

Executive Summary (As Submitted 2013)

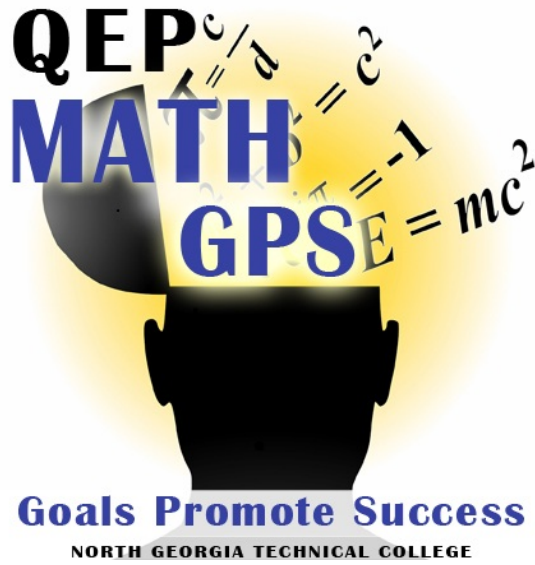
North Georgia Technical College's Quality Enhancement Plan (QEP), Math GPS: Goals Promote Success, is a five-year, college-wide quality improvement plan with the goal of guiding students from learning support math through applied math in their program area, leading to graduation. Implementation of the QEP includes course redesign, placement testing procedures, mathematics instructional technology, staff development, and new math learning labs.

Students completing NGTC's redesigned Learning Support Mathematics courses will demonstrate mastery of the behavioral objectives and learning outcomes:

- Math 0090—students will complete required modular assessments and achieve a score of 70% or higher.
- Math 1012 and Math 1111—students will achieve a score of 70% or higher on the final exam.
- Program Courses—students will complete math related tasks or assessments and achieve a score of 70% or higher.

QEP updates are provided each semester, and an annual report will be provided at the beginning of each Fall semester. Updates and reports summarize QEP and student progress and outline areas that require additional focus and modifications to achieve further success.

By focusing on student progression from learning support math through applied math in the student's chosen program area, it is the hope of NGTC faculty, staff, and students that the QEP transforms the campus culture to improve overall quality and effectiveness of student success.



NORTH GEORGIA TECHNICAL COLLEGE

Quality Enhancement Plan

Impact Report

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Initial Goals and Intended Outcomes

The initial goal of North Georgia Technical College's (NGTC) QEP was to guide students from learning support math through applied math in their program area. From this goal, three outcomes were created: 1) successfully complete the required learning support math course(s); 2) successfully complete required core mathematics courses(s); and 3) demonstrate mastery of mathematics skills needed for assessed programs.

The outcomes were measured by the following methods. Students completing NGTC's redesigned learning support mathematics courses will demonstrate mastery of the behavioral objectives and learning outcomes: 1) For MATH 0090, students will complete required modular assessments and achieve a score of 70% or higher; 2) For MATH 1012 and MATH 1111, students will achieve a score of 70% or higher on the final exam; 3) For program courses students will complete math-related tasks or assessments and achieve a score of 70% or higher.

Changes Made to the QEP

As planned, implementation of the QEP in Fall 2012 involved a redesign of the math learning support courses. MATH 0097, 0098, and 0099 were combined into one course, MATH 0090— Learning Support Math. A NGTC module-based emporium model (interactive computer software combined with one-on-one assistance from instructors and tutors) was implemented for MATH 0090. Course module benchmarks, Table 1, were established for each student based on prior learning support or math course completion and the program required core math course. Course success and end of course grades were awarded based on these established benchmarks. The modular design allowed students to work at their own pace, receiving additional support where needed. Additionally, acceleration through learning support math was now possible. Dedicated Math Learning Labs were created on each of NGTC's three campuses. A Learning Lab Coordinator was hired at the Clarkesville Campus along with Learning Lab Assistants on the Currahee and Blairsville Campuses.

Table 1: Math 0090 Established Module Benchmarks

Math Benchmarks
Module Benchmarks for Math:
Modules 1-6 (1 semester's minimum content)
Modules 7-10 (1 semester's minimum content)
Modules 11-15 (1 semester's minimum content)

The initial goals called for student success in MATH 1012 and MATH 1111 to be measured by the students' final exam grade. The faculty determined that a better measure of student success was the students' final overall grade. The faculty believe that student success should be determined by the full semester's work instead of one exam. Also, one of the initial goals of the QEP, completion of program specific math-related assessments, proved to be very difficult to assess. Most programs on campus have math requirements embedded within program courses. It proved difficult to collect data on student success of program math competencies.

In the beginning, the QEP goal focused only on learning support math. As the redesign process began, the decision was made to include reading and English learning support; therefore, the QEP evolved into a plan that encompassed all learning support courses at North Georgia Technical College. A co-requisite model was also implemented that allowed students scoring within 5 points of the required placement score to enroll in the program-level math or English course while attending mandatory tutoring. Therefore, the focus of the QEP became completion of learning support math, reading, and English courses; completion of the core-level math class; and acceleration opportunities for students including co-requisite offerings.

Data collection and tracking were an integral element to the success of the QEP. A QEP annual reporting process was developed to:

- Review student success data collected each semester
- Inform NGTC stakeholders of successes, challenges, and modification resulting from the previous year's QEP data collection and outcomes

Each year during fall semester, a newsletter was sent to all NGTC faculty and staff that offered a review of the QEP changes and highlighted any QEP success for the year.

After the initial implementation year, student success data was collected and analyzed; and enhancements were developed. In Fall 2013, the college implemented a requirement of 100 minutes per week of on-campus lab time for MATH 0090 students. This additional lab time was a major contributor to the continued student success rate, as noted in Chart 1. Additionally, student to teacher ratios were reduced on the Clarkesville Campus. After the application of these changes, the college experienced a tremendous increase in the number of students completing all math modules in one semester thereby shortening their time into the gateway course by 2 semesters. In Fall 2012, 4 students completed all 15 modules in one semester. In Fall 2013, 30 students completed all modules in one semester. Instructors attribute the success in acceleration to the implementation of the required 100 minutes per week of on-campus lab time.

Further Math 0090 changes during the five-year QEP period include: revising pre-test and post-test to ensure better consistency between questions; additional homework assignments; lowering of pretest exemption requirements from 90% to 85%; including attendance as a part of the overall grade; student intervention plans for struggling students; and a focus on

encouraging students to register for their core level math class immediately following completion of learning support.

After the success enjoyed by the math redesign due to the QEP, the redesign of English and reading began. In Fall 2013, Reading Learning Support Courses READ 0097 and 0098 were combined into READ 0090; and English Learning Support Courses ENGL 0097 and 0098 were combined into ENGL 0090. Course module benchmarks, Table 2 and Table 3, were established for each student based on prior learning support or English course completion. Learning Labs were created on all campuses for the ENGL 0090 and READ 0090 classes. Tutors were provided to assist instructors in the classroom. Originally, English and reading classes were redesigned into a module-based emporium model. In Fall 2015, a decision was made to move from separate learning support reading and writing courses to an integrated reading and writing course (ENGL 0988—Intermediate Reading and Writing). The move was made to facilitate a more rapid movement for students through learning support and for students to become more aware of the reading-writing relationship. At this time, the emporium model was abandoned; and a more traditional lecture-based/workshop model course was created. Further enhancements to English Learning Support soon followed. In Summer 2017, ENG 0988 transitioned to a 100% co-requisite course. All degree-level students who required learning support now enroll in both ENGL 0988 and ENGL 1101—Composition and Rhetoric.

Table 2: English 0090 Established Module Benchmarks

English Benchmarks
Module Benchmarks for English: Modules 1-6 (1 semester’s minimum content) Modules 7 & 8 (1 semester’s minimum content)

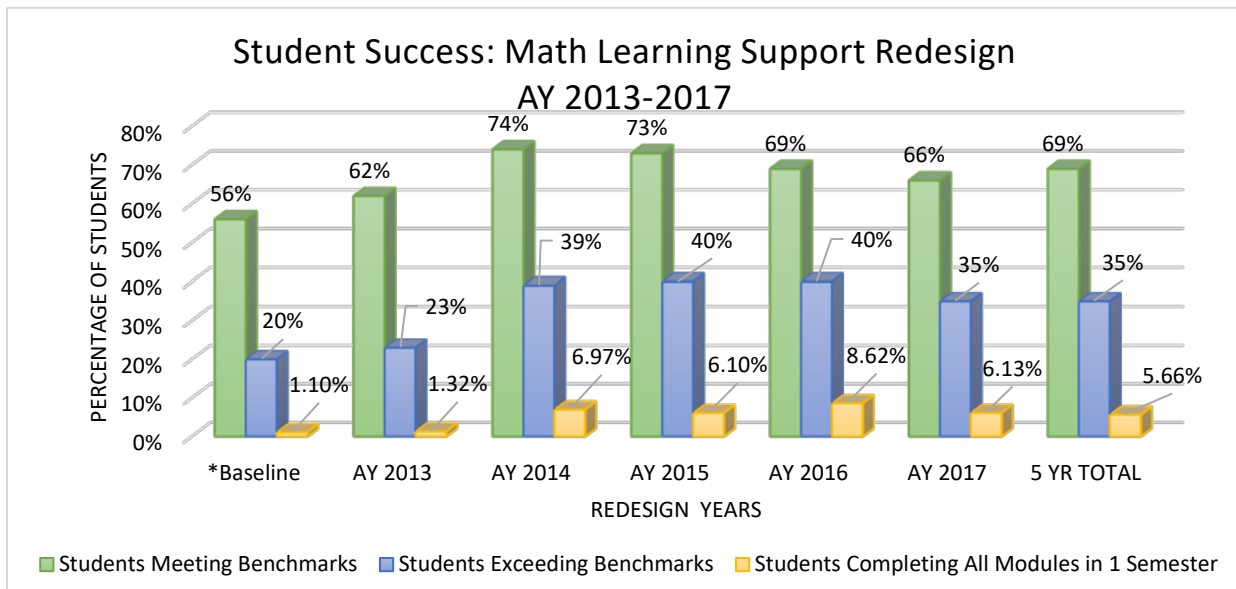
Table 3: Reading 0090 Established Module Benchmarks

Reading Benchmarks
Module Benchmarks for Reading: Modules 1-6, 9-14 (1 semester’s minimum content) Modules 15-26 (1 semester’s minimum content)

QEP's Impact on Student Learning

Prior to the redesign of NGTC's Learning Support program through the QEP, many students failed to complete the developmental sequence successfully delaying a student's ability to complete desired educational goals. Through the evolution of our QEP, the focus continued to be removing the barrier often created by developmental math, English and reading courses. Through our efforts, many NGTC students were able to successfully complete the sequence, achieve success in the program level course, and successfully graduate.

Chart 1: Student Success after Implementation of Math Learning Support Redesign



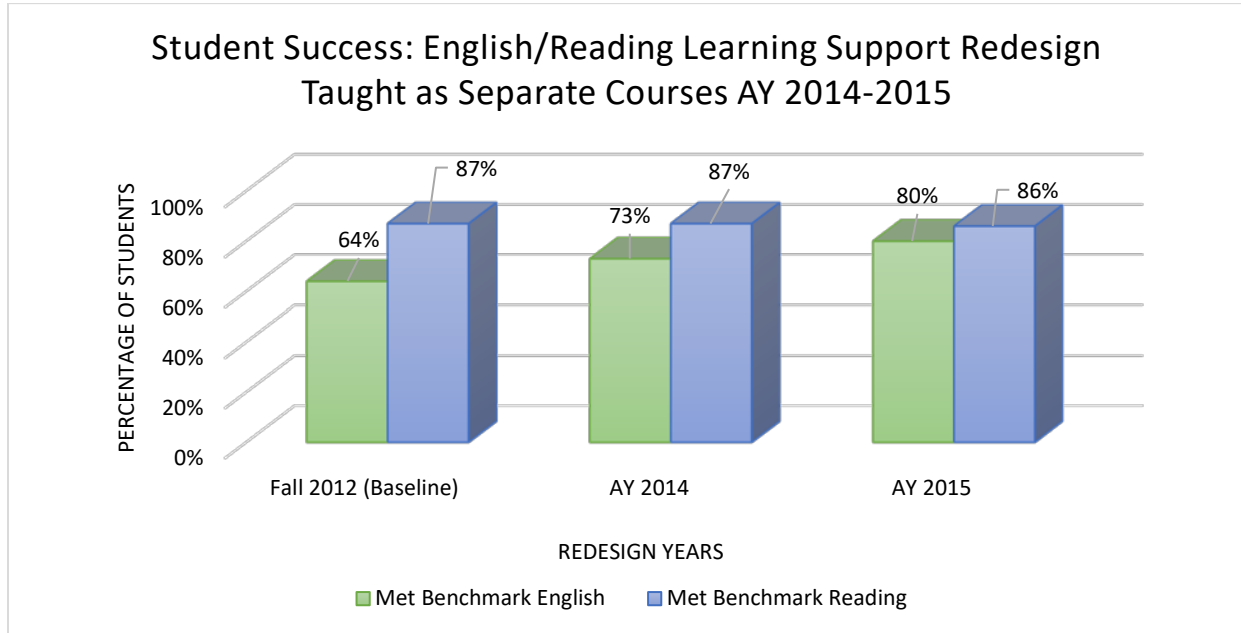
*Baseline data for students meeting benchmarks collected from Fall 2011, the last fall semester before redesign implementation. All other baseline data collected from Fall 2012, the first semester of redesign implementation.

NOTE: Successful Completion is defined as meeting the minimum semester benchmark module.

Narrative Description of Chart 1

The math redesign efforts showed tremendous gains throughout the first two years and remained consistent in the third year. Years four and five showed a small reduction in students meeting benchmarks but remained significantly higher than the baseline year. Over the five-year redesign period, 2965 students out of 4325, for a percentage of 69%, successfully completed MATH 0090. This was a 13-percentage point gain over the baseline data. Also, 245 students or 5.66% were able to complete all modules in one semester and 1508 students completed more than the minimum required.

Chart 2: Student Success after Implementation of English/Reading Learning Support Redesign

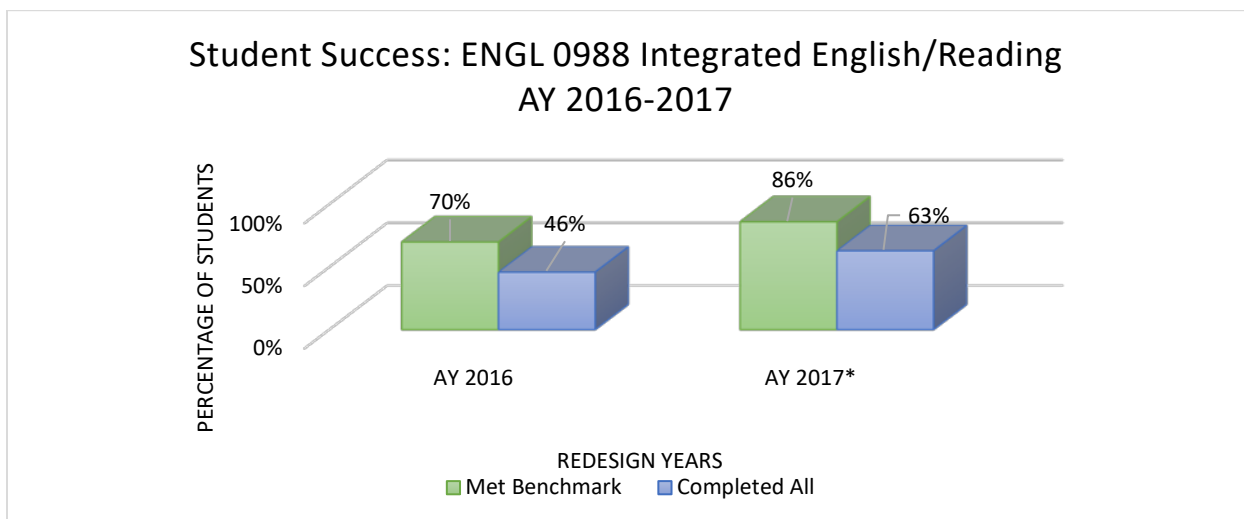


NOTE: Successful Completion during AY2014 and AY2015 is defined as meeting the minimum semester benchmark module.

[Narrative Description of Chart 2](#)

In the first two years of the English/reading redesign, the courses were taught separately. Over this three-year period, English showed tremendous gains. In AY2015, English showed a 15% increase over baseline AY2012. Comparably, reading maintained a high success rate in the upper eighties.

Chart 3: Student Success after Implementation of English and Reading Integrated Course



*Includes Fall 2016 and Spring 2017 only. New Co-requisite model implemented in Summer 2017.

NOTE: Successful Completion during AY2016 and AY2017 is defined as achieving a 70% or better class average.

Narrative Description of Chart 3

In year three (AY2016) an integrated English/Reading course, ENGL 0988—Intermediate Reading and Writing, was implemented. This approach allowed students to accelerate by combining two learning-support courses into one course. The 86% success rate achieved in AY2017 was significantly higher than previous years. Also, 63%, or 124 out of 197 students, were able to complete two semesters of learning support in one semester.

In Summer Semester 2017, an English co-requisite model was implemented. All English students requiring learning support enrolled in both a learning-support course and a degree-level course. This resulted in 71% of the students successfully completing both ENGL 0988 and ENGL 1101. This program has continued in subsequent semesters and is experiencing sustained success.

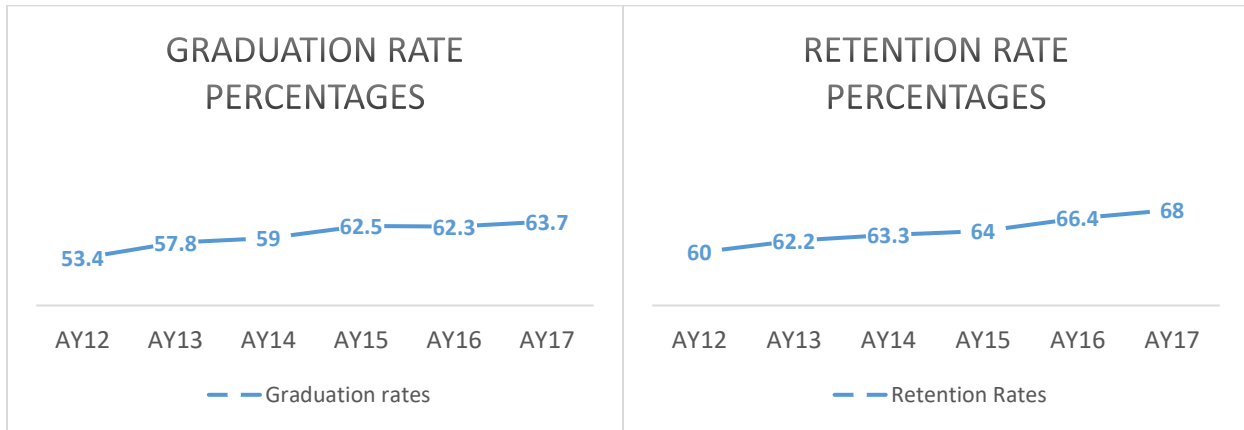
Student Success in Program Level Courses

Over the five-year redesign period, NGTC tracked MATH 0090 students through the completion of their program required core math course. During this time period, 536 out of 826, or 65%, of MATH 0090 students successfully completed the degree-level math course. In comparison, 1307 out of 1842, or 71%, of non-MATH 0090 students successfully completed the degree-level math course. The diploma-level math course was successfully completed by 122 out of 176, or 69%, of MATH 0090 students, compared with 934 out of 1381, or 68%, of non-MATH 0090 students.

Student Success in Contract Tutoring Co-requisite Model

The original QEP co-requisite model allowed students within 5 points of the required placement score to enroll in the program-level math or English course. Students meeting the qualifications signed a mandatory tutoring contract requiring him or her to attend 2 hours of tutoring per week. The student was assigned a personal tutor and was monitored by the Learning Lab Coordinator. During the redesign period, 73 out of 97 or 75% of the students successfully completed the program level math course. For English, 66 out of 87 or 76% of the students successfully completed the program level course. This model has now been expanded to include all diploma students who require learning support, regardless of test score. An enhanced, more inclusive co-requisite model has been adopted for degree level mathematics students requiring learning support. This enhanced model has shown promising results in the first year of implementation.

Chart 4: North Georgia Technical College Graduation and Retention Rates (AY 2012-2017)
Other Successes



[Narrative Description of Chart 4](#)

While we cannot directly link learning support redesign to the increase in graduation and retention rates, we believe it has had an effect. In AY2012, the graduation rate was 53.4%. In AY2017, the graduation rate had risen to 63.7%. In AY2012, the retention rate was 60% compared to AY2017 which was 68%. We believe that the learning support redesign and the ability for students to accelerate greatly contributed to these increases.

Reflections

NGTC believes that the learning support redesign had a positive impact on student learning. The redesign of math has allowed students to learn at their own pace and accelerate through concepts that they already know. The redesign of English has led to the creation of a course (ENGL 0988) that is structured to help specifically with the objectives and assignments of ENGL 1101. Diploma level learning support students receive one-on-one tutoring to help them succeed in diploma level English and math courses. The goal of the QEP has never wavered from helping to create a path to graduation for NGTC students.

A survey of faculty resulted in 32 responses. Of these responses, 87.5% believe that the learning support redesign has helped their program’s retention rates and 90.6% believe the redesign has helped graduation rates. Faculty had many positive comments concerning the redesign.

Comments from the QEP Survey.

The QEP:

- *improved student motivation*
- *helped students get one-on-one attention, which they like*
- *system is less stressful*

- *allows students to finish quicker due to the module-based system*
- *lead to students who need more support get the necessary time and attention*
- *process as well as those who oversee the functionality are instrumental to the students' success*
- *helps students accelerate through learning support.*

NGTC continues to research and look for innovative and research-based strategies for student success. In 2013, the Technical College System of Georgia (TCSG) began studying the Accelerated Learning Program (ALP) and Accelerated Math Program (AMP) that was developed by the Community College of Baltimore County (Maryland). These programs allowed students to take learning support classes along with credit-level classes in math and/or English. Over the course of the next few years, NGTC sent several faculty members to the ALP/AMP Conferences. These faculty members researched and developed their own version of a co-requisite program in both English and math.

In Summer 2017, the English department implemented a pilot Co-Requisite Program for Learning Support. All degree students testing into Learning Support could enroll in an ENGL 1101 class along with an ENGL 0988 support class. Pairing the learning support class with a degree-level class is an attempt to accelerate student learning while providing support and one-on-one assistance to the student. Diploma learning support students continued to enroll in ENGL 1010 along with two hours per week mandatory tutoring.

Summer 2017 had a total of 41 co-requisite students. Of those, 29 out of 41, or 71% completed their core English requirement. In Fall Semester, the English Department had 107 co-requisite students. Of these students, 76 out of 107, or 71% completed their core English requirement. Though the success rate for the co-requisite pilot was slightly lower than the previous learning support approach, many positives point to increased benefit for learning support students. The major advantage has been acceleration through core classes.

In Fall Semester 2017, the Math Department implemented a Co-Requisite Program. Students who tested into a given placement test range were given the opportunity to enroll in a degree-level math (MATH 1103, MATH 1111, or MATH 1127) along with a MATH 0090 support class (MATH 0090Q, MATH 0090A, MATH 0090S). The MATH 0090 class is specifically designed to provide support for the students' degree-level class. At the Clarkesville Campus, two additional lab assistants were hired to assist with the co-requisite students. Diploma learning support students continued to enroll in MATH 1012 along with two hours per week of mandatory tutoring. In Fall Semester 2017, 108 students enrolled in this program. Of these students, 70% successfully completed their core math requirements. Currently, NGTC is the only member of TCSG offering co-requisite options in Math 1103, 1111, and 1127.

Also, in Fall Semester 2017, the Math Department implemented two significant changes to the traditional MATH 0090 course. In the past, the department required three modules to be completed without the use of a calculator. These were modules covering whole numbers,

fractions, and decimals. After discussions with program area instructors, it was determined that this was no longer necessary. The second change was to condense the current 15 module course into a 10-module course while maintaining the same curriculum standards.

The QEP has been a catalyst for change at NGTC. It has allowed the math and English faculty to research and implement many learning support changes. The faculty continues to embrace change and provide more opportunities for students to succeed.