Revised: March 2010

Institution Name: South Texas College

On-site Review: September 28 – October 1, 2009

CEO: Dr. Shirley A. Reed, President

SACS Liaison: Laura B. Talbot, Curriculum and Accreditation Officer

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EXECUTIVE SUMMARY

South Texas College (STC) proposed Quality Enhancement Plan (QEP) addresses the low success rates in Developmental Mathematics courses. The current developmental math sequence involves three courses: Basic Mathematics (MATH 0080), Introductory Algebra (MATH 0085), and Intermediate Algebra (MATH 0090). According to Institutional data from the First-Time-In-College (FITC) students in the sequence, only 32% of those students were "college ready" within two years (Research & Analytical Services, 2009a).

The process of selecting the QEP theme was designed to be open and include all stakeholders of the College. After months of campus-wide meetings, and review of institutional research related to student learning, the QEP Planning Team identified the need to improve student success within the Developmental Math courses as the QEP topic. Therefore, the College's Quality Enhancement Plan calls for the redesign of the traditional Development Math three-course sequence (MATH 0080, MATH 0085, and MATH 0090) into a two-course sequence (MATH 0100 and MATH 0200) with expanded lab hours and a redesigned pedagogical approach, including increased lab time and computer-aided instruction. In addition, the proposed design will incorporate required mandatory assessment, active learning techniques, and intensive student support services. Student success for the purpose of the QEP will be evaluated by the following goals:

- Ensure 70% of students meet at least 70% of the Developmental Math Program Learning Outcomes.
- Increase success rates of students in Developmental Math courses (as evidenced by grades of "C" or better or passing scores on Texas Success Initiative [TSI] approved assessments).

- Increase the First-Time-In-College (FTIC) percentage of students who become "college ready" in Mathematics to 50% (by earning a grade of "C" or better in the highest-level course in the Developmental Math sequence or achieving passing scores on TSI approved assessments) within a two-year period.

A thorough literature review confirmed the College community's decision. According to Noel-Levitz (2005), research has indicated that one of the most serious obstacles to academic success has been students' inability to pass developmental mathematics coursework. Furthermore, research conducted by the Achieving the Dream (2006) initiative, reported that 71% of students in the 2002 Achieving the Dream cohort were referred to developmental math. This, coupled with the fact that most students do not complete a developmental sequence early on, reinforces the need of reforming developmental math remediation from a three-course sequence to a two-course sequence.

As the project is implemented over the initial five-year period, it will be modified according to the results of both formative and summative assessments conducted both internally and externally. The project is poised to transform student lives and the College culture by improving success in Developmental Mathematics.

INTRODUCTION TO SOUTH TEXAS COLLEGE

College Profile

South Texas College (STC) was established by the Texas legislature on September 1, 1993, to serve the residents of Hidalgo and Starr counties (South Texas College, 2004, p. 9). Situated on the southeast U.S.-Mexico border, the contiguous counties comprise extensive rural areas and several small towns and cities constituting a major metropolitan area, in approximately 2,800 square miles (South Texas College, 2004, p. 10). Over the past fifteen years, the two counties' over 750,000 residents (U.S. Census Bureau, 2009) have witnessed STC's metamorphosis into "a world-class comprehensive institution of higher learning" (South Texas College, 2009b), due in large part to their support. Community participation, moreover, has increased dramatically, transforming STC's initial program offerings of ten certificates and an enrollment of fewer than 1,000 students (South Texas College, 2004, p.9), into an array of program offerings including two baccalaureate degrees, fifty-four associate degrees and forty-two certificates (South Texas College, 2009a) and an enrollment of 21,666 students at the beginning of the 2008-2009 academic year (South Texas College, 2009a).

As of January 27, 2009, STC's student body is approximately 94% Hispanic and 55% female. The College's unduplicated Fall 2008 headcount enrollment for STC was 21,666, and the unduplicated Fall 2008 Hispanic headcount was 20,280, which represented 93.6% of total enrollment (South Texas College, Certified Institutional Data, 2009).

In response to the challenges and opportunities faced by the STC community, STC promotes a mission that clearly and comprehensively defines the College and its institutional commitment to teaching and learning. STC's mission is as follows:

Comprehensive College Mission

Vision: A better quality of life for our communities.

Purpose: South Texas College is a world-class comprehensive institution of higher learning providing premier educational and workforce programs and services in response to the needs of the region.

Core Values

- Student Success
- Learning
- Excellence
- Integrity
- Community
- Opportunity

Guiding Principles

- Be a premier learning-centered higher education institution where student and community success are paramount;
- Serve as the cornerstone for the economic vitality of South Texas;
- Foster an environment for the students and community to achieve a better quality of life;
- Nurture a culture where collaboration is valued and achievement is recognized.

Strategic Directions

- South Texas College commits to student learning as the foundation of student success through excellence in teaching and service, faculty and staff empowerment, professional development, and accountability.
- South Texas College proudly provides opportunities to all students with high expectations for their success.

- South Texas College leads the transformation of the region to a “college-going” culture whereby attending and completing higher education is expected for all.
- South Texas College serves as the catalyst for regional economic prosperity and social mobility.
- South Texas College models professionalism through integrity, mutual respect, civility, trust, and collaboration.
- South Texas College champions a culture of excellence based on evidence (South Texas College, 2009b).

STC’s Comprehensive Mission is consistent with the College’s past and present accomplishments. The College was recognized for its exceptional performance in five national benchmarks of Effective Education Practice, according to results from the 2006 Community College Survey of Student Engagement (CCSSE):

- Active and Collaborative learning
- Student Effort
- Academic Challenge
- Student-Faculty interaction
- Support for Learners (Office of Public Relations and Marketing, 2006).

The College is committed not only to fostering, but also to responding to the accelerated enrollment in a manner that will most benefit the STC community, bringing to fruition the Vision, Purpose, Core Values, Guiding Principles, and Strategic Directions that comprise its Comprehensive Mission.

PROCESS USED TO DEVELOP THE QEP

South Texas College began planning for the Quality Enhancement Plan (QEP) in January 2007, when the College's Curriculum and Accreditation Officer developed a presentation for the Academic Affairs Council. The purpose of the presentation was to introduce the QEP concept, the principle requirements of CR 2.12, and initiate a discussion of a plan to develop the College's QEP proposal for the upcoming reaffirmation. Recognizing the importance of broad-based faculty and staff participation, the Academic Affairs Council established a team to plan and identify the topic and determined that faculty from each instructional division should compose approximately 50% of the planning team. The QEP Planning Team's primary charge was to develop and implement procedures to identify the College's QEP topic. With resources provided by the Vice-President for Academic Affairs, the Curriculum and Accreditation Officer and the Director for Student Learning Outcomes, the Planning Team completed their task in early Spring 2008.

Once the topic was selected, a separate QEP Implementation Committee, composed of at least 50% faculty, was charged with conducting an extensive literature review and then developing an implementation plan. The Implementation Team met regularly during the 2008-2009 academic year until a draft of the QEP proposal was completed. The Implementation Team's charge also includes an advisory role during the implementation phase once the QEP is approved. Because of this, the vast majority of the faculty members on the Implementation Team were selected because of their direct involvement with the QEP topic.

The Quality Enhancement Plan (QEP) Planning Team

The QEP Planning Team, a cross-functional group including representatives from all College divisions, worked for over a year to select a QEP topic that would meet

Southern Association of Colleges and Schools (SACS) criteria and prove transformative for the College. Table 1 lists the members of the QEP Planning Team (in alphabetical order):

Table 1

QEP Planning Team Members

Faculty	
Richard Coronado	Liberal Arts and Social Sciences
Dr. Jane De La Garza	Developmental Studies
Abel Duran Jr.	Business, Math, Science, and Technology
Pamela Fowler	Nursing and Allied Health
*Oscar O. Hernandez	Liberal Arts and Social Sciences
Wallace D. Johnson	Liberal Arts and Social Sciences
Patricia Maserang	Business, Math, Science, and Technology
Curtis Roberson	Nursing and Allied Health
Stevan M. Schiefelbein	Developmental Studies
Edward Wagner	Faculty Senate, Developmental Studies
Administration and Staff	
Brenda Balderas	Finance and Administrative Services
Luzelma G. Canales	Accountability and Management Services
Jose Cruz	Information Services and Planning
Mary Elizondo	Finance and Administrative Services
Dr. Ali Esmaeili	Bachelor Programs and University Relations
Cody Gregg	Information Services and Planning
Lee H. Grimes	Professional Development
Paul Hernandez Jr.	Student Services and Development
Kimberly McKay	Student Services and Development
Anahid Petrosian	Academic Affairs
William Serrata	Student Services and Development
Resource Personnel	
Dr. Brenda Cole	Information Services and Planning
Jacque Gillispie	Information Services and Planning
Laura B. Talbot	Curriculum and Accreditation

*Was faculty at the time

QEP Orientation and QEP Topic Selection Process

In early March 2007, the Planning Team met for the first time for an orientation to the QEP planning process. Over the next two months, the Planning Team reviewed information on the processes that other institutions followed in selecting their QEPs. The

team requested data reports on previous South Texas College initiatives and studies that could be used as a basis for QEP topic selection, including; Strengths, Weaknesses, Opportunities, and Threats (SWOT) data compiled from surveys and analyzed by the Office of Institutional Research and Effectiveness (OIRE, the former name of the Research and Analytical Services office); *Achieving the Dream* data, including a list of the top ten barriers to student success and specific strategies to address these issues; Graduation Task Force data; and *Community College Survey of Student Engagement* (CCSSE) data from the first year of STC's participation in the survey.

A subcommittee of the Planning Team was formed and charged with the task of developing a proposal for the QEP topic selection process, based upon the models reviewed from other colleges. In late April 2007, the subcommittee (Laura Talbot, Anahid Petrosian, Lee H. Grimes, Wallace Johnson and Luzelma Canales) presented the proposed process for QEP topic selection, which included the identification of constituents from which to solicit input and the methodology to do so. This process was adopted by the QEP Planning Team.

Communication of QEP Process

During May and June of 2007, a website for communicating the definition and nature of the QEP to the College constituencies was created. In accordance with CR 2.12, broad-based support from faculty and staff for the QEP was critical. To that end, marketing materials and events were held for faculty and staff. During this timeframe, QEP presentations were made to approximately 215 faculty and staff, by Planning Team members who were charged with educating their departmental/divisional colleagues with the purpose and criteria for the QEP. Individual team members gave these QEP

presentations at their department meetings before the fall semester to achieve (and document) campus-wide communication of the QEP selection process.

Preparation for QEP Kick-Off and Evaluation of Stakeholder Input

Another Planning Team subcommittee was formed and charged with developing focus group discussions. In early June 2007, the subcommittee recommended holding focus groups of randomly selected faculty and staff to be conducted at the Fall 2007 College-Wide Professional Development Day —slated as the general QEP kick-off event at STC. The subcommittee recommended that 200 randomly selected participants be sent a letter of invitation to participate in the focus groups. To further prepare for the QEP Planning Process, in late July 2007, eight members of the Planning Team attended the four-day SACS Summer Institute held in Louisville, Kentucky, one day of which was devoted to QEP.

In addition to the training the Planning Team received, team members developed a survey for distribution to the Community Advisory Committee members for community input; designed a tri-fold brochure with QEP information and a tear-off section for the mailing in of ideas by members of the STC community; prepared a one-page newsletter for distribution across the College; and published an article for publication in the October faculty and staff newsletter, *October 2007 Staying Connected* (see Appendix II – Sample Informational Marketing Materials).

In late August 2007, the Planning Team divided the 200 randomly selected faculty and staff members into 10 groups of 20 to encourage interactivity and open discussion during the QEP kick-off event. The sessions, moreover, were named "Stakeholder Dialogue Sessions" to reflect the size and nature of the groups. The Qualitative Researcher from OIRE helped compile a list of questions to be used as a discussion guide. The Planning Team determined that, because dialogue was to

concentrate on student learning, it would be important to provide a definition to help focus the “Stakeholder Dialogue Sessions” on the actual process of student learning rather than issues not directly related to student learning.

After reviewing student learning definitions from the SACS handbook, faculty input, and various dictionaries, the Planning Team agreed on the following definition:

> Student ‘[l]earning is a personal, interactive’ process of gaining understanding through both study and experience that leads to the modification of attitudes and behaviors by the acquisition of knowledge, skills, and values. This process ‘results in greater expertise and a more comprehensive understanding of the world.’ (Cascadia Community College, 2002)

To involve student stakeholders into the QEP process, the Planning Team planned for 3 Student Focus Groups that were conducted on off-site campuses, including the Technology Campus, Starr County Campus and Mid-Valley Campus, with each group to be led by two faculty/staff facilitators.

Ultimately, dialogue sessions were conducted with 125 faculty and staff during the Fall 2007 College-Wide Professional Development Day. In addition, the student focus groups were held, and adjunct faculty and Community Advisory Committee members were surveyed. The data that were generated by these groups were then compiled and analyzed by the Qualitative Researcher from OIRE, after which the team was presented an overview of the data, divided into Strengths, Weaknesses, Challenges and Changes, with the most common responses to focus group questions being highlighted. From the data, the team identified 11 overarching student-learning themes. Afterwards, a subcommittee of the Planning Team (Laura Talbot, Lee Grimes, Anahid Petrosian, Cody Gregg, and Curtis Roberson) met with the data research team to reconfigure the data analysis information into these broader themes. Throughout the process, the ultimate goal of the data collection was to combine all data sources by

Spring 2008 and present a list of the top 10 possible QEP areas to the faculty for their vote during the Spring 2008 College-Wide Professional Development Day.

Analysis of Top QEP Themes

The review of data ultimately resulted in ten themes, two of the original themes being combined because of their similarities. In January 2008, the Planning Team created a QEP topic selection ballot to include 10 themes, as seen in Table 8. A sample ballot is included in Appendix III – Sample QEP Ballot.

Table 8

10 Possible QEP Themes

Academic Advising & Process	Professional Development
Academic Preparation (College Readiness)	Student Engagement
Communication	Student Services
Customer Service/Cross-Training	Teaching Effectiveness
Learning Support	Technology in the Classroom

All faculty and staff had the opportunity to vote for their top five QEP themes at the Spring 2008 College-Wide Professional Development Day. Prior to the vote, the list of top ten QEP themes, along with corresponding data for each, was distributed to all faculty and staff for their review. The ballot results for the top five themes were as follows, including the total number and percentage of ballots on which the themes were selected:

1. Academic Preparation……..... 420 (68%)
2. Teaching Effectiveness……..... 393 (63%)
3. Learning Support..... 365 (59%)
4. Academic Advising and Process.....345 (56%)
5. Student Engagement..... 290 (47%)

Unduplicated ballot count..... 621

Over a two-month period (March and April 2008), the Planning Team evaluated each of the top five themes against the criteria for an acceptable QEP and against institutional data to make a final QEP recommendation. Some of the institutional data reviewed for the top five QEP themes follows.

Academic Preparation

Having received the most votes, the Academic Preparation theme was given foremost consideration by the Planning Team, which analyzed various data concerning student performance in developmental and academic coursework. The data was comprised of Fall-to-Fall and Fall-to-Spring Retention by Remediation status data; graduation comparisons of students with and without developmental courses; success indicators for all developmental levels in regards to sequence completion, meeting Texas Success Initiative (TSI) requirements (i.e. college readiness standards), attempts versus pass rate of college-level coursework, and academic progress after developmental coursework; degree completion data for developmental vs. non-developmental part-time and full-time students; pass rates in core and non-credit bearing (developmental) gatekeeper courses; and Fall 2003 to Spring 2008 course repeater data for all developmental courses.

Teaching Effectiveness

The Teaching Effectiveness theme, a close second to Academic Preparation, was evaluated through two main data sources. The first set of data was the results of the 2007 CCSSE and the Community College Faculty Survey of Engagement (CCFSE) – Survey Responses with Significant Differences between What Full-time Faculty Say and What Students Say (Items related to Teaching Effectiveness). The second set of data was the results from the 2004-2005 Faculty Survey Institutional Profile.

Learning Support

The Planning Team examined the Learning Support by using the results of the 2007 CCSSE Implementation – Items related to use of Academic or Learning Support Services (Peer and other tutoring, skills labs, computer labs). Further evaluation of the theme comprised analyses of progress in Math 0085 for Students with and without Supplemental Instruction.

Academic Advising and Process

The Academic Advising and Process theme, selected on more than half of the ballots, was a prominent subject on the CCSSE and duly studied by the Planning Team by evaluating the results of the 2007 CCSSE Implementation – Items related to use of Academic Advising services (academic advising/planning, job placement, counseling services, child care, financial aid advising, student organization, transfer credit assistance, services to students with disabilities).

Student Engagement

Nearly half of the voters selected Student Engagement, so the Planning Team also analyzed pertinent survey data with respect to the theme by evaluating the results of the 2007 CCSSE and CCFSE – Survey Responses with Significant Differences between What Full-time Faculty Say and What Students Say (Items related to Student Engagement).

Selection of QEP Topic

The analysis of data pertaining to the top five QEP themes highlighted the most critical issues with respect to student learning at the College. While the Planning Team acknowledged the relevance of student engagement, academic advising and process, learning support, and teaching effectiveness, ultimately, academic preparation was

selected as the general theme for the College's QEP based upon the selection of the Academic Preparation theme as the most important by the faculty and staff significant amount of data which indicated greater opportunity to impact student learning in Developmental Mathematics as opposed to Reading or Writing. In April 2008, the Planning Team recommended the QEP topic: "**Increasing Success in Developmental Mathematics.**"

The following significant data underpinned the Planning Team's topic selection:

- Sixty-eight percent (68%) of faculty and staff, who participated in the vote for the top five themes, selected Academic Preparation, identifying the issue as significant to the STC community stakeholders.
- Eighty percent (80%) of students in developmental courses require remediation in Math; in contrast, approximately 40% of students in remediation require remediation in Reading and Writing (Research & Analytical Services, 2009b).
- Student success rates in the Developmental Math sequence (successful course completion) are substantially lower than the success rates of students in the Developmental Reading and Developmental Writing sequences. Forty-nine percent (49%) of students in the Fall 2006 FTIC cohort enrolled in Developmental English were "college-ready" after two years, as measured by completion of the developmental sequence or passing an approved assessment exam. Fifty-nine percent (59%) of students in the Fall 2006 FTIC cohort enrolled in Developmental Reading were "college-ready" after two years. However, only 32% of students in the Fall 2006 FTIC cohort (see Appendix V) enrolled in Developmental Mathematics were "college-ready" after two years (Research & Analytical Services, 2009a). This data highlights the challenges that students face in becoming "college-ready" in mathematics, as compared to reading and writing.

- The current success rates in the Developmental Mathematics courses at STC (as defined by grades earning a grade of a "C" or higher) have ranged from 36.2 % to 65.9 % during the most recent five semesters. See page 44 for a detailed breakdown of the success rates per course.
- There are substantially more course repeaters in Developmental Math than in Developmental Reading or Developmental Writing. According to OIRE, in Spring 2008, 668 students were repeating a Developmental Mathematics course for the second time; 164 students were repeating for a third time, and 133 students were repeating for a fourth time, for a total of 965 course repeaters. The most course repeaters were in MATH 0080 (302 students) and MATH 0085 (504 students), the first two courses in the sequence. In contrast, during Spring 2008, there were only 81 course repeaters in Developmental English and 148 course repeaters in Developmental Reading (Research & Analytical Services, 2009b).
- Both full-time and part-time First-Time-In-College (FTIC) students who receive remediation (developmental coursework) are not retained at the same rate as students who are not required to take developmental coursework. Of the full-time FTIC Fall 2007 students not required to take developmental coursework, 69% were retained in Fall 2008, compared to 55% of the full-time FTIC students who were required to take developmental coursework. Of the part-time FTIC Fall 2007 students who were not required to take developmental coursework, 52% were retained in Fall 2008, compared to 48% of part-time FTIC students who were required to take developmental coursework (Research & Analytical Services, 2009a).
- Graduation rates of students receiving remediation (developmental coursework) are significantly lower than graduation rates of students not receiving remediation. Full-time, FTIC students who did not receive remediation entering in

Fall 2001, had a 38% graduation rate within three years. Full-time, FTIC students who did receive remediation entering in Fall 2001, had a 30% graduation rate within four years. In addition, the graduation rate for part-time students who did not receive remediation was 66% within five years for the Fall 1999 cohort, compared to 32% within seven years for those part-time students who did receive remediation in the Fall 1997 cohort, a 34% difference (Texas Higher Education Coordinating Board, n.d.).

- Students that have taken developmental mathematics courses have tended to succeed, defined as earning an A, B, C, D, or P, in College Algebra (MATH 1414), at lower rates than those students who were not required to take developmental mathematics courses. In the Fall 2007 semester, students having taken the developmental mathematics sequence had a 65% success rate in College Algebra, as compared to 72% of students who did not take developmental courses (Research & Analytical Services, 2009a).

The Quality Enhancement Plan (QEP) Implementation Team

Once the QEP topic was selected, members for a new committee, the Quality Enhancement Plan Implementation Team were nominated by their respective Vice-Presidents and Academic Division Deans. The Implementation Team was charged with developing the topic into a viable plan for implementation. In addition to developing the QEP topic, the team has also been given the charge of implementing the plan and taking on an advisory role as the QEP is carried out after acceptance by the Southern Association of Colleges and Schools (SACS). Members of the QEP Implementation are listed in Table 2, below.

Table 2

QEP Implementation Team Members

Faculty	
Dr. Max Abbassi	Math and Science – Biology, Chair
Enrique Arredondo	Developmental Studies – Math
Pablo Cortez	Developmental Studies – Math, Interim Chair
Dr. Mahmoud Fathelden	Math and Science – Math
Dr. Aparna Ganguli	Developmental Studies – Math
Javier Garcia	Developmental Studies – Math
Rosana Maldonado	Developmental Studies – Math
Todd Meisel	Math and Science – Math
Mario J. Morin	Math and Science – Math
Lyda L. Neal	Developmental Studies – Math
Edward Wagner	Faculty Senate, Developmental Studies – Math
Rene R. Zuniga	Liberal Arts and Social Sciences – Education
Administrators and Staff	
Michelle A. Balani	Public Relations – Specialist
Luzelma G. Canales	Grant Development/Accountability and Management Services – Director
Mary G. Elizondo, MBA, CPA	Finance and Administrative Services – Business Office, Comptroller
Helen Escobar	Public Relations – Coordinator
Dr. Ali Esmaeili	Bachelor Programs and University Relations – Dean
Lee H. Grimes	Professional Development – Director
Oscar O. Hernandez	Student Learning Outcomes and Assessment – Director
Paul Hernandez Jr.	Student Services and Development – Student Support Services, Dean
Wesley T. Jennings	Research and Analytical Services – Quantitative Researcher
David C. Plummer	Finance and Administrative Services – Chief Project Administrator
Dr. Jinhao Wang	Institutional Effectiveness and Assessment (IEA) – Director
Resource Personnel	
Laura B. Talbot	Curriculum and Accreditation – Officer

The Implementation Team divided its work into five subcommittees: Assessment, Budget, Program Design and Literature Review, Marketing, and Professional Development. The subcommittees and their members are listed in Appendix I – Subcommittee Listing and Membership, Tables 3 through 7 (in alphabetical order by subcommittee, then by member, subcommittee chairs in bold).

Implementation Team Organizational Timeline

The team established the following organizational timeline:

Time Period	*Activities and Strategies*
Fall 2009	• Develop the QEP Strategies, assessment plan, marketing plan, literature review, and budget.
Spring 2009	• January 2009: Draft the QEP document, select the external consultant, and the lead evaluator • February 2009: Plan the QEP Implementation Team Retreat, finalize the initial draft for QEP document sections 4, 5, 6, 7 and 8 • March: Final reports submitted by all subcommittees • April: Edit the QEP document • May 30th: Finalize the QEP document
Summer 2009	• June 2009: Submit QEP document to administrators and external consultant for review • July 2009: Final review by Vice Presidents and the President • August 2009: Submit QEP document to SACS
Fall 2009	• September 2009: SACS Onsite Visit
Spring 2010	• Response to On-Site Review Report
Summer 2010	• COC Review and Decision, and Action Letter from SACS

IDENTIFICATION OF THE QEP TOPIC

Identification of the Problem and the QEP Topic

After the extensive, campus-wide process to identify possible barriers to student achievement and success in college, South Texas College identified low success rates in Developmental Mathematics sequence as a major issue hindering overall student success. This was supported by research concluding that more students enter college less prepared in mathematics than in any other area (McCabe, 2003).

The analysis of data pertaining to the top five QEP themes highlighted critical issues with respect to student learning at the College. The Planning Team acknowledged the relevance of student engagement, academic advising and process, learning support, and teaching effectiveness; however, academic preparation was selected as the general theme for the College's QEP, and, as previously mentioned, the Planning Team recommended the QEP topic: "**Increasing Success in Developmental Mathematics**".

Consequently, representatives from College community, comprising the QEP Implementation Team, met to develop a plan that would improve student learning in Developmental Mathematics, and thereby, increase student passing rates in developmental mathematics courses, and increase the percentage of FTIC students who become "college ready" in mathematics within a two-year timeframe.

Quality Enhancement Plan (QEP) Goals

After the topic was selected, the QEP Implementation Team established the following five goals for the Quality Enhancement Plan:

1. Ensure 70% of students meet at least 70% of the Developmental Math Program Learning Outcomes.
2. Increase success rates of students in Developmental Math courses (as evidenced by grades of “C” or better or passing scores on Texas Success Initiative [TSI] approved assessments).
3. Increase the First-Time-In-College (FTIC) percentage of students who become “college ready” in Mathematics to 50% (by earning a grade of “C” or better in the highest-level course in the Developmental Math sequence or achieving passing scores on TSI approved assessments) within a two-year period.
4. Increase Success Rates in the MATH 1332-Contemporary Mathematics (as measured by earning a grade of A, B, C, D, or P).
5. Increase Success Rates in MATH 1414-College Algebra (as measured by earning a grade of A, B, C, D, or P).

STC’s QEP topic selection has been a data-driven decision, with input for all stakeholders, and with the potential to effect positive change. Achievement Targets for the above listed goals and current baseline data are located in the Assessment section beginning on page 61.

Program Design

Once the topic selection was made and goals were established, the Implementation Team set out to develop the topic into an actionable project. The Program Design and Literature Review Subcommittee of the Implementation Team was charged to develop proposals that would focus on improving student learning and success in Developmental Mathematics. The subcommittee proposed to pilot a new developmental math course sequence by redesigning the traditional three-course

sequence (MATH 0080, MATH 0085, and MATH 0090) into a two-course sequence (MATH 0100 and MATH 0200) with expanded lab hours and tutoring support to enhance students' success. Thus, this new sequence would afford students the opportunity to complete the developmental math course sequence in a shorter time frame and increase concept mastery. The subcommittee designed student learning outcomes for each course (MATH 0100 and MATH 0200) and for the QEP Developmental Math Program as a whole, matching the objectives for the proposed two-course sequence to those for the traditional three-course sequence to ensure comparability between the two sequences. In addition, the subcommittee organized the corresponding topical modules for each course in the proposed sequence, and outlined specific details regarding placement scores, assignments, assessments, computer lab use, the role of MyMathLab (an online learning tool), and grading policy.

Chief outcomes of the Implementation Team's work were drafts of the QEP budget, marketing plan, and assessment plan. Key budget items, such as the purchase of mobile computer labs as a cost-effective alternative to the conversion of classrooms into computer labs, as well as expenditures on enhanced tutoring services designed to meet projected student needs under the QEP were included.

LITERATURE REVIEW AND BEST PRACTICES

To arrive at the proposed program design, an extensive literature review was conducted. Through this review, six main themes emerged, supporting the proposed design for a two course sequence, assisted by incorporation of improved placement and assessment, active learning strategies, advising, student support services (e.g. Learning Assistance Centers), computer assisted instruction, and acceleration.

Placement and Assessment

Open admissions institutions in higher education provide access to all students regardless of their academic preparation. Granting universal access to higher education to traditionally underserved groups such as low-income and minority students brings to the institution large numbers of students who are not prepared with the basic skills necessary to successfully complete college-level work (Hadden, 2000; Morante, 1989; Roueche & Roueche, 1999a). An open admission institution confronts the dilemma of balancing access with success (Swartz & Ganguli, 2007). Coupled with institutions' goal to maintain high academic standards through quality instruction, open admissions institutions must find ways in which to facilitate student success for all students they admit.

Research studies support mandatory assessment and placement of students in the proper level of instruction to achieve success (Amey & Long, 1998; Boylan, 2002; Hadden, 2000; Morante, 1987,1989; Roueche & Roueche, 1999b). The aforementioned studies stress the importance of colleges implementing policies that require basic skills assessment and mandatory placement in courses at the appropriate level in order to foster student success and maintain high academic standards. Amey and Long (1998) found a relationship between mandatory placement and the completion of Reading and English classes during the student's first semester, and a student's overall academic success. Hunter Boylan (2002), Director of the National Center for Developmental Education, identified mandatory assessment and placement as a *best practice* in his book *What Works: Researched-based Best Practices in Developmental Education*. He argued that if assessment and placement were not mandatory, then only the most motivated students would enroll in developmental classes. The less motivated students, who lack adequate preparation for college-level courses, will not assess their academic

weaknesses. They would tend to skip developmental classes and, consequently, experience little success and most likely drop out of college (Boylan, 2002).

According to Young (2002), research studies have shown that students, who take mandatory assessment and placement tests and enroll in appropriate developmental courses, perform better in college-level courses than similar background students who are not assessed and placed properly. Young (2002) recommended mandatory placement tests for all students. Sturtz & McCarroll (1993) observed that students who follow placement test recommendations become more successful than students who enroll in courses that exceed the level in which they were originally placed. Successful students continue to enroll in college. Moreover, Morante (1987, 1989) argued that allowing students to register in courses for which they do not have the prerequisite skills is not ethical. By doing this, institutions set students up for failure (Morante, 1987, 1989). McCabe (2003) recommended that all degree-seeking students, with very few exceptions, should be assessed and placed accordingly.

There are several factors to consider in selecting an appropriate assessment instrument (McCabe, 2003; Morante, 1987, 1989). Morante (1987) stated that admissions tests, such as the SAT or ACT, are not appropriate to use as placement tests because they do not differentiate students at lower levels; rather, they are designed to identify stronger students. According to Morante (1987, 1989), mathematics assessment should include arithmetic, elementary algebra, and appropriate higher-level mathematics such as estimations, computations, and word problems.

Most open admissions colleges, though, use computer-based tests, such as the Assessment of Skills for Successful Entry and Transfer (ASSET) or Computer Adaptive Placement Assessment and Support System (COMPASS), both offered by ACT, or ACCUPLACER offered by the College Board (College Entrance Examination Board, 2004). Both McCabe (2003) and Morante (1987, 1989) identified ACCUPLACER as one

of the placement tests to be administered. ACCUPLACER is considered “an adaptive test” because the selection of test questions is based on the test taker's “answers to previous questions”; the adaptive technique ensures that the test-taker’s ability level is compatible with the test questions (College Board, 2009). After intensive work selecting the primary instrument for South Texas College, the college’s Assessment, Placement and Matriculation Task Force recommended ACCUPLACER as the primary assessment instrument for initial placement, and the College requires all students not placing into college-level courses to take ACCUPLACER (Swartz & Ganguli, 2007).

Boylan (2002) listed regular, systematic program evaluation as a *best practice* of effective developmental programs. According to McCabe (2003), requiring exit tests provides an alternative to course grades for measuring skill mastery. Computer adaptive tests provide effective exit tests. Administering a departmental final examination developed by the faculty could be another method for assessing the exit level performance of the students. Other performance measures, such as performance in subsequent courses (Boylan, 2002; McCabe, 2003), completion of college algebra (McCabe, 2003), completion of the general education core (McCabe, 2003), graduation rates (Boylan, 2002; McCabe, 2003), and performance after transferring to a four-your institution (McCabe, 2003), can be used to evaluate a developmental program. Overall, as McCabe (2003) concludes, proper assessment and subsequent placements is essential for student success in developmental mathematics courses.

Active Learning

According to the higher education consulting firm Noel-Levitz (2005), research indicated that one of the most serious obstacles to academic success and persistence has been students’ inability to pass developmental mathematics coursework before going on to college-level coursework. There has been statistical evidence that

developmental coursework increases underprepared students' academic success, making developmental education "an integral, necessary, [and] cost-effective part of postsecondary education" (Noel-Levitz, 2005). The matter at hand is improving developmental education to increase the academic success of students who take developmental coursework (Noel-Levitz, 2005).

Many factors determine students' success in college coursework, including "the effectiveness of the instruction and their motivation to work hard enough to succeed" (Thiel, Peterman, & Brown, 2008). The effectiveness of developmental education depends on competent assessment and placement of students as well as "individualized, 'intrusive' instruction and support" (Noel-Levitz, 2005). According to Boylan (2006), it is incumbent upon instructors to use various methods in the classroom to achieve active student participation and learning. In fact, Roy (2008) cited National Literacy Trust statistics showing that students learn 5% by lecture, 20% by what they hear, 50% by discussion, 75% by doing practice, and 90% by teaching one another. Therefore, the learner is at the center of, and ultimately responsible for, active learning (Roy, 2008).

Boylan (2006) reminded educators about the 15-minute attention span of the typical developmental student; therefore, the best way to help students learn is to get them actively involved during every class meeting, particularly through hands-on activities (Massachusetts Community Colleges Executive Office, 2006). Because the overwhelming majority of today's developmental students are tactile or visual learners, they can achieve maximum learning by viewing video clips and computer graphics, working in groups to solve problems, and taking an active role in classroom activities (Boylan, 2006). Such activities facilitate students' direct participation in, instead of passive reception of, learning (Boylan, 2006).

There is insufficient time in the classroom to ensure that students acquire all the necessary information and practice all the necessary skills solely through in-class activities. In fact, there is a strong correlation between the amount of homework assignments that students complete and the degree to which they successfully complete their math courses (Noel-Levitz, 2005). Given that lecture is not the most effective instructional method, classroom educators are using more interactive, individualized methods that can better meet the particular needs of students in developmental studies (Noel-Levitz, 2005).

Advising

Intricately tied to assessment and placement is academic advising. As Hollis (2009) observed, the academic advisor is crucial because misadvisement can have serious negative effects when a student is placed into a course that is unsuitable advanced, which could cause the student to lose financial aid and increase his or her time to graduation. Furthermore, for the developmental student misadvisement can push the student into academia without guidance that will help the student navigate the collegiate system (Hollis, 2009). According to Wyckoff (1999), “inadequate academic advising” is the main reason students are not retained (p. 1). This conclusion is important because of Heisserer and Parette’s (2002) finding that a crucial factor in a student’s decision to remain in college or withdraw is whether he or she has contact with a significant member of the college community. Colleges, therefore, need to make “a major effort to counsel and guide students perhaps even before their initial assessment” (Jaschik, 2009).

Being advised and receiving an orientation increases the chances a student will be retained and perform well in college. Despite the benefits of advising, Ashburn (2007)

observed results from the 2007 Community College Survey of Student Engagement (CCSSE), which indicate that

> [M]ore than half of students did not discuss educational goals with an adviser in the first month...The lack of early advising may contribute to a students' confusion later on. Last spring almost a quarter of community-college students surveyed weren't sure if they would return to college any time soon.

In fact, during the CCSSE's first five years,

> [S]tudents have consistently rated academic advising as the most important service community colleges can provide. Yet a third of students continue to say that they rarely or never use advising. That disparity occurs in part because advising services are not easily accessible for many students, especially those attending college part time or at night. (Ashburn, 2007)

Results from the Survey of Entering Student Engagement (SENSE) indicated that half of the students do not return for their second year, prompting Kay McClenney, director of both the CCSSE and the SENSE, to declare, "The first term of college is enormously important" (Sander, 2008, p. A25). Given the vital nature of the first term, some relevant findings with respect to advising for new college students, include:

- Only a third of respondents said that in the first few weeks of the term, an advisor helped them set academic goals and devise a plan to achieve them.
- Forty-one percent (41%) said they never used academic-planning services in the first few weeks.
- Less than a third said a financial-aid staff member helped them analyze their needs for financial aid (Sander, 2008).

Moreover, 20% had no knowledge of any orientation program being available at the college although 38% did report having attended an orientation before the first day of class (Sander, 2008). Community colleges are encouraged by the SENSE to "reach out to their new students earlier and more aggressively in such areas as orientation, academic advising, and financial aid," noting the likely "payback" as "happier and more productive students and…higher retention rates" (Sander, 2008).

In an announcement honoring four "best-practice colleges," the CCSSE Retention Initiative (2008) highlighted key student support strategies at St. Philips College. St. Phillips placed academic advisors in large departments with retention difficulties. In addition, their First-Time-In-College program offers intensive advising and mentoring, specialized tutoring, career assessment, student success workshops, and "learning communities" that invite groups of students to enroll in courses together (CCSSE Retention Initiative, 2008). These best practices display the types of additional assistance that will support the developmental mathematics students in the proposed two-course sequence. Therefore, the QEP Implementation Team will work together so advisors, as Hollis (2009) stated, provide developmental students with "an insightful, understanding of the students' confusion and fear" so they can overcome them and succeed throughout their college career.

Student Support Services: Learning Assistance Centers

One of the main goals of higher education institutions is to facilitate the academic success of their students (Stern, 2001). In trying to fulfill that goal, community colleges face challenges with respect to academically underprepared students, particularly those who are "first-generation, immigrant, economically disadvantaged, non-White, and limited [in their] English ability" (Chaves, 2003). Learning Assistance Centers (LACs)

offer students “comprehensive learning assistance” (Stern, 2001) and various support services to college faculty and staff (Maxwell, 1997).

Maxwell (1997) identified fourteen main functions of LACs. Among these are programs to improve study skills and learning strategies, peer tutoring and/or professional tutoring, supplemental instruction, and computer assisted instruction (Maxwell, 1997). LACs support developmental students, implicitly, through the availability of peer and professional tutors (Perin, 2004). When tutoring is provided to support a college-level course, the help is often a means to completing a specific assignment, such as a research paper (Perin, 2004). However, tutoring services for basic academic skills, such as developmental mathematics, provide exposure, practice, and, most importantly, explicit instruction that strengthens the students’ skills (Perin, 2004).

LACs also support institutional goals and missions through coordination efforts with other campus services, such as counseling and financial aid (Stern, 2001). In effect, LACs do their best to foster an atmosphere of assistance to encourage student participation and help students feel supported by the campus (Stern, 2001). Enright (1998) observed that having a “physical place” on campus where academic support can be found gives students a “sense of place” even if they are generally uncomfortable in the academic world. Community colleges will continue to receive students who are deficient in mathematics and other subjects (Chaves, 2003). The key in meeting the challenge will be to instill students with “a sense of involvement and community” through services the LAC can offer (Chaves, 2003).

Computer Assisted Instruction (CAI)

There is a significant body of research revealing the value of using technology in the classroom. The term “computer-assisted instruction” (CAI) is used to refer to

instruction that is used by educators to supplement lecture, usually in the form of tutorials and practice drills (Golfin, Jordan, Hull, & Ruffin, 2005). Students who take the computer-assisted courses usually have a higher retention rate and an increased rate of enrollment in higher math courses once completing their CAI course successfully (Cartnal, as cited in Golfin et al., 2005).

Studies comparing two groups being taught with and without different teaching modalities found that providing instruction in several teaching modalities gives students more confidence in math, as well as the opportunity to succeed as opposed to using only one modality that may not be suitable for students (McClendon & McArdle, 2002). One study compared the performance of students in developmental courses the previous summer term, using the traditional classroom lecture format alone, with those using the CAI approach during the summer 2000 term (Golfin et al., 2005). That study found that using CAI resulted in a 7% decrease in the number of withdrawals, a 12% increase in the number of satisfactory grades, and an 11% decrease in the number of unsatisfactory grades in elementary algebra (Golfin et al., 2005). In another study, CAI was used in a traditional lecture class for practicing skills that were taught during lecture and for doing homework; results of the study showed that the course pass rates of developmental students who used MyMathLab in their traditional lecture increased from 40% to 84% (Speckler, 2005).

In general, CAI provides students with the benefits of individualized instruction, subsequent learning mastery and active learning opportunities that have been shows to be effective in the developmental classroom (Southeast Kentucky Community and Technical College, 2006). Moreover, Boylan and Saxon (1998) observed that computerized tutoring provided the students with more learning in less time, increased success in post-tests, and improved perceptions and attitudes towards learning. They concluded that using computers to complete writing assignments and for mathematics

tutoring, contributed to the students' success in remedial courses (Boylan & Saxon, 1998). In effect, computer assisted instruction nurtures students' ability to become independent learners and to assume the primary responsibility for improving their performance in mathematics courses by trying out different learning strategies (McCabe, 2003).

Acceleration

According to a report by Achieving the Dream (2006), 71% of students in the 2002 Achieving the Dream cohort were referred to developmental math. Among the students referred to developmental mathematics (including 77% of Hispanic students), 77% did not attempt or complete the sequence by the end of the third year; 18% completed developmental math after their first year, 4% after their second year, and 1% after their third year (Achieving the Dream, 2006). Another study by Achieving the Dream (2006) revealed that 22% students in the same cohort were referred to the lowest level of the developmental math sequence, which is three levels below freshman-level mathematics courses; among Hispanics, 35% were referred to the lowest level developmental math course (Achieving the Dream, 2006).

A separate study conducted by the Community College Research Center of Teachers College, Columbia University, revealed that most students who do not complete a developmental sequence abandon it early on, with almost 50% failing to complete the first course in the sequence (Jaschik, 2009). The study also revealed that of all students referred to the lowest level developmental course in the sequence, more than 40% never enroll; many who choose to enroll and are not successful do not return (Jaschik, 2009). The authors of the study suggested that institutions should consider combining two or three courses into a longer, more intense course, saving students and institutions both time and money (Jaschik, 2009).

Boylan (2004) suggested that 30% of developmental students each year do not return for several reasons, including:

- the students never acquire the skills necessary to complete the sequence;
- the students get bored with developmental courses;
- the students use up much of their financial aid money on developmental education and incur debt to continue with their studies;
- personal problems or issues interfere with college attendance;
- students encounter other opportunities, such as full time employment.

Biswas (2007) pointed out that students faced with the possibility of having to take three levels of developmental math courses get discouraged at the thought of the slow progress they would make, under those circumstances, towards enrollment in college-level courses. In an effort to accelerate students' progression through the developmental math sequence, some institutions have explored alternative instructional approaches and offerings (Biswas, 2007). Housatonic Community College has introduced self-paced, open-entry, open-exit courses designed to help students in need of little remediation progress quickly without enrolling in a traditional 16-week course (Biswas, 2007). The Community College of Denver offers a "Fast Start" program allowing students to complete two levels of developmental math coursework in one semester by increasing the number of contact hours (Biswas, 2007). Mountain Empire Community College is offering short refresher courses in mathematics designed to accelerate students' progress by increasing their skills for them either to avoid developmental classes altogether or to place at a higher level in the sequence (Biswas, 2007). According to Biswas (2007), each initiative has showed positive results.

DESIRED STUDENT AND PROGRAM LEARNING OUTCOMES

Student Learning Outcomes

The program and student learning outcomes, stemming from the five QEP goals, include a set of Developmental Math Program Learning Outcomes (PLOs), a set of MATH 0100 Course Learning Outcomes, and a set of MATH 02000 Course Learning Outcomes. The Program Learning Outcomes for the QEP Developmental Mathematics Program are as follows:

Developmental Math Program Learning Outcomes

Upon successful completion, the student will be able to:

1. Recognize and use properties, concepts and procedures to simplify and perform operations on algebraic expressions;
2. Recognize and use properties, concepts and procedures to solve linear and quadratic equations in one variable;
3. Interpret and analyze graphs of linear and quadratic equations;
4. Solve applied problems using algebraic concepts and reasoning;

To arrive at the appropriate student learning outcomes for the proposed two-course sequence, the learning outcomes for the current three-course sequence were analyzed and then reclassified according to their appropriateness in a two-course sequence. Student learning outcomes for the proposed two course developmental sequence are as follows:

MATH 0100 Course Learning Outcomes

Upon successful completion of the MATH 0100 course, the student will be able to:

1. Perform operations with integers;
2. Simplify algebraic expressions;
3. Perform operations with fractions;
4. Solve applied problems involving fractions;
5. Solve applied problems involving proportions;
6. Solve applied problems involving percents;
7. Solve linear equations with one variable;
8. Solve applied problems using algebraic equations;
9. Apply the rules of exponents;
10. and Perform operations on polynomials.

MATH 0200 Course Learning Outcomes

Upon successful completion of the MATH 0200 course, the student will be able to:

1. Graph a linear equation with two variables;
2. Identify the slope and the intercepts of a linear equation;
3. Factor polynomials;
4. Solve quadratic equations by factoring;
5. Perform basic operations on rational expressions;
6. Solve equations with rational expressions;
7. Perform basic operations on radical expressions;
8. Solve applied problems involving right triangles;
9. Solve a quadratic equation;

10. and Graph a quadratic equation.

ACTIONS TO BE IMPLEMENTED

Sequence Redesign

Currently, South Texas College's (STC) developmental math sequence consists of three courses: Basic Mathematics (MATH 0080), Introductory Algebra (MATH 0085), and Intermediate Algebra (MATH 0090). Each course is a three-hour credit course; students meet approximately four hours per week, three hours of lecture and one hour of lab. Generally, on one day of the week, class is held in a classroom for two hours; on another day of the week, class is held in the classroom for one hour and in a computer lab for the remaining hour. During the weekly lab hour, students engage in individualized, online instruction, using MyMathLab software to complete online homework assignments.

As suggested by the literature review on acceleration, students are more likely to complete a developmental course sequence if they start only two levels below freshman-level coursework as opposed to three levels below. The proposed QEP design is the development of a new two-course sequence consisting of Developmental Math I (MATH 0100) and Developmental Math II (MATH 0200). Along with accelerating the mathematics developmental sequence, the QEP involves a redesign of the curricula, to focus on active student participation through computer-aided instruction and increased tutoring. Each course will be a four-hour credit course with six contact hours per week evenly divided into three hours of lecture and three hours of lab. Students will spend the first half of each class meeting in a lecture setting and the second half in a computer lab, practicing the objectives introduced in lecture. The two additional lab hours will afford students sufficient time for individualized instruction to practice the skills learned during the lecture hours, as supported by the literature regarding active learning and computer-assisted instruction. *Figure 1*, below, graphically displays the comparison between the traditional course sequence and the proposed course sequence.

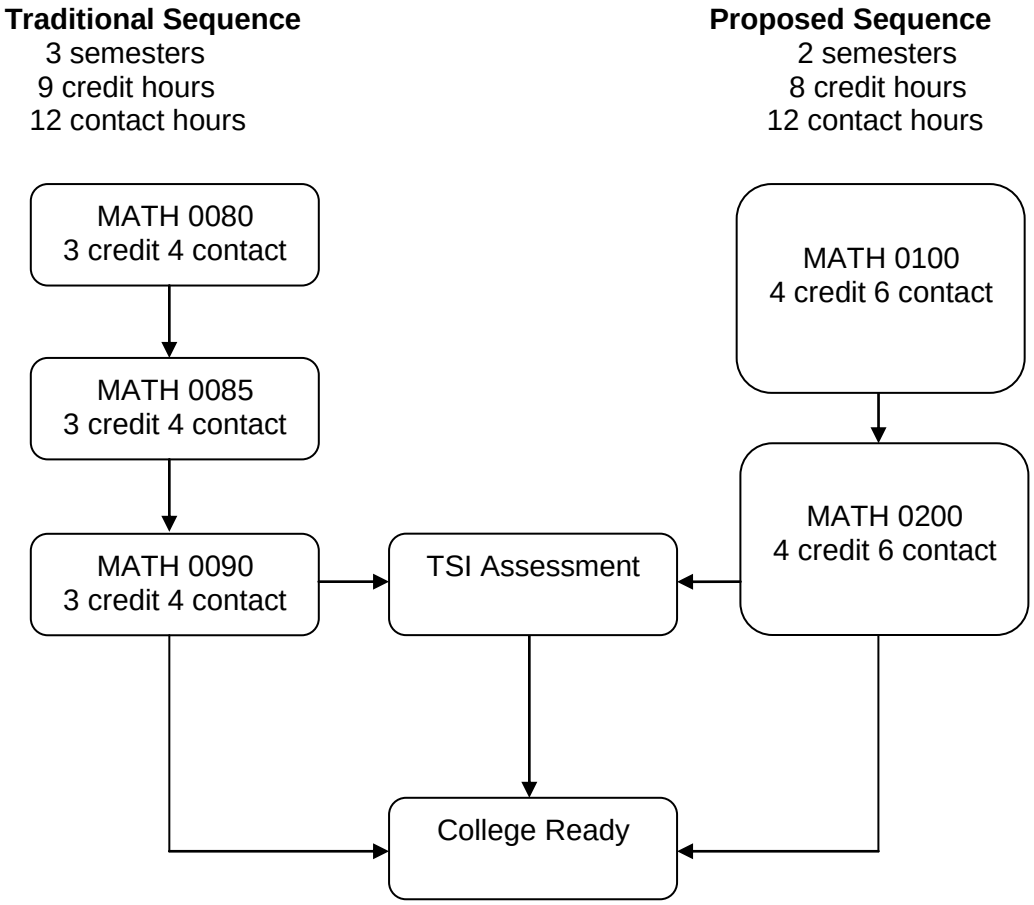


Figure 1. Sequence Redesign

The proposed MATH 0100 is composed of five modules comprising objectives currently covered in MATH 0080 and MATH 0085. The first three modules are taken from MATH 0080 objectives while modules four and five are taken from MATH 0085 objectives. MATH 0200 is composed of five modules consisting of objectives covered in MATH 0085 and MATH 0090. The first module is taken from MATH 0085 objectives while the remaining four modules are taken from MATH 0090 objectives. Tables 9 and 10, in Appendix IV – Current and Proposed Course Modules, outline the modules as well as the MATH 0080, MATH 0085, and MATH 0090 objectives corresponding to each of the two proposed courses, MATH 0100 and MATH 0200, respectively.

Under the proposed two-course sequence, students could satisfy developmental math requirements in two semesters as opposed to three semesters, thereby becoming "college ready" earlier in their college career. STC institutional data tracking Fall 2003, Fall 2004, and Fall 2005 cohorts for two years show that of those students starting the developmental math sequence in the lowest level, only between 8% and 11% completed a college-level math course; see Appendix V – Developmental Student Perseverance for details (Research & Analytical Services, 2009a).

It is worth noting that students are not locked into the sequence, nor are they required to enroll in the next-level course in the subsequent semester. Many students only need to become TSI complete either by earning a grade of "C" or better in the highest-level developmental course or by achieving a minimum passing score on a TSI approved assessment. Once students become TSI complete, they are no longer required to enroll in developmental courses.

Table 11 identifies the schedule of course offerings for MATH 0100 and MATH 0200 over the five years of the QEP.

Table 11

Table 11
QEP Proposed Schedule Of Course Offerings

Year	Semester	Sections Offered	Total No. of Sections
Year 0	Fall 09	1 (Math 100)	1
Year 1	Spring 2010	8 (Math 100) 2 Math 200)	10
	Summer 2010	4 (Math 100) 4 (Math 200)	8
	Fall 2010	10 (Math 100) Day 1 (Math 100) Evening 4 (Math 200) Day Other Campus: 1 (Math 100) Mid-Valley	16
Year 2	Spring 2011	8(Math 100) 6 (Math 200)	18

		1(Math 200) evening 1(Math 200) Mid-Valley 1 (Math 200) Starr Campus	
	Summer 2011	6 (Math 100) 6 (Math 200)	12
	Fall 2011	10 (Math 100) Day 2 (Math 100) Evening 4 (Math 200) Day 4 (Math 100) Mid Valley 2 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	26
Year 3	Spring 2012	10 (Math 100) Day 2 (Math 100) Evening 4 (Math 200) Day 4 (Math 100) Mid Valley 2 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	26
	Summer 2012	6 (Math 100) 6 (Math 200)	12
	Fall 2012	10 (Math 100) Day 2 (Math 100) Evening 4 (Math 200) Day 4 (Math 100) Mid Valley 2 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	26
Year 4	Spring 2013	12 (Math 100) Day 4 (Math 100) Evening 6 (Math 200) Day 4 (Math 100) Mid Valley 4 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	32
	Summer 2013 Fall 2013	8 (Math 100) 8 (Math 200) 12 (Math 100) Day 4 (Math 100) Evening 6 (Math 200) Day	14 32

		4 (Math 100) Mid Valley 4 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	
Year 5	Spring 2014	12 (Math 100) Day 4 (Math 100) Evening 6 (Math 200) Day 4 (Math 100) Mid Valley 4 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	32
	Summer 2015	8 (Math 100) 8 (Math 200)	14
	Fall 2014	12 (Math 100) Day 4 (Math 100) Evening 6 (Math 200) Day 4 (Math 100) Mid Valley 4 (Math 200) Mid Valley 2 (Math 100) Starr Campus 2 (Math 200) Starr Campus	32

Course Structure

The three courses in the current sequence feature a common departmental final exam weighted at 25% of the final course grade. Instructors distribute the remaining 75% of the course grade at their own discretion. Most of the assessments students take are paper and pencil, and returned by the instructor within two class periods. MyMathLab is utilized in the lab primarily for homework assignments. Assignments not completed during the lab hour become students' homework.

As part of the QEP design, the new sequence will consist of a more structured, uniform curriculum, with each course containing five modules broken down into three to six objectives per module. The class meetings envisioned under the plan will consist of an introduction to an objective followed by computer assisted active learning for more in-

depth coverage of the learning objective. In addition, uniform homework assignments and assessments will measure progress made on each objective for all sections of MATH 0100 and MATH 0200. Assignments and assessments will be recursive, including problems from previous objectives for skill maintenance and reinforcement.

Attendance in the new, two-course sequence will be mandatory and documented each class meeting, as it is in the three-course sequence. Students are currently referred to a retention specialist upon four hours of absence and may be withdrawn from the course upon eight hours of absence. The attendance policy for the proposed sequence will require that a retention specialist be notified upon four hours of absence, and it will allow a student up to nine hours of absence before he or she is withdrawn from the course.

A comparison of the grade breakdown for the traditional, three-course sequence and the grade breakdown for the proposed, two-course sequence is indicative of the increased structure and uniformity of the curriculum under the proposed sequence:

Grade Breakdown for Traditional, Three-Course Developmental Math Sequence

Homework/Quizzes/Projects/Tests (at instructor's discretion)	75%
Departmental Comprehensive Final Exam (mandatory)	25%
	100% (total)

Under the grade breakdown for the traditional developmental math sequence, instructors determine an overwhelming majority of the course grade's composition and do not have to conform to a uniform curriculum. The breakdown for the traditional sequence, therefore, contrasts with the breakdown for the proposed sequence:

Grade Breakdown for Proposed Two-Course Developmental Math Sequence

Organized Lab Folder	5%
Cooperative Learning Activities	10%
Homework Assignments	10%
Quizzes	10%
Module Exams I-IV	40% (10% each)
Module Exam V (Final Exam)	25%
	100% (total)

In effect, instructors and students involved in MATH 0100 and MATH 0200 would have several tools, including lab folders, learning activities and module exams, at their disposal and organized according to a more structured, uniform curriculum.

Computer-Aided Instruction (CAI)

As the literature review suggests, the individualize instruction, subsequent learning mastery, and active learning opportunities provided by computer-aided instruction (CAI) have shown to be effective in the developmental classroom (Southeast Kentucky Community and Technical College, 2006). Students will spend the first half of each class meeting in a lecture setting and the second half in a computer lab, practicing the objectives introduced in lecture, utilizing MyMathLab. The two additional lab hours will afford students sufficient time for individualized instruction to practice the skills learned during the lecture. Upon completing all objectives in a module, students will be given a module review prior to testing. All assessments, including quizzes and module exams, will be computerized and proctored for immediate feedback and item analysis to help students determine the objectives on which they need to improve. A study plan generated by MyMathLab will show what objectives students have mastered and the objectives on which they need extra practice, so instructors and tutors can offer

individualized instruction designed to strengthen the students' skills (Perin, 2004). Even though scoring above 70% will be considered a success, students who score below 80% on a module exam will be encouraged to attend weekly workshops and tutoring sessions to improve concept mastery. These students will have up to a week to remediate and retest on the module, and a maximum score of 80% will be allowed on any retests. All students will be required to keep an organized lab folder consisting of all assignments and assessments practiced in the lab.

Active Learning Strategies

In addition to the hands on learning that will take place each class period through the use of MyMathLab, other active learning activities will include in-class group worksheets assigned from the course workbook, cooperative learning exercises on practical applications of the topic being covered, and group discussion and writings on synthesis questions posed in the textbook. Other activities may be introduced when appropriate.

Placement

In recent semesters, MATH 0085 has been the developmental math course with the highest enrollment but the lowest success rates, with "success" defined as earning grades of "C" or better in developmental coursework or achieving passing scores on Texas Success Initiative (TSI) approved assessments. Tables 12 and 13 show the enrollment and success rates by course. Many students in MATH 0085 lack the fundamental math skills to succeed in the course because of a long gap in time since their last high school mathematics course. Because MATH 0100, the first course in the proposed sequence, draws upon several objectives of the Basic Math course (MATH 0080), each student in the course receives instruction in fundamental arithmetic and algebraic concepts.

Table 12

Enrollment by Course

	Spring 07	*Fall 07*	*Spring 08*	*Fall 08*	*Spring 2009*
Math 80	1521	1441	549	1,318	1095
Math 85	1210	1774	1930	1,462	1502
Math 90	543	856	996	895	887

Table 13

Success Rates by Course (%)

	Spring 07	*Fall 07*	*Spring 08*	*Fall 08*	*Spring 2009*
Math 80	40.8	46.7	37.5	60.7	56%
Math 85	40.4	44.7	36.2	45	49%
Math 90	62.2	62.1	55.3	65.9	63%

The QEP will use ACCUPLACER as the main placement instrument. The placement criteria for MATH 0100 will be the same as the placement criteria used for MATH 0080 of the three-course sequence. Essentially, both MATH 0100 and MATH 0080 will be open to all students who do not meet the scores required for MATH 0200 or MATH 0085, respectively. Despite the increased contact hours in MATH 0100, a student may consider enrolling in MATH 0100 because it may lead to faster completion of the developmental program.

The placement criteria for MATH 0200 are slightly lower than the placement criteria for MATH 0090, the terminal course in the traditional, three-course sequence. A student scoring below the MATH 0090 standard on a TSI approved assessment can still complete developmental math coursework in one semester by enrolling in and passing MATH 0200 with a grade of “C” or better. Additionally, students who score high enough to be placed in MATH 0090 may opt to enroll in MATH 0200 if they sense their prospects for success are higher in MATH 0200 due to the additional contact hours and course

design. The placement scales for the traditional sequence and the proposed sequence are shown in Tables 14 and 15.

Table 14

Current Placement Scale for Three-Course Sequence

Subject Area	*THEA*	*ACCUPLACER*	*Placement*
MATH	250+	68+	College Math Standard MATH1414
	230-249	AR 65 + EA 55-67	MATH0090
	200-229	AR 65 + EA 18-54	MATH0085
	100-199	AR 0-64 regardless of EA scores unless students meet the EA 68 for college readiness	MATH0080

AR = Arithmetic; EA = Elementary Algebra
THEA = Texas Higher Education Assessment
ACCUPLACER = College Board test for Higher Educational Skills Assessment

Table 15

Proposed Placement Scale for Two-Course Sequence

Subject Area	*ACCUPLACER*	*Placement*
MATH	EA 68+	College Math Standard MATH1414
	AR 65 + EA 45-67	MATH0200
	EA < 45	MATH0100

AR = Arithmetic; EA = Elementary Algebra
THEA = Texas Higher Education Assessment
ACCUPLACER = College Board test for Higher Educational Skills Assessment

Student Support Services: Centers for Learning Excellence, Tutors and Advising

Currently, STC has tutoring centers, the Centers for Learning Excellence (CLE), accessible to all students. Often, the CLE's confront a shortage of math tutors, which at times subjects students to longer waiting periods than desired to get the assistance they need. As part of the QEP design, an area of the CLE will be specifically designated for developmental math students only and additional tutors will be hired and trained to be available for developmental math students. During the first year of implementation, eight additional developmental mathematics tutors will be hired. By the fifth year of the program, 16 additional tutors will be hired. The tutors will be introduced to all students enrolled in the pilot sections and will work with faculty to identify student needs. Although the tutors will be available to all developmental mathematics students, by working closely with the QEP Coordinator, the tutors will focus their efforts on the QEP Pilot sections by setting up individual and group tutoring appointments.

Even though scoring above 70% will be considered a success, students who score below 80% on a module exam will be encouraged to attend weekly workshops and tutoring sessions to improve concept mastery. Tutors can then design their sessions to meet the specific needs of the students and prepare for them for upcoming assessments. Tutors will also provide weekly review sessions on the objectives mastered week by week.

Advisors will make all students in need of a developmental math remediation aware of the new two-course sequence and assist students in determining if the sequence is more beneficial to them than the traditional three-course sequence. In addition, all students enrolled in MATH 0100 and MATH 0200 will be given the opportunity for priority registration to ensure that they enroll in the subsequent course and eliminate any unnecessary gaps in instruction between semesters.

Faculty and Staff Professional Development

Supporting the need for faculty and staff professional development during the implementation timeframe, the QEP Implementation Team established a sub-committee that assessed training needs for Developmental Math Faculty. As per the sub-committee's recommendations, during the first implementation year the Director of Professional Development will meet with the Developmental Math Department Chair/QEP Coordinator and the Developmental Math faculty to conduct a needs assessment for additional professional development activities. Furthermore, a Great Teachers Retreat for all Developmental Mathematics Faculty will be held during the first year of the project's implementation.

In addition to professional development retreats, developmental mathematics faculty who are directly involved in the QEP will develop Individual Developmental Plans (IDPs) during the first year of implementation. These IDPs will guide the QEP Director, QEP Coordinator, and the Director for Professional Development in making recommendations for conference travel and/or speakers. Furthermore, as the project expands during the second implementation year, a QEP Faculty and Staff Academy (QEP – FSA) will be conducted, in which all developmental mathematics faculty and specific support personnel (e.g. tutors and assigned advisors) will have the opportunity to meet and discuss specific pedagogical concepts and be presented with additional College resources that support the College's QEP effort (e.g. tutoring presentations and faculty advising strategies).

Because professional development is a constant and continually evolving process, the selection of specific professional development activities will need to be flexible to address the QEPs needs. Therefore, a second needs assessment will be conducted and new IDPs will be developed for all personnel directly involved in the

project's implementation at the end of the second implementation year. This identification and professional development process will be duplicated throughout the entire QEP implementation cycle. In support of all the professional development activities that are planned for QEP personnel, the College has set aside money's for travel, conferences, meetings, and retreats, as itemized in the resources section.

TIMELINE

In developing a timeline for implementation, the Implementation Team took great care to ensure that all items included in the timeline were logically ordered and allowed adequate time for the responsible entities to complete the activities. The resulting timeline for implementation includes activities related to curriculum development and implementation, faculty training and professional development, resource acquisition, and project assessment/evaluation. The proposed QEP implementation timeline is as follows:

QEP Project Timeline

Time Period	*Activities and Strategies*
Spring 2009	• Implementation Planning: Develop curriculum, assignments, assessments, and active learning activities for the two-course sequence. MATH 0100 will be developed prior to Fall 2009.
Fall 2009	• Hire and train two tutors for the developmental math tutoring lab, whose primary responsibility will be to provide tutoring services to QEP pilot students and with secondary responsibility of attending the pilot sections. • Market new courses to students, advisors, counselors, retention specialist, and all supporting staff for upcoming pilot phase in Spring 2010. • Offer one pilot section of MATH 0100 during the day at Pecan Campus. • Offer professional development for all developmental math faculty and tutors that will be involved in the Spring 2010 pilot

	phase. • Prepare two classrooms for the upcoming implementation phase in Spring 2010. • Finalize curriculum and assessment development for MATH 0200.
Spring 2010	• Hire and train an additional three tutors. • Perform comprehensive data analysis, including analysis of Student Learning Outcomes and student retention, of MATH 0100 for Fall 2009 and make any necessary revisions to curriculum. • Pecan campus, offer eight sections of MATH 0100 and two sections of MATH 0200 during day. More courses can be introduced to meet increased demand. • Organize tutoring review sessions. • Organize priority registration with advising center to help eliminate gaps in sequence.
Summer 2010	• Perform comprehensive data analysis, including analysis of Student Learning Outcomes and student retention, of MATH 0100 and MATH 0200 for Spring 2010 and make any necessary revisions to curriculum. • Pecan campus, offer four sections of MATH 0100 and four sections of MATH 0200. • Continue with priority registration for Fall 2010. • Prepare another classroom to be mobile lab ready for Fall 2010.
Fall 2010	• Hire and train three tutors.

	• Perform comprehensive data analysis, including analysis of Student Learning Outcomes, Program Learning Outcomes, and student retention, of MATH 0100 and MATH 0200 for Summer 2010 and make any necessary curriculum revisions. • Pecan campus, offer 11 sections of MATH 0100 with one section being offered during evening hours. Offer four sections of MATH 0200 during the day. • Mid-Valley campus, offer one MATH 0100 course during the day. • The number of sections for each course may vary according to student demand. • Carry out professional development activity for adjunct instructors involved in the pilot phase. • Continue with priority registration for Spring 2011.
Spring 2011	• Perform comprehensive data analysis, including analysis of Student Learning Outcomes, Program Learning Outcomes, and student retention, of MATH 0100 and MATH 0200 for Fall 2010 and make necessary revisions to curriculum. • Pecan campus, offer eight sections of MATH 0100 and six sections of MATH 0200, depending on demand for each course. Offer one evening MATH 0200 course. • Mid-Valley campus, offer one MATH 0200 course • Starr campus, offer one MATH 0200 • Continue with priority registration. • Hire and train one tutor.
Summer 2011	• Continue with data analysis and necessary revisions.

	• Offer six sections of MATH 0100 and six sections of MATH 0200 for summer session. • Prepare a classroom at Mid-Valley campus for mobile lab.
Fall 2011	• Continue with data analysis and necessary revisions. • Hire four additional tutors. • Pecan Campus, offer 10 sections of Math 100 during the day and two sections during evening hours. Offer four Math 200 day time sections. • Mid-Valley campus, offer two sections of MATH 0200 during the day with more sections available on demand. • Starr campus, offer two sections of MATH 0100 and two sections of MATH 0200 during the day. • Continue with priority registration.
Spring 2012 - 2014	• Hire an additional three tutors. This will bring the total number of tutors working with pilot sections to 16. • Continue data analysis and implement any changes to the plan prior to each subsequent semester. • Vary the number of sections offered at each campus according to student need and demand, increasing lab space as necessary.

ORGANIZATIONAL IMPLEMENTATION STRUCTURE

Organizational Structure for QEP Implementation

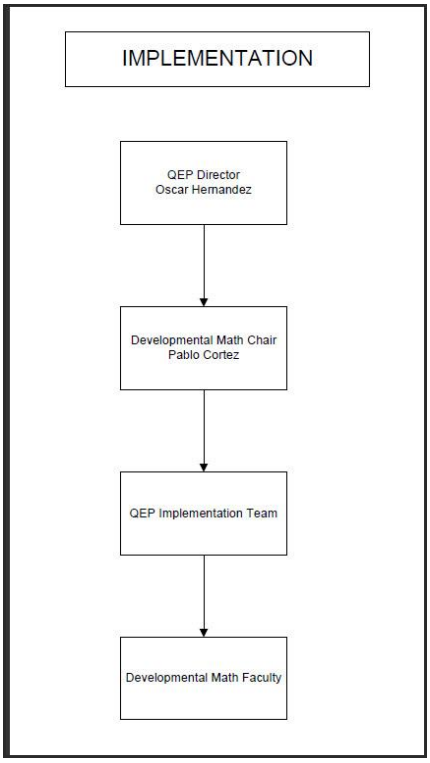


Figure 2. Implementation Organization Structure

The QEP Implementation is directed by Oscar Hernandez, Director for Student Learning Outcomes and Assessment, and Pablo Cortez, Interim Chair for Developmental Math, will act as the Coordinator for the QEP Implementation. Mr. Hernandez served the College as a Spanish Language faculty member from 2002 to 2008. In 2008, Mr. Hernandez became Interim Director for Student Learning Outcomes and Assessment, and, in April 2009, accepted the directorship of the Student Learning Outcomes and Assessment Department. Mr. Hernandez has coordinated many assessment activities at different levels of the institution.

Pablo Cortez has served the College as a Developmental Math faculty member since 2000. He has been an active member in departmental committees and taskforces,

such as the Curriculum Alignment and Acceleration Taskforce. In Fall 2007, Mr. Cortez was appointed Interim Chair of the Developmental Math Department.

The QEP Implementation Team includes Developmental Math faculty members and representatives from several College divisions and departments involved in the QEP process, as outlined in Table 2, on page 17 of this document. Although not all Developmental Math faculty members are included in the Implementation Team, the department's faculty will all be directly or indirectly contributing to the project. According to the Office of the Vice President for Academic Affairs, as of Spring 2009, there were 23 full-time and 31 adjunct Developmental Math faculty. Therefore, the collective human resources of the faculty will greatly contribute to the projects implementation in both an advisory and implementation capacity. Other resource personnel may be added to the official team on an *ad hoc* basis, including the Director of the Centers for Learning Excellence, retention specialists, and advisors.

RESOURCES

South Texas College (STC) has committed considerable human (described above) and financial resources to the Quality Enhancement Plan (QEP). Dedicated project resources total $1,591,017.00 for the five-year life of the project. Table 16 provides a detailed description of STC's projected budget allocations:

Table 16

Budget for Fiscal Years (FY) 2009 – 2014 (in dollars)

Description	*Year 0 FY 08-09*	*Year 1 FY 09-10*	*Year 2 FY 10-11*	*Year 3 FY 11-12*	*Year 4 FY 12-13*	*Year 5 FY 13-14*
Salaries and wages						
Tutors (2009-2010) 19 hrs/wk, $8/hr, 42 wk	12,768	51,072	82,992	82,992	102,144	102,144
*Director (50%)		30,000	31,500	33,075	34,728	36,464
*Coordinator (2 course releases per semester-50%)		20,000	21,000	22,050	23,152	24,309
*Administrative Assistant (50%)		12,500	13,125	13,781	14,470	15,193
*Data Technician		19,000	19,950	20,947	21,994	23,093
Consultant			5,000	5,000	5,000	5,000
Total salaries/wages	*12,768*	*132,572*	*173,567*	*177,845*	*201,488*	*206,203*
**Related benefits (22%)*		*17,930*	*18,827*	*19,768*	*20,756*	*21,793*
Total salaries/wages and benefits		*150,502*	*192,394*	*197,613*	*222,244*	*227,996*
Marketing						
Promo on College-Wide Professional Development Day		6,000	4,000			
Report & Scrapbook		1,000	1,000	1,000	1,000	2,000
Pamphlets		8,000		8,000		
Postcard		6,000	6,000			
Banners		2,000	1,000			
Buttons		2,000				
"Quick Facts" math reference sheets		2,000	2,000	2,000	2,000	2,000
press releases				750	750	

Table 16 (Continued)

Budget for Fiscal Years (FY) 2009 – 2014 (in dollars)

Description	**Year 0 FY 08-09**	**Year 1 FY 09-10**	**Year 2 FY 10-11**	**Year 3 FY 11-12**	**Year 4 FY 12-13**	**Year 5 FY 13-14**
Total marketing		*27,000*	*14,000*	*11,750*	*3,750*	*4,000*
Office supplies						
Copier		5,000	5,000	5,000	5,000	5,000
Computers		6,000			1,000	
Printers		1,500			500	
Supplies		5,000	5,000	5,000	5,000	5,000
Auxiliary (food for meetings/retreats)		5,000	5,000	5,000	5,000	5,000
Total office supplies & equipment		*22,500*	*15,000*	*15,000*	*16,500*	*15,000*
Professional Development						
Travel & Retreats		14,000	16,000	16,000	18,000	18,000
Total professional development		*14,000*	*16,000*	*16,000*	*18,000*	*18,000*
Equipment						
Computers				15,000	15,000	
Networking & wiring				10,000	10,000	
Mobile labs		90,000	45,000		45,000	
Computer maintenance & upgrades				5,000	5,000	5,000
New technology requirements			5,000	5,000	5,000	5,000
Total equipment		*90,000*	*50,000*	*35,000*	*80,000*	*10,000*
Furniture						
Furniture		21,600	5,000	5,000	5,000	5,000
Tables			24,000	10,000		
Chairs			14,400	6,000		
Total furniture		*21,600*	*43,400*	*21,000*	*5,000*	*5,000*
Total expenditure per fiscal year	*12,768*	*325,602*	*330,794*	*296,363*	*345,494*	*279,996*
Grand total for five-year QEP project			*1,591,017*			

MARKETING PLAN

Situational Analysis

As part of the reaffirmation process, the College will execute a Quality Enhancement Plan (QEP) introducing an intensive, two-course developmental math sequence. The project will begin implementation in Spring 2010 and will be in place for five years after initial implementation, at which time a final report submitted to SACS showing the plan's progress, challenges, and benefits. During the five year implementation, data collected will be analyzed semi-annually (as presented in Appendix VI) in order to make adjustments as necessary. The ultimate objective is for the QEP to become, after necessary adjustments, fully realized as standard practice at STC.

As an integral part of the QEP Implementation Team, the QEP Marketing Subcommittee was tasked with providing the framework for publicly rolling out the project to gain the support of students, faculty, and staff. The Marketing Subcommittee committed itself to maintaining College-wide momentum toward the project throughout its initial five-year implementation. The subcommittee will also document the QEP results and successes through coverage in College-wide media resources as well as in local and other relevant media outlets.

Based on a variety of feedback, including subcommittee input, student feedback and a campus-wide vote by faculty and staff, the tagline selected for STC's QEP is: "***Math Today, The World Tomorrow***." The Marketing Subcommittee's five objectives and main tactics for carrying out the QEP Marketing Plan are as follows:

Objectives

1. Design look and feel of QEP artwork (Quarter3 [Q3] 2009).

   Tactic: STC's Graphic Design Team will create artwork to identify the QEP in all printed and digital mediums.

2. Create exciting roll out of the QEP project to gain the support and recognition from the College's faculty, staff and administration (Q3 2009).

   Tactic: Create an "event to remember" at Fall 2009 College-Wide Professional Development Day (budget: $6,000 for promotional items)

3. Create exciting roll out of the QEP project to gain the support and recognition from the College's student population (Q4 2009).

   Tactics:

   - Create signage for use across all STC campus locations (budget: $2,000 for banners).
   - Create QEP-themed website.
   - Create pamphlet showcasing QEP project course offerings (budget: $8,000 for 6,000 units).
   - Create postcard to mail to targeted students promoting QEP courses (budget: $6,000 for 4,000 units).
   - Highlight QEP course offerings in STC literature.
   - Install QEP-theme screen saver on all public-use computers around campus.
   - Hold "Math Mondays" college-wide.
   - Have information table at "Friday Night Live" registration drive event (January 2010 – Date TBD).

4. Maintain public momentum for the QEP project for five years (Q1 2010-Q4 2014).

   Tactics:

   - Continue promoting QEP course offerings during peak registration times for first two years.
   - Hold second QEP rally during Fall 2010 College-Wide Professional Development Day (budget: $4,000 for promotional items).
   - Revamp postcard to mail to targeted students in Q3 2010 promoting QEP courses (budget: $6,000 for 4,000 units).
   - Revamp pamphlet in Q4 2011 showcasing QEP project course offerings (budget: $8,000 for 6,000 units).
   - Continue to highlight QEP course offerings in STC literature.

5. Document results and successes in a variety of public forums (Q1 2010-Q4 2014).

   Tactics:

   - Highlight success of QEP project at STC in local media.
   - Highlight success of QEP project at STC in statewide and national media in 2013 and 2014.
   - Use Business Wire as a vehicle to highlight major project milestones in 2013 and 2014 (budget: $750 per Business Wire story issue, two issues projected).
   - Build QEP Scrapbook (budget: $1,000 per fiscal year through year five of project).
   - Publish yearly assessment results on the QEP website.

It is envisioned, that these marketing plan activities will not only complement the QEP implementation directly, but also reinforce the College's guiding principle of being a premier learning-centered higher education institution where student and community success are paramount. In addition, the activities should help maintain faculty, staff, and

student enthusiasm towards the College's core values, specifically student success, learning, and opportunity.

ASSESSMENT PLAN

Implementation and Assessment Organizational Process

Ongoing assessment to evaluate the effectiveness and make necessary adjustments will be necessary during the implementation period. According to Fullan (2001), planned assessment is crucial to subsequent institutionalization of educational initiatives. To assess the aforementioned student and program learning outcomes, the Director for Student Learning Outcomes and Assessment has developed an assessment model, which includes both internal and external evaluators.

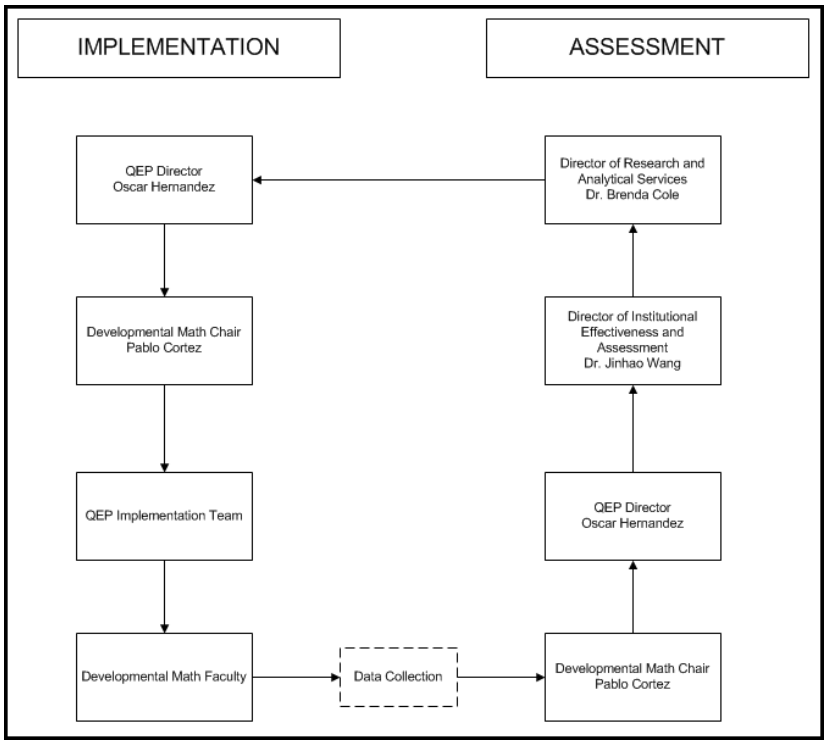


Figure 3. Implementation and Assessment Flowchart

Figure 3, above, clearly reflects the recursive connection between implementation and assessment. During the initial implementation, data will be collected regarding all the student and program learning outcomes success rates, retention, course completion, and TSI completion rates. As previously mentioned, it is anticipated

that the students who are enrolled in the proposed two-course sequence will outperform those students in the three-course sequence. To assess each project goal, both formative and summative evaluations will take place.

Ongoing formative evaluation will occur from the outset and throughout the project, as shown in Appendix VI – QEP Assessment Yearly Data Collection Reference Table. The QEP Coordinator, Pablo Cortez, will compile these data and forward them to the QEP Director, Oscar Hernandez. Mr. Hernandez will coordinate with the Office of Research and Analytical Services (RAS) to analyze the data and determine whether changes are necessary in the way the plan is implemented. In all likelihood, new strategies and improvement initiatives will emerge as the student assessment data are collected and analyzed. In addition, following the College's system for faculty evaluation, Pablo Cortez will also conduct classroom observations to determine the effectiveness of teacher training regarding the revised curriculum. Dr. Brenda Cole, RAS Director, will serve as an internal evaluator (but external to the actual implementation process), and provide analytical services to Mr. Hernandez. Dr. Jinhao Wang, Director of Institutional Effectiveness and Assessment, will serve in a support and consultative role to Mr. Hernandez for the purposes of evaluation. Summative evaluation of the project's success will occur annually, and at the end of the fifth year, both through internal evaluation by Mr. Hernandez and RAS and externally when data sets are provided to an external consultant for further evaluation.

Mission/Purpose of QEP

The purpose of South Texas College's Quality Enhancement Plan (QEP) is to pilot a new developmental math course sequence by redesigning the traditional three-course sequence (MATH 0080, MATH 0085, and MATH 0090) into a two-course sequence (MATH 0100 and MATH 0200) with expanded lab hours and tutoring support

to enhance students' success. Thus, this new sequence affords students the opportunity to complete the developmental math course sequence in a shorter time frame and increased concept mastery.

Five goals for STC's QEP guide the both implementation and assessment of the project.

1. Ensure 70% of students meet at least 70% of the Developmental Math Program Learning Outcomes.
2. Increase success rates of students in Developmental Math courses (as measured by grades of "C" or better or passing scores on Texas Success Initiative [TSI] approved assessments).
3. Increase the First-Time-In-College (FTIC) percentage of students who become "college ready" in Mathematics to 50% (as measured by earning a grade of "C" or better in the highest-level course in the Developmental Math sequence or achieving passing scores on TSI approved assessments) within a two-year period.
4. Increase Success Rates in the MATH 1332-Contemporary Mathematics (as measured by earning a grade of A, B, C, D, or P).
5. Increase Success Rates in MATH 1414-College Algebra (as measured by earning a grade of A, B, C, D, or P).

Goal 1 Assessment

Program and Student Learning Outcomes Assessment

All student learning outcomes will be assessed through homework assignments, quizzes, and module exams. PLOs will be formatively assessed within the course where the objective is taught as well as with the **end *of program summative assessment***.

Goal

Ensure 70% of students meet 70% of the Developmental Math Program Learning Outcomes.

Achievement Target

70% of students will meet at least 70% of the Developmental Program Learning Outcomes by the end of the five year assessment period for the QEP.

As this is a new course sequence with re-designed pedagogy and assessment methods, current baseline data is not available.

Assessment Instruments

Math 0100 (Developmental Mathematics I) and Math 0200 (Developmental Mathematics II) consist of 5 modules with 4 to 6 learning objectives for each module. For each learning objective, students are assessed through daily homework assignments, weekly quizzes, and module examinations held every 3 to 4 weeks. All assignments, quizzes and examinations were developed by a team of 6 developmental math instructors who were part of the QEP design team.

A comprehensive final exam is administered at the end of each course covering the primary learning outcomes determined for the course. The comprehensive final examination for Math 0100 measures 10 course learning outcomes and consists of 30 questions.

The comprehensive final examination for Math 0200 serves as the ***end of course summative assessment*** for the QEP Program Learning Outcomes and consists of 30 to 35 questions. There are 3 to 7 questions designed to measure each of the 4 program learning outcome. The remaining questions on the final exam are designed to measure other 10 course learning outcomes specific to Math 0200.

Below is a sample module from Math 0200, followed by an explanation of how homework assignments, quizzes and module exams are administered in the course.

Module 2	*Factoring Polynomials*	*Math 0200*
Obj. 1	Factor out the greatest common factor of a polynomial expression	
Obj. 2	Factor polynomials by grouping	
Obj. 3	Factor trinomials when a=1	
Obj. 4	Factor trinomials with leading coefficient a≠1	
Obj. 5	Factor binomial difference of squares	
Obj. 6	Solve quadratic equations by factoring	

Homework Assignments

For each class period, the first half of the course (1 hr 30 min) is generally conducted in a lecture style format where the new objective is introduced and demonstrated for the student. Students are encouraged to ask questions and participate in discussions. The second half of each class period is reserved for student engagement in online homework assignments consisting of 15-30 questions pertaining to the objective learned during the lecture period. The instructor helps students individually with their assignments.

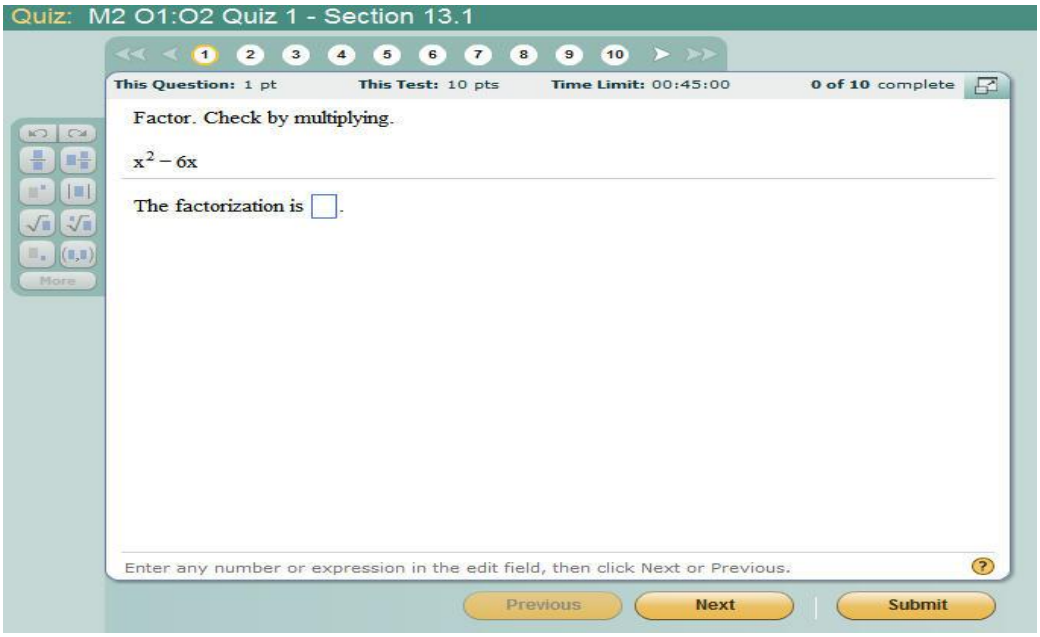
The sample above is an assignment for Module II Objective I, consisting of 16 problems. The use of lecture notes is allowed for homework assignments. Students are immediately informed whether their response is correct or incorrect and are allowed an opportunity to change their response. If a student answers incorrectly a specified number of times (currently set to 3), the problem is marked incorrect; however, students may request a similar problem and receive credit upon answering correctly. Additional resources are available to help the student better understand the objective and can be found on the right column. Students can choose ask for help, read through an example, view the textbook material corresponding to that problem, view an animation video, or send their instructor an email for an explanation. The basic principle is to have students practice to gain more confidence and a better understanding. Homework assignments account for 10% of the overall course grade.

Quizzes

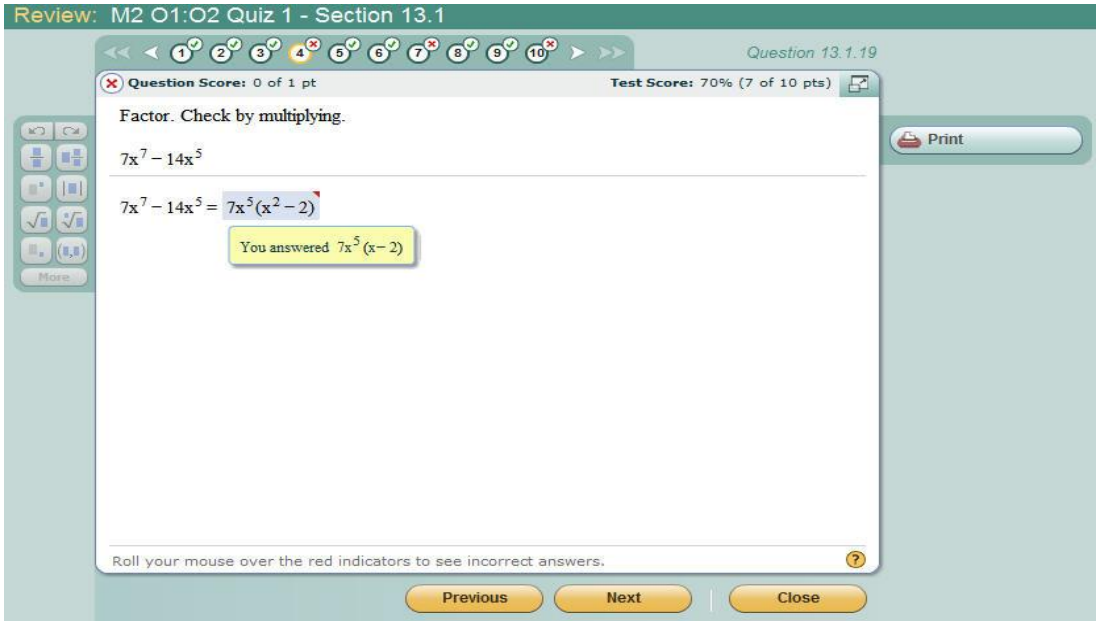
Approximately once each week, students are administered a quiz over the objectives they have been practicing. Each quiz assesses two objectives and contains between 10-15 questions. Though a single grade is recorded and used for computation

of the students' overall grade, performance by objective is also computed to determine which objectives students need most improvement on. A study plan of additional homework problems is generated by MyMathLab for any objective not mastered by the student. A sample grade report and quiz display follow.

Name	Quiz 1 Grade	Obj 1	Obj 2
XXXXX	80	100	67



As shown above, the configuration of the quizzes is slightly different than that of homework assignments. Students are not allowed to use lecture notes on quizzes, nor are they given the additional resources available to help with each problem. In addition, students are not informed immediately whether each response is correct or incorrect, but rather must complete the entire quiz to get their results. They are then notified which responses were correct and incorrect. A sample review follows.



After each quiz, an item analysis report is generated showing which problems students struggled with the most. Instructors then go over these problems with the class to help them understand where mistakes were made. Quizzes account for 10% of the overall course grade. A sample item analysis report follows.

Item Analysis Legend

Name	M2 O1:O2 Quiz 1 - Section 13.1	**# of students submitted**	23
Date Due	01/28/10 10:59pm	**total # of attempts**	23
Results View	All Scores		

▸ Export class summary Data delimiter: comma Change...

Results submitted by an instructor are not included in this data.

#	Question ID	Objective	Correct	Partial Credit	Incorrect	Not Attempted	Avg Time Spent	Median Time Spent
1	13.1.13	Factor out the greatest common factor.	22	0	1	0	1m 20s	show median
2	13.1.15	Factor out the greatest common factor.	22	0	1	0	1m 8s	show median
3	13.1.17	Factor out the greatest common factor.	23	0	0	0	53s	show median
4	13.1.19	Factor out the greatest common factor.	18	0	5	0	1m 34s	show median
5	13.1.23	Factor out the greatest common factor.	23	0	0	0	3m 6s	show median
6	13.1.39	Factor by grouping.	21	0	2	0	2m 36s	show median
7	13.1.43	Factor by grouping.	18	0	5	0	4m 29s	show median
8	13.1.45	Factor by grouping.	19	0	4	0	2m 59s	show median
9	13.1.49	Factor by grouping.	21	0	2	0	1m 36s	show median
10	13.1.51	Factor by grouping.	19	0	4	0	2m 14s	show median

Module Exams

Approximately every three weeks, students are administered a module exam over all objectives in that module. Module exams consist of 25 questions, with anywhere from 3 to 5 questions per objective in the module. Module exams also consist of anywhere from 5 to 7 questions from objectives in previous modules to help students better retain the material they have learned. The exams are administered in much the same way as quizzes, with no use of lecture notes or use of additional resources. Item analysis reports are also generated to help target class deficiencies. Unlike quizzes however, students who score below an 80 on the module exam are allowed one opportunity to retest on the module for a maximum score of 80. Though a single grade is recorded and used for computation of the students' overall grade, performance by objective is also computed to determine whether students have mastered individual objectives. There are 4 module exams, each accounting for 10% of the overall course grade. Module V exam is the comprehensive final exam.

Name	Exam 1 Grade	Obj 1	Obj 2	Obj 3	Obj 4	Obj 5	Obj 6
XXXXX	86	100	67	100	100	80	60

Final Exams

Unlike all previous assessments, the final examinations in Math 0100 and Math 0200 are not administered online but rather using paper, pencil and scantrons. The comprehensive final examination for Math 0100 measures 10 course learning outcomes with 3 multiple choice questions per learning outcome. The comprehensive final examination serves as the ***end of course summative assessment*** for the QEP Program Learning Outcomes. The comprehensive final examination for Math 0200 consists of questions used to measure the following program learning outcomes:

1. Recognize and use properties, concepts and procedures to simplify and perform operations on algebraic expressions;
2. Recognize and use properties, concepts and procedures to solve linear and quadratic equations in one variable;
3. Interpret and analyze graphs of linear and quadratic equations;
4. Solve applied problems using algebraic concepts and reasoning.

There are 3 to 7 questions designed to measure each program learning outcome. The remaining questions on the final exam are designed to measure other learning outcomes specific to Math 0200. Performance on each program learning outcome is measured and segregated much like is done on individual objective performance for module exams. The expectation is that at least 70% of all students meet 3 out of the 4 program learning outcomes. The comprehensive final exam accounts for 25% of the students' overall grade.

Goal 2 Assessment

Goal 2 assesses the effectiveness of the QEP by comparing the course pass rates between the proposed classes against those of the current three-course sequence. The outcomes will be measured by comparing the pass rates using the appropriate statistical procedures.

Goal

Increase success rates of students in Developmental Math courses (as measured by grades of "C" or better or passing scores on Texas Success Initiative [TSI] approved assessments).

Achievement Targets

1. The percentage of students passing MATH 0100 will be 5% higher than the percentage of students passing MATH 0080 on a yearly basis.
2. The percentage of students passing MATH 0100 will be 10% higher than the percentage of students passing MATH 0085 on a yearly basis.
3. The percentage of students passing MATH 0200 will be 5% higher than the percentage of students passing MATH 0090 on a yearly basis.

The current baseline data from the spring indicated that the passing rates for the traditional three course Developmental Mathematics course sequence range from 49% to 63%. Refer to page 44 for the detailed breakdown of passing rates over the past five semesters.

Goal 3 Assessment

To gauge the effectiveness of accelerating student completion of developmental coursework against state standards, a separate external project outcome compares Texas Success Initiative (TSI) completion rates for students taking the proposed two-course sequence to the traditional three-course sequence. The outcome will be measured by comparing the completion rates using the appropriate statistical procedures.

Goal

Increase the First-Time-In-College (FTIC) percentage of students who become "college ready" in Mathematics to 50% (as measured by earning a grade of "C" or better in the highest-level course in the Developmental Math sequence or achieving passing scores on TSI approved assessments) within a two-year period.

Achievement Target

The TSI completion rate (earning a grade of "C" or better in the highest level course in the developmental math sequence or achieving passing scores on a TSI approved assessment within a two-year timeframe) for the QEP cohorts will be at least 50% by the end of the five year assessment period for the QEP.

The current percentage of FTIC students who became "college ready" in Mathematics within two years is 32% based upon the Fall 2006 cohort, the most recent cohort for whom data is available (refer to Appendix V for data for the last three cohorts).

Goal 4 and 5 Assessment

To assess the project's effectiveness as compared to the current three-course sequence and compared to students without mathematics remediation, comparative outcomes, measures, and targets have been developed.

Goal

Increase Success Rates in the MATH 1332-Contemporary Mathematics (as measured by earning a grade of A, B, C, D, or P).

Achievement Targets

1. Students who complete the proposed two-course developmental sequence will pass MATH 1332 (Contemporary Mathematics) at a rate of 5% higher than the pass rate of students who complete the traditional three-course developmental sequence (passing is defined as earning a grade of an A, B, C, D, or P).

2. Students who complete the proposed two-course developmental sequence will pass MATH 1332 (Contemporary Mathematics) at a rate equal to or higher than the pass rate of students who did not take developmental coursework in Mathematics (passing is defined as
3. earning a grade of an A, B, C, D, or P).

Goal

Increase Success Rates in MATH 1414-College Algebra (as measured by earning a grade of A, B, C, D, or P).

Achievement Targets

1. Students who complete the proposed two-course developmental sequence will pass MATH 1414 (College Algebra) at a rate of 5% higher than the pass rate of students who complete the traditional three-course developmental sequence (passing is defined as earning a grade of an A, B, C, D, or P).
2. Students who complete the proposed two-course developmental sequence will pass MATH 1414 (College Algebra) at a rate equal to or higher than the pass rate of students who did not take developmental

coursework in Mathematics (passing is defined as earning a grade of an A, B, C, D, or P).

Students that have taken the traditional developmental mathematics courses have tended to succeed, defined as earning an A, B, C, D, or P, in College Algebra (MATH 1414), at lower rates than those students who were not required to take developmental mathematics courses. In the Fall 2007 semester, students having taken the developmental mathematics sequence had a 65% success rate in College Algebra, as compared to 72% of students who did not take developmental courses (Research & Analytical Services, 2009a). In the Fall 2007 semester, students having taken the developmental mathematics had an 87% success rate in Contemporary Mathematics (MATH 1332), as compared to 68% of students who did not take developmental courses (Research & Analytical Services, 2009c).

COMPLEMENTARY INITIATIVES TO THE QEP

The focus of South Texas College's Quality Enhancement Plan is to increase student success and decrease time to TSI completion by piloting a new developmental math course sequence, which collapses the traditional three-course sequence (MATH 0080, MATH 0085, and MATH 0090) into a two-course sequence (MATH 0100 and MATH 0200) with expanded lab hours and tutoring support. However, students will also benefit from other current College initiatives taking place at the College. Students, including those in Development Mathematics courses will soon have access to by-appointment tutoring through the Centers for Learning Excellence. In addition, the College's advising initiatives, including Beacon Mentors and Faculty Advisors will reinforce the importance of the QEP's goals. Therefore, although not formal components of the QEP, other existing and future College initiatives will serve to underscore the College's support to the QEP philosophy and the College's commitment to providing students with the needed resources for their success.

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APPENDICES

Appendix I – Subcommittee Listing and Membership

Table 3

QEP Assessment Subcommittee

Dr. Aparna Ganguli	Developmental Studies – Math
Oscar O. Hernandez	Student Learning Outcomes and Assessment – Director
Lyda L. Neal	Developmental Studies – Math
Laura B. Talbot	Curriculum and Accreditation – Officer
Edward Wagner	Faculty Senate, Developmental Studies – Math
Dr. Jinhao Wang, Chair	Institutional Effectiveness and Assessment (IEA) – Director

Table 4

QEP Budget Subcommittee

Dr. Max Abbassi	Math and Science – Biology, Chair
Enrique Arredondo	Developmental Studies - Math
Pablo Cortez	Developmental Studies – Math, Interim Chair
Mary G. Elizondo, MBA, CPA, Chair	Finance and Administrative Services – Business Office, Comptroller
Lee H. Grimes	Professional Development – Director
Oscar O. Hernandez	Student Learning Outcomes and Assessment – Director

Table 5

QEP Program Design and Literature Review Subcommittee

Enrique Arredondo	Developmental Studies – Math
Pablo Cortez, Chair	Developmental Studies – Math, Interim Chair
Javier Garcia	Developmental Studies – Math
Dr. Aparna Ganguli	Developmental Studies – Math
Lee H. Grimes	Professional Development – Director
Oscar O. Hernandez	Student Learning Outcomes and Assessment – Director
Rosana Maldonado	Developmental Studies – Math
Lyda L. Neal	Developmental Studies – Math
Dr. Jinhao Wang	Institutional Effectiveness and Assessment (IEA) – Director

Table 6

QEP Marketing Subcommittee

Michelle A. Balani	Public Relations – Specialist
Pablo Cortez	Developmental Studies – Math, Interim Chair
Helen Escobar, Chair	Public Relations – Coordinator
Mary G. Elizondo	Finance and Administrative Services – Business Office, Comptroller
Javier Garcia	Developmental Studies - Math
Lee H. Grimes	Professional Development – Director
Oscar O. Hernandez	Student Learning Outcomes and Assessment – Director
Laura B. Talbot	Curriculum and Accreditation – Officer

Table 7

QEP Professional Development Subcommittee

Enrique Arredondo	Developmental Studies - Math
Luzelma G. Canales	Grant Development/Accountability and Management Services – Director
Lee H. Grimes, Chair	Professional Development – Director
Oscar O. Hernandez	Student Learning Outcomes and Assessment – Director
Rene R. Zuniga	Liberal Arts and Social Sciences – Education

Appendix II – Sample Informational Marketing Materials

STC South Texas College

Reaffirmation 2010

QUALITY ENHANCEMENT PLAN

Core Requirement 2.12 "The institution has developed an acceptable Quality Enhancement Plan (QEP) that (1) includes a broad-based institutional process identifying key issues emerging from institutional assessment, (2) focuses on learning outcomes and/or the environment supporting student learning and accomplishing the mission of the institution, (3) demonstrates institutional capability for the initiation, implementation, and completion of the QEP, (4) includes broad-based involvement of institutional constituencies in the development and proposed implementation of the QEP, and (5) identifies goals and a plan to assess their achievement." **(Quality Enhancement Plan)**

Accreditation— Regional accreditation is extremely important to South Texas College because, according to Dr. Belle Wheelan, the president of the Commission on Colleges of SACS, it means that we have "a purpose appropriate to higher education" and the "resources, programs, and services to accomplish and sustain that purpose." This accreditation is what provides the basis for our operation as an institution of higher education because it ensures that our degrees and courses are accepted and recognized by other institutions of higher education and that our students are eligible to receive federal financial aid funding.

Accreditation Process

STC is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS). We will be considered for "Reaffirmation of Accreditation" in 2010.

Compliance Certification

The Accreditation Process is governed by the *Principles of Accreditation* published by SACS. The Reaffirmation process requires that the College provide evidence that it complies with the **Core Requirements** and **Comprehensive Standards** specified in *the Principles of Accreditation* through a Compliance Certification. STC prepared a successful Compliance Certification for approval of our accreditation as a Level II-Baccalaureate degree granting institution in 2005. STC will again complete a Compliance Certification for our 2010 reaffirmation. *The Principles of Accreditation* can be found on the SACS website at the following link: http://www.sacscoc.org/pdf/2007%20Interim%20Principles%20Complete.pdf

Quality Enhancement Plan

In addition to a Compliance Certification, the *Principles of Accreditation* requires each college to prepare a **Quality Enhancement Plan (QEP)** as part of the reaffirmation process (**Core Requirement 2.12**). The Quality Enhancement Plan is a "compelling, thoughtfully designed & transforming course of action that has **a meaningful impact on student learning**, analyses and applies data to action, engages the college community, and enhances the future for the institution and students" (Diane K. Troyer, 2006). This 5-year focused project not only satisfies an accreditation requirement, it will provide an excellent opportunity for STC to specifically address a vital student learning issue in order to enhance student success. That is why we need everybody's input!

QEP Planning Team

In order to create a QEP that focuses on student learning and meets the other SACS requirements, a QEP Planning Team has been established to identify several viable QEP topics via input from our STC stakeholders and community. The Planning Team will evaluate the topics and then select one for the QEP, based upon input from our College constituents. To help ensure significant participation, the Planning Team has broad representation every Division within the College, including: Faculty, Instructional Services, Student Services, Administrative Services, and Information Services & Planning. After a topic is selected, a QEP Implementation Team will be established to identify the actions needed, develop the assessment plan, construct the budget, and create the 5-year QEP project proposal for submission to SACS.

Identifying a QEP Topic

The immediate task of the Planning Team is to identify potential QEP topics. Although we are looking at our strategic plan, student surveys, and what other colleges are doing as sources of information, the most important source of ideas is the STC community—**the faculty members, students, staff members, administration, board members, and community representatives** that make STC what it is.

To get your input through December of 2007, we will use

- Feedback cards;
- Focus groups (faculty, staff, students, community);
- Open meetings;
- Web and email solicitations.

Expect to see announcements about these opportunities, including information about the QEP Kick-Off event that will take place during College-Wide Professional Development Day on September 21, 2007. We will need to hear from YOU.

For questions about Accreditation or the QEP, please contact:
Laura Talbot
Curriculum and Accreditation Officer
Phone: 872-2134 Office Location: D-100 (Pecan Campus)

Statement of Equal Opportunity: *No person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under any program or activity sponsored or conducted by South Texas College on the basis of race, color, national origin, religion, sex, age, veteran status or disability. Individuals with disabilities requiring assistance or access to receive services should contact DisABILITY Support Services at (956) 872-2513.*

STAYING CONNECTED
STC South Texas College
Oct. 8 - Oct. 19, 2007 Vol. 8 No. 1

Coming soon...The QEP

By: Cody Gregg, Director of Instructional Technologies, and Laura Talbot, Curriculum and Accreditation Officer

Consider the following. STC is accredited by SACS and falls under the purview of the THECB. We do IE for OIRE and we hire deans for NAH, LASS and BMST. Our reports all go to the VP and we go to plays by WILD. Our students take the SAT, the ACT, or THEA. We hold classes on MW and TR, and on Friday we attend PDC. We submit work orders to TSS in IS&P and we help students fill out the FAFSA.

It seems that our lives at STC are filled with acronyms. And now we have another very important acronym coming our way - the QEP.

As you may know, STC is accredited by the Southern Association of Colleges and Schools. Accreditation is extremely important to the college because it provides the basis for our operation as an institution of higher learning. At a more practical level, accreditation ensures our degrees and courses are accepted and recognized by other institutions of higher education and that we are eligible to receive federal funding.

In order to maintain accreditation, STC is required to go through the reaffirmation process every 10 years. STC was last reaffirmed in 2000. In 2010, a team of visitors from the SACS Commission on Colleges will visit STC to determine our reaffirmation status for the following 10 years. Know how does QEP play into this?

QEP stands for Quality Enhancement Plan and is one of the most important elements of the accreditation reaffirmation process. It is a plan designed to improve student learning. SACS requires that every institution undergoing reaffirmation develop a QEP. The QEP must meet several criteria. Among other things, it must:

1. Be based on key issues identified by a broad-based institutional process and come from institutional assessment.
2. Focus on learning outcomes and/or the environment supporting learning and accomplishing the college's mission.
3. Include broad-based involvement throughout the institution in the development and implementation of the plan.

STC is on the ball with this planning and has put together a QEP Planning Team comprised of a diverse set of members from every area of the college. The team has already started meeting to prepare for the 2010 reaffirmation visit. Over the next year, STC will focus more activity and energy on preparing for the QEP. The planning team will finalize the process for selecting the QEP topic. The college will hold a QEP kick-off event. A QEP leadership team and director will be selected.

The QEP represents a wonderful opportunity to make constructive, meaningful changes to positively impact the educational experience for our students.

Get ready. Be prepared. Participate. The QEP is coming! PDQ. ASAP.

QEP Planning Team members are:

- Abel Duran Jr., Business, Math, Science and Technology Faculty Representative
- Helen Patricia Maserang, Business, Math, Science and Technology Faculty Representative
- Dr. Jane De La Garza, Developmental Studies Faculty Representative
- Stevan M. Schiefelbein, Developmental Studies Faculty Representative
- Wallace D. Johnson, Liberal Arts and Social Sciences Faculty Representative
- Richard Coronado, Liberal Arts and Social Sciences Faculty Representative
- Curtis Roberson, Nursing and Allied Health Faculty Representative
- Pamela Fowler, Nursing and Allied Health Faculty Representative
- Edward Wagner, Faculty Senate Representative
- Dr. Ali Esmaeili, Bachelors Programs Representative
- Dr. Brenda Cole, Information Services and Planning Representative
- Cody Gregg, Information Services and Planning Representative
- Jose Cruz, Information Services and Planning Representative
- Jacque Gillispie, Information Services and Planning Representative Alternate
- Paul Hernandez Jr., Student Services Representative
- William Serrata, Student Services Representative
- Kimberly McKay, Student Services Representative Alternate
- Lee Hudson Grimes, Professional Development Representative
- Luzelma G. Canales, Accountability Representative
- Mary Elizondo, Finance and Administration Representative
- Brenda Balderas, Finance and Administration Representative
- Laura Talbot, Accreditation Liaison
- Anahid Petrosian, Instructional Services Representative

Appendix III – Sample QEP Ballot

Background:

QEP stands for **Quality Enhancement Plan**. The QEP, one of the most important elements of the accreditation reaffirmation process, is a plan designed to improve student learning. SACS requires that every institution undergoing reaffirmation develop a QEP. The QEP must meet several criteria. Among other things, it must

1. be based upon key issues identified by a broad-based institutional process and come from institutional assessment;
2. focus on learning outcomes and/or the environment supporting learning and accomplishing the college's mission;
3. include broad-based involvement throughout the institution in the development and implementation of the plan.

The QEP Planning Team has identified the following 10 themes from the data collected during the Fall Semester through the Dialogue sessions with faculty and staff as well as by conducting community and adjunct faculty surveys. Each theme represents a potential area in which the College could focus our QEP efforts. Your help is needed to identify the top priorities of our College Community from among these 10 themes. **Listed on the opposite side of this page are the 10 themes in ALPHABETICAL ORDER.** Possible strategies to address each theme identified by our college community are provided in the support materials attached to this ballot.

Instructions:

On the back of this page, please mark an "X" in the box by the 5 themes on which you feel it would be most beneficial for the College to focus the QEP. Please leave your completed ballot on the table or place in a collection box as you exit. **Remember: the QEP Topic must focus on STUDENT LEARNING.**

Please turn over page for ballot

Themes are in Alphabetical Order (Please mark an "X" in up to 5 boxes)

- ☐ **Academic Advising and Process**
- ☐ **Academic Preparation (College Readiness)**
- ☐ **Communication**
- ☐ **Customer Service / Cross - Training**
- ☐ **Learning Support**
- ☐ **Professional Development**
- ☐ **Student Engagement**
- ☐ **Student Services**
- ☐ **Teaching Effectiveness**
- ☐ **Technology in the Classroom**

Appendix IV – Current and Proposed Course Modules

Table 9

Math 0100: Proposed Modules and Objectives

Modules	*Content*	*Current*
Module 1	*Integers and Algebraic Expressions*	*Math 0080*
Obj. 1	Add and subtract integers	
Obj. 2	Multiply and divide integers	
Obj. 3	Simplify expressions using order of operations	
Obj. 4	Simplify algebraic expressions	
Module 2	*Fractions*	*Math 0080*
Obj. 1	Find equivalent fractions and simplify fractions	
Obj. 2	Multiply and divide fractions	
Obj. 3	Add and subtract fractions	
Obj. 4	Solve application problems with fractions	
Module 3	*Ratio, Proportions & Percents*	*Math 0080*
Obj. 1	Solve problems involving proportions	
Obj. 2	Solve problems involving percents	
Obj. 3	Solve application problems with percents	
Module 4	*Solving Equations*	*Math 0085*
Obj. 1	Solve linear equations in one variable	
Obj. 2	Solve a formula for a specified variable	
Obj. 3	Solve applied problems using algebraic equations	
Module 5	*Polynomials*	*Math 0085*
Obj. 1	Apply rules of exponents	
Obj. 2	Perform operations on numbers in scientific notation	
Obj. 3	Evaluate and classify polynomials	
Obj. 4	Add and subtract polynomials	
Obj. 5	Multiply polynomials	
Obj. 6	Divide polynomials	

Table 10

Math 0200: Proposed Modules and Objectives

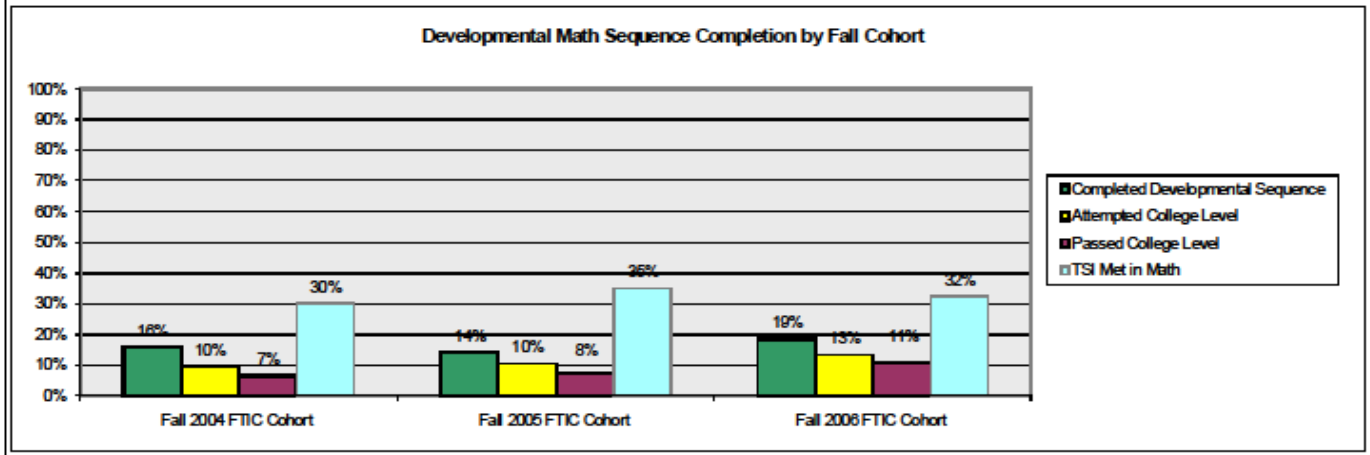
Module	*Content*	*Current*
Module 1	*Graphs of Linear Equations*	*Math 0085*
Obj. 1	Determine the x and y intercept of a line given the equation	
Obj. 2	Graph a linear equation by identifying and plotting intercepts	
Obj. 3	Find the slope of a line	
Obj. 4	Graph a linear equation using the slope intercept form of a line y=mx+b	
Obj. 5	Find the equation of a line given the slope and a point	
Module 2	*Factoring Polynomials*	*Math 0090*
Obj. 1	Factor out the greatest common factor of a polynomial expression	
Obj. 2	Factor polynomials by grouping	
Obj. 3	Factor trinomials when a=1	
Obj. 4	Factor trinomials with leading coefficient a≠1	
Obj. 5	Factor binomial difference of squares	
Obj. 6	Solve quadratic equations by factoring	
Module 3	*Rational Expressions and Equations*	*Math 0090*
Obj. 1	Simplify rational expressions	
Obj. 2	Multiply and divide rational expressions	
Obj. 3	Add and subtract rational expressions	
Obj. 4	Solve equations containing rational expressions	
Obj. 5	Solve applied problems using rational equations	
Module 4	*Radical Expressions and Equations*	*Math 0090*
Obj. 1	Simplify perfect square radicands	
Obj. 2	Simplify radical expressions using the product rule	
Obj. 3	Multiply and divide radical expressions	
Obj. 4	Divide radical expressions	
Obj. 5	Solve applied problems involving right triangles	
Obj. 6	Rationalize denominators of radical expressions	

Module 5	*Quadratic Equations*	*Math 0090*
Obj. 1	Solve quadratic equations by factoring	
Obj. 2	Solve quadratic equations using the principle of square roots	
Obj. 3	Solve quadratic equations by completing the square	
Obj. 4	Solve quadratic equations using the quadratic formula	
Obj. 5	Graph quadratic equations	
Obj. 6	Find the x-intercept(s) of quadratic equations	

Appendix V – Developmental Student Perseverance

Completion

Developmental Math Sequence Completion (continued)



Source: Banner September 9, 2008

* TSI Complete in Math only: These are Developmental cohorts from level one, two, or three that passed the Math section of either THEA or ACCUPLACER within the two year tracking parameter.

Note: First Time in College (FTIC) cohorts used in this report include only fall FTIC students enrolled in one of the four levels of Math their first term at STC. Course completion was tracked for two years at STC and UTPA for each cohort. Students were counted as completing a course level if they completed the course by the end of the second year. Repeated courses were counted. Students passing THEA while enrolled in Developmental Courses are encouraged, but not required, to complete the course. Passing for Developmental Math includes grades of "A", "B", "C", and "P". Passing Math 1414 includes grades of "D" or better at STC and includes grades of "DP" and "WP" from UTPA.

Appendix VI – QEP Assessment Yearly Data Collection Reference Table

(A "v" sign means collecting data during that semester)

QEP Assessment --Yearly Data Collection Reference Table (A "V" sign means collecting data during that semester)															
					Year 1-2010		Year 2-2011		Year 3-2012		Year 4-2013		Year 5-2014	
QEP Goal	Objective/Outcome	Achievement Target	Baseline Data	Cohort	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
Ensure 70% of students meet at least 70% of the Developmental Math Program Learning Outcomes.	1. Recognize and use properties, concepts and procedures to simplify and perform operations on algebraic expressions.	70% of students will meet this outcome.				v	v	v	v	v	v	v	v	v
	2. Recognize and use properties, concepts and procedures to solve linear and quadratic equations in one variable.	70% of students will meet this outcome.				v	v	v	v	v	v	v	v	v
	3. Interpret and analyze graphs of linear and quadratic equations.	70% of students will meet this outcome.				v	v	v	v	v	v	v	v	v
	4. Solve applied problems using algebraic concepts and reasoning.	70% of students will meet this outcome.				v	v	v	v	v	v	v	v	v

Increase success rates of students in Developmental math courses (as evidenced by grades of "C" or better or passing scores on Texas Success Initiative [TSI] approved assessments.	5. A higher percent of students in Math 100 will pass the course as compared to the percent of students passing Math 80.	The percentage of students passing MATH 100 will be 5% higher than the percentage of students passing MATH 80 on a yearly basis.	56% for Spring 2009		v	v	v	v	v	v	v	v	v	v
	6. A higher percent of students in Math 100 will pass the course than the percent of students passing Math 85.	The percentage of students passing MATH 100 will be 10% higher than the percentage of students passing MATH 85 on a yearly basis.	49% for Spring 2009			v	v	v	v	v	v	v	v	v
	7. A higher percent of students in Math 200 will pass the course than the percent of students passing Math 90.	The percentage of students passing MATH 200 will be 5% higher than the percentage of students passing MATH 90 on a yearly basis.	63% for Spring 2009					v		v		v		v

Increase the First-Time-In-College (FTIC) percentage of students who become "college ready" in mathematics to 50% (by earning a grade of "C" or better in the highest-level course in the developmental math sequence or achieving passing scores on TSI approved assessment) within a two year period.	8. The TSI completion rate within a two-year period for QEP cohorts will increase as compared to the TSI completion rate within a two-year period for students in Traditional Developmental Mathematics.	The TSI completion rate (earning a grade of "C" or better in the highest-level course in the developmental course sequence or achieving passing scores on a TSI approved assessment within a two-year timeframe) for the QEP cohorts will be at least 50% by the end of the five year assessment period for the QEP.	32% for the Fall 2006 FTIC Cohort.					v	v	v	v	v	v	v

	9. Increase Success Rates in the MATH 1332- Contemporary Mathematics (as measured by earning a grade of A, B, C, D, or P).	Students who complete the proposed two-course developmental sequence will pass MATH 1332 at a rate of 5% higher than the pass rate of students who complete the traditional three-course developmental sequence (passing is defined as earning a grade of an A, B, C, D, or P).	87% for students that took the traditional developmental mathematics courses (Fall 2007)					V	V	V	V	V	V	V
		Students who complete the proposed two-course developmental sequence will pass MATH 1332 (Contemporary Mathematics) at a rate equal to or higher than the pass rate of students who did not take developmental coursework in Mathematics(passing	68% for student who did not take developmental courses (Fall 2007)					V	V	V	V	V	V	V

		is defined as earning a grade of an A, B, C, D, or P).												
	10.Increase Success Rates in the MATH 1414-College Algebra (as measured by earning a grade of A, B, C, D, or P).	Students who complete the proposed two-course developmental sequence will pass MATH 1414 (College Algebra) at a rate of 5% higher than the pass rate of students who complete the traditional three-course developmental sequence (passing is defined as earning a grade of an A, B, C, D, or P).	65% for students that took the traditional developmental mathematics courses (Fall 2007)					V	V	V	V	V	V	V

		Students who complete the proposed two-course developmental sequence will pass MATH 1414 (College Algebra) at a rate equal to or higher than the pass rate of students who did not take developmental coursework in Mathematics (passing is defined as earning a grade of an A, B, C, D, or P).	72% for student who did not take developmental courses (Fall 2007)					V	V	V	V	V	V	V