



Texas State Technical College Waco

We All Add Up!: Student Success in Developmental Mathematics

To support our legislative mandate and mission statement to provide emerging and advanced technical education, Texas State Technical College Waco (TSTC Waco) has created a Quality Enhancement Plan (QEP) that addresses a key-learning issue on campus – student success in developmental mathematics.

The QEP Development Team used stakeholder surveys, focus groups, and historical student success data to determine an initiative that would have the most impact on student learning and would be achievable within the financial resources of the college.

The QEP title “We All Add Up!” emphasizes developmental mathematics’ role as a common foundation for the various technical education programs on campus. The plan focuses on improving student engagement, student learning outcomes, and student success in developmental mathematics through the following strategies:

- Active and Collaborative Learning
- Application of Mathematics Concepts to Technical Career Contexts
- Math Anxiety Reduction through Awareness Activities and Classroom Design Changes
- Team Teaching with Pairings of Academic and Technical Instructors

The college has developed a comprehensive assessment plan for evaluating attainment of the student learning outcomes, student success outcomes, and the four instructional strategies.

Outcomes & Strategies	Assessment Plan
Student Learning Outcomes	Use standardized internal test scores on course learning outcome assessments (5-7 tests per course mapped to SLOs). Analyze by section, instructor, time of day, and placement test abilities.
Student Success Outcomes	Course pass rate, withdraw rate, fail rate, section GPA, and grade distribution; # students completing developmental math sequence; # students completing first college level math.
Strategy 1: Active & Collaborative Learning	Classroom observations with rubric; Items on student course improvement survey; Items on instructor survey.
Strategy 2: Applications of Math in Technical Contexts	Classroom observations with rubric; Items on student course improvement survey; Items on instructor survey.
Strategy 3: Math Anxiety Reduction	Pre-post Math Anxiety Scale-Revised (MAS-R); · Items on end of course survey about facilities, equipment, etc.
Strategy 4: Team teaching	Classroom observations with rubric; Items on student course improvement survey; Items on instructor survey.

The college has developed a budget providing sufficient resources for the five year initiative and includes the following: faculty development and conference registrations, faculty and staff stipends, student tutors, classroom modifications, and computer equipment.