

Product Used **MyMathLab**
 Course Names **Developmental Math Sequence**

Guilford Technical College 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

Guilford Technical Community College's (GTCC's) course redesign had three primary goals: 1) increase the percentage of students who successfully complete the developmental math curriculum, 2) fill in academic gaps from previous math courses, and 3) permit students to move rapidly through their courses.

GTCC redesigned its developmental mathematics curriculum using the Emporium Model. Three existing courses were divided into 13 modules. Students began each module with a pre-test, moved through a module as quickly as their skills allowed using a guided notebook/schedule, took a post-test and, if successful, moved on to the next module. Because testing occurred when the students felt they were ready and

because retesting was available, students experienced higher levels of success and less test anxiety.

The redesign approach to developmental math enhanced the quality of student learning. The guided module design enabled students to be more active and engaged learners, receive immediate feedback about their work, focus on what they did not know, and move quickly through what they did know. A combination of guided content learning and remediation as needed meant that more students could successfully complete the course and that the cumulative learning effect from module to module would be greater because the mastery approach was reinforced with regular testing.

Results and Data

GTCC evaluated the effects of the redesign by comparing performance on a common final exam in the traditional and redesign sections. GTCC also looked at comparative success rates as well as persistence and retention rates in the developmental courses.

Student performance improved significantly in all three courses as measured by performance on common final exams.

- In Essential Mathematics, 78% of the traditional students scored a C or better vs. 97% of the redesign students.
- In Introductory Algebra, 77% of the traditional students scored a C or better vs. 91% of the redesign students.
- In Intermediate Algebra, 62% of the traditional students scored a C or better vs. 91% of the redesign students.

Course	Fall 2010 Traditional A,B,C	Fall 2011 Redesign A,B,C + MP
Essential Mathematics	57%	67%
Introductory Algebra	55%	56%
Intermediate Algebra	45%	50%

Table 1. Completion Rates before and after Redesign, Fall 2010 and 2011

In fall 2011, GTCC added a "Making Progress" (MP) grade. Students receiving an MP grade must have completed three of five modules or two of four modules at 80% mastery. When taking into account the MP grades, completion rates improved in the redesign (table 1).

Retention also improved. In fall 2010, 74% of the students in the traditional courses remained until the end of the semester. In fall 2011, 81% of the students in the redesigned courses remained until the end of the semester.

Conclusions

The administration at GTCC has supported the redesign from the beginning and continues to support it. North Carolina has recently redesigned the developmental math curriculum into

eight one-credit modules. Students will have multiple exit points based on their program of study.