

Product Name MyLabsPlus

Course Name Developmental Math Sequence

Course Format Emporium: scheduled meeting times, flexible pacing, mastery learning

- ▶ **Key Results** After redesigning its developmental math sequence with MyLabsPlus in an emporium model, Guilford Technical Community College significantly increased the average success rate of each developmental math course and achieved an 85 percent average subsequent course success rate.

Materials in Use

Developmental Math, Martin-Gay; custom workbook

Implementation

Students watch lectures and read the workbook at home, then receive on-demand tutoring from instructors and tutors during class, which meets in the lab. The emphasis is on active reading, critical thinking, and personal responsibility for student learning.

For each semester that they participate in the program, students register for a Shell Course in which content is divided into eight modules, also called DMAs. Flexible pacing allows students to both work ahead and devote more time to difficult topics. The average time to complete each DMA is four weeks.

Each module is completed in MyLabsPlus and includes the following:

- **Diagnostic test.** Students who earn a score of at least 85 immediately progress to the next module. Students who score less than 85 are required to complete both the module in MyLabsPlus and its corresponding sections in the LEAP Log (workbook). Students only complete the material within the module that they have not demonstrated mastery on.
- **The LEAP Log.** Each section includes reading and written exercises. Students must show all work and turn it in to be checked for completion before proceeding to the test. Corresponding MyLabsPlus lecture videos are optional but highly recommended.
- **Homework.** Students must earn a score of 100 before proceeding to the next section. Students may request help from an instructor, they have unlimited attempts, and all learning aids are available except “Show Me an Example.”

- **Quizzes.** Students take one quiz halfway through the module and another at the end of it. No instructor or tutor assistance is allowed and learning aids are turned off. Students have four attempts to score at least 85 before they are required to repeat the section. Instructor intervention is required after two failed attempts.
- **Review Homework.** Students complete a comprehensive homework assignment at the end of each module. A score of 100 is required to progress from the section. No learning aids are allowed, students have unlimited attempts.
- **Module Test** (proctored, password protected). Upon completion of the rest of the module, students take a comprehensive Module Test. They have four attempts and must score at least 80 to pass the module. Each time a student scores less than 80, they remediate via personalized MyLabsPlus homework. Students must score 100 on the personalized homework before retaking the Module Test. After four unsuccessful attempts, a student must rework the entire module.

GTCC utilizes almost every feature of MyLabsPlus, including Personalized Homework, Prerequisites, Instructor Tips, and the Study Plan.

Assessments (each module)

90 percent MyLabsPlus module exam (proctored)

5 percent MyLabsPlus quizzes

5 percent MyLabsPlus homework

Use of MyMathLab contributes 100 percent to each student’s final course grade

Semester	Format	Essential Math	Introductory Algebra	Intermediate Algebra
Spring 2011	Traditional Redesign	66% 93%	73% 80%	62% 72%
Fall 2011	Traditional Redesign	73% 80%	73% 58%	66% 59%
Spring 2012	Redesign	72%	82%	64%
Summer 2012	Redesign	82%	82%	87%

Table I. Average Success (ABC) Rates before and after MyLabsPlus Redesign, Spring 2011–Summer 2012 ($n=7,000$)

Results and Data

Developmental math success rates have steadily increased with the MyLabsPlus redesign. Intermediate Algebra success rates, for example, increased from 62 percent in spring 2011 to 87 percent in summer 2012 (table I).

In addition, students are experiencing increased success in subsequent courses. At the end of summer 2012, developmental math students saw an average 85 percent success rate in their next math courses (figure I).

The Student Experience

Susan Barbitta, developmental math instructor, reports that students quickly realized the benefits of the MyLabsPlus redesigned format. The following student comments reflect their preference for the new program's flexibility and individualized instruction:

- “I hate to work at someone else’s pace. This course gives me the ability to learn the way I learn.”
- “I like that I can complete the course at my own speed and not the speed of the class. I comprehend more at my own rate.”
- “All of my class time is actively used, instead of getting lectured at and being lost.”
- “I like the individualized attention—a teacher is always available to answer my questions.”

Student comments have helped spur programmatic changes. By listening to students, faculty learned that different explanations from different tutors created confusion. As a result, the department agreed on one method to explain concepts, and all tutors now adhere to that method.

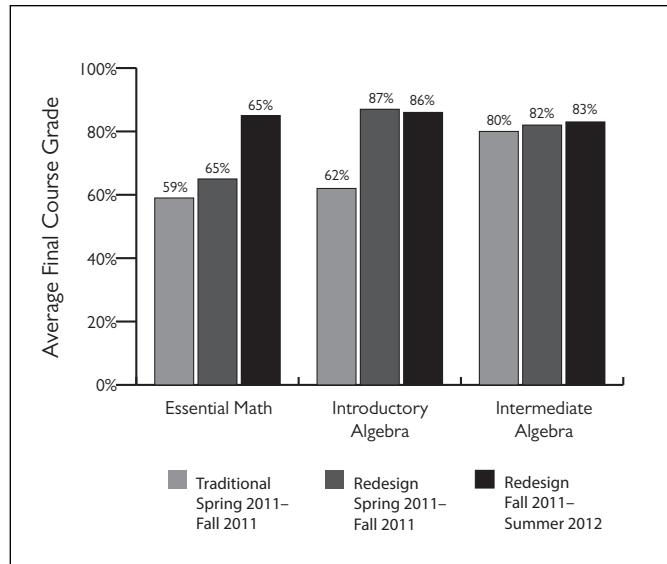


Figure I. Average Subsequent Success (ABC) Rates for Developmental Math Students, Spring 2011–Summer 2012 ($n=7,000$)

Conclusion

Guilford Technical Community College’s developmental math redesign enhances its students’ quality of learning. The guided module design offers students immediate feedback and promotes that they become more active and engaged learners.

“The personalized homework feature in MyLabsPlus enables students to focus on what they don’t know, and gives them credit for concepts in which they can demonstrate mastery,” says Barbitta. “This combination of guided content learning, acceleration, and remediation as needed, helps students successfully complete their courses. The mastery approach, reinforced by regular testing, increases the cumulative learning effect from module to module. As a result, students are more successful in subsequent math courses.”

According to another faculty member, “Students learn by doing, not by watching. With MyLabsPlus, they are responsible for what they learn and how quickly they learn it.”

Submitted by Susan Barbitta, Developmental Math Instructor
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