woodbury increased his students' time on task. As a result, he increased the retention rate in his Prealgebra course by 8 percent and the ABC rate by 74 percent.

Textbook in Use

Prealgebra, 4e, Jamie Blair, John Tobey

Course Implementation

Course Design

Instructor George Woodbury has been using MyMathLab to supplement his traditional classes since 2000. Classes meet for four hours of lecture a week and use MyMathLab outside of class to complete homework and take quizzes.

In summer 2010, as an experiment to further boost student success rates in his Prealgebra course, Woodbury added a student contract to the course curriculum. For each of the first three weeks, if a student met the following criteria, Woodbury added 10 points to the student's test score:

- Zero absences
- A score of 100 percent on all MyMathLab homework assignments
- Completion of all written textbook homework assignments
- A score of at least 80 percent on every MyMathLab quiz

Assessments

10 percent	MyMathLab homework <i>Completed from any location. Students without Internet access at home used the school's Learning Center. Students had three assignments per day, due at the start of class the next morning.</i>
20 percent	MyMathLab quizzes <i>One quiz per chapter, not proctored, due before the weekly exam, with unlimited attempts to score 100.</i>

50 percent

Tests

A pencil-and-paper test covering one to three chapters and given on each of the first three Fridays of the course.

20 percent

Final exam

A standardized, departmental exam comprising 50 free-response questions, graded via a four-point rubric.

Use of MyMathLab

Woodbury builds homework assignments and quizzes using MyMathLab's bank of problems. He uses the Search/Email by Criteria and Item Analysis functions in the MyMathLab Gradebook to keep tabs on students and to determine which students are struggling and with what topics. Woodbury also makes "heavy use" of the Home Page Manager to send students updates and summaries of sections covered in class. "I love using the Home Page Manager," he says. "It enables me to both email announcements and post them on the MyMathLab site."

Students use the Dashboard to keep track of their grades as well as upcoming deadlines. They also take advantage of section videos, Pass the Test videos, and PowerPoint presentations.

Use of MyMathLab contributes 30 percent to a student's final course grade.

I have never had results in Prealgebra that were as strong as those from these students. They reported to me that the student contracts motivated them to do the necessary work and that MyMathLab really helped them to learn the material.”

—George Woodbury, Instructor
College of the Sequoias

Results and Data

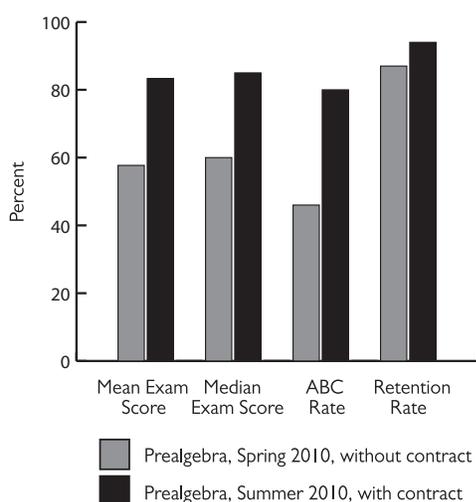


Figure 1. Comparison of Student Success in Prealgebra with and without Woodbury's Contract+MyMathLab Approach

Figure 1 compares mean and median final exam scores, ABC rates, and retention rates between Woodbury's spring 2010 Prealgebra students, whose course did not include the extra credit contract, and his summer 2010 Prealgebra students. The summer course was for four weeks and the spring course was for 17 weeks. Both classes used the same departmental final exam.

Students who completed Prealgebra with the contract far outperformed those students who completed the course without the contract.

- The summer mean exam score was 44 percent higher than the spring score: 83.3 percent compared with 57.5 percent.
- The summer median exam score was 42 percent higher than the spring score: 85 percent compared with 60 percent.
- The summer ABC rate was 74 percent higher than the spring rate: 80 percent compared with 46 percent.
- The summer retention rate was 8 percent higher than the spring rate: 94 percent compared with 87 percent.

The Student Experience

Woodbury attributes the significantly higher gains by the summer 2010 students both to the contracts and to use of MyMathLab. "Using the contracts in conjunction with MyMathLab motivated students to persist through difficult problems," he says. "As they began to connect success with their work in MyMathLab, their self-confidence increased.

In turn, they practiced more and were able to better learn the material in a condensed, four-week session."

Students' comments indicate that they aren't sure they could have been as successful without the contractual structure and the MyMathLab courseware.

Conclusions

Woodbury has never before had Prealgebra results that were as strong as his summer 2010 results. "The next time I teach this course," he says, "I will definitely use the contract/MyMathLab approach, including short-term

deadlines and rewards for performance benchmarks on MyMathLab homework and quizzes, as well as attendance."

Submitted by George Woodbury, Instructor
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