ACCUPLACER®

Case Study

Aligning Curriculum with K–12 and College Partnerships

Asheville-Buncombe Technical Community College
Asheville, North Carolina

Target Students: 10th-12th Grade

Duration: 35 hours

Implementation Model:
Teacher-led, targeted intervention

Executive Summary

Asheville-Buncombe Technical Community College partnered with other institutions to redesign curricula and address student needs based on ACCUPLACER placement and diagnostic results. They brought together 75 public school educators with college math and developmental education faculty members to dialogue about how students could be better prepared for college-level work. A.C. Reynolds was one of eight participating high schools in the pilot program. A total of 128 students in grades 10–12 who were enrolled in Technical Math I, Technical Math II, or Introductory Math/Algebra took the ACCUPLACER placement test, and then received approximately 35 hours of mathematics instruction. Following the intervention, students who scored lowest on initial placement test show the greatest gain.

Implementation Details

In 2010, Asheville-Buncombe Technical Community College (A-B Tech) set a goal of better aligning high school curricula to college requirements and to employers' current needs. The college invited the participation of three local public school systems — those in the city of Asheville and in Buncombe and Madison counties — to partner with them in this effort.

Creating a Dialogue about Math

A-B Tech began by creating a math consortium that brought together 75 public school educators, in addition to A-B Tech math and developmental education faculty members.

Participants quickly focused on ACCUPLACER placement data showing a high need for developmental math: 72 percent of the service area's 2007–2008 college "tech prep" high school graduates who enrolled in A-B Tech upon graduation placed into at least one developmental math course.

The consortium began a rich dialogue about how students could be further supported in high school so they would be better prepared for college-level work. Sharing ideas across systems led A-B Tech to provide the high schools with math materials they could use to prepare their students for college-level math. One school system developed Moodle instruction (an online learning platform) based on the A-B Tech materials and then shared it with the other school systems.

Using ACCUPLACER Diagnostics to Improve Outcomes

In 2010, A-B Tech and eight area high schools administered ACCUPLACER placement tests to high school math students. Students who did not meet the college-ready threshold took ACCUPLACER Diagnostics. Based on the test results, the high schools offered various treatments with the students to strengthen math knowledge. Each high school determined its own intervention strategies. Following the intervention, students retook the ACCUPLACER placement test. Results showed that students who had the lowest scores on the initial placement test showed the greatest gains after the intervention.

Improving Collaboration Among Teachers

All of the participating high school teachers also took the ACCUPLACER Diagnostics test themselves, and nearly 100 percent found it more rigorous than they expected it to be. This helped provide a meaningful context and increased the dialogue between the Career Technical Education (CTE) teachers and the math teachers. CTE teachers frequently teach specific applied math within their programs. Using ACCUPLACER scores that correlate to the individual programs can get more students placed correctly initially, while the Diagnostics give an in-depth look at specific skills needed by students. Engaging in this process created the opportunity for CTE teachers and math instructors to talk about their common goals.

As a result, CTE teachers redesigned curricula — from car repair to carpentry, food preparation and medicine — to be more mathematically relevant. This change increased student engagement in math. Teachers also recognized the value of spending more time with each other in professional development.

Lessons Learned

The partnership between high schools and A-B Tech opened lines of communication so high school teachers and college faculty could work together to better serve students. Among the outcomes of the partnership include:

- Better understanding of the content of ACCUPLACER Diagnostics as a tool to reduce the need for remediation and help more students succeed
- Improved instruction and better integration of math into CTE curricula
- Rethinking structures to improve collaboration between CTE and math teachers, including relocating classrooms so CTE and core teachers are in the same area of the school
- Recognizing the need for joint professional development for CTE and math teachers

Implementation model

- ■ Individualized Instruction
- ■ Targeted Group Intruction
- □ Review Coursework
- □ Redesigned Coureswork
- □ Accelerated Coursework

Measure of success

- ■ Improvement in Scores
- ■ Improvement in Placement Levels
- ■ Improvement in Proficiency Levels
- □ Performance in Subsequent Courses

Location

- ■ Urban
- □ Suburban
- □ Rural
- □ Online

"With ACCUPLACER Diagnostics, we are able to pinpoint areas of deficit on the class level as well as on the individual student level. The class-level data gave us opportunities to share best practices within schools and across school systems. The student-level data gave teachers insights on the specific needs of individual students so they could work with them using our fast-track technology or more drills."

— *Deborah Harmon, Executive Director of Counseling/Advising, A-B Tech*

A.C.Reynolds High School — A Few Findings

- Students who scored lowest on the initial placement test showed the greatest gain after targeted intervention.
- Aggregate data for these classes show that 39 of the students who received the intervention tested into the next higher-level course, and eight students tested up two levels following the remedial instruction.
- Testing ninth-graders on arithmetic skills with a message about math skills needed for college readiness is a good idea.