

Product Used **MyMathLab**

Course Names **Developmental Math Sequence**

West Virginia University at Parkersburg used MyMathlab in its Developmental Math course redesign as part of the Changing the Equation (CTE) National Center for Academic Transformation/Gates Foundation grant. All CTE participants implemented the Emporium Model at their two-year institutions. [This white paper](#) documents the best practices drawn from these CTE schools.

Course Implementation

West Virginia University at Parkersburg (WVU Parkersburg) was concerned about low student success rates in developmental math courses—Basic Arithmetic and Elementary Algebra. Out of the approximately 4,300 students who enrolled for classes at WVU Parkersburg in AY 2009/10, 31% were enrolled in a developmental math course. Students enrolled in Basic Arithmetic between fall 2008 to spring 2010 had an average success rate of about 48%; those enrolled in Elementary Algebra during this time had a 40% success rate.

To improve overall student retention and success in developmental math, WVU Parkersburg redesigned its traditional developmental math sequence. The plan segmented the two courses into 10 modules to be delivered in a 48-seat computer lab using MyMathLab. Students were required to spend a minimum of three hours per week in the lab, overseen by one WVU Parkersburg faculty member assisted by one lab assistant. Students worked in a self-paced, online program with support available on demand. Students experienced a seamless progression from one level to another through

modularized shell courses without the constraints that limit progress and retention.

The WVU Parkersburg redesign positively impacted the quality of the developmental math program in several ways.

- At-risk students were identified immediately through reports generated by MyMathLab and were assisted before they became frustrated and failed.
- The new computer classroom provided an active learning environment that engaged students throughout the entire class.
- Retention of developmental math skills was increased by making exams cumulative.
- Independent learning was encouraged by the individualized computer-based curriculum, and small, class-based learning communities provided opportunities for individual and small-group instruction.

Results and Data

During fall 2011 and spring 2012, scores from a common comprehensive final exam for students in redesigned sections were compared with those of students in traditional sections from fall 2010. The mean scores for students participating in the redesign sections were significantly higher than their peers in the traditional sections (table 1).

Other Impacts on Students

In fall 2011, 14 students completed all developmental mathematics requirements (the equivalent of two courses) in one

semester, which translated into a cost savings for the students, as well as a time savings on their way to degree completion.

| Course | Fall 2010 Traditional | Fall 2011 Redesign | Spring 2012 Redesign |
|--------------------|--------------------------|-----------------------|-------------------------|
| Basic Arithmetic | 74 | 86 | 88 |
| Elementary Algebra | 67% | 68 | 73 |

Table 1. Mean Common Final Exam Scores before and after Redesign, Fall 2010–Spring 2012

Conclusions

The math department at WVU Parkersburg is committed to continuing to offer these courses using the redesigned format and to keep working toward improving completion rates.