

IMPROVING STUDENT SUCCESS THROUGH ENGAGEMENT: ENHANCING STUDENT LEARNING IN DEVELOPMENTAL MATH (a QEP executive summary)

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Extensive analyses at New River Community College have identified a lack of success in developmental mathematics as a major impediment to student learning. Over a recent five-year period, only 52 percent of students enrolled in developmental math courses successfully completed them.

This problem became a major item of discussion across the entire college community during a comprehensive, broad-based process of identifying possible topics for the college's Quality Enhancement Plan (QEP). Results of student focus groups, faculty focus groups and student surveys indicated that the greatest challenges students face are non-academic challenges external to the college. In the academic arena, students' difficulties in learning math and applying math to contexts outside of the math classroom were seen as the most pervasive weakness. The emerging question became "How can the college's instructional program be reshaped to help students achieve success in math?" The resultant plan focuses on having mathematics faculty work closely with faculty from other disciplines and departments to create "applied laboratory settings" across the college for students to apply concepts they learn in the mathematics classroom.

During a Framework Summer Institute held in 2007, faculty members from ten different disciplines developed measurable learning goals/objectives for the QEP, strategies to achieve these goals, leadership for implementing the strategies, assessment methods for achievement of goals, a timeline for accomplishment of the project, a preliminary budget for projected costs and a plan for communicating the project to the entire college community.

The overarching goal of New River Community College's QEP is to improve student success in MTH 03, which covers the topics of Algebra I including real numbers, equations and inequalities, exponents, polynomials, factoring, the Cartesian coordinate system, and applications. The chief strategy for improving student learning in MTH 03 is to develop and implement applied multi-disciplinary learning experiences to enhance the relevance of algebra concepts. Supporting this strategy will be the use of tutors; professional development for faculty in MTH 03 and those providing the applied laboratory experiences; monitoring of placement of students in MTH 03 based on ASSET or COMPASS placement test scores, and of reasons for student withdrawals; incentives for students to produce their best effort on post-tests; advising of students about selection of the appropriate follow-up math course; and surveys of student opinions on relevance of math experiences.

As the project evolves over the initial five-year period, it will remain fluid to allow for changes based upon the outcomes as they are analyzed. The QEP is a key initiative as the college continues to investigate ways and develop strategies to improve student success.