

Developmental Education:
Linking Students to Strategies for Success in Mathematics

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The purpose of the Quality Enhancement Plan is to equip students with the requisite math skills, through active learning and technology, improving their performance in Math 0099 developmental education courses, improve pass rates on the Learning Support exit exam, COMPASS, and enhance their performance in the College Algebra gateway course.

Through the QEP process, the College sought to answer three fundamental questions: (1) what is students' 'greatest learning need; (2) how can the College best address this need; and (3) How can the College maximize the impact, sustainability, and expandability of the QEP? With these questions answered through the QEP process, the College has confidence that its QEP will address a critically important student learning need, while also maximizing its resources.

What is AMSC's students' greatest learning need?

The College addressed this question by engaging the full AMSC community of faculty, staff, students, Board of Regents and community representatives. This broad-based participation ensured a representative sample size that adequately engages the full population of stakeholders. Through a combination of soft data (e.g., surveys, focus groups, interviews, campus town hall meetings) and empirical data (e.g., learning outcome assessment results, course success rates), it became unequivocally clear to the College that the greatest learning need is in developmental mathematics, which constitutes roughly 30% of the student population.

How can the College best address students' greatest learning need?

Through literature review, followed by a one year pilot study, the College developed a QEP that employed a computer-based curriculum, a modified Emporium method, to deliver developmental math, Math 0099 courses. Emporium does not replace the instructor in the classroom; rather it repositions the instructor as a facilitator, while allowing students to assume an active role as learners.

How can the College maximize the impact, sustainability, and expandability of the QEP?

The College chose developmental mathematics because it not only will have the greatest impact, but it has the greatest potential to improve student math performance in subsequent math courses, such as College Algebra. Twenty five percent of AMSC students, based on admissions testing and placement data, are required to take developmental math prior to other college level math courses. The success rates for developmental math courses are typically in the 42-48% range, which negatively impact the retention and graduation rates of developmental education students. Mathematics clearly presents the greatest challenge for students upon matriculation at the College. Thus, improvements in the student success rates in developmental math will have a broad and substantial impact, both for improving persistence/completion and enhancing students' academic performance beyond developmental courses.

The QEP in developmental mathematics is sustainable because it is expected to: (1) increase the pipeline of students progressing from developmental education to college level courses; (2) decrease the developmental course teaching load hours of faculty, thus reducing institutional costs, and (3) allow the College to expand educational programs in other areas and reallocate resources to better address other student needs.