Quality Enhancement Plan

Prepared for the
Southern Association of Colleges and Schools

On-Site Review
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West Georgia Technical College
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EXECUTIVE SUMMARY

West Georgia Technical College's (WGTC's) Quality Enhancement Plan, *Reaching the Summit: Conquering Mathematics*, focuses on improving student learning and success in learning support math. A comprehensive review of assessment and completion data since the College underwent a merger in 2009 revealed declining student success rates in learning support math courses and in the subsequent college algebra course, required for all Associate of Applied Science degrees offered by the College. Without successful progression through this course sequence, WGTC students pursuing an associate degree cannot advance through their chosen programs of study nor persist to graduation. The large number of students affected by this lack of success in learning support math presents a critical area of need for the College; improvement in this area would therefore have a significant impact on student learning.

Through broad-based involvement of the College learning community, WGTC identified the overarching goal of the QEP, along with four initiatives to guide the strategies of the plan:

<table>
<thead>
<tr>
<th>Goal: To improve student learning and success in learning support math and in the subsequent college algebra course</th>
</tr>
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<tbody>
<tr>
<td>1. Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.</td>
</tr>
<tr>
<td>2. Increase the percentage of students who successfully complete MATH 1111 as a result of completing the emporium model learning support course.</td>
</tr>
<tr>
<td>3. Improve students' problem-solving skills.</td>
</tr>
<tr>
<td>4. Enhance faculty development opportunities in order to improve student learning.</td>
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</table>

To support these initiatives and the related outcomes, the plan includes a redesign of the current learning support math course sequence into one consolidated course, integrating several methods identified through the literature and best and promising practices in this area: employing an “emporium” model of instruction, modularizing course content for mastery learning, integrating computer-aided instruction through ALEKS software, and implementing active learning strategies to increase problem-solving skills. The College recognizes that faculty are a prime resource and, as such, investment in their professional development directly and substantially benefits student learning and the College's ability to fulfill its educational mission. Professional development for faculty is therefore a critical component of the QEP. The plan has been piloted in four phases from fall 2011 through fall 2012, beginning with the redesign of two learning support math course sections on one campus and subsequently of multiple sections on
all campuses. Upon approval from the Commission, full implementation is planned for spring 2013, with all learning support math sections on all campuses employing the redesign strategies of the Quality Enhancement Plan. A comprehensive assessment plan includes both direct and indirect assessment, longitudinal comparative measures, student perceptions of instruction and academic support, self-evaluations by faculty across learner-centered dimensions of instruction, as well as other auxiliary measures. Results will be correlated and reported annually to continuously improve the QEP. The assessment plan is fully integrated into the overall College strategic plan to provide data on the plan’s progress and to inform decisions that will further enhance student learning.

Demonstrating its ability to initiate, implement, and sustain the QEP, the College has established a budget and allocated resources to support the initiative. These resources will be available for the duration of the QEP and are designed to become part of operational resources for increased student learning.

**INSTITUTIONAL CONTEXT**

West Georgia Technical College is a multicampus two-year public institution offering credit and noncredit learning opportunities to traditional and nontraditional students with a variety of both personal and professional educational goals. The College is one of 25 two-year technical colleges within the Technical College System of Georgia and provides associate degree, diploma, and certificate programs and comprehensive services to the West Georgia region. Its unique and distinctive mission places major emphasis on the preparation of a qualified labor force for the region while maintaining a commitment to enhanced educational opportunities and student learning and success:

*The mission of West Georgia Technical College, a unit of the Technical College System of Georgia, is to lead economic and workforce development by offering learning opportunities through quality services and educational programs using traditional and distance learning delivery methods. These opportunities focus on the development of academic and technical competence; critical thinking skills; social, personal, and intellectual values; work ethic traits; and an understanding of society. West Georgia Technical College services—including associate degree, diploma, and certificate programs, adult education, continuing education, and customized corporate training—meet the workforce needs of citizens, communities, businesses, and industries of the West Georgia service area.*
To meet its mission to provide quality services and educational programs, West Georgia Technical College offers 16 associate degree programs, 28 diploma programs, and over 60 certificate programs. Students may select from a wide range of program opportunities in the schools of business and public services, health services, and trade and technology, with a school of arts and sciences supporting all majors. Whenever feasible, educational programs are designed with multiple opportunities for students who need flexible choices in terms of program length, including early exit points that allow students to meet their immediate employment needs and also pursue more long-term academic goals and opportunities.

On September 4, 2008, the State Board of the Technical College System of Georgia voted unanimously to consolidate 14 technical colleges statewide into six. On July 1, 2009, West Georgia Technical College and West Central Technical College merged to become West Georgia Technical College. For the purposes of defining and developing the College’s Quality Enhancement Plan without confusion and using data most reflective of the institution as it moves forward, only data since the merger has been reviewed and used in the QEP decision-making process.

The merger made the newly named West Georgia Technical College one of the largest technical colleges in Georgia. Through its five campuses and two instructional sites, the College serves seven counties west and southwest of Atlanta – Carroll, Coweta, Douglas, Haralson, Heard, Meriwether, and Troup. Record-breaking enrollment in FY2011 reached 12,508 unduplicated students, with the majority (83%) of students residing within the service area; the remaining 17% were drawn from surrounding counties, including bordering counties in Alabama. The student population is 68% female and 32% male, with a larger population of part-time students (59%) than full-time students (41%).

Separately, the previous West Central and West Georgia Technical Colleges had long histories of educational leadership in and partnership with their respective communities. Together, the faculty and staff of the merged West Georgia Technical College remain committed to providing technical education that is responsive to the changing needs of business and industry, students, and the community at large. Today, West Georgia’s unwavering commitment to educational excellence and student success has made its graduates some of the most competitive individuals in the workforce. West Georgia Technical College’s commitment to student success
has driven the process of developing the College’s Quality Enhancement Plan and contributed to the student-centered focus of the plan’s goal and initiatives.

**Broad-Based Process**

As described in the next two sections, the process for developing the QEP involved the participation and input of all of WGTC’s major constituencies: students, faculty, staff, administrators, program advisory committees, and the Local Board of Directors. A total of 65 WGTC faculty and staff have served on 12 key committees involved in the development of the QEP, and another 153 contributed suggestions during the topic selection. This participation represents more than 76% of the College’s full-time faculty and staff. Senior administrators provided oversight to the QEP development process and served on decision-making teams. The WGTC Local Board of Directors have remained abreast of the College’s QEP development process through two presentations at regular Board meetings to date. In all, more than 1300 WGTC students, faculty, staff, administrators and Board members have participated in this process. Their work has culminated in a comprehensive, unified plan to address student success in learning support math, *Reaching the Summit: Conquering Mathematics*.

**BROAD-BASED INVOLVEMENT TO DEVELOP THE QEP**

The two-year comprehensive process of planning and developing the QEP began in 2009 with identifying the resources required for QEP development and implementation and identifying an appropriate topic. Broad-based participation was solicited from all major constituents of the College—students, faculty, staff, and administrators, as well as the Local Board of Directors, program advisory committees, and partnering communities within the College’s seven-county service area. The following section provides an overview of that process; further details of the broad-based involvement of all relevant constituencies are provided in the upcoming section, *Narrowing the QEP Topic*.

**Leadership Involvement**

In November 2009, the QEP Leadership Team was appointed by administration to guide the College’s efforts throughout the QEP, overseeing the overall development and implementation of the plan. The Leadership Team was chosen based upon individual members’ functions within the College, capacity to contribute to the oversight of the QEP, and leadership/decision-making skills. The Team includes senior leadership members and assistant vice presidents, as well as representative directors and deans (membership is detailed in Appendix A).
The Leadership Team played a critical role in galvanizing the initial efforts of the QEP; they will continue that role through providing the visible administrative support required to make the QEP successful. For wider participation in decision-making, faculty and staff representatives have been added to planning, development, and implementation teams as the process evolved and the QEP topic was identified.

Planning and Development Involvement
In June 2010, the initial introduction of the College community to the QEP began with an in-service presentation to all faculty and staff by the Vice President for Institutional Effectiveness. During that same month, the QEP Planning and Development Team was formed to direct the College through the initial steps of preparation, preliminary research, and topic selection. To ensure broad-based involvement, team membership reflected interdepartmental representation from various units of the College and incorporated the Leadership Team (membership is detailed in Appendix B).

The Team’s responsibilities included the following:
- Identifying opportunities for broad-based involvement of College constituents
- Identifying key decision makers and key decision points
- Reviewing QEP documents and processes from other institutions
- Coordinating initial informational efforts
- Soliciting input for topic consideration and selection
- Reviewing white papers and selecting QEP topic and direction
- Reviewing baseline empirical data
- Obtaining commitments for resource support

The Planning and Development Team’s initial charge was to provide preliminary data stemming from the College’s ongoing institutional assessment related to student learning and to the student learning environment. Members of the Team compiled results of surveys, student perceptions of instruction, and student success rates into formats, including brief narrative, graphs, and charts (Appendix C), that could be interpreted easily by the diverse audiences representing the College’s constituencies and facilitate their input. The information provided the College community with a comprehensive review of the College’s strategic plan, academic
program assessments, and institutional and national data that would enable decision-making throughout the development of the QEP.

Through a variety of approaches, including podcasts, surveys, and group presentations, the Team presented the data and sought to involve all members of the College community in identifying potential topics for the QEP. From July to December 2010, the team solicited suggestions for potential QEP topics from faculty, staff, students, Local Board of Directors, program advisory committee members, and administration. (Details of topic solicitation and finalization are included in the following section on Narrowing the QEP Topic). They then synthesized those suggestions into broad categories, which were posted to the QEP website in February 2011, along with guidelines for submitting proposals based on the narrowed categories. Proposal submission was an open process, and all constituents were encouraged to submit ideas to help focus topic selection. Simultaneously throughout the topic solicitation process, members of the Planning and Development Team further analyzed the data on student engagement, retention, and course completion rates and examined the College’s strategic plan.

Finalization of the QEP topic arose from selection of the white paper, *Improving Student Success in the Developmental Mathematics Classroom Using Technology and Course Redesign*, submitted by a full-time math faculty member. This selection then led to the appointment of a QEP Director and Faculty Coordinators in May 2011.

**Implementation Involvement**

In July 2011, the QEP Director and Faculty Coordinators formed the QEP Implementation Team to facilitate the development and implementation of the Quality Enhancement Plan. In an effort to involve as many stakeholders as possible, team members from all functional areas of the College were asked to participate on the committee at large or on its numerous subcommittees. The Team is composed of the faculty champions who would pilot the project; the four persons who submitted white papers for topic consideration, chosen because they had shown a strong interest in and willingness to further the process; and representatives in key departments related to instruction, academic and student support services, technology support, and administration, chosen because of their functions within the College and their expertise in areas critical to the success of the QEP implementation. Members of the standing QEP Implementation Team have developed and will continue to develop and mobilize ad hoc subcommittees as needed.
throughout the implementation of the QEP. Membership on these subcommittees is designated based on the function and expertise of the designees.

To accomplish necessary tasks efficiently and effectively, subcommittees of the QEP Implementation Team have been formed and charged with examining and coordinating efforts in the following areas:

- Registration and financial aid considerations and concerns
- Marketing and awareness
- Professional development
- Curriculum alignment
- Goals and outcomes
- Tutoring and lab staffing/scheduling
- Research and best practices
- Assessment and evaluation
- IT support

Members of the QEP Implementation Team and its various subcommittees (Appendix D) have initialized and coordinated the development of the QEP pilot phases and the supporting procedures in order to ensure the execution, progress, and success of the QEP.

The registration subcommittee is composed primarily of staff in the Student Affairs and Financial Aid divisions of the College but also includes IT and Academic Affairs personnel. The subcommittee has examined processes related to course scheduling in Banner, advisement and registration procedures, fee payment and financial aid, and other logistical issues. Throughout the QEP implementation, subcommittee members will continue to monitor processes and procedures in order to improve the QEP and enhance student learning.

The marketing subcommittee is steered by staff of the College’s division of Institutional Advancement, including specialists in marketing, communications, and digital media; it also includes personnel from Academic Affairs and Institutional Effectiveness. The marketing subcommittee has also involved students whenever possible, inviting them to make decisions regarding the final logo and student t-shirt designs (both of which were chosen by the Phase I pilot students), featuring student faces and voices in the informational video and campaign, and welcoming their participation as scheduled peer speakers in the instructional student summits. The subcommittee was initially charged with the critical process of branding and promoting the Quality Enhancement Plan. They will continue that charge throughout the QEP implementation by conducting scheduled informational summits for students, faculty, and staff and by providing updated communications related to the QEP to the College community.
Faculty contribute expertise on several subcommittees, including professional development, curriculum, outcomes, research and best practices, and assessment. Faculty have been involved in defining course outcomes and assessment measures, aligning all course materials, and planning faculty development and training opportunities. Faculty will remain in critical roles throughout the QEP implementation as they apply the principles of best and promising practices to the course redesign.

As the QEP unfolds, the professional development subcommittee will continue to plan and provide opportunities for learning support math faculty in ALEKS features and capabilities and in using problem-solving to increase mastery of math concepts. The subcommittee will also plan activities in learner-centered instructional approaches that will be open to all faculty, not only those teaching learning support math.

The tutoring/lab scheduling subcommittee has been instrumental in determining qualifications and responsibilities of the math lab facilitators, posting the position announcements, and screening applicants. The subcommittee will continue to provide assistance to all campuses as they schedule lab times and ensure adequate faculty coverage for the emporium math labs. The subcommittee has developed a student survey to collect information regarding experiences with tutoring services and will use results for improvement, as described in the Implementation Plan.

Working with all areas, the IT support subcommittee has provided expertise and information on the technology infrastructure necessary for successful implementation of the QEP course redesign. The plan relies on computer-aided instruction as the method of course delivery, and the technology subcommittee members will continue to play active roles in maintaining and troubleshooting computer systems on all campuses, as well as lending support for related advising and Banner registration functions.

The assessment subcommittee, composed of staff in the division of Institutional Effectiveness as well as math faculty, has led the efforts of data collection and analysis and provided evaluation tools such as surveys during the planning and development stage. They have also facilitated data collection and analysis during the piloting of the QEP project in order to help in decision-making. The subcommittee will continue and amplify this role throughout the implementation of the QEP and will be responsible for coordinating assessment efforts at each stage of the project as well as summatively.
The development of a wide ranging committee and subcommittee structure since the early planning stages of the QEP has facilitated the involvement of key and ancillary members of the College community. Their contributions have ensured that institutional needs and capacities have been considered in selecting the QEP topic and implementing \textit{Reaching the Summit: Conquering Mathematics}.

**NARROWING THE QEP TOPIC**

Foundational work in QEP topic identification involved examining the College’s strategic plan, as well as results of learning outcomes assessment, surveys and inventories, and program reviews. The Planning and Development Team also reviewed QEP topics developed by other institutions to gain perspective on the scope and possibilities of a sustainable QEP. Systematic efforts were launched to ensure broad institutional participation in the identification, selection, and acceptance of a QEP topic that is important to the College and will enhance student learning.

Initial efforts focused on identifying a significant area of concern or “gap” in student learning. The Planning and Development Team was interested in considering a broad range of topics and in understanding the concerns of the College constituencies as they related to student learning. Data from institutional assessment efforts and a structured topic selection process contributed to identifying and narrowing those concerns to address one topic that will best serve the learning needs of a large number of WGTC students: \textit{Reaching the Summit: Conquering Mathematics}.

**Preliminary Data Contributing to Topic Selection**

As one of its efforts to identify areas of strength as well as potential concern, WGTC conducted the Community College Survey of Student Engagement (CCSSE) in Winter Quarter 2010, the results of which provided substantial insight into student engagement related to learning. During the process of QEP topic selection, analyses of that survey data and of institutional assessment findings regarding results of the Collegiate Assessment of Academic Proficiency (CAAP) and course completion rates collectively pointed toward a need to improve student learning and success in math, specifically learning support courses and the subsequent gateway algebra course, and in problem-solving.
**Student Engagement Results.** Student engagement is a key indicator of learning; research shows that students actively engaged with faculty, other students, and the subject matter are more likely to learn and persist, enabling them to achieve their academic goals (CCSSE, 2012). Five benchmarks have been introduced by the Community College Survey of Student Engagement (CCSSE) to reflect institutional practices and student behaviors that promote student engagement: (1) Active and Collaborative Learning, (2) Student Effort, (3) Academic Challenge, (4) Student-Faculty Interaction, and (5) Support for Learners. The results of the 2010 CCSSE conducted for WGTC identified active and collaborative learning as one of the areas of lowest student engagement, for full-time as well as part-time students. Only 45.8% of WGTC students responded favorably (*often* or *very often*), as compared to 50% of the CCSSE cohort and 59.6% of the top performing colleges participating in the survey, regarding the extent of their participation in active and collaborative learning activities. When those results are disaggregated, data reveals that a lower percentage of WGTC students (-11.8% of full-time and -10.1% of part-time), as compared to other students in the CCSSE cohort, responded favorably (*often* or *very often*) to the item within active and collaborative learning regarding working with other students on projects during class (Item 4f in Figure 1):

![Figure 1. 2010 CCSSE disaggregation of items related to active and collaborative learning.](image)

This trend has continued beyond the initial data review in 2010. The key findings of the 2012 CCSSE conducted for WGTC (received in summer 2012 as the QEP document was being completed) again identify active and collaborative learning as one of the areas of lowest student engagement. In the 2012 survey responses are even lower, with only 39.1% of WGTC students responding favorably, as compared to 48.3% of the national cohort, regarding their involvement in active and collaborative learning activities at the College. As one of the five CCSSE benchmarks, active and collaborative learning reflects a key component of WGTC students’ learning experience. Through these practices, students are able to apply what they are learning to diverse contexts and develop problem-solving skills to help them deal with real-life situations.
Active and integrative collaborative learning strategies facilitate problem-solving, enable students to more readily master course content, and stimulate intellectual development (Pascarella & Terenzini, 2005). If a large number of WGTC students have rarely engaged in such activity, they have missed valuable opportunities for learning.

Perhaps one of the most disturbing findings of the CCSSE survey for West Georgia Technical College involved the 2010 special-focus item related to students’ engagement in “deep learning.” On that item, 46.9% of WGTC students responded that they have never or only sometimes “put together ideas or concepts from different courses when completing assignments or during class discussions” (Figure 2).

Such responses signaled an alarming inclination because significant, integrative, or “deep” learning involves experiences that help students synthesize and apply information to prompt inquiry, critical reasoning, and problem-solving (Fink, 2003; Nelson Laird, Shoup, Kuh, & Schwarz, 2008). Without employing such synthesis and evaluation, almost half of WGTC students seem to be engaging in lower order thinking skills than should be expected for significant learning to occur.

CAAP Results. Longitudinal studies to determine how successful these WGTC students are in subsequent credit-bearing math courses are still being conducted; however, other measures indicate weaknesses in this area and in problem-solving skills even upon students’ graduation. Analysis of results of the ACT Collegiate Assessment of Academic Proficiency (CAAP) testing of degree-level students in their final quarter before graduation (Table 1) reveal that within the tested areas of writing, reading, critical thinking, and mathematics skills, WGTC students score consistently low as compared to a national cohort in the area of mathematics. CAAP results for FY 2010-FY 2012 confirm progressively declining scores in this area.
Table 1. Comparison of West Georgia Technical College CAAP Results, FY2010-FY2011
(Percentage of students scoring at or above the national average)

<table>
<thead>
<tr>
<th>Test Areas</th>
<th>FY 2010 (3 testing sessions)</th>
<th>FY 2011 (2 testing sessions)</th>
<th>AY 2012 (College transitioned from quarter FY to semester AY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td>59.7%</td>
<td>50.0%</td>
<td>64.1%</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>57.6%</td>
<td>53.0%</td>
<td>63%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>51.2%</td>
<td>45.2% - overall</td>
<td>39.8% - overall</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76.1% - basic algebra</td>
<td>39.8% - basic algebra</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36.9% - college algebra</td>
<td>35.9% - college algebra</td>
</tr>
<tr>
<td>Reading</td>
<td>69.8%</td>
<td>no data</td>
<td>no data</td>
</tr>
</tbody>
</table>

The 11.4% decline in math scores over the last three years supports the assertion that WGTC students are not meeting expectations in this area even after progressing through their math course sequence. When the CAAP math section is further broken down into the components of basic algebra and college algebra, as noted for FY 2011 and AY 2012, results are even more disheartening. In AY 2012 only 35.9% of students scored at or above the national average on testing items related to college algebra.

Learning Support Course Completion Rates. The Core Abilities and General Education Outcomes identified by WGTC in 2009 define five areas that the College deems necessary for its graduates to be successful in life and in the workplace. Three of the five concentrate on basic communication, computational, and reasoning skills and emphasize the ability to “apply appropriate reading, writing, speaking, and listening skills to express ideas and opinions,” to “use everyday mathematical concepts and basic mathematical tools to obtain or convey information,” and to “develop critical thinking and reasoning skills for problem-solving.” However, several recent external and internal studies confirm that the College’s success in helping students achieve these specific expected outcomes has not always been exemplary.

Through examination of course completion and graduation rates, unease has arisen over the success rate of students who require remediation in one or more basic skills in order to progress through their academic programs. FY 2011 reports from the Technical College System of Georgia data center reveal that less than 10% of WGTC students requiring learning support coursework persist to graduation. This figure is half the estimated number nationally (20%) of developmental students enrolling in postsecondary institutions who will earn a degree, as
compared to the 50% of students enrolling in postsecondary institutions without need of remediation who will graduate (Boylan & Saxon, 2005; NCES, 2003). In Georgia, the contrast between two-year and four-year degree completion by students needing remediation is even more bleak. A recent Complete College America report (2011) revealed that the graduation rate for a cohort of remedial students persisting to a baccalaureate degree by 2007 was 24.7% as compared to a rate of only 7.2% for those earning an associate degree. As noted in that same report, remedial classes “have become the Bermuda Triangle of higher education,” with many students entering, but few coming out at graduation.

Of the three areas of learning support, the major stumbling block for many WGTC students is math. Increasingly, the College’s internal research findings point to discouraging outcomes in this area. Of the 6711 (duplicated number) WGTC students enrolled in learning support courses in FY 2011, 65.36% required remediation in basic math and/or algebra before they were considered ready for college-level math courses. Comparatively, roughly half that number, a combined 34.64%, needed remediation in writing and reading skills. This distribution mirrors national Achieving the Dream data analyzed in a study conducted by CCRC, which found that more students need math remediation than English remediation. Of the 46,000 students in 27 institutions studied, over 70% were referred to developmental math, compared to 34% referred to developmental English (Biswas, 2007).

Over the last eight quarters (before the College converted to semesters in fall 2012), the passage rate for the highest level learning support math course, MATH 0099 (formerly MAT 099), has averaged only 47.28%. In comparative data over FY 2010 and FY 2011, math learning support success rates indicate an alarming trend. As illustrated in Figure 3, with only slight digressions in two quarters of activity, student success rates decreased consistently from the lower level of learning support, MAT 097, through MAT 098, and into MAT 099.

Figure 3. Rates of student success in math learning support FY 2010-FY 2011.
Success rates for English and reading learning support courses during that same period are significantly higher. However, as shown in Table 2, success rates in both these subject areas also decline consistently from the lower level 097 to the higher level 098. Students in the higher (098) level of English and reading are also required, as in math, to pass the exit exam, which is the corresponding section of the COMPASS exam.

Table 2. Rates of Student Success in English and Reading Learning Support FY 2010-FY 2011

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<thead>
<tr>
<th></th>
<th>FY 2010</th>
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<th>FY 2011</th>
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<tbody>
<tr>
<td></td>
<td>Summer</td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
<td>Summer</td>
<td>Fall</td>
</tr>
<tr>
<td>ENG 097</td>
<td>60.00%</td>
<td>85.92%</td>
<td>76.47%</td>
<td>80.00%</td>
<td>83.72%</td>
<td>67.00%</td>
</tr>
<tr>
<td>ENG 098</td>
<td>43.30%</td>
<td>54.48%</td>
<td>49.32%</td>
<td>58.02%</td>
<td>54.87%</td>
<td>49.46%</td>
</tr>
<tr>
<td>RDG 097</td>
<td>78.95%</td>
<td>84.65%</td>
<td>81.60%</td>
<td>68.94%</td>
<td>85.71%</td>
<td>77.51%</td>
</tr>
<tr>
<td>RDG 098</td>
<td>73.81%</td>
<td>53.65%</td>
<td>44.12%</td>
<td>42.01%</td>
<td>53.06%</td>
<td>50.67%</td>
</tr>
</tbody>
</table>

Data analysis also reveals that the math obstacle continues beyond learning support courses. An examination of WGTC passage rates for MATH 1111, College Algebra, over FY 2010-FY 2011 (Table 3) revealed that this course impedes students’ persistence to graduation. As a core requirement for all associate degree programs, MATH 1111 is necessary for progression. Data reveals that a substantial number of students (an average of 34.42% from FY 2010-2011) do not complete that course and therefore never complete their programs and graduate.

Table 3. Rates of Success in MATH 1111 FY 2010-FY 2011

<table>
<thead>
<tr>
<th></th>
<th>FY 2010</th>
<th></th>
<th></th>
<th>FY 2011</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summer</td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
<td>Summer</td>
<td>Fall</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>246</td>
<td>525</td>
<td>436</td>
<td>410</td>
<td>359</td>
<td>640</td>
</tr>
<tr>
<td>N Successful</td>
<td>165</td>
<td>334</td>
<td>276</td>
<td>270</td>
<td>248</td>
<td>437</td>
</tr>
<tr>
<td>% Successful</td>
<td>67.07%</td>
<td>63.62%</td>
<td>63.30%</td>
<td>65.85%</td>
<td>69.08%</td>
<td>68.28%</td>
</tr>
</tbody>
</table>

This trend coincides with the longitudinal study conducted by Bailey, Jeong, & Cho (2010) of more than 250,000 students in 57 colleges, which found that only 17% of students referred to three or more levels of math remediation courses successfully completed the sequence. Of those students, only 68% enrolled in the subsequent credit-bearing, or “gateway,” math course, and only 53% of those students successfully completed that course.

One of the reasons students do not succeed in the degree level math course may be a lack of preparation for the rigors of college algebra. That preparation includes the current extensive three-course remediation sequence that underprepared students must complete in order to be considered college ready. The sequence begins with basic math, progressing to beginning
algebra, and then intermediate algebra, each course a prerequisite to the subsequent course. Once they are determined “not program ready” by their placement test results, degree-seeking students must complete all three courses in the sequence before advancing to college algebra. Figure 4 illustrates the sequence of math learning support and credit-bearing courses at WGTC.

In spite of the three-course preparation requirement for college algebra, analysis of passage rates for learning support math courses reveals surprisingly low final exam scores even among those students who do pass the exit exam required for enrollment into MATH 1111. In addition to passing all other course requirements, students in MATH 0099, the highest level of the math learning support course sequence, must also pass the exit exam, a post-test of the COMPASS placement exam they took upon admission to the College. Student scores on that exam should reflect their ability to succeed in the subsequent math course. However, the low scores are probable indicators that even after remediation, many students are not fully prepared to face the demands of college algebra. The minimum COMPASS score required to exit MATH 0099 and progress to MATH 1111 is 37. Of the 818 students who passed the learning support math exit exam in FY 2011, 269 (32.88%) scored within the minimum range of 37-45. Of these 269 students, only 166 (61.71%) succeeded in the subsequent algebra course, suggesting that almost 40% of the students who successfully completed the learning support course sequence in FY 2011 were unprepared for college algebra even after remediation.

As depicted in Table 4, the completion rate for the gateway English course is significantly higher (with an average of only 28.79% unsuccessful from FY 2010-2011) than that for the gateway algebra course during the same time period, FY 2010-FY 2011.
The preliminary data gleaned from these three sources—CCSSE, CAAP, and course completion rates—helped to identify significant areas of concern related to student learning. More targeted direction for the College’s Quality Enhancement Plan emerged throughout the discussion and survey stages of the QEP topic selection process.

### Process for Topic Selection

In order to place the QEP topic in context, the Planning and Development Team examined the WGTC strategic plan, which identified the institution’s strategic goals (Appendix E). The strategic plan was referenced at each stage of the QEP planning process to keep topic selection and development congruent with the goals of the College. The Team also reviewed numerous Quality Enhancement Plans of other colleges, both two-year and four-year institutions, to achieve a sense of perspective on the holistic process of QEP development and implementation.

A variety of approaches encouraged broad-based involvement in identifying a topic. Evidence was gathered through surveys, interviews, and analysis of institutional assessment results. An informational flyer (Appendix F) was developed with a detachable topic submission form that could be deposited in drop boxes set up on each campus. Additionally, the Planning and Development Team worked with the webmaster to develop a website (Appendix G) that would serve to disseminate information as well as provide a vehicle to solicit input from the College community. Through the website, the College conducted an open solicitation of topics via an online suggestion box that allowed anyone to submit ideas related to the QEP. Team members notified College personnel of this input option and presented QEP background and procedural information through presentations on each campus, facilitated by members of the QEP Planning and Development Team. To keep the focus on student learning, the QEP Planning and Development Team created a logo that was used on all related documents and presentations and on the QEP website:
Team members presented an overview of the process, along with the preliminary assessment data on each campus, to mixed groups of faculty and staff, providing index cards for topic ideas that were later transposed and posted to the QEP website.

They elicited interactive engagement of faculty, staff, students, advisory committees, and the Local Board of Directors through planned and impromptu meetings on all campuses, as well as an initial collegewide in-service presentation (Appendix H) that introduced faculty and staff to the QEP and explained the various means of topic identification and selection, facilitating involvement and participation in the process. A podcast presentation was shown to constituents off campus, specifically, program advisory committees and the Local Board of Directors during their regularly scheduled meetings. The podcast was also posted as a link on the College website, visible to and accessible by anyone who visited the site. The fall 2010 schedule of presentations is detailed in Appendix I. From the combined solicited feedback, the Planning and Development Team was able to begin identifying and refining a QEP topic.

The initial list of potential topic suggestions received from faculty, staff, students, advisory committee members, and administration included 160 ideas, which the Team grouped into eight evolving themes (Appendix J): technology, student orientation, collaboration, critical thinking/problem-solving, social utility, learning support, writing across the curriculum, and online/distance learning. A ninth miscellaneous category included suggestions that were isolated instances and did not clearly fall into one of the other categories. Through further review and discussion, the Team determined a need to separate learning support into distinct disciplinary areas and honed the list to ten clearly defined categories representing the predominant concerns expressed by College constituents:

- Critical thinking/problem-solving
- First-year experience
- Instructional technology
- Online learning
- Social utility/information literacy
- Strengthening learning support English
- Strengthening learning support math
- Strengthening learning support reading
- Student collaboration
- Writing across the curriculum

The Team then launched a survey to students, asking them to choose which of the ten topics they felt would be most beneficial to students as a concentrated effort for the College. Results of that survey (Appendix K), with just over 1000 responses, indicated clear student preferences for
focusing on critical thinking/problem-solving skills (26.9%), first-year experience (22.9%), online learning (15.1%), instructional technology (9.9%), and learning support math (9.3%). The remaining five topics elicited significantly weaker response, ranging from 5.8% citing student collaboration, to 0.9% citing learning support reading as the concern most critical to students.

Simultaneously with launching the student survey, the QEP Planning and Development Team solicited more targeted input from faculty and staff as well. As a means of encouraging a deeper level of involvement, particularly by faculty, the Team invited faculty and staff to develop proposals based on the broad topic list (the ten categories listed above), requesting a brief two-page “mini white paper” that presented the proposed topic, need, and justification. The Team incentivized the request for these proposals with modest stipends, offering research awards of $100 each for proposal development. Proposal guidelines (Appendix L) were developed and posted to the College website, along with instructions for online submission. As part of the mini-proposal submission process, contributors were asked whether they were interested in expanding their ideas into full white papers and whether they were interested in participating in the development of the Quality Enhancement Plan after the topic was selected.

Using an established rubric (Appendix M) and blind review procedure, multiple readers considered the submitted proposals based on each topic’s

- importance to the College;
- strong potential to effect improved student learning in the classroom;
- potential to affect a well-defined and large group of credit-seeking students;
- potential for adequate resources;
- clear identification of the level of departmental and unit involvement;
- identification of assessment measures to substantiate student learning; and
- presentation of either a new endeavor or a significant extension of ongoing efforts.

From the 12 submitted mini-white papers, readers selected the top four proposals for the authors to expand into full white papers, again incentivized but by more significant research awards of $1000 each. The guidelines for full white papers (Appendix N) included questions authors were to address for each of the required major components: student learning, critical thinking, significance and urgency, description and scope, assessment, schedule/timeline, resource requirements, risk assessment, commitment and support of the topic, available WGTC
expertise, and bibliography. The top four white papers were submitted to senior leadership members for review and final topic selection:

1. Pre-Teaching in Math Learning Support Classes
3. Improving Student Success in the Developmental Mathematics Classroom Using Technology and Course Redesign
4. Write to Think: Improving Student Learning through Writing Across the Curriculum

Led by the evidence provided by data and within the white papers, senior leadership selected the topic related to increasing student success in learning support math courses, proposed by a full-time math faculty member: *Improving Student Success in the Developmental Mathematics Classroom Using Technology and Course Redesign*. Although all agreed that the primary focus should be on increasing math readiness, it had also become increasingly clear throughout the process of topic solicitation, proposal review, and data analysis that enhancing students’ critical thinking and problem-solving skills was also a pressing need. The senior leadership therefore requested that the final QEP topic focus not only on enhancing student success in learning support math but also on improving students’ quantitative reasoning and problem-solving skills.

The integration of the two echoes the stance of the 2008 National Mathematics Advisory Panel report to Education Secretary Margaret Spellings, which noted that to prepare students adequately for algebra, which is the primary intent of WGTC’s learning support math course sequence, “the curriculum must simultaneously develop conceptual understanding, computational fluency and problem solving skills.” Additionally, the selection of *Improving Student Success in the Developmental Mathematics Classroom Using Technology and Course Redesign* as the final QEP topic addresses three of the five primary concerns expressed by students themselves in their survey responses: problem-solving, use of technology, and learning support math.

**Determinations**

As the QEP Leadership Team and the QEP Planning and Development Team deliberated the data gathered before and during selection of the QEP topic, they determined these factors to be the most significant:

1. The overall challenge that math presents to students
2. Math’s potential to impede or halt student progression toward graduation
3. Low student success rates in learning support math as compared to other learning support courses
4. Low student success rates in the subsequent college algebra course
5. Low critical thinking and problem-solving abilities, even after completion of degree programs
6. Low participation in active and collaborative learning activities that foster student engagement

It became clear during the QEP topic selection process that WGTC has a need to increase student engagement and achievement in math as a means of enhancing learning. In light of CCSSE and CAAP results, the College also feels compelled to examine students’ critical reasoning and problem-solving abilities and make every effort to improve student learning outcomes in these areas, particularly as they relate to bolstering achievement in math.

As the QEP topic was finalized, the QEP Implementation Team was developed, chaired by the QEP Director. The Team outlined a structure of subcommittees that would be tasked with coordinating operational procedures required to effectively execute the QEP (subcommittees are further detailed on pp. 7-8 and in Appendix D). Among these, a subcommittee was formed to review the literature and best or promising practices of other institutions in fields related to the College’s topic. The subcommittee concluded the following:

- The most significant gains in student learning in math are the result of embedding both computational and problem-solving skills within the course content.
- Modularization of course content addresses students’ varying levels of preparation and facilitates mastery learning.
- Computer-aided instruction (CAI) provides interactivity, immediate feedback, and self-regulation, leading to higher concept mastery and improved attitudes toward learning.
- Providing multiple exit points within developmental requirements allows students to move more quickly to a desired program of study, maintaining momentum and motivation to persist.
- An emporium model of course delivery provides a flexible, learner-centered approach that offers necessary support while requiring students to take an active role in their own learning.

Through this review, the College was able to narrow its focus and determine the direction of the learning support math course redesign: The existing three-course math learning support
sequence will be combined into one modularized course with multiple exit points and will utilize the emporium model recommended by the National Center for Academic Transformation (NCAT); that model replaces traditional lectures with a learning resource center, interactive software, and on-demand personalized assistance. The best/promising practices review also enabled the College to identify the "champion" faculty and staff needed to develop, implement, and sustain the QEP. Consultation with and visits to other colleges helped facilitate the selection of ALEKS software by McGraw-Hill as the vehicle for the computer-aided instructional delivery in the learning support courses.

Upon choosing a topic and reviewing the associated literature, a QEP framework for implementing the College’s QEP was designed, following the best practices models of Tennessee, North Carolina, Virginia, and Kentucky Community College Systems, as well as colleges and universities in Georgia:

- Accelerated learning support math course sequence with multiple exit points and opportunities for students to complete multiple courses within a semester.
- Course redesign of three courses in learning support math sequence using a modularized approach, with discrete topics or units connected to specific competencies.
- Reevaluation of current exit testing to accommodate modules and student progression.
- Diagnostic testing to allow for customizable, flexible learning options that identify prior knowledge and target each student’s specific learning needs.
- Curriculum alignment of course competencies, learning activities, assessments, and learning outcomes to focus on college math readiness and lifelong numeracy.
- Problem-solving as a central theme in course activities and assessments.
- Mastery learning focused on conceptual understanding and use of contextually-based problems.
- Integration of ALEKS intelligent learning technology as a vehicle for content delivery, allowing access from any Internet connection.
- Interactive learning materials incorporating text content, embedded tutoring, video, immediate feedback on homework/quizzes, and mastery assessment.
- Emporium style lab environment with expanded lab hours staffed by qualified math lab assistants and tutors.
- Ongoing professional development opportunities for faculty, specific to ALEKS and the emporium model and in learning-centered classroom facilitation.
• Ongoing research and evaluation to collect data, measure impact, and inform future decisions.

The review of literature and best practices leading to the development of this framework in support of the QEP topic *Reaching the Summit: Conquering Mathematics* is summarized in the following section.

**APPLICATION OF THE REVIEW OF LITERATURE AND BEST PRACTICES**

A review of the literature and best practices included gathering more information on the following topics related to WGTC’s QEP, *Reaching the Summit: Conquering Mathematics*, which focuses on improving student learning and success in learning support math:

- Possible deterrents to student success in math, including lack of preparedness for college-level work and placement practices;
- Strategies to support the goal of the QEP to increase success in learning support math, including the following:
  - Learner-centered methods of instruction
  - Problem-solving
  - Computer-aided instruction;
- Features and capabilities of intelligent learning systems available, specifically leading to the choice of ALEKS as the method of instructional delivery for the QEP;
- The emporium model of course redesign, including successful attempts by other institutions; and
- Components of successful professional development efforts, including goals and methods of presenting opportunities for faculty in support of the QEP.

**Possible Deterrents to Student Success**

More than half of students enrolled in postsecondary institutions exhibit through entrance testing a need for academic remediation in reading, writing, and/or math and are recommended for developmental courses (Attewell, Levin, Domina & Levey, 2006). The number is even higher for entering community college students, at nearly 60% recommended or required to enroll in at least one remedial course (Bailey, Jeong & Cho, 2010). However, researchers argue that even this number is an underestimation of student lack of preparedness for college-level coursework; many more students’ placement test results reveal a deficiency, but because some colleges do not require the remediation, students never enroll in the remedial courses.
Many institutions have policies that recommend but do not require students whose placement results reflect a need for remediation to enroll in those courses before attempting credit-bearing courses. However, mandatory testing and placement are now strongly recommended in the literature on best practices in developmental education (Boylan, 2002; Perin, 2006). The current national trend seems to be toward state standardization and enforcement of mandatory testing and placement but with the caveats that placement should include multiple measures, any needed remediation should be customized, and students should be allowed to begin their introductory college-level courses as soon as possible (Jenkins & Cho, 2012).

One of the considerations surrounding mandatory testing and placement has been the validity of testing in accurately predicting readiness and the potential for success in college-level courses. Although concern has arisen over placement test accuracy, a meta-analysis of placement outcomes for the two leading testing products, ACCUPLACER and COMPASS, found these two to be a valid predictor of student success in college-level courses, particularly math (Mattern & Packman, 2009). West Georgia Technical College uses the ACT COMPASS for admissions placement into appropriate English, math, and reading courses and as an exit exam for students as they complete the highest levels of their learning support courses. Studies suggest, however, that these testing methods alone do not lead to improved learning outcomes for students who take the recommended remedial courses. As shown previously in this report, WGTC students who have completed their math learning support course sequence still have low scores on the exit exam designed to identify students who at that point should be ready for college level algebra. To improve early intervention efforts that better meet student needs and enhance student learning, supplemental placement methods are necessary. One suggestion is to use multiple measures, including targeted diagnostics, or what are termed “actionable assessments” (Hughes & Scott-Clayton, 2011). Such assessments would identify skills students already possess and allow them to concentrate on areas they need in order to be successful. The two leaders in the college placement testing market also suggest that their products, ACCUPLACER and COMPASS, may work best when combined with other assessment measures (ACT, 2006; College Board, 2003). Software such as MyMathlab by Pearson and ALEKS by McGraw-Hill, among others, offer a targeted diagnostic feature that allows for flexible options to meet each student’s learning needs; partly for this reason, West Georgia Technical College has chosen to incorporate ALEKS into its learning support math courses as a strategy to achieve the goal of the QEP.
Of the three developmental studies areas—reading, writing, and math—students seem to struggle in particular with math courses. Although 75% of two-year college students are required to take remedial math courses, withdrawal and failure rates significantly lower the rate of successful completion of those courses (Bonham & Davis, 2011). Students who fail to complete their first developmental course usually do not return to complete it or attempt other courses (Biswas, 2007). While an average of 70% pass all of their writing and reading developmental courses, respectively, only 30% successfully complete all of their developmental math courses (Attewell, Lavin, Domina, & Levey, 2006).

**Strategies to Improve Student Success**

**Learner-Centered v Teacher-Centered Approach.** Because the learner-centered emporium model used in WGTC’s redesign of math learning support courses is a radical departure from the traditional teacher-centered lecture format currently employed in those courses, helping faculty change roles from teacher-centered to learner-centered will be critical to the success of West Georgia Technical College’s QEP. Research suggests that student achievement is enhanced by teaching styles that incorporate learner-centered principles (Grasha, 1994; Hamilton, 2002).

A study by Miglietti and Strange (1998) found that students in community college remedial courses attained significantly higher course grades and expressed a higher sense of accomplishment in courses taught by teachers with a learner-centered teaching style. The researchers suggested that student learning outcomes can be improved if faculty systematically assess their teaching styles and adopt a more learner-centered orientation. However, a large number of two-year college faculty exhibit the characteristics common to teacher-centered rather than learner-centered styles. A teaching style inventory administered to 381 faculty members at 200 U.S. public and private colleges and universities revealed that 60% taught using the teacher-centered mode of instruction assuming the role of Expert, Authority, and Model (Grasha, 1994). The Facilitator and Delegator teaching styles, which are learner-centered, were used less in mathematics and computer science classes than in any other discipline. The Facilitator and Delegator styles represent a learner-centered approach that places instructors in a role as additional, rather than sole, resources. Instructors exhibiting these latter styles seek to help students develop their own capacity for self-direction and autonomy (Cross, 2002; Grasha, 2002). Such self-direction will be critical in the computer-aided instructional environment of the emporium model course redesign being implemented by West
Georgia Technical College. The emporium model emphasizes structuring a learning environment based on the needs of individual learners and their experiences; the emphasis is on promoting learner autonomy and enhancing learner achievement.

While learner-centered facilitation in West Georgia Technical College’s redesigned learning support math course is a critical component, faculty will need training and support in order to distinguish between a learner-centered environment and one that is learner-controlled. Learner-centered facilitation means preparing students to assume more responsibility in the learning process and being self-regulated, not necessarily self-paced or self-taught. Weimer (2003) makes the point that “when teaching is learner-centered, power is shared, not transferred wholesale.” Faculty still make key decisions about learning, but they no longer make all decisions and not always without student input. Weimer (2002) promotes five instructional practice areas to achieve learner-centered teaching: function of content, role of the instructor, responsibility for learning, processes and purposes of assessment, and balance of power. Based on these five dimensions, Blumberg (2010) has developed rubrics and benchmarking methods to help faculty self-assess their progress toward learner-centered teaching. These rubrics will be referenced as faculty develop their own method to evaluate the effectiveness of faculty development efforts to increase the use of learner-centered approaches throughout the QEP. Training in these practices will be the starting point to help WGTC faculty find the balance between student self-regulation and self-teaching and help them apply the principles of learner-centered teaching.

**Problem-Solving.** As part of its learning support math course redesign, West Georgia Technical College plans to incorporate problem-solving as a contextualized methodology into its math curriculum. Research indicates that students who approach math through problem-solving have higher levels of math understanding than students with more traditional instruction (Cai, 2003). Teaching math through problem-solving involves changing instructors’ roles from teaching-centered to learning-centered, intentionally designing and selecting relevant problems for instruction, collaborative learning, and problematizing the curriculum. This approach to learning math actively involves students in the process of knowledge construction by engaging them in cognitively demanding questions that require them to justify their path to math solutions, rather than follow formulaic procedures to obtain answers.
The standards document of the American Mathematical Association of Two-Year Colleges (AMATYC), *Beyond Crossroads: Implementing Mathematics Standards in the First Two Years of College*, stresses that building problem-solving skills is as critical as, if not more critical than, mastering basic algorithmic skills (2006). Effective problem-solving involves interconnecting concepts, envisioning multiple solution paths, and monitoring one’s own progress in order to appropriately revise those paths to arrive at a reasonable solution. A common characteristic of developmental math students, however, is a failure to plot a solution in advance or monitor their own progress and an inability to switch to alternate strategies when their initial tactic fails to solve a problem. To improve developmental math students’ problem-solving capabilities, AMATYC standards (2006) recommend that faculty employ intentional and persistent methods in the classroom, including modeling multiple problem-solving approaches, contextualizing or situating content in authentic situations, and allowing students adequate time to reflect and seek alternative solutions to problems. Problem-solving through contextualization in developmental algebra courses has been shown to be particularly effective, increasing the likelihood of successful remediation, as well as accelerated entry into and successful completion of college-level coursework (Perrin, 2011). Research indicates that students with low basic skills can learn more effectively and advance to college-level programs more readily through contextualization of basic skills instruction than by using standard, noncontextualized practices (Perin, 2011) and that contextualization promotes “deep learning” through the integration of ideas and concepts (Moltz, 2010).

One of the most common approaches to problem-solving is a four-stage method proposed by Pólya (1973), which uses a connection-oriented thinking process for obtaining a solution. Pólya has been referred to as “the father of the modern focus on problem solving in mathematics education” (Passmore, 2007, p. 44). Pólya proposes a four-stage model for problem-solving: understanding the problem or forming the connections between its different aspects; devising a plan rearranging the elements for a solution; executing the plan, or solving the calculation; and looking back or reflecting on the process. A recent study assessing each of Pólya’s four stages of problem-solving with pre-algebra students found that the students had the most difficulty with Stage 2, followed by Stage 4 (Czarnocha, Baker, Prabhu, & Dias, 2009). The researchers suggest that students’ difficulty with these stages is a result of the disparity between the problem-solving process and the content and approach presented by most math textbooks. Stages 2 and 4 of Pólya’s method are traditionally skipped by the majority of textbooks and, consequently, by classroom instructors; however, these stages are where the majority of critical
reasoning takes place during problem-solving activity. In order to encourage development of students’ problem-solving skills, the QEP redesign will incorporate Pólya’s four-stage method in classroom activities; full-time faculty will develop examples of activities for use by all faculty teaching the redesigned course, along with rubrics for assessment.

In evaluating the effectiveness of integrating problem-solving into remedial courses, research suggests selecting discipline-area courses that are required for graduation by large numbers of students but that also have high failure rates (Perin 2011). In its evaluation of the QEP, WGTC will include a comparison of success rates in the college algebra course MATH 1111 before and after implementation of problem-solving strategies through the math learning support redesign. Evaluating the success rate of the college algebra gateway course will help determine the effectiveness of both the modularization and problem-solving methods employed in the redesign of the learning support course sequence leading to it. The QUANT-Q by Insight Assessment will be administered to MATH 0090 students preparing to enter MATH 1111 to gauge the effectiveness of problem-solving strategies implemented in the redesigned MATH 0090 course. Because the QUANT-Q measures quantitative reasoning capabilities as well as computational skills, it will be a valuable assessment tool for the QEP.

**Computer-Aided Instruction.** One of the key strategies chosen for the redesign of the learning support math courses targeted in WGTC’s QEP is the use of computer-aided instruction (CAI) as an instructional methodology. The benefits of CAI have been strongly debated over the last ten years. In general, however, the efficacy of CAI is well supported in the literature, particularly that related to developmental math instruction. More than 40% of community colleges nationwide use CAI (NCES, 2003). Many of those using CAI for their developmental or credit math courses utilize software products such as MyMathLab, Math Zone, ALEKS, Hawkes, Plato, Cognitive Tutor, and EnableMath.

The Technology Principle of the National Council of Teachers of Mathematics’ *Principles and Standards* (2000) states that “[t]echnology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances students’ learning” (p.3). Although the stance taken by the American Mathematical Association of Two-Year Colleges (2006) is consistent with this statement, they add that merely adding technology to a lecture method does not improve student learning. Technology used to enhance good pedagogical practice, on the other hand, can shift the learning environment from teacher-centered to learner-centered and
improve the quality of instruction and student learning (Twigg, 2011). In basic skills courses such as the learning support math courses being redesigned by WGTC, much of the content relies on a core of basic principles that underpin a considerably larger amount of numeric calculation. Such content is best mastered by examples, practice efforts, and repetition, tactics which are well suited to the interactive instructional methods provided by CAI.

CAI offers benefits to both instructors and students in the learning process. The key instructor benefits of CAI include freeing faculty from labor-intensive tasks such as materials and test generation and grading, as well as tracking student progress. By moving such repetitive tasks to technology, instructors are able to spend more time providing individualized attention and assistance when and where it is most needed. The student advantages of using CAI in a learning support math classroom are many, including flexibility, immediate feedback, structure, and active learning, but as importantly, the freedom to make mistakes while learning without fear of embarrassment or loss of self-confidence. An American Institutes of Research Access Center research brief (2004) claims that for many students who have unsuccessfully experienced traditional classroom instruction, CAI provides an attractive, nonthreatening alternative, encouraging students when they arrive at correct solutions and guiding them when they answer incorrectly.

The critical value of computer-aided instruction lies in its capacity to provide more active forms of learning through interactive, engaging tutorials and exercises that give students the necessary practice for mastery; computerized, continuous, low-stakes quizzes that provide immediate feedback and reinforcement; and the ability to access material they need, when they need it, an approach that takes into account differences in learning styles and abilities. When used in this capacity, CAI holds the potential to drastically improve student learning (Twigg, 2008).

An analysis of 123 institutions revealed that students in courses that included CAI learned more in less time, post-tested with slightly higher scores, and held improved attitudes toward learning (Kinney, Stottlemeyer, Hatfield, & Robertson, 2004). Students in CAI environments are also more likely to meet course objectives on schedule (Kinney & Robertson, 2003) and have a greater sense of control over their learning because they can navigate the course at their own pace and according to their individual learning needs and receive more individual attention than in a more traditional lecture class (Lundell & Higbee, 2001). Interactive web-based assessment
in CAI environments affords opportunities for immediate scoring and feedback on a large number of randomized items, providing an automatic diagnosis system for performance evaluation and helping students more effectively design their own learning paths (Nguyen & Kulm, 2005).

Following proven practices for integrating computer-aided instruction into its learning support math course redesign offers WGTC the opportunity to introduce more active learning strategies. This approach will help shift the learning process from teacher-centered to learner-centered, actively engaging students with the course content and in their own learning.

**ALEKS Intelligent Learning System**

After a careful evaluation of the commercial software available for computer-aided instruction, West Georgia Technical College has chosen ALEKS as the learning system to be utilized for course delivery in its QEP redesign of math learning support courses. A comparative study of several intelligent learning systems (Burden, 2007) notes that the student and administrative features of ALEKS, as well as its robust assessment capabilities, make it a prime choice for use in math remediation.

**Assessment and LEarning in Knowledge Spaces (ALEKS)** is a web-based, artificially intelligent assessment and learning system designed and distributed by McGraw-Hill Higher Education (http://www.aleks.com/). Using a system of complex algorithms and interactive math problems, ALEKS uses adaptive questioning to determine what students know or do not know about specific math topics and what they are ready to learn next. Students master increasingly challenging material through continuous assessment. As a student works through the material and assessments, his or her knowledge is represented by a multicolor pie chart that quickly and visually illustrates the student’s level of progression. By determining the student's prerequisite knowledge, the program offers only those topics the student is ready to learn; to ensure long-term retention of the material learned, ALEKS periodically assesses the student and adjusts the knowledge level based on performance. Mastery of a particular topic is achieved when the student has retained 90% of the concepts. Through a pie chart, the student graphically sees progress toward the goals of the course, with each filled-in “slice” corresponding to a completed required module, determined by the student’s initial diagnostic assessment. At any time the student may obtain a precise list of topics mastered, item-by-item, and an associated list of topics he or she is ready to learn next.
ALEKS also offers administrative functions that will facilitate tracking of student progress throughout the implementation of the QEP. ALEKS provides a centralized management system that can carry a student’s records through a variety of publisher-developed and instructor-developed modules and instructional aides. In order to view progress of the class as a whole, the instructor may examine a list of syllabus items with corresponding percentages of the level of class mastery for each. At a glance, the instructor is able to see details of what topics the class "on average" is struggling with or has mastered. Another useful aspect of the monitoring capabilities is being able to see student "time-on-task": ALEKS records how much time is spent doing problems online, not just being logged on. This tool will be a useful feature as the assessment plan of the QEP will include a comparison of success rates in the redesigned course based on students' time on task, among other factors. Perhaps most importantly, ALEKS provides a diagnostic and prescriptive analysis of each student, establishes individualized lessons, and monitors each student's progress. The diagnostic assessment offered by ALEKS is one of the critical components necessary in the learning support course redesign of the QEP, allowing accurate placement of students and contributing to their successful remediation.

ALEKS provides interactive instructions, allowing students to take virtual notes, bookmark, and highlight text passages and get embedded tutoring through the "explain it to me" feature on topics where they need assistance. Multimedia resources, such as videos, images, and worked examples, provide additional learning support. Research indicates that the interactive features offered by web-based technology, such as these embedded in ALEKS, provide more opportunities for students to self-regulate and self-evaluate, increasing their attitudes and motivation toward the subject (Nguyen, Hsieh, & Allen, 2006), and give students control over their own learning (Sanchis, 2001).

Case studies of colleges and universities using ALEKS in their developmental and credit math courses credit the software’s benefits of additional time on task through required and self-determined lab time, supplemental instruction, or tutoring and the product’s assessment that forces mastery of concepts for their gains in student performance and course completion rates. A study conducted by Taylor (2008) suggested that students using ALEKS exhibited a decreased level of math anxiety, increased positive attitude, and improved math achievement over the semester. Burke (2008) details the efficacy of using ALEKS for placement, college-
level preparedness, and course redesign, including several case studies of successful course redesigns in developmental mathematics:

- California’s Foothill College, which recently began using ALEKS software for its developmental math program, *Math My Way*, reports preliminary outcomes that point to a 20% higher success rate in college level math for program completers than for students in previous cohorts that did not use ALEKS. Students who have progressed through *Math My Way* experience 80% success rates in their first gateway math course, with over 70% receiving a grade of A or B.

- Missouri Western State University has experienced similar success since it began piloting ALEKS use in its developmental math program in 2003. Currently, all Western’s developmental math courses utilize ALEKS, with a student pass rate of 78% overall. However, R. E. Moore, Western’s Director of Developmental Mathematics, defines the success rate as 96%, reflecting completion by students “who gave ALEKS a real try,” meaning all those who did not receive a grade of FA (failed due to lack of attendance), which identifies students who did not make even a minimum effort to pass the course.

- Middlesex County College in NJ experienced a 77% increase in course pass rate over their historic developmental math course pass rates of 40-50% prior to ALEKS implementation in 2007.

**The Emporium Model: Best Practices and Models**

West Georgia Technical College’s QEP redesign of its learning support math courses will follow the emporium model of instruction, developed by Virginia Tech and advanced by the National Center for Academic Transformation (NCAT) as one of six models for course redesign to improve student learning. NCAT is an independent, not-for-profit organization working with institutions to help them redesign courses for greater use of technology, improved student learning, and reduced instructional costs. NCAT maintains that current practice in higher education is to individualize faculty experiences, allowing greater latitude in course development and delivery while standardizing student learning experiences, following a traditional lecture and fixed scheduling pattern. The emporium model suggests that we should do just the opposite: student learning should be individualized to meet the wide variety of student needs and levels of
understanding while faculty practice should be standardized to ensure consistent learning outcomes and maintain quality (Twigg, 2008).

In redesigning any course using the emporium model, NCAT suggests that colleges follow six principles essential to success in improving student learning.

1. **Redesign the whole course.** A collective commitment from all faculty rather than an individual redesigning a single class or section allows feedback and continuous improvement of the teaching and learning process and leads to shared best practices. Many colleges have found that whole course redesign also improves course coherence and eliminates “course drift,” the result of inconsistently applied grading and standards by multiple instructors that produces unreliable student learning outcomes (“Lessons,” 2011).

2. **Encourage active learning.** This principle is a well-established pedagogical approach that leads to improved student learning. In the words of Chickering & Gamson (1987), “Learning is not a spectator sport.” Students do not learn by sitting, listening, memorizing, and echoing; they learn by doing. Replacing lecture with an array of interactive materials, resources, and activities shifts the learning process from teacher-centered to learner-centered, thoughtfully engaging students with the course content.

3. **Provide students with individualized assistance.** The emporium model replaces lecture with individual and small group activities generated by computer software designed to give immediate feedback. Using computer-aided instruction is part of a necessary support structure, particularly for academically at-risk students such as those in developmental studies courses. However, when students encounter difficulty understanding concepts or making progress, they need the encouragement and assistance of an instructor to help them stay on task and persist. Institutions employing the emporium model find that providing individual assistance to students also aids faculty in determining the most common stumbling blocks and improving the associated learning activities (Twigg, 2011).

4. **Build on ongoing assessment and prompt (automated) feedback.** Shifting traditional summative or high-stakes testing to the continuous, formative assessment and feedback provided by the computer-aided instruction of the emporium model encourages content mastery; students repeat material as often as necessary, engaging in multiple low-stakes quizzes until they “get it.” Repeated practice with detailed diagnostic feedback allows for timely corrective action and advances the learning process. The most successful emporium model redesigns require students to complete homework sets each week, completing the entire set before learning which responses are correct or incorrect, a tactic which takes
students to the next level of autonomy in the learning process (Burke, 2008). Most also require students to keep a notebook demonstrating their work on homework and practice tests; notebooks are holistically graded using common rubrics.

5. **Ensure sufficient time on task and monitor student progress.** Early efforts at course redesign using the emporium model allowed an entirely self-paced learning environment. Faculty involved in these projects, however, soon realized that students need a structured, concrete learning path and milestones of achievement; all projects have seen a strong, direct correlation between student success and time on task (“Lessons,” 2011). Most colleges currently using the emporium model require students to log in at specific intervals and to spend a minimum amount of time in the course materials, generally three hours a week. The software packages most commonly used (MyMathLab and ALEKS) have exceptional tracking features that allow faculty to carefully monitor students’ time on task and their performance as they advance through the material. Faculty contact students who are not progressing to provide timely assistance and contact students who are progressing well to encourage them.

6. **Modularize the student learning experience, especially in developmental math.** The traditional “one size fits all” lecture method is replaced in the emporium model by a modularized curriculum in which each course is reorganized into 10-12 modules, customizable for each student based on background and skill level, as well as on learning preferences and academic goals. Students enroll in and complete only the modules that address their deficiencies and are relevant to their intended course of study. Effective modularization depends on accurate diagnostic assessments and placement and on a course structure that allows students to progress to the next level immediately after completing the previous one. Successful course redesigns employing the emporium model integrate flexible registration and scheduling throughout the semester to maximize student success (Twigg, 2008).

Colleges and universities that have redesigned both developmental and college-level algebra courses following the NCAT tenets of course redesign have shown increased passage rates varying from a 31% increase (basic math and intermediate algebra at Cleveland State Community College in Tennessee) to a 95% increase (intermediate algebra at the University of Alabama). The impact on developmental course redesign in the institutions participating through NCAT projects has been an average 51% increase in passage rates from the traditional method to the redesigned method using the emporium model.
Prior to the redesign of their developmental studies courses using the emporium model, Cleveland State Community College (CSCC) reported an average course completion rate of 55%; after the redesign during fall 2008, that rate increased to 72%. Even more indicative of course redesign success than completion rates in developmental courses is student success in subsequent college-level math courses. Before the CSCC course redesign, the completion rate of developmental students in the college-level course was 71% compared to a completion rate of 70% for other students. Tracking of students who completed the spring 2008 redesigned developmental courses revealed that the completion rate for these students increased to 81% compared to a completion rate of 70% for other students. Students who had come through the redesigned courses also had higher average course grades in the college-level course: 3.15 compared to 2.94 (Twigg, 2008). The CSCC redesign team identified the following factors that contributed to the success of the project:

- **Student engagement (time on task).** Students in the redesigned courses not only were required to spend time each week in the classroom and math lab but also had to log additional hours at home, watch videos and take notes, complete homework sets, and complete every quiz and exam. This additional time on task ensures the mastery of content necessary to student success in learning support and subsequent courses.

- **Continuous enrollment.** The emporium model allows students to progress rapidly through modules, often leading to completion of multiple courses in a semester. In the CSCC redesign, 48 students (of 268 enrolled in the redesigned courses) were able to complete more than one course during the semester.

- **Curricular changes.** Faculty modified the math curriculum to include more concentration on topics such as graphing in order to better prepare students for work at the next level.

- **Overcoming math anxiety.** Through the volume of work they were required to complete, students in the redesigned courses were able to conquer their fear of math and remove that factor as an obstacle to success.

When institutions involved in the original NCAT course redesign project in 1998 encountered implementation difficulties, in almost every instance the problem was directly related to a lack of readiness (Twigg, 2008). NCAT emphasizes that course redesign relies on the readiness of the institution to embark on and commit to the project. That organization has identified readiness criteria for those considering redesign, including potential for high impact on the curriculum;
collective decision-making by faculty; faculty champions with requisite leadership, pedagogical, and technology skills; clear identification of learning outcomes; and self-sustainability (Twigg, 2008). West Georgia Technical College has identified all of these factors as clear strengths within the institution, signaling readiness to implement the learning support math course redesign outlined in the QEP.

Faculty Development and Support

Consistent and ongoing professional development is critical to promoting faculty ownership of the QEP. The concepts of the emporium model in course redesign, the efficacies of problem-solving and computer-aided instruction, the use of ALEKS as an instructional vehicle, and the changing roles of faculty from teacher-centered lecturer to learner-centered facilitator will all be difficult to comprehend and practice without intentional and thoughtful faculty development in those areas.

The goals of faculty development are variously regarded as enhancing curricular content knowledge, learning to apply new technologies to instruction, improving presentation skills, orienting and enculturating new instructors to the institution, revitalizing teachers, and furthering the mission of the institution (Grant & Keim, 2002; Brawer, 1990). Although methods of providing activities and programs vary, the overriding goal of developing and sustaining successful faculty development opportunities remains consistent throughout the literature: to improve teaching and learning. The success of any faculty development is a measure of its effectiveness in meeting this determined goal. A review of the literature presents several criteria inherent to a successful faculty development program.

Guskey (2003) analyzes 13 lists of such criteria drawn from publications of the Educational Testing Service, Education Development Center, National Partnership for Excellence and Accountability in Teaching, and National Staff Development Council, to name a few. While the lists distinguish 21 characteristics, the most consistent criteria for success include factors such as faculty collaboration, appropriate allocation of time, a close alignment between the activities and institutional goals, and strong evaluation procedures. Sydow (2000) asserts that successful faculty development must be comprehensive, faculty driven, supported by the administration, adequately funded, and periodically evaluated and must maintain a learner-centered, research-driven approach. Brawer (1990) maintains that faculty development activities at the community college level should center on “attitude adjustment” as much as on instructional approaches.
George Kuh, developer of the National Survey of Student Engagement (NSSE), in his report on high impact educational practices (2008), contends that what faculty \textit{think} and \textit{value} positively or negatively affects student engagement in college activities. How effective the QEP is across the College will depend on how well faculty perceive and understand the program. Because rigorous and thoughtful professional development is critical in the adoption of any proposed innovation (Epper & Baker, 2009), faculty preparation for implementing West Georgia’s QEP will be continuous and ongoing. It will include training in and exposure to the variety of learning strategies used in the learning support course redesign, including problem-solving, learner-centered teaching, and computer-aided instruction. Training specific to the tools faculty will use, including ALEKS and emporium math lab facilitation, will also be a critical component.

**QEP GOAL, INITIATIVES, AND DESIRED OUTCOMES**

Comprehensive analysis of the institutional data, along with the research and review of best practices, established the direction and anticipated outcomes of the QEP. It became apparent during the topic selection process that the focus of the QEP would be to improve student learning in learning support math courses. Upon finalization of the QEP topic, attention was centered on how to measure student achievement and know that learning had taken place as a result of the QEP efforts in learning support math. The overwhelming conclusion, particularly by math faculty involved in committee discussions, was that the true measure of success in learning support is students’ readiness for college-level coursework. It was therefore determined that success in the gateway algebra course for those students who had completed learning support math after the course redesign would become part of the goal of the QEP as well:

**QEP Goal**

\textit{To improve student learning and success in learning support math and in the subsequent college algebra course.}

Development of the QEP initiatives and strategies was determined by this goal. The goals and outcomes subcommittee of the QEP Implementation Team, composed primarily of Institutional Effectiveness staff and representative math faculty (Appendix D), was charged with formulating a structure to support the goal of the QEP. The team developed four supporting initiatives, each of which includes multiple strategic components designed to achieve the QEP goal. Keeping in mind that student learning and success are centric to the QEP and to the goals of West Georgia Technical College, the subcommittee reviewed the College mission and strategic plan to ensure alignment of the QEP initiatives and strategies with these components. The Team found that the
QEP directly supports the following five of the College’s strategic goals (Appendix E), as outlined in the *West Georgia Technical College 2012-2015 Strategic Plan*: I. Ensure **access** to learning opportunities by providing educational programs, services, support systems, and facilities that meet student needs; II. Ensure the delivery of **quality educational programs and services** to meet the academic and technical education needs of individuals, provide pathways to satisfying and rewarding careers, and ensure a skilled workforce; III. Provide educational experiences that focus on **learning outcomes** appropriate for the development of academic skills, occupational competencies, and lifelong learning in all academic and technical programs; IV. Use **technology** in creative ways to enhance learning and streamline institutional processes; VI. Employ **quality indicators** to guide, assess, and improve the programs and services of the College. The team also developed student learning outcomes for the redesigned learning support math course, along with measures of success related to the QEP initiatives.

**QEP Initiatives and Strategies**

As discussed earlier, the purpose of WGTC’s current learning support math course sequence is to ensure that students have the appropriate foundational skills to progress to and complete the college-level algebra course required for all associate degrees. The most direct measures of student success include rates of successful completion of learning support math, progression to the college algebra course, and successful completion of that course. Indirect measures of student success such as student retention and persistence rates for both courses contribute to a more complete understanding of student progress.

Table 5 identifies the key measures of student success for the QEP. Each initiative includes the target for success and strategies to accomplish the initiative. Details of each strategy are included in the *Implementation Plan* section of this document.

*Table 5. Initiatives and Strategies of the QEP*

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Target for Success</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.</td>
<td>Minimum 10% increase in MATH 0090 course completion rates.</td>
<td>1. Redesign courses in math learning support sequence into one course.  2. Integrate CAI through ALEKS.  3. Develop emporium model math labs.  4. Strengthen tutoring services.  5. Enhance academic advisement efforts.</td>
</tr>
<tr>
<td>Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.</td>
<td>Minimum 10% increase in MATH 0090 course completion rates.</td>
<td>1. Align learning support activities and assessments with college level algebra</td>
</tr>
</tbody>
</table>
complete MATH 1111 as a result of completing the emporium model learning support course. | MATH 1111 course completion rate. | expectations. | 2. Adjust current learning support exit exam requirement. | 3. Offer and encourage enrollment in MATH 1111 immediately upon completion of learning support. |
---|---|---|---|---|
Improve students’ problem-solving skills. | Minimum 10% increase in general education assessment scores in critical thinking for problem-solving. | 1. Include problem-solving in course activities and assessments in learning support course. | 2. Employ real-world contextual problem-solving. |
Enhance faculty development opportunities in order to improve student learning. | Minimum 25% increase in faculty use of learner-centered methods in learning support and college algebra courses. | 1. Provide ALEKS training to full-time and adjunct faculty on all campuses. | 2. Provide resources on CAI, problem-solving, effective assessment methods, and learner-centered classroom facilitation. |

**Student Learning Outcomes**

While initiatives for the QEP were developed by members of the QEP goals and outcomes subcommittee, which included representative math faculty, student learning outcomes for MATH 0090 and MATH 1111 and for problem-solving were developed exclusively by math faculty. Faculty reviewed the total list of learning outcomes for the redesigned learning support math course and identified those most critical to student success in the next level of college algebra. Direct measures of assessment include performance and progress within the individual learning support course modules and college algebra course units, as well as student performance on the CAAP critical thinking and mathematics sections and on the QUANT-Q assessment. Indirect measures related to math and problem-solving performance include student responses to the CCSSE items on active and collaborative learning and responses to specific items on the Student Perceptions of Instructions completed at the end of each course.

Table 6 lists the student learning outcomes that have been identified for the learning support math course after redesign and for the college algebra course; these outcomes will be assessed within each course. For comparison, the student learning outcomes for the former MATH 0097, MATH 0098, and MATH 0099 courses are also shown. Student learning outcomes for problem-solving skills are included and will be assessed within each course and through the results of the QUANT-Q pre- and posttest.
Table 6. Course-Level Student Learning Outcomes for the QEP

<table>
<thead>
<tr>
<th>Course</th>
<th>Outcomes</th>
<th>Target for Success</th>
<th>Former Course</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesigned 0090, Modules 1-6</td>
<td>1. Perform mathematical operations on whole numbers, fractions, and decimals. 2. Convert between equivalent forms of numbers and units of measurement. 3. Use the appropriate formula to calculate the perimeter and/or area of geometric figures.</td>
<td>Minimum 70% of students will demonstrate mastery of course-level student learning outcomes at 80%.</td>
<td>MATH 0097</td>
<td>1. Perform mathematical operations involving whole numbers, fractions, and decimals. 2. Solve applied problems involving whole numbers, fractions, and decimals. 3. Round whole numbers and decimals to specified place values. 4. Apply the order of operations in simplifying expressions. 5. Convert fraction, decimal, or percent to equivalent other two forms. 6. Convert between US and metric units of measurement. 7. Use the appropriate formula to calculate the area, perimeter, or volume of geometric figures.</td>
</tr>
<tr>
<td>Redesigned 0090, Modules 7-12, 14A, 15A</td>
<td>1. Simplify algebraic expressions using order of operations. 2. Solve linear equations and inequalities. 3. Graph linear equations and inequalities. 4. Add, subtract, and multiply polynomials in one variable.</td>
<td>Minimum 70% of students will demonstrate mastery of course-level student learning outcomes at 80%.</td>
<td>MATH 0098</td>
<td>1. Simplify algebraic expressions using order of operations. 2. Solve linear equations. 3. Solve linear inequalities. 4. Graph linear equations. 5. Graph inequalities. 6. Graph lines using the slope and y-intercept. 7. Apply rules of integer exponents to simplify expressions. 8. Solve applied problems using scientific notation. 9. Perform operations with polynomials in several variables.</td>
</tr>
<tr>
<td>Redesigned 0090, Modules 13-15</td>
<td>1. Perform mathematical operations on polynomials. 2. Apply algebraic concepts to simplify various types of expressions. 3. Apply algebraic concepts to solve multiple types of equations and inequalities.</td>
<td>Minimum 70% of students will demonstrate mastery of course-level student learning outcomes at 80%.</td>
<td>MATH 0099</td>
<td>1. Solve applied problems using systems of equations. 2. Factor polynomials, binomials, trinomials, and 4-term polynomials. 3. Simplify complex rational expressions. 4. Solve rational equations, radical equations, and quadratic equations. 5. Solve applied problems involving rational equations.</td>
</tr>
</tbody>
</table>
### Problem-Solving Activities in Redesigned MATH 0090

1. Recognize and consider more than one strategy when problem solving.
2. Apply strategies in new or novel problem solving situations.
3. Demonstrate increased level of critical thinking skills in the context of quantitative literacy.

Minimum 70% of students will demonstrate mastery of course-level student learning outcomes at 80%.

### MATH 1111

1. Apply mathematical concepts, tools and reasoning to graph functions.
2. Apply mathematical concepts, tools, and reasoning to solve systems of equations.
3. Model mathematical concepts in real world application problems.
4. Apply properties of logarithms to expand and condense logarithmic expressions.

Minimum 70% of students will demonstrate mastery of course-level student learning outcomes at 80%.

The QEP initiatives and student learning outcomes serve as a framework for the assessment plan, which is detailed in the Assessment Plan section of this document.

### IMPLEMENTATION PLAN

Implementation of WGTC’s Quality Enhancement Plan entails a six-year process, including the pilot implementation phase from 2012 to 2013. The components of this process will involve significant cultural transformation within the College, through the shift of responsibility for learning from instructors to students, interdepartmental collaboration, professional development,
and extensive assessment and data evaluation. Modifications in instructional methodology and student support services will occur throughout the College during the implementation period.

**Course Redesign**

Implementation of the QEP will involve redesigning the way that learning support math is taught at West Georgia Technical College. In AY 2012, 191 individual sections of MATH 0097, 0098, and 0099 were taught by 34 full-time and adjunct faculty, enrolling over 3200 duplicated students; of the 1291 students enrolled in MATH 0099, 141 (11%) were repeating the course after at least one unsuccessful attempt. Of the total number of students enrolled, fewer than 50% have the potential under the current course design to complete the learning support sequence successfully and progress to the gateway college algebra course, MATH 1111. One of the objectives of the QEP is to increase that percentage dramatically, enabling students to progress at a higher rate and more rapid pace than the current structure allows.

Redesigning the sequence into one course containing 15 MATH 0090 modules, utilizing the emporium model supported by NCAT, and employing learner-centered methods of instruction, problem-solving, and computer-aided instruction will help achieve this aim. Upon approval of the QEP and full implementation of the plan, all sections of learning support math will be redesigned to MATH 0090. In order to explore the redesign strategies and adjust procedures for QEP implementation beginning in 2013, a pilot was designed beginning fall semester 2011 and continuing through fall 2012. Table 7 outlines the process undertaken during each phase of the pilot.
Table 7. Pilot 2011-2012: Phasing in the Learning Support Math Course Redesign

<table>
<thead>
<tr>
<th>Phase/Term</th>
<th>Campus(es); Instructor(s)</th>
<th>N Sections</th>
<th>Courses</th>
<th>N Faculty</th>
<th>N Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Fall 2011</td>
<td>Murphy Full-time (QEP Faculty Coordinators)</td>
<td>2</td>
<td>MATH 0097 MATH 0098</td>
<td>2</td>
<td>45</td>
</tr>
</tbody>
</table>

(Completed) Subcommittee Activities

QEP Director/Faculty Coordinators: Identified lab facilities on each campus; chose sections for Phase I pilot. Visited Macon State College to view ALEKS labs in action; consulted with math course redesign faculty at Georgia Gwinnett College and Missouri Western University regarding ALEKS use.

Registration: Designed and implemented procedures enabling students who complete one course in sequence to move seamlessly to next in same semester. Determined trial guidelines and procedures for concerns related to registration, coding of courses in Banner, the student record management system, and navigation through financial aid.

Curriculum Alignment: Determined syllabus elements for redesigned courses that would inform students of new requirements and activities; formulated final exams, assessment plan, rubrics, and grading system to pilot. Finalized ALEKS interactive textbook.

Research: Began review of literature and case studies.

Marketing: Finalized QEP tagline and presented selection of logos for pilot students to choose final design. Worked with pilot students to design t-shirt; designed banners and distributed to all campuses to promote QEP. Designed student informational “summits” to be presented each semester; determined newsletter format.

Professional Development: Scheduled mini-training session for instructors teaching spring semester; planned ALEKS consultation/training for full-time faculty spring 2012. Ordered faculty resources: books and webinars; distributed to all libraries.

IT Support: Reviewed lab tracking software to differentiate student time on task in class/computer labs v outside; chose LanSchool to be installed in all learning support math labs. Loaded QEP logo as background image on all WGTC phones.

Assessment: Developed student exit survey for pilot sections; administered via email link to Survey Monkey and gathered results.
### Reaching the Summit: Conquering Mathematics

#### II Spring 2012

**Murphy added: Douglas, LaGrange Full-time**

<table>
<thead>
<tr>
<th></th>
<th>7</th>
<th>MATH 0097</th>
<th>MATH 0098</th>
<th>MATH 0099</th>
<th>4</th>
<th>101</th>
</tr>
</thead>
</table>

**(Completed) Subcommittee Activities**

**QEP Director/Faculty Coordinators:** Developed presentation for collegewide in-service detailing pilot results to date. Scheduled summer pilot sections and faculty.

**Registration:** Defined method of entering ALEKS course identifiers into Banner schedule.

**Goals/Outcomes:** Determined preliminary learning outcomes for learning support math course sequence.

**Curriculum Alignment:** Reviewed data and determined necessary changes for moving from 3-course sequence to combined learning support math course, fully redesigned.

**Marketing:** Distributed t-shirts; developed and posted first QEP newsletter. Chose promotional items in accordance with mountain-climbing theme for *Reaching the Summit: Conquering Mathematics*.

**Professional Development:** Scheduled and coordinated first ALEKS training for remaining champion faculty, delivered in-house in Murphy Campus QEP math lab.

**Lab Scheduling:** Developed job description for math lab facilitators; posted position and screened applicants.

**Assessment:** Analyzed data from fall pilot sections; compiled results for distribution.

#### III Summer 2012

**Murphy Douglas LaGrange added: Carroll, Coweta Full-time**

<table>
<thead>
<tr>
<th></th>
<th>11</th>
<th>MATH 0097</th>
<th>MATH 0098</th>
<th>MATH 0099</th>
<th>6</th>
<th>130</th>
</tr>
</thead>
</table>

**(Completed) Subcommittee Activities**

**QEP Director/Faculty Coordinators:** Finalized QEP annual budget, based on pilot to date and QEP subcommittee recommendations. Viewed webinars presented by Pearson/MyMathLab and by other colleges involved in course redesign initiatives. Developed advisement Q/A flyer to be distributed to students, faculty/staff regarding upcoming QEP redesigned learning support math course sections available for fall 2012. Presented QEP pilot findings and upcoming events to WGTC Local Board of Directors in their scheduled meeting and to faculty and staff in planned in-service.

**Registration:** Discussed changes necessary for combined course, MATH 0090, renamed as *QEP Summit Math* during remaining pilot phase. Anticipated financial aid ramifications and potential issues related to combined course for students not completing in one semester.
**Research:** Completed review of literature and case studies; reported best practices of model programs.

**Marketing:** Finalized schedule of student informational “summits” on each campus; worked with Student Government Association on schedule and coordination of supporting activities. Ordered/developed promotional items for summits and fall Week of Welcome (WOW) on all campuses, including rock climbing wall rental; completed QEP video including pilot student accounts of QEP experiences.

**Professional Development:** Scheduled and developed ALEKS training sessions for all full-time and adjunct faculty teaching fall 2012.

**Assessment:** Analyzed data from spring pilot sections; compiled results for distribution. Began comparative data review of ALEKS with traditional learning support math sections; began comparative analysis of MATH 1111 completion rates and success rates of students who completed traditional and redesigned learning support math leading to college algebra.

### IV Fall 2012

<table>
<thead>
<tr>
<th>All campuses</th>
<th>Full-time, Selected Adjunct</th>
<th>MATH 0090 (MATH 0097/0098/0099 combined and redesigned)</th>
<th>8</th>
<th>TBD</th>
</tr>
</thead>
</table>

**(Planned) Subcommittee Activities**

**QEP Director/Faculty Coordinators:** Meet with all math pilot faculty to brief and debrief regarding activities in final phase pilot sections of MATH 0090. Finalize syllabus and course assessments for the redesigned course.

**Registration:** Continue to monitor issues related to student advisement and registration for redesigned course; develop means of including QEP information in new student correspondence and orientation.

**Marketing:** Post QEP newsletter and update website with upcoming QEP activities and information. Continue internal promotional campaign for institutionalization of QEP project. Conduct QEP Student Summits on each campus.

**Professional Development:** Order faculty resources for libraries; plan and schedule ALEKS training sessions as ongoing for new faculty, including newly hired math lab facilitators. Discuss upcoming conference opportunities for faculty involvement. Plan and schedule in-house sessions on learner-centered v teacher-centered instructional approaches and incorporating problem-solving for improved student learning.

**Assessment:** Continue analyzing data and compiling results for distribution. Develop and administer entering pilot student survey, including attitudinal items.
Upon approval by the Commission, as full implementation of the QEP begins in January 2013, elements of the course redesign will be refined as needed in order to improve the process. Other components of the QEP implementation will be ongoing from years 2013-2017 and will include those outlined below. Further information about each component is included in the QEP Implementation Timeline and Assessment Plan sections of this document.

Implementing Learning Strategies

Faculty will be responsible for integrating appropriate learning strategies into the redesigned learning support math course. The three learning strategies identified through the literature review as those most effective in improving student success in math were computer-aided instruction (CAI), learner-centered pedagogy, and problem-solving. As faculty undergo professional development and training in these areas, they will be phased into the learning support course MATH 0090.

The first necessary step in the course redesign is the integration of CAI, the instructional method upon which the emporium model relies. Computer-aided instruction has been implemented in the pilot sections, and upon approval and full implementation of the QEP, all learning support math sections will transition to CAI in spring 2013. To facilitate a smooth implementation of CAI, the first three phases of pilot sections were taught by full-time faculty members. Adjunct faculty will be assigned to sections in the last semester, fall 2012, of the pilot sequence. This plan will allow ample time for training adjunct faculty members before they implement a new teaching methodology. The Faculty Coordinator involved in the first phase of the pilot received training in ALEKS, the software system chosen for the learning support course redesign, in summer 2011; during the first pilot phase in fall 2011, he trained full-time math faculty who were to be involved in the following spring 2012 pilot, and all full-time faculty received training during spring and summer 2012. In summer 2012, selected adjunct math faculty also received ALEKS training; all existing adjunct math faculty will be trained during fall 2012 and spring 2013. Ongoing training will then be scheduled each semester for new full-time and adjunct faculty and to communicate any changes in software or CAI methodology.

Some facets of learner-centered pedagogy will also necessarily become an immediate part of the implementation of the QEP, inherent to the nature of the emporium model. As learning support course sections are transitioned to the redesigned MATH 0090, students will begin attending math labs as a required portion of their course contact hours. Students involved in
pilot Phases I-III have spent one scheduled hour per week in class with a designated instructor and two hours per week scheduled by the students themselves in a math lab staffed by a facilitator. Because of the limited number of sections and students in the pilot, class and lab time have been staffed by the same instructor up to this point. As the QEP is fully implemented, lab hours will be expanded to ten hours of operation per day to accommodate all learning support math students and still provide as much flexibility as possible. At that point, additional lab facilitators, not necessarily the class instructors, will be hired and trained. Learner-centered facilitation rather than lecture will be introduced gradually, with students scheduling their own time-on-task and regulating their own learning pace and with faculty participating in the emporium lab while learning more about transferring the responsibility for learning from themselves to students.

During the learner-centered methods training in spring 2013 (initiated by attendance at The Teaching Professor Conference), faculty will participate in discussions and workshops focusing on the five practice areas delineated by Weimer (2002), as discussed in the literature review. To facilitate self-assessment, as well as evaluate the QEP initiative of enhanced professional development leading to improved student learning, faculty will also develop rubrics addressing specific and tangible components of the instructional and behavioral changes anticipated as a result of their exposure to learner-centered methods. In summer 2013, after initial training, faculty will develop the rubrics and correlate them to the student perceptions of instruction in preparation for implementation in pilot courses fall 2013. Integration of learner-centered teaching approaches will be in place for all learning support math sections by summer 2014. This progression will help faculty acclimate to their changing role as facilitator rather than lecturer, following Blumberg’s (2008) recommendations to take incremental steps that allow instructors to make changes gradually over time, defining a manageable transition from instructor-centered to learner-centered teaching.

As the QEP is approved and moves into implementation in spring 2013, problem-solving strategies will begin to be integrated into MATH 0090. Through faculty seminars and workshops in utilizing Pólya’s four-step approach to problem-solving, as discussed in the literature review, faculty will examine techniques to encourage and facilitate development of students’ quantitative thinking and reasoning skills. Through spring and summer 2013, faculty will develop activities and rubrics for the classroom assessment of problem-solving and will implement them in pilot sections of MATH 0090 in fall 2013. As faculty have opportunities to develop and refine
activities and assessments, results will be evaluated in the classroom and through the QUANT-Q from Insight Assessments, which will be administered annually to all exiting MATH 0090 students, beginning in spring 2013.

Through the structured and incremental integration of these learning strategies, faculty will be able to determine “best practices” for the use of CAI, learner-centered approaches, and problem-solving throughout implementation of the College’s QEP. Further details of the measures used to evaluate the effectiveness of each learning strategy are related in the Assessment Plan section of this document.

**Professional Development**

West Georgia Technical College is committed to providing ongoing professional development opportunities to support the goal of the QEP. In addition to the ongoing training in computer-aided instructional methodologies and specifically in ALEKS features, the following activities and opportunities will be incorporated in the QEP.

- National and regional conferences – Math faculty will be encouraged to attend discipline specific conferences, including that of the American Mathematical Association of Two-Year Colleges (AMATYC) each fall. For faculty who may not be able to attend the national conference of that professional organization, AMATYC also provides access to an annual series of webinars on timely topics, which will be publicized and made available to faculty. Attendance at the summer Teaching Professor Conference will be especially encouraged for all faculty, not only those teaching math, because of its focus on teaching methods, specifically learner-centered teaching. The sponsor for the Teaching Professor Conference, Magna Publishing, also produces a series of webinars that will be purchased and made available to faculty each year. Attendance at the spring Scholarship of Teaching and Learning Commons Conference, hosted annually by Georgia Southern University, will be encouraged and supported through Perkins funding, encouraging wide faculty participation in that event emphasizing scholarly inquiry into student learning. A list of conference locales and dates will be distributed to faculty at the beginning of each year in order to anticipate scheduling and budgeting needs within academic departments.

- Faculty resources – A list of QEP related professional development resources and instructional support materials, including books, e-books, films, and journal and
reference databases, is being compiled; some resources have already been purchased, and duplicate copies have been distributed to each of the campus libraries and to the Coweta campus to be housed in the administrative office (Appendix O). All resources will be available either in-house or online and will include not only discipline-specific areas but also topics such as learner-centered teaching, active learning strategies, assessment techniques, problem-solving, and problem-based learning. The QEP Implementation Team will work with the library staff to update resources annually as needed.

- In-house faculty presentations and workshops – Math faculty will attend sessions specifically designed to acquaint them with the methodology of the emporium model and the administrative features of ALEKS. They will also attend the learning support meetings provided by the Technical College System of Georgia for all faculty teaching in learning support areas. Faculty in all disciplines who attend the national and regional conferences will share the knowledge, practice, and pedagogical approaches they have garnered through in-house presentations in inter- and intradepartmental faculty meetings. Although the focus of the QEP is on learning support math, all faculty will support the goal of the QEP and will benefit from professional development that advances learner-centered teaching and supportive learning environments in their own disciplines and departments. The QEP Implementation Team will work with faculty to develop an annual list of workshops and work with staff on each campus to schedule meeting rooms. The list will be distributed to faculty at the beginning of each year.

Collegewide Activities
The Marketing Subcommittee of the QEP Implementation Team will continue the internal awareness campaign begun during the piloting stage (reference Table 7 for details) in order to maintain momentum and interest in the QEP project. Upon full implementation, the practices that have proven to be successful in increasing awareness and support for the QEP will continue in order to institutionalize the initiative.

- New Student Orientation – All new students are required to view an online WGTC orientation presentation before advisement and registration. The QEP video and other information pertaining to the learning support math course redesign have been added to the orientation, which will be updated each year as needed. Additionally, QEP brochures will be placed in the Student Advisement Center and Student Affairs offices, and QEP bookmarks will be distributed through campus bookstores each term.
• **QEP Awareness Weeks** – During the first week of the fall semester, Student Activities sponsors fun, get-acquainted activities for West Georgia Technical College students. The QEP will be a highlight of the Week of Welcome (WOW) activities, starting with fall 2012 and continuing each year of the QEP implementation. Additionally, QEP awareness activities (Student Summits) are planned for one week in each of the first three months of fall and spring terms. During that week, each campus will host events revolving around the mountain climbing theme of the QEP and will distribute promotional items to students, faculty, staff, and campus visitors. Libraries, bookstores, and advisement areas on each campus will maintain QEP-related displays that will be updated each semester by the respective personnel.

• **Electronic QEP Newsletter** – To maintain communication and disperse updated information regarding the QEP, the QEP Director will post an electronic newsletter each semester, both to the intranet (SharePoint) and to the QEP website. The first newsletter was posted in spring 2012 (Appendix P).

• **QEP Website** – To communicate to all constituents up-to-date information about QEP activities and progress of the QEP, regular postings will be made to the QEP website. The QEP Director will gather relevant information and submit to the College webmaster for publication.

• **In-Service** – The QEP Director, Faculty Coordinators, and math faculty will develop presentations for each collegewide in-service in order to spotlight the QEP. Presentations will include fun facts, success stories, updated procedures, and progress reports.

### Collegewide Support

In addition to the marketing efforts to increase awareness of the QEP goal and initiatives, ongoing coordination among all departments of the College will be critical to provide the support needed for a successful QEP implementation. QEP Implementation Team subcommittees will continue the tasks begun in the initial pilot phases.

**Advisement/Registration.** The subcommittee will continue to meet each semester and as otherwise needed to complete activities related to academic advisement and registration to help students effectively plan their classroom and lab times in the redesigned MATH 0090. The Student Advising Center has developed advisement planning sheets for new students who will begin the pilot course in fall 2012. By October 2012 (when new student registration begins),
they will also update the online new student orientation presentation to include information about the QEP. They will meet with math faculty to discuss key matters that students should be aware of during learning support advisement and registration in order to prepare them for the self-directed nature of the course. Math faculty will work with the QEP Director to update all curricular materials and resources to reflect the learning support course redesign, including the *WGTC Student Catalog*, which will be revised in December 2012. Subsequent revisions will be coordinated each spring for timely publication for fall semester. The registration and IT support subcommittees will continue to test Banner administrative processes to ensure a smooth transition upon full implementation in spring 2013. Each semester thereafter, the registration subcommittee will meet to discuss any updated procedures and design a plan for implementing them before the next student registration opens. Financial aid personnel will email students to clarify the effects of the course redesign on their financial aid status and ensure that no loss of aid occurs due to miscommunication of procedures.

**Tutoring/Scheduling.** In fall 2012 the subcommittee responsible for lab scheduling and tutoring coordination will meet with campus directors of instruction (DIs) to plan expanded hours of operation for emporium math labs upon full implementation of the QEP. Because DIs are responsible for planning adjunct faculty budgeting on each campus, they play a critical role in developing an efficient schedule that allows maximum flexibility for student use. Tutoring services are staffed by adjunct faculty as well and will be expanded to support the QEP. Currently, tutoring centers on all campuses provide appointment and drop-in tutoring services; however, decreased funding limits the times available for students to take advantage of this support service. The subcommittee will conduct a survey of students in fall 2012 to determine the hours of greatest need on each campus and will develop schedules around those times. Careful coordination between the subcommittee and DIs will ensure adequate staffing of lab and tutoring facilities by qualified faculty. These two groups will continue to meet before the beginning of each semester to discuss outstanding staffing and scheduling needs. They will work with the QEP Faculty Coordinators to schedule and provide ALEKS training to all newly hired learning support math instructors and math lab facilitators each semester.

**IT Support.** IT will continue to maintain the hardware and software in the MATH 0090 classrooms and labs on each campus. Math faculty will log all incidents related to computer usage and contact IT through the online help desk to resolve issues quickly and minimize disruption of time-on-task for students. In spring 2013, the IT support subcommittee will meet to
reopen its examination of automated systems to be used by students to signal for academic assistance in the emporium lab. The committee met in spring 2012 to begin the review and recommend a system. In order to more thoroughly research available systems, members recommended the use of a temporary system of red cups at each computer station, a method utilized by many other emporium labs. A red plastic cup placed on top of the computer monitor signals a student’s need for help; lab facilitators can easily see the signal and provide timely assistance without disruption of the lab atmosphere. The subcommittee will survey faculty at the end of spring 2013 to determine if this temporary measure is meeting the need; if not, they will recommend another alternative.

**Assessment**

The assessment subcommittee will be responsible for coordinating the data collection, analysis, and reporting related to the QEP initiatives and student learning outcomes. The subcommittee will convene at appropriate intervals to review and analyze assessment data for the strategies throughout the project period as the data becomes available. Working with the various other subcommittees, they will develop survey instruments to be administered to students, faculty, and/or staff, as appropriate, to measure the effectiveness of the tutoring services, faculty development opportunities, and awareness strategies. They will also compile the results of the national assessments being used, namely, the Collegiate Assessment of Academic Proficiency (CAAP), Noel-Levitz Student Satisfaction Survey, Community College Survey of Student Engagement (CCSSE), and the QUANT-Q. The timeline for these assessment activities is detailed in the next section of this document.

Math faculty will be responsible for developing rubrics for the problem-solving activities to be implemented in the redesigned course and for informing students of upcoming survey opportunities, including the national assessments mentioned above and the MATH 0090 student entry/exit attitudinal surveys. They will collect and submit data related to ALEKS usage and time-on-task, as well as that related to the assessment of student learning outcomes in MATH 0090 and MATH 1111. Student learning outcomes assessment plans for those courses will follow the annual timeline established for the evaluation of student learning outcomes in all academic programs (Appendix Q).
The assessment subcommittee will make available the results of assessment activities for evaluation by appropriate personnel. Further details of assessment and evaluation of each QEP initiative and student learning outcome are provided in the Assessment Plan section.

For each major task related to the implementation of the Quality Enhancement Plan, a detailed work plan is being developed, including the related initiative and strategy, timeline, objective, activities, designated responsibility, budget impact, and assessment measures. Appendix R provides three samples of tasks noted in the Implementation Timeline. All work plans are maintained on the College intranet, SharePoint, and will be shared with the on-site review team.

**IMPLEMENTATION TIMELINE**

Presented below are two timelines for the primary activities described in the Implementation Plan in the previous section. Each timeline includes the area of responsibility for implementation and follow-up. Table 8 reflects pre-implementation activities leading to the on-site reaffirmation visit and includes planning, development, and pilot implementation.

**Table 8. QEP Planning and Pre-Implementation Activities 2009-2012**

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Primary Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2009</td>
<td>QEP Development Committee Chair named</td>
<td>VP Institutional Effectiveness, Kristen Douglas</td>
</tr>
<tr>
<td>December 2009</td>
<td>Representatives attended SACS/COC Annual Meeting</td>
<td>VP Institutional Effectiveness, Kristen Douglas</td>
</tr>
<tr>
<td>March 2010</td>
<td>QEP timeline developed</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton</td>
</tr>
<tr>
<td>June 2010</td>
<td>QEP Planning Committee formed; QEP presented to WGTC faculty/staff</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton</td>
</tr>
<tr>
<td>July 2010</td>
<td>Representatives attend SACS Summer QEP Institute</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton</td>
</tr>
<tr>
<td>August-September 2010</td>
<td>QEP Planning Committee meetings to discuss search logo and awareness campaign; QEP website launched</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton AVP Curriculum, Sindi McGowan</td>
</tr>
<tr>
<td>October-November 2010</td>
<td>QEP presentations to College community continued; topic webpage added to site; topic solicitation from broad base</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton</td>
</tr>
<tr>
<td>December 2010</td>
<td>Representatives attended SACS/COC Annual Meeting</td>
<td>VP Institutional Effectiveness, Kristen Douglas</td>
</tr>
<tr>
<td>January 2011</td>
<td>SACS Leadership Team Orientation Meeting</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton</td>
</tr>
<tr>
<td>February 2011</td>
<td>Proposal submission forms, guidelines posted to website; students surveyed; topics narrowed to eight from</td>
<td>VP Institutional Effectiveness, Kristen Douglas; Dean of Arts/Sciences, Kevin Bratton</td>
</tr>
</tbody>
</table>
Table 9 depicts projected activities and anticipated duration from the first year of implementation (2013) to the compilation of the five-year report for reaffirmation review by SACS-COC (2017). These projected activities are identified as those Developed (D), Reviewed (R), Updated (U), Executed (X), or As Needed (A) within each academic year over the course of the implementation.
### Table 9. QEP Implementation Activities 2013-3017

<table>
<thead>
<tr>
<th>Activity</th>
<th>AY 2013</th>
<th>AY 2014</th>
<th>AY 2015</th>
<th>AY 2016</th>
<th>AY 2017</th>
<th>Primary Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Redesign and Implementation</strong></td>
<td></td>
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<tr>
<td>Standardize MATH 0090 syllabus</td>
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<td>-</td>
<td>Faculty</td>
</tr>
<tr>
<td>Publish math lab schedule</td>
<td>D X R X X R X R R X R X R R</td>
<td>- - - - - - - - - - -</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>QEP Faculty Coordinators</td>
</tr>
<tr>
<td>Publish math tutoring schedule</td>
<td>D X R U U U U U U U U U U</td>
<td>- - R - R - - - -</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Student Success Coord</td>
</tr>
<tr>
<td>Revise COMPASS exit exam procedure</td>
<td>R R D X X</td>
<td>- - - - - - - - -</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Faculty</td>
</tr>
<tr>
<td>Develop ALEKS procedural manual</td>
<td>D X U U A A A A A A A</td>
<td>- - - - - - - - -</td>
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<td>-</td>
<td>-</td>
<td>QEP Faculty Coord; LS Chair</td>
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<tr>
<td>Integrate CAI through ALEKS</td>
<td>X X - - - - - - - - -</td>
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<tr>
<td>Select text/workbook to accompany ALEKS</td>
<td>X R U - - U - - U - - U</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Engage in course redesign consultation with NCAT representatives</td>
<td>- - X - - A - - - - - - - -</td>
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<tr>
<td>Integrate learner-centered activities</td>
<td>- D D X X X R - - R - - R - - R -</td>
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<tr>
<td>Integrate problem-solving activities</td>
<td>- D D X X X R - - R - - R - - R -</td>
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<tr>
<td>Revise all curricular materials</td>
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<tr>
<td>Revise all student advising information</td>
<td>X X U U U U U U U U U U U U U U</td>
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<tr>
<td>Recruit, train, schedule math lab facilitators</td>
<td>X X X X A A A A A A A A A A A</td>
<td>-</td>
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<tr>
<td><strong>Professional Development</strong></td>
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<tr>
<td>Acquire QEP-relevant resources</td>
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<tr>
<td>Conduct collegewide in-service presentations</td>
<td>X - - X - - X - - X - - X - - X - - X</td>
<td>-</td>
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<tr>
<td>AMATYC Conference</td>
<td>X - - X - - X - - X - - X - - X - - X</td>
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<tr>
<td>Teaching Professor Conference</td>
<td>X - - X - - X - - X - - X - - X - - X</td>
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<tr>
<td>SoTL Conference</td>
<td>X - - X - - X - - X - - X - - X - - X</td>
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<tr>
<td>Acquire Magna Publishing webinar series</td>
<td>D X X U - - U - - U - - U - - U</td>
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<tr>
<td>Offer learner-centered pedagogy workshops</td>
<td>D X X X A A A A A A A A A A A A A</td>
<td>-</td>
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<tr>
<td>Offer problem-solving workshops</td>
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<tr>
<td>Provide ALEKS training</td>
<td>X X X X A A A A A A A A A A A A A</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Math faculty meetings</td>
<td>X X A X X A X X A X X A X X A</td>
<td>-</td>
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</tbody>
</table>
### Collegewide Support

<table>
<thead>
<tr>
<th>Activity</th>
<th>AY 2013</th>
<th>AY 2014</th>
<th>AY 2015</th>
<th>AY 2016</th>
<th>AY 2017</th>
<th>Primary Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disseminate QEP materials/information through new student orientation</td>
<td>Fall: D</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: U</td>
<td>Spring: U</td>
<td>Summer: U</td>
</tr>
<tr>
<td>Distribute QEP brochures/bookmarks through student services areas/bookstores/libraries</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Conduct student information “summits”</td>
<td>Fall: A</td>
<td>Spring: X</td>
<td>Summer: A</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
</tr>
<tr>
<td>Distribute QEP materials through WOW</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Distribute QEP electronic newsletter</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Maintain QEP website</td>
<td>Fall: U</td>
<td>Spring: U</td>
<td>Summer: U</td>
<td>Fall: U</td>
<td>Spring: U</td>
<td>Summer: U</td>
</tr>
<tr>
<td>Incorporate QEP benefits/procedures into learning support student advisement</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Maintain QEP-focused displays</td>
<td>Fall: U</td>
<td>Spring: U</td>
<td>Summer: U</td>
<td>Fall: U</td>
<td>Spring: U</td>
<td>Summer: U</td>
</tr>
<tr>
<td>Maintain math lab software/hardware</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
</tr>
<tr>
<td>Redesign lab facilities to include “pods”</td>
<td>Fall: D</td>
<td>Spring: D</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Conduct (CCSSE)</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
</tr>
<tr>
<td>Conduct CAAP testing</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Conduct QUANT-Q</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
</tr>
<tr>
<td>Conduct test/join/exit surveys</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Conduct SLO assessment</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Review/apply prior term QEP assessment</td>
<td>Fall: R</td>
<td>Spring: R</td>
<td>Summer: R</td>
<td>Fall: R</td>
<td>Spring: R</td>
<td>Summer: R</td>
</tr>
</tbody>
</table>

### Reporting

<table>
<thead>
<tr>
<th>Activity</th>
<th>AY 2013</th>
<th>AY 2014</th>
<th>AY 2015</th>
<th>AY 2016</th>
<th>AY 2017</th>
<th>Primary Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publish Annual QEP Summary Report</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
<td>Fall: X</td>
<td>Spring: -</td>
<td>Summer: X</td>
</tr>
<tr>
<td>Coordinate representation at SACS-COC mtg</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
<td>Fall: -</td>
<td>Spring: X</td>
<td>Summer: -</td>
</tr>
<tr>
<td>QEP Registration Subcommittee meeting</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: A</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
</tr>
<tr>
<td>QEP Professional Dev Subcommittee meeting</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: A</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
</tr>
<tr>
<td>QEP Marketing Subcommittee meeting</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: A</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
</tr>
<tr>
<td>QEP Assessment Subcommittee meeting</td>
<td>Fall: X</td>
<td>Spring: X</td>
<td>Summer: A</td>
<td>Fall: A</td>
<td>Spring: A</td>
<td>Summer: A</td>
</tr>
<tr>
<td>Prepare MATH 0090 Report, five-year review</td>
<td>Fall: -</td>
<td>Spring: -</td>
<td>Summer: -</td>
<td>Fall: D</td>
<td>Spring: D</td>
<td>Summer: X</td>
</tr>
</tbody>
</table>
ORGANIZATIONAL STRUCTURE
West Georgia Technical College recognizes the need for strong leadership and institutional support for successful implementation of the QEP. To that end, qualified individuals have been identified and appointed or have volunteered to serve in the various positions responsible for the implementation and sustainability of the QEP.

Proposed Relationships
Figure 5 illustrates the proposed relationships among the various organizational components responsible for implementation of the QEP. In this structural representation, solid lines indicate direct report or functional relationships while dashed lines represent indirect report or collaborative relationships.

Figure 5. Organizational structure for the QEP.
Roles and Responsibilities

**Vice President for Academic Affairs (VPAA).** The VPAA reports directly to the President and provides leadership in the activities of personnel as they relate to instruction. The VPAA will be responsible for overseeing the implementation and evaluation of the Quality Enhancement Plan by working closely with the Vice President for Institutional Effectiveness and the QEP Director.

**Vice President for Institutional Effectiveness (VPIE).** The VPIE reports directly to the President and serves as the College’s SACS liaison. As the chief entity responsible for coordinating the College’s strategic planning process, analyzing and assessing the effectiveness of its programs, and maintaining its accreditation status, the VPIE will oversee the assessment and evaluation of the Quality Enhancement Plan. She will ensure its coordination with the overarching College planning and institutional effectiveness processes.

**QEP Director.** The QEP Director reports directly to the VPIE and is responsible for the management and execution of the Quality Enhancement Plan, including the allocation of project resources. The director will chair the QEP Implementation Team, direct all activities associated with the QEP, prepare all project reports and materials, monitor the project budget, communicate the progress of the QEP implementation to the College community, and facilitate the statistical analysis of data and the annual evaluation of the project. The director will supervise the activities of the QEP faculty coordinators. In her dual role as AVP for Curriculum, the director will coordinate all curricular activities and materials associated with the redesigned course, including the assessment of student learning outcomes.

**Assistant Vice President for Academic Affairs (AVP).** The AVP reports directly to the VPAA and supervises the activities of deans of all schools, including the Dean of Arts and Sciences, as well as the Director of Academic and Student Support Services. The AVP will be responsible for overseeing the activities related to academic advisement and tutoring services. He will also coordinate faculty development opportunities, including conferences and in-house workshops offered for all faculty.

**QEP Implementation Team.** The Implementation Team will coordinate and mobilize subcommittees responsible for the implementation activities of the QEP, providing recommendations as needed. The Implementation Team, chaired by the QEP director, will
consist of the faculty coordinators and faculty champions of the QEP, as well as key personnel from all divisions of the college, particularly those responsible for instruction and academic support, student support services, fiscal appropriations, technology support, and promotion of the QEP.

**Faculty Coordinators.** The two faculty coordinators of the Quality Enhancement Plan include the instructor whose proposal was chosen as the QEP topic and another champion math instructor with expertise in technology, specifically computer-aided instruction. The faculty coordinators will provide faculty leadership and support in all elements of the math learning support course redesign, serve as liaisons with ALEKS representatives, and facilitate workshops and other training sessions related to the QEP. They will be responsible for gathering all course data from QEP math faculty and assisting with data analysis and interpretation to evaluate QEP learning outcomes. The faculty coordinators will oversee the QEP activities of learning support math faculty and math lab facilitators.

**Dean of Arts and Sciences.** The Dean of Arts and Sciences reports directly to the Assistant Vice President for Academic Affairs and will supervise the activities of the Learning Support Program Chair as they relate to the implementation of the QEP. The dean will oversee the assessment of student learning outcomes in the redesigned learning support math course and the college algebra course and will submit annual results to the QEP Director.

**Learning Support Program Chair.** The chair of the learning support department reports indirectly to the Dean of Arts and Sciences in matters related to the implementation of the QEP. The chair will coordinate the efforts of the learning support math faculty in the curricular redesign of the learning support math course and will assist in coordinating professional development activities designed for those faculty members.

**Math Faculty.** The five champion faculty identified for the implementation of the Quality Enhancement Plan, one on each campus, will provide support and guidance to other math faculty during the process of redesigning the learning support math courses. They will pilot the QEP redesign during the pre-implementation phase and make recommendations for improvement to prepare for full implementation of the QEP. All learning support math faculty will be involved in curricular redesign for the QEP and will be responsible for managing learning activities related to ALEKS and for providing direct student support and instruction in learning
support math classrooms and math labs. Faculty will be centric to the success of the QEP and attainment of its initiatives and student learning outcomes.

**Math Lab Facilitators.** Math lab facilitators for the Quality Enhancement Plan will provide direct student support and instruction in learning support math labs but not necessarily in learning support classrooms. They will assist students as they progress through the modularized course content and will therefore participate in faculty development related to ALEKS and other methods of curricular reinforcement. Math lab facilitators will report to the QEP faculty coordinators and provide necessary input into improving the QEP.

**Director of Academic and Student Support.** The Director of Academic and Student Support reports directly to the AVP for Academic Affairs and supervises the activities of the Student Success Coordinator and the Student Advising Center Coordinator. She will be responsible for overseeing two academic services that will play a critical role in supporting the QEP: learning support math tutoring and orientation and advisement for new students who will enroll in the redesigned math learning support course.

**Student Success Coordinator.** The Student Success Coordinator will be responsible for QEP activities related to providing academic support services to students enrolled in learning support courses. The coordinator will assist campus directors of instruction with scheduling and staffing QEP math labs and will oversee the tutoring services provided to students. As part of those responsibilities, she will monitor tutoring lab usage and submit reports to the QEP Director.

**Student Advising Center Coordinator.** The Student Advising Center Coordinator supervises activities related to new student orientation and academic advisement. She will be responsible for ensuring that all new students receive information regarding the QEP through orientation materials made available in the advising center. The advising center will also facilitate enrollment in the learning support math course sections and direct new students to personnel or events providing additional QEP information.
FISCAL RESOURCES AND SUSTAINABILITY

West Georgia Technical College recognizes that implementing *Reaching the Summit: Conquering Mathematics* will require a substantial dedication of physical, human, and financial resources. The College is committed to the QEP and has allocated administrative support, adequate facilities, and sufficient resources in both personnel and funding to ensure its success.

The College has a sound financial base and the financial stability to support the scope of its programs and services, including the QEP. WGTC's fiscal capacity is demonstrated by years of audit history, growing assets, and a sound annual budgeting process. This stability allows the College to adequately fund the continued operation of programs and services as well as procuring up-to-date equipment and technology that will be necessary for the implementation of the Quality Enhancement Plan.

The QEP Planning and Development Team developed a budget for the first two years' activities, which included faculty stipends for topic development, initial travel and research funding, document preparation, and a promotional campaign. Upon the appointment of a director and faculty coordinators, the QEP Implementation Team identified personnel, facilities, equipment, and financial resources necessary to adequately develop, implement, and sustain the QEP that, upon approval by the Commission, will begin January 2013.

The College’s primary sources of revenue include student tuition and fees and state appropriations. Funding for the QEP will be secured through these sources, with the exception of the Scholarship of Teaching and Learning Conference funded through an annually renewable Carl Perkins grant. Non-reliance on external grant funding will contribute to the sustainability of the QEP throughout its implementation. The primary expenditures for the QEP will be for administration, faculty, lab facilitators, and tutors, with a smaller percentage needed for professional development and operational supplies and equipment. The ALEKS student learning and instructor management system is free to institutions through student adoption, and classroom and lab facilities have been identified, including student computers, already available on each campus. Other in-kind costs include office space, supplies, and equipment such as printers, fax machines, copiers, computers, and phones, which are supplied and maintained by the College. The in-kind contribution will also include the salaries of several individuals, principally the QEP Director and Faculty Coordinators, who have been identified as key to this process and will devote a percentage of their time to implementing the QEP.
One of the added benefits of the emporium model of course redesign being utilized in the QEP is the reduction in cost that it offers (NCAT, 2011). Because multiple sections of a course can be combined into one modularized course structure, the emporium model increases the number of contact hours, or time on task, for students while it greatly decreases the cost per hour for that contact. Staffing adjustments can be made based on real use. In FY 2012, WGTC offered a total number of 191 sections of MATH 0097, 0098, and 0099; in the redesigned MATH 0090, that number is expected to be approximately 140 sections in AY 2013, offered at the times of highest demand on each campus. The decreased number of sections represents a savings of approximately $48,000 in additional personnel for that year alone.

At the same time, the College recognizes that improved student success in math courses will result in higher student retention. Because of the large enrollments in the targeted learning support math and college algebra courses, even small gains in student success can potentially produce strong results. In projecting the potential tuition revenues of increased student success and subsequent retention, even a modest increase in students of 5% per year would result in an additional $102,000 in tuition revenue. Although the college is aware of this potential return on investment for Reaching the Summit: Conquering Mathematics, it will not rely on these increases to fund the project.

The budget for the QEP has been developed as part of the College’s annual operational and strategic planning processes. The following projected budget reflects the College’s commitment in financial, human, and physical resources for successful implementation of the QEP from the planning and development stages prior to the QEP review, 2010-2012, through the five years of implementation, 2013-2017. In the following QEP budget, items that require new funding are highlighted in red to distinguish them from in-kind funding. Although the overall budget for the QEP implementation over five years totals $2.2 million, financial resources not already represented as annual College budgetary expenses, and which will require new funding, total $715,150.
## Reaching the Summit: Conquering Mathematics Budget

### Personnel

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>QEP Director salary/benefits offset (40%)</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$38,000</td>
<td>$190,000</td>
</tr>
<tr>
<td>Faculty Coordinators salary/benefits offset (2 at 50%)</td>
<td>$70,000</td>
<td>$70,000</td>
<td>$70,000</td>
<td>$70,000</td>
<td>$70,000</td>
<td>$70,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Faculty Champions (stipend to pilot sections, one per campus)</td>
<td>$5,000</td>
<td>$115,200</td>
<td>$126,000</td>
<td>$135,000</td>
<td>$135,000</td>
<td>$135,000</td>
<td>$646,200</td>
</tr>
<tr>
<td>Adjunct Math Lab Facilitators, 5 campuses, (60% sections, $20/hr)</td>
<td>$29,440</td>
<td>$76,800</td>
<td>$84,000</td>
<td>$90,000</td>
<td>$90,000</td>
<td>$90,000</td>
<td>$430,800</td>
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<tr>
<td>Math tutors ($20/hr)</td>
<td>$18,500</td>
<td>$18,500</td>
<td>$18,500</td>
<td>$37,000</td>
<td>$37,000</td>
<td>$37,000</td>
<td>$148,000</td>
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### Professional Development

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants for ALEKS training</td>
<td>$2,800</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$1,200</td>
</tr>
<tr>
<td>Consultants for emporium model</td>
<td></td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
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<tr>
<td>Adjunct faculty training ($15/hr)</td>
<td>$1,250</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$12,500</td>
</tr>
<tr>
<td>Teaching resources (library and webinars)</td>
<td>$2,000</td>
<td>$1,000</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$3,000</td>
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<tr>
<td>Conference attendance (AMATYC, Teaching Professor, SoTL)</td>
<td>$7,500</td>
<td>$21,500</td>
<td>$21,500</td>
<td>$21,500</td>
<td>$21,500</td>
<td>$21,500</td>
<td>$107,500</td>
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<tr>
<td>Local learning support workshops</td>
<td>$350</td>
<td>$750</td>
<td>$750</td>
<td>$750</td>
<td>$750</td>
<td>$750</td>
<td>$3,750</td>
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</table>

### Equipment

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated math lab computers, printers, as needed</td>
<td></td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$100,000</td>
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### Supplies and Materials

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
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<tr>
<td>Training materials</td>
<td>$250</td>
<td>$750</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$2,750</td>
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<tr>
<td>Student informational materials (orientation, 1st day)</td>
<td>$750</td>
<td>$750</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$1,750</td>
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<tr>
<td>General office supplies, postage</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$1,250</td>
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### Campus Awareness Activities

<table>
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<tr>
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<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotional materials/giveaways</td>
<td>$6,250</td>
<td>$13,750</td>
<td></td>
<td></td>
<td>$13,750</td>
<td></td>
<td>$13,750</td>
</tr>
<tr>
<td>Banners, flags, posters, flyers</td>
<td>$2,500</td>
<td>$1,750</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
<td>$2,750</td>
</tr>
<tr>
<td>Campus events</td>
<td>$250</td>
<td>$5,000</td>
<td></td>
<td></td>
<td></td>
<td>$5,000</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

### Assessment

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAAP exam</td>
<td>$4,000</td>
<td>$5,500</td>
<td>$5,500</td>
<td>$5,500</td>
<td>$5,500</td>
<td>$5,500</td>
<td>$27,500</td>
</tr>
<tr>
<td>QUANT-Q exam</td>
<td>$6,500</td>
<td>$6,500</td>
<td>$6,500</td>
<td>$6,500</td>
<td>$6,500</td>
<td>$6,500</td>
<td>$32,500</td>
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<tr>
<td>Data analysis tools</td>
<td>$5,000</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$7,500</td>
</tr>
</tbody>
</table>

### Total

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$188,840</td>
<td>$402,200</td>
<td>$396,500</td>
<td>$430,000</td>
<td>$430,000</td>
<td>$430,000</td>
<td>$2,088,700</td>
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</tbody>
</table>

### Total New Funding Needed

<table>
<thead>
<tr>
<th>FY 2011-2012 (Plan Yr.)</th>
<th>FY 2013 (Year 1)</th>
<th>FY 2014 (Year 2)</th>
<th>FY 2015 (Year 3)</th>
<th>FY 2016 (Year 4)</th>
<th>FY 2017 (Year 5)</th>
<th>Total Years 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total New Funding Needed</td>
<td>$19,900</td>
<td>$149,150</td>
<td>$134,750</td>
<td>$143,750</td>
<td>$143,750</td>
<td>$143,750</td>
</tr>
</tbody>
</table>

Total $2,277,540
ASSESSMENT PLAN

The QEP assessment subcommittee (Appendix D), under the leadership of the QEP Director and the QEP Faculty Coordinators, has developed a comprehensive assessment plan for the project. A detailed planning process involving the analysis of institutional data and research of best and promising practices led to the development of initiatives and student learning outcomes that are measurable, attainable, and critical to the success of the QEP. The QEP Assessment Plan details both the direct and indirect measures that will be used to evaluate Reaching the Summit: Conquering Mathematics. Direct and indirect evaluation procedures will allow faculty and administration to more accurately determine the success of the QEP efforts and continually improve implementation processes to produce meaningful results.

The assessment plan includes a detailed description of evaluation methods for each of the four QEP initiatives developed to meet the QEP goal:

<table>
<thead>
<tr>
<th>QEP Initiatives</th>
<th>Goal: To improve student learning and success in learning support math and in the subsequent college algebra course</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.</td>
</tr>
<tr>
<td>2.</td>
<td>Increase the percentage of students who successfully complete MATH 1111 as a result of completing the emporium model learning support course.</td>
</tr>
<tr>
<td>3.</td>
<td>Improve students’ problem-solving skills.</td>
</tr>
<tr>
<td>4.</td>
<td>Enhance faculty development opportunities in order to improve student learning.</td>
</tr>
</tbody>
</table>

The plan also details evaluation methods for the student learning outcomes identified for MATH 0090, including problem-solving, and for MATH 1111. For each initiative and student learning outcome, the description provides the related strategies (also reference Table 5), outcomes, assessment methods, frequency of data collection, person(s) responsible, baseline performance, and timeline for first available assessment results.

Collection of data and reporting of results will follow the College’s student learning outcomes assessment cycle (Appendix Q). The QEP Director will prepare annual progress reports that include assessment results and project updates. The reports will be submitted to the Vice President for Institutional Effectiveness and the Vice President for Academic Affairs, who will then share the information with the President and Senior leadership. The annual reports will be a critical component of the College’s QEP Impact Report as part of its fifth-year review.
### Reaching the Summit: Conquering Mathematics Assessment Plan

**QEP Initiative 1:** Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.

**Target for Success:** Minimum 10% increase in MATH 0090 course completion rates.

<table>
<thead>
<tr>
<th>Related Strategy</th>
<th>Outcome</th>
<th>Assessment Plan for Student Learning Outcomes for specific outcomes assessment</th>
<th>Baseline Performance (N/A= Not Available)</th>
<th>Results to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesign courses in math learning support sequence into one course.</td>
<td>Course modularization for accelerated completion</td>
<td>MATH 0090 Course Completion Rates and average course completion time (in weeks)</td>
<td>Direct (D) or Indirect (I)</td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D</td>
<td>Each pilot term Fall 2011 through Fall 2012 (follow last pilot cohort through Fall 2013); each term thereafter</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage of repeated attempts for MATH 0090 before successful completion</td>
<td>D</td>
<td>Each term</td>
</tr>
<tr>
<td></td>
<td>Student MATH 0090 exit surveys response to item 18: “The tests in ALEKS helped me progress quickly through the material.”</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrate CAI through ALEKS.</td>
<td>Increased subject mastery levels</td>
<td>Percentage of students demonstrating competency at 80% on key competency areas for each course level on comprehensive final assessment for MATH 0090</td>
<td>D</td>
<td>Each term</td>
</tr>
<tr>
<td></td>
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<td>Student MATH 0090 exit surveys response to items 13. “I learned more about math with ALEKS than in a traditional math classroom” and 24. “After using ALEKS, I am now more confident in my ability to succeed in my next math course.”</td>
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<td>Student MATH 0090 exit surveys response to items: 16. “I liked the instant feedback ALEKS gave when I worked homework problems” and 12. “The pie charts and progress reports I could view in ALEKS were</td>
<td>I</td>
<td>Each term</td>
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<tr>
<td>Initiative</td>
<td>Measure</td>
<td>Frequency</td>
<td>Responsible Parties</td>
<td>Term</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Improved levels of self-regulation</td>
<td>ALEKS Total Lab Time Reports (percentage of students spending above 6-hr minimum required time in coursework)</td>
<td>I</td>
<td>QEP Faculty Coordinators; math faculty; math lab instructors</td>
<td>Summer 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td>Fall 2012</td>
</tr>
<tr>
<td></td>
<td>Correlation of ToT to successful completion of MATH 0090 (significant at 0.01 level)</td>
<td>I</td>
<td>QEP Faculty Coordinators; math faculty; math lab instructors</td>
<td>Summer 2012 pilot students, avg. ToT = 62.45 hrs/term (4.16 hrs/wk.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td>Fall 2012</td>
</tr>
<tr>
<td>Develop emporium model math labs.</td>
<td>ALEKS Time-on-Task (ToT) Reports</td>
<td>D</td>
<td>QEP Faculty Coordinators; math faculty; math lab instructors</td>
<td>Summer 2012 pilot students, 45.8% successful completion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td>Fall 2012</td>
</tr>
<tr>
<td></td>
<td>Number of students served as recorded through tutoring schedules and usage logs, all campuses</td>
<td>I</td>
<td>Student Success Coordinator</td>
<td>Fall 2012 number of students served, all campuses = N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Strengthen tutoring services.</td>
<td>Correlation of math learning support Course Completion Rates and student use of tutoring services (for tutored students as compared to those not tutored)</td>
<td>I</td>
<td>Student Success Coordinator; QEP Faculty Coordinators</td>
<td>Fall 2012 Course Completion Rate for tutored/untutored students in math learning support = N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td>Fall 2013</td>
</tr>
<tr>
<td></td>
<td>Tutoring Services Survey Results (comparison of baseline to subsequent)</td>
<td>I</td>
<td>Student Success Coordinator</td>
<td>Fall 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Response to item: &quot;I feel the tutoring services I received will help improve my grade for that course.&quot;</td>
<td>I</td>
<td>Student Success Coordinator</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation of program progression by students needing learning support to completion by students not needing learning support)</td>
<td>D</td>
<td>Registrar</td>
<td>FY 2011 number of graduates who needed learning support = 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each AY</td>
<td></td>
<td>AY 2014</td>
</tr>
<tr>
<td></td>
<td>Learning Support Persistence Rates (percentage of course D/F/W grades; percentage of unsuccessful MATH 0090 students subsequently re-enrolled to complete)</td>
<td>I</td>
<td>QEP Faculty Coordinators</td>
<td>Fall 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each term</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Reaching the Summit: Conquering Mathematics Assessment Plan

**QEP Initiative 2:** Increase the percentage of students who successfully complete MATH 1111 as a result of completing the emporium model learning support course.

**Target for Success:** Minimum 10% increase in MATH 1111 course completion rate.

<table>
<thead>
<tr>
<th>Related Strategy</th>
<th>Outcome</th>
<th>Assessment Method</th>
<th>Direct (D) or Indirect (I)</th>
<th>Frequency</th>
<th>Responsibility</th>
<th>Baseline Performance</th>
<th>First Available Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Align learning support activities and assessments with college level algebra expectations.</td>
<td>Increased student preparedness</td>
<td>MATH 1111 Course Completion Rates (comparison of students who completed learning support math to students placing directly into college algebra)</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Program Chair; Director of Admissions</td>
<td>Fall 2011 MATH 1111 Course Completion, direct placement = 46.6% MATH 1111 Course Completion, after learning support = 53.4%</td>
<td>Fall 2012</td>
</tr>
<tr>
<td></td>
<td>Increased subject mastery levels</td>
<td>Percentage of students demonstrating competency at 80% on key competency areas on comprehensive final exam for MATH 1111</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Program Chair</td>
<td>Refer to Assessment Plan for Student Learning Outcomes for specific outcomes assessment</td>
<td>Fall 2012</td>
</tr>
<tr>
<td>Adjust current learning support exit exam requirement.</td>
<td>Correlation of assessment to needed level of competence</td>
<td>MATH 0090 and MATH 1111 Course Completion Rates after redesign of learning support final exam</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Program Chair</td>
<td>Fall 2011 MATH 0099 Course Completion Rate, with COMPASS exit in MATH 0099 = 43.96% MATH 1111 Course Completion Rate, with COMPASS exit in MATH 0099 (completers needing LS) = 53.4%</td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Offer and encourage enrollment in MATH 1111 immediately upon completion of learning support.</td>
<td>Improved content retention</td>
<td>Math Course Progression Rates (percentage of successful MATH 0090 students who enroll in MATH 1111 in the next available term)</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Program Chair</td>
<td>Spring 2012 Percentage of students who completed MATH 0099 Fall 2011 and enrolled in MATH 1111 Spring 2012 = 65.77%</td>
<td>Spring 2013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MATH 1111 Course Completion Rates (percentage of students who successfully complete learning support math and immediately enroll in MATH 1111 compared to success rate of students who wait at least one term to enroll)</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Program Chair</td>
<td>Spring 2012 Percentage of successful MATH 1111 students who had successfully completed MATH 0099 before Fall 2011 = 41.71%</td>
<td>Spring 2013</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Spring 2012 Percentage of successful MATH 1111 students who had successfully completed MATH 0099 in Fall 2011 = 52.94%</td>
<td></td>
</tr>
</tbody>
</table>
### Reaching the Summit: Conquering Mathematics

#### QEP Initiative 3: Improve students’ problem-solving skills.

**Target for Success:** Minimum 10% increase in general education assessment scores in critical thinking for problem solving.

<table>
<thead>
<tr>
<th>Related Strategy</th>
<th>Outcome</th>
<th>Assessment Method</th>
<th>Direct (D) or Indirect (I)</th>
<th>Frequency</th>
<th>Responsibility</th>
<th>Baseline Performance</th>
<th>First Available Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include problem-solving activities and assessments in learning support course.</td>
<td>Improved subject mastery and application</td>
<td>Percentage of students demonstrating competency at 80% on key competency areas on comprehensive MATH 0090 final exam items related to problem solving</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Program Chair</td>
<td>Refer to Assessment Plan for Student Learning Outcomes for specific outcomes assessment</td>
<td>Fall 2013</td>
</tr>
<tr>
<td></td>
<td>Student Perceptions, response to item, “The instructor stimulated students to reason and problem solve.”</td>
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<td>I</td>
<td></td>
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<tr>
<td>Employ real-world contextual problem-solving.</td>
<td>Enhanced ability to problem-solve in various contexts</td>
<td>CAAP assessment results on mathematics and critical thinking components (all associate degree graduates)</td>
<td>D</td>
<td>Fall and Spring terms</td>
<td>QEP Faculty Coordinators; QEP Director</td>
<td>Fall 2011 avg CAAP score of students completing math learning support and college algebra, Mathematics = 55.00 Critical Thinking = 62.26 Fall 2011 avg CAAP math score of students completing college algebra without learning support, Mathematics = 56.70 Critical Thinking = 63.57</td>
<td>Fall 2014</td>
</tr>
<tr>
<td></td>
<td>Student Perceptions, response to item, “The relevance of the subject matter to real world issues was made apparent.”</td>
<td></td>
<td>I</td>
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<tr>
<td></td>
<td>QUANT-Q assessment results of quantitative thinking and reasoning skills (all exiting MATH 0090 students)</td>
<td></td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators: Math Faculty</td>
<td>Refer to Assessment Plan for Student Learning Outcomes for specific outcomes assessment</td>
<td>Fall 2013</td>
</tr>
<tr>
<td></td>
<td>CCSSE Survey results, response to item on Active and Collaborative Learning, “Worked with other students on projects during class.”</td>
<td></td>
<td>I</td>
<td>Spring term</td>
<td>Institutional Effectiveness</td>
<td>Spring 2012 percentage of students who responded Often or Very often to the item = 39.1%</td>
<td>Spring 2014</td>
</tr>
</tbody>
</table>
## Reaching the Summit: Conquering Mathematics Assessment Plan

**QEP Initiative 4:** Enhance faculty development opportunities in order to improve student learning.

**Target for Success:** Minimum 25% increase in faculty use of learner-centered methods in math learning support course.

<table>
<thead>
<tr>
<th>Related Strategy</th>
<th>Outcome</th>
<th>Assessment Method</th>
<th>Direct (D) or Indirect (I)</th>
<th>Frequency</th>
<th>Responsibility</th>
<th>Baseline Performance</th>
<th>First Available Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide ALEKS training to full-time and adjunct faculty on all campuses.</td>
<td>Increased comfort level with use of CAI for course delivery</td>
<td>Pre- and post-training survey results, self-reported or perceived effectiveness, response to item, “I am proficient in the use of technology in the classroom.”</td>
<td>I</td>
<td>Fall term</td>
<td>QEP Faculty Coordinators</td>
<td>Percentage of faculty who respond <em>Strongly Agree</em> or <em>Agree</em> to the item = N/A</td>
<td>Fall 2013</td>
</tr>
<tr>
<td></td>
<td>Increased adoption of CAI for course delivery</td>
<td>Comparison, Self-Evaluation, response to item, “I am familiar with the software, technology, and other resources that students are required to use in this course” and Student Perceptions, response to item, “The instructor was familiar with the software, technology, or other resources that students were required to use in the course.”</td>
<td>I</td>
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<tr>
<td>Provide resources on CAI, problem solving, effective assessment methods, and learner-centered classroom facilitation.</td>
<td>Increased use of learner-centered, rather than teacher-centered, classroom techniques</td>
<td>Faculty survey results of self-evaluation, comparison of instructional practices and behaviors before and after availability of resources, Comparison, Self-Evaluation, response to item, “My teaching practices create an environment that fosters student learning and accommodates different learning styles” and Student Perceptions responses to item, “The instructor was responsive to my learning needs.”</td>
<td>I</td>
<td>Fall term</td>
<td>QEP Faculty Coordinators; Dean of Arts and Sciences; QEP Director</td>
<td>Percentage of faculty who regularly employ learner-centered techniques = N/A</td>
<td>Fall 2013</td>
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<tr>
<td>Student Learning Outcome</td>
<td>Assessment Method</td>
<td>Direct (D) or Indirect (I)</td>
<td>Frequency</td>
<td>Responsibility</td>
<td>Baseline Performance</td>
<td>First Available Results</td>
<td>Related Initiative</td>
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<tr>
<td><strong>MATH 0090</strong></td>
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</tr>
<tr>
<td>1. Perform mathematical operations on whole numbers, fractions, and decimals.</td>
<td>Minimum 70% of students will demonstrate competency at 80% on key competency areas on comprehensive final exam for MATH 0090.</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Faculty</td>
<td>Spring 2012 performance on assessments: Modules 1-6 (former MATH 0097) SLO 1 = 78.5% SLO 2 = 53.5% SLO 3 = 87%</td>
<td>Spring 2013</td>
<td>Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090 (Refer to Assessment Plan, QEP Initiative 1)</td>
</tr>
<tr>
<td>2. Convert between equivalent forms of numbers and units of measurement.</td>
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<td>3. Use the appropriate formula to calculate the perimeter and/or area of geometric figures.</td>
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<tr>
<td><strong>MATH 1111</strong></td>
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</tr>
<tr>
<td>1. Apply mathematical concepts, tools and reasoning to graph functions.</td>
<td>Minimum 70% of students will demonstrate competency at 80% on key competency areas on comprehensive final exam for MATH 1111.</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Faculty</td>
<td>Spring 2012 performance on assessments SLO 1 = 74.00% SLO 2 = 69.00% SLO 3 = 67.67% SLO 4 = 64.50%</td>
<td>Spring 2013</td>
<td>Increase the percentage of students who successfully complete MATH 1111 as a result of completing the emporium model learning support course. (Refer to Assessment Plan, QEP Initiative 2)</td>
</tr>
<tr>
<td>2. Apply mathematical concepts, tools, and reasoning to solve systems of equations.</td>
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<tr>
<td>3. Model mathematical concepts in real world application problems.</td>
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<tr>
<td>4. Apply properties of logarithms to expand and condense logarithmic expressions.</td>
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<tr>
<td><strong>Problem Solving</strong></td>
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</tr>
<tr>
<td>1. Recognize and consider more than one strategy when problem solving.</td>
<td>Minimum 70% of students will demonstrate competency at 80% on key competency areas on comprehensive MATH 0090 final exam items related to problem solving.</td>
<td>D</td>
<td>Each term</td>
<td>QEP Faculty Coordinators; Math Faculty</td>
<td>Fall 2012 performance on assessments SLO 1 = N/A SLO 2 = N/A</td>
<td>Fall 2013</td>
<td>Improve students' problem-solving skills. (Refer to Assessment Plan, QEP Initiative 3)</td>
</tr>
<tr>
<td>2. Apply strategies in new or novel problem solving situations.</td>
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<tr>
<td>3. Demonstrate increased level of critical thinking skills in the context of quantitative literacy.</td>
<td>50% of students will score at or above the national mean on QUANT-Q assessment of quantitative thinking and reasoning skills.</td>
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</tbody>
</table>
As noted in the Implementation Plan section of this document, WGTC developed a pilot of the QEP, undertaken in four phases over four terms, fall 2011 through fall 2012. Only three of those phases have been accomplished at the time of this writing, and the number of students participating is relatively low; however, the results have been encouraging, particularly as related to the success rate of students who have completed the redesigned course sequence and the subsequent college algebra course. The first three phases involved the implementation of CAI through ALEKS and included the existing three courses, MATH 0097/0098/0099; the fourth phase in fall 2012 will transition pilot sections of those courses to the redesigned MATH 0090 (details of the pilot activities are provided in Table 7, p. 42). Table 10 provides a comparison of pilot math course completion rates with all learning support math course completion rates from fall 2011 through summer 2012.

Table 10. Course Completion Rates* for Learning Support Math Fall 2011-Summer 2012

<table>
<thead>
<tr>
<th>Beginning Term</th>
<th>N Enrolled</th>
<th>N Completed</th>
<th>% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALEKS</td>
<td>ALL</td>
<td>ALEKS</td>
</tr>
<tr>
<td>MATH 0097</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2011</td>
<td>5</td>
<td>158</td>
<td>5</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>25</td>
<td>103</td>
<td>20</td>
</tr>
<tr>
<td>Summer 2012</td>
<td>30</td>
<td>59</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>320</td>
<td>41</td>
</tr>
<tr>
<td>MATH 0098</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2011</td>
<td>37</td>
<td>554</td>
<td>30</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>42</td>
<td>432</td>
<td>37</td>
</tr>
<tr>
<td>Summer 2012</td>
<td>53</td>
<td>224</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
<td>1210</td>
<td>99</td>
</tr>
<tr>
<td>MATH 0099</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2011</td>
<td>10</td>
<td>505</td>
<td>6</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>13</td>
<td>492</td>
<td>5</td>
</tr>
<tr>
<td>Summer 2012</td>
<td>21</td>
<td>268</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>1265</td>
<td>21</td>
</tr>
<tr>
<td>MATH 1111</td>
<td>(after ALEKS)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Completed with grade of C or higher

Completion rates for MATH 0097 and 0098 are significantly higher for the pilot sections than for all sections combined. As the exit exam procedures for MATH 0099 are aligned with the modular activities and assessments, faculty expect the completion rate for that course to increase as well. Pilot course completion rates for summer 2012 are noticeably lower than for previous terms because the total enrollment reflects those students who completed one course and began the next at midterm; these students are continuing into fall 2012. Faculty have noted that student time-on-task also decreased during summer term, which affected the completion rates. As an abbreviated 8-week term, the summer lab time expectation was double that of a traditional semester; however, many students did not accelerate their time proportionately, a
factor that contributed to the lowered rate of completion. Students averaged only 4.16 hours per week in ALEKS, approximately the same amount of time averaged by students in traditional 15-week semester.

Other colleges with which WGTC faculty have been in contact have stressed the need for mandated lab time, as they have found a direct correlation between time-on-task and successful completion. Data from the WGTC summer 2012 pilot sections of MATH 0098, the largest group of students, supports these findings. A Pearson product-moment correlation was run to determine the relationship between students’ total time in ALEKS and the percentage of required modules completed. There was a strong, positive correlation between the two, $r = .458$, $n=85$, $p<0.01$. The total number of students includes those who began the first day of the semester and those who began at midterm.

After reviewing the data, faculty have adjusted the fall 2012 syllabus to reflect required class time of 1 hour/week, lab time of 2 hours/week, with the expectation of an additional 4-5 hours/week in ALEKS from any location, in order to accelerate completion time and increase student success. The result of that adjustment will be visible at the completion of pilot Phase IV. Pilot faculty have also expressed a need for regular math faculty meetings to “debrief” after each semester. These meetings have been included in the QEP Implementation Timeline and will be conducted by the QEP Faculty Coordinators in order to discuss results of the previous semester, as well as to plan strategies to continue to meet the goal of the Reaching the Summit: Conquering Mathematics, to improve student learning and success in learning support math and in the subsequent college algebra course.
REFERENCES


Perrin Alford          Provost
*Kevin Bratton (Chair)  Dean of Arts and Sciences
Dawn Cook             Vice President for Institutional Advancement
Robert Curry         Assistant Vice President for Academic Affairs
Kristen Douglas      Vice President for Institutional Effectiveness; SACS Liaison
Pat Hannon           Vice President for Academic Affairs
Karen Kirchler       Executive Director, Adult Education
Sindi McGowan        Assistant Vice President for Curriculum
*Greg Nelson         Vice President for Administrative Services
Pete Snell           Vice President for Economic Development

*no longer employed by the College
APPENDIX B: QEP Planning and Development Team

Perrin Alford  Provost
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*Kevin Bratton (Chair)  Dean of Arts and Sciences
Olivia Brown  Management Instructor/Program Chair, LaGrange Campus
*Lourdes Cody  Nursing Instructor, Murphy Campus
Dawn Cook  Vice President for Institutional Advancement
Robert Curry  Assistant Vice President for Academic Affairs
Kristen Douglas  Vice President for Institutional Effectiveness; SACS Liaison
Diana Hair  Coordinator, Customer Care Center/Student Advising Center
Pat Hannon  Vice President for Institutional Advancement
Zsa Zsa Heard  Psychology Instructor/Chair, LaGrange Campus
Karen Kirchler  Executive Director, Adult Education
Lauren Lunk  Director, Academic and Student Support Services
Sindi McGowan  Assistant Vice President for Curriculum
*Greg Nelson  Vice President for Administrative Services
Cecilia Owens  Dean of Health Services
Carol Pearson  Instructor/Chair, English/Humanities, Carroll Campus
G.W. Rogers  Associate Provost, Murphy Campus
Pam Sanders (Recorder)  Program Specialist, Institutional Effectiveness
Pete Snell  Vice President for Economic Development
Linda Sullivan  Director of Instruction, Carroll Campus
*Tina Warren  Nursing Instructor, Murphy Campus
Robin Witcher  Webmaster
*no longer employed by the College
Quality Enhancement Plan
with broad-based involvement

Road to SACS COC Reaffirmation
Dr. Kevin Bratton
Dr. Kristan Douglas

Focus: Documenting the Problem
➢ Initial efforts in topic identification phase
➢ Need evidence
➢ Surveys
➢ Interviews
➢ Focus groups
➢ Assessment criteria
➢ Identify the “gap”
➢ Basis for improvement in student learning
➢ Baseline data for assessment purposes

Research Findings
Community College Survey of Student Engagement
Areas of Lowest Student Engagement
➢ Active and Collaborative Learning
  Developmental Students – lower means in class
  presentations, peer projects, and community
  based projects
  Regular Status Students – lower means in
  community based projects
➢ Student-Faculty Interaction
  Developmental Students – lower means in career
  planning, outside class work, and extracurricular
  activities
  * in comparison to cohort colleges

Research Findings
WGTC Student Perceptions (Course Evaluations)
Lowest Areas for the Overall College
Communication Skills
➢ "The course contributed significantly to my
  communication skills"
Globally-oriented world
➢ "The course contributed to my understanding
  of a globally-oriented world"

Research Findings
Learning Support Success Rates - English

Research Findings
Learning Support Success Rates - Math

Research Findings
Learning Support Success Rates - Reading

Research Findings
WGTC CAAP Results FY2010

Topic Suggestions
➢ http://www.westgoshen.edu/qaqs/suggestion.htm
➢ Anonymity option
➢ Collected by groups
➢ Simple electronic form (permanent backup
  and green solution)
➢ Not limited to one idea
➢ Anyone can suggest a topic
➢ Allows for documentation of...

BROAD BASED INVOLVEMENT!
APPENDIX D: QEP Implementation Team

Mary Aderhold  Director of Admissions
Brian Barkley  Interim Dean of Arts and Sciences
Norman Blue  Math Instructor, Douglas Campus
Kevin Cain  Director of Institutional Advancement
Dee Coulter  Math Instructor/Learning Support Chair, LaGrange Campus
Kim Crockett  Student Success Coordinator
Robert Curry  Assistant VP for Academic Affairs
Kristen Douglas  Vice President for Institutional Effectiveness; SACS Liaison
Nihal Gunay  Dean of Distance Learning
Brian Henderson  Executive Director of Information Technology
Patti Manion  Math Instructor/Chair, LaGrange Campus
Chad Mathews  Math Instructor, Murphy Campus; Faculty Coordinator of QEP
Kisha Maynard  Math Instructor, Coweta Campus
Sindi McGowan (Chair)  Assistant VP for Curriculum; QEP Director
Ron Murphy  Math Instructor, LaGrange Campus; Faculty Coordinator of QEP
Norma Plunkett  Math Instructor, Carroll Campus
Tonya Sparkman (Recorder)  Program Assistant, Curriculum

Implementation Team Subcommittees

Registration Subcommittee

Mary Aderhold (Chair)  Director of Admissions
Nelda Burgess  Financial Aid Director
Brian Henderson  Executive Director of Information Technology
Elaine Heifner  Banner Database Manager, Information Technology
Laura Jakubiak  Registrar
Debra Jeter  Program Specialist, Academic Affairs
Diana Hair  Advising Center Coordinator, Academic and Student Support
Lynn Terry  Data Management Assistant, Information Technology
Amber Wilson  Accountant/AR Supervisor, Compliance and Reporting

Marketing Subcommittee

Kevin Cain (Chair)  Director of Institutional Advancement
Alaina Ellis Abney  Student Activities Coordinator
Brian Barkley  Interim Dean of Arts and Sciences
Ben Chambers  Marketing Specialist, Institutional Advancement
Anitra Ellison  Communications Specialist, Institutional Advancement
Kathy Johnson  Digital Media Specialist, Institutional Advancement
Ron Murphy  Math Instructor, LaGrange Campus; Faculty Coordinator of QEP
Sindi McGowan  Assistant VP for Curriculum; QEP Director
Nihal Gunay  Dean of Distance Learning
Robin Witcher  Webmaster

**Professional Development Subcommittee**

Chad Mathews (Chair)  Math Instructor, Murphy Campus; Faculty Coordinator of QEP
Norman Blue  Math Instructor, Douglas Campus
Regina Jarrett  Instructional Designer, Academic Affairs
Penny Kenerly  Director of Instruction, Murphy Campus
Sindi McGowan  Assistant VP for Curriculum; QEP Director
Ron Murphy  Math Instructor, LaGrange Campus; Faculty Coordinator of QEP
Babs Russell  Dean of Business/Public Services
Michael Stephens  Librarian, Douglas Campus
TBA  Adjunct Instructor

**Curriculum Subcommittee**

Ron Murphy (Chair)  Math Instructor, LaGrange Campus; Faculty Coordinator of QEP
Brian Barkley  Interim Dean of Arts and Sciences
Norman Blue  Math Instructor, Douglas Campus
Dee Coulter  Math Instructor/Learning Support Chair, LaGrange Campus
Patti Manion  Math Instructor/Program Chair, LaGrange Campus
Kisha Maynard  Math Instructor, Coweta Campus
Sindi McGowan  Assistant VP for Curriculum; QEP Director
Norma Plunkett  Math Instructor, Carroll Campus

**Goals and Outcomes Subcommittee**

Dee Coulter (Co-Chair)  Math Instructor/Learning Support Chair, LaGrange Campus
Ron Murphy (Co-Chair)  Math Instructor, LaGrange Campus; Faculty Coordinator of QEP
Kelechukwu (KC) Alu  Math Instructor, Carroll Campus
Lee Bradley  CIST/Math Instructor, Coweta Campus
Robert Curry  Assistant VP for Instruction
Kristen Douglas  Vice President for Institutional Effectiveness; SACS Liaison
Chad Mathews  Math Instructor, Murphy Campus; Faculty Coordinator of QEP
TBA  Adjunct Math Instructor
Tutoring/Scheduling Subcommittee
Kim Crockett (Chair)  Student Success Coordinator
Brian Barkley  Dean of Arts and Sciences
Carla Bradley  Program Specialist, Carroll Campus
Tyson Burke  Instructional Coordinator, Carroll Campus
Dallas Moon  Instructional Coordinator, Murphy Campus
Paige Saylors  Director of Instruction, Douglas Campus

Research Subcommittee
Robert Curry (Chair)  Assistant VP for Academic Affairs
Brian Barkley  Dean of Arts and Sciences
Nihal Gunay  Dean of Distance Learning
Mary McClung  Director, Library Services
Sindi McGowan  Assistant VP for Curriculum; QEP Director

Assessment and Evaluation Subcommittee
Sindi McGowan (Chair)  Assistant VP for Curriculum; QEP Director
Dee Coulter  Math Instructor/Learning Support Chair, LaGrange Campus
Becky deMayo  Psychology Instructor/Coordinator, Research and Planning
Kristen Douglas  Vice President for Institutional Effectiveness; SACS Liaison
Nihal Gunay  Dean of Distance Learning
Chad Mathews  Math Instructor, Murphy Campus; Faculty Coordinator of QEP
Tammy Harris  Enrollment Center Coordinator, Murphy Campus

IT support Subcommittee
Brian Henderson (Chair)  Executive Director of Information Technology
Clay Alsip  Systems Technician, Carroll Campus
Brian Barkley  Interim Dean of Arts and Sciences
Diane Corso  Network Administrator, Information Technology
Nihal Gunay  Dean of Distance Learning
Ron Murphy  Math Instructor, LaGrange Campus; Faculty Coordinator of QEP
Access
I. Ensure access to learning opportunities by providing educational programs, services, support systems, and facilities that meet student needs.

Quality Programs and Services
II. Ensure the delivery of quality educational programs and services to meet the academic and technical education needs of individuals, provide pathways to satisfying and rewarding careers, and ensure a skilled workforce.

Learning Outcomes
III. Provide educational experiences that focus on learning outcomes appropriate for the development of academic skills, occupational competencies, and lifelong learning in all academic and technical programs.

Technological Innovation
IV. Use technology in creative ways to enhance learning and streamline institutional processes.

Collaboration and Partnerships
V. Serve as a catalyst for the creation and maintenance of cooperative and collaborative partnerships among the educational, business, and government entities in the community.

Accountability
VI. Employ quality indicators to guide, assess, and improve the programs and services of the College.

Economic Development
VII. Assist in the economic development of the region by ensuring the availability of job training opportunities and serving as an economic catalyst for workforce development.

Resource Management
VIII. Ensure accountability and expand the College’s potential for promoting lifelong learning through the efficient use and management of available resources and by pursuing additional resources from both the public and private sectors.
West Georgia Technical College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS). As part of our reaffirmation in 2013, the Principles of Accreditation require each institution to prepare a Quality Enhancement Plan (QEP).

SACS describes the Quality Enhancement Plan as a “carefully designed and focused course of action that addresses a well-defined issue or issues directly related to improving student learning.”

The QEP Committee needs your input in identifying important issues that will help to improve student learning at WGTC. Please help us by submitting your great ideas.

You will find a suggestion box at the QEP webpage at http://www.westgatech.edu/qep/suggestatopic.htm.

If you have any questions, please contact Dr. Kevin Bratton at kevin.bratton@westgatech.edu or Dr. Kristen Douglas at kristen.douglas@westgatech.edu.

QEP Topic Suggestion:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Name: ____________________________________________

Position at WGTC: _____________________________ (Faculty or Staff)
Welcome to West Georgia Technical College’s SACS Accreditation Reaffirmation website for the Quality Enhancement Plan (QEP).

The Commission on Colleges of the Southern Association of Colleges and Schools (SACS) is the regional body for the accreditation of higher education institutions in the southern states (Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia) and Latin America awarding associate, baccalaureate, masters, or doctoral degrees.

West Georgia Technical College was accredited for the merger in December 2009. The College’s accreditation status will be reviewed in 2012. A new component of the accreditation process is the Quality Enhancement Plan (QEP). The development of the QEP is an opportunity for the institution to enhance overall institutional quality and effectiveness by focusing on an issue or issues the institution considers important to improving student learning.

As a five-year project, the QEP should represent a new endeavor for the College and not be something that has been or is nearly accomplished. It is essential that the QEP have broad-based College input in the selection of the topic and be accepted by the College community as having important value for the College in enhancing student learning.
APPENDIX H: QEP In-Service Presentation to Faculty and Staff

Quality Enhancement Plan

Road to SACCS COC Reaffirmation

Dr. Kevin Bratton
Dr. Kristen Douglas

Quality Enhancement Plan

- Proposed Case Requirement 4.4. The institution has developed an appropriate Quality Enhancement Plan (QEP) that includes:
  - Institutional processes for identifying key issues emerging from institutional assessment and focusing on learning outcomes and for the environment supporting student learning and overcoming the mission of the institution.
- Proposed Comprehensive Standard 5.1.3. The institution has developed a Quality Enhancement Plan that (1) demonstrates institutional capability for the initiative, implementation, and completion of the QEP; (2) includes broad-based involvement of institutional constituencies in the development and proposed implementation of the QEP; and (3) identifies a broad plan to measure their achievement.

Institutional Capability

- The institution provides evidence that it has sufficient resources to initiate, implement, sustain, and complete the QEP
  - Task and actions—who, what, when, where, how?
    - Management responsibility
    - Resources—new and reprogrammed
      - Personnel
      - Budget
      - Facilities
      - Policies

Generating Potential QEP Topics

- Review institutional assessment results
  - Team members are the primary contact with faculty
  - Open topic solicitation—on line suggestion box
  - Pro-active engagement with ongoing groups—meetings
  - Synthesize topics into master list of evolving themes and get feedback
  - Seek more developed ideas—substantive proposals from faculty, staff, and students

Focus Documenting the Problem

- Initial efforts in topic identification phase
  - Need evidence
    - Surveys
    - Interviews
    - Focus groups
    - Assessment results
    - Identify the “gap”
  - Basic for improvement in student learning

Creating In-depth Involvement

- Submit topic proposals
  - White paper
  - Selection by Learning Team

Assessment of the Plan

- The institution demonstrates that it has goals and a plan to assess their achievement
  - What do we want to accomplish?
    - Student learning
    - Behavioral change
  - How well are we doing?
    - Assessment of goals and actions
    - Student learning-based
  - Assessment of Plan
    - Progress
    - Focus
## APPENDIX I: Fall 2010 Schedule of QEP Presentations

<table>
<thead>
<tr>
<th>Campus/Group</th>
<th>Date/Time</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carroll Campus - Faculty</td>
<td>Wednesday, November 10(^{th}) 3:30PM</td>
<td>Kevin Bratton</td>
</tr>
<tr>
<td>Murphy Campus - Faculty</td>
<td>Wednesday, October 27(^{th}) 3:30PM</td>
<td>Kevin Bratton, Kristen Douglas</td>
</tr>
<tr>
<td>LaGrange Campus - Faculty</td>
<td>Wednesday, November 17(^{th}) 3:00PM</td>
<td>Kevin Bratton</td>
</tr>
<tr>
<td>Coweta Campus - Faculty</td>
<td>Tuesday, October 12(^{th}) 3:30PM</td>
<td>Sindi McGowan</td>
</tr>
<tr>
<td>Student Leadership Council</td>
<td>Monday, November 1(^{st}) 12:00 Noon (Tandberg)</td>
<td>Lauren Lunk</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>Tuesday, November 16(^{th}) 4:00PM (Murphy Campus)</td>
<td>Kristen Douglas</td>
</tr>
<tr>
<td>Advisory Committees</td>
<td>Scheduled by Program Chairs during Fall Quarter</td>
<td>Podcast Presentation</td>
</tr>
</tbody>
</table>

### Podcast
- Email to Everyone
- Email to Students
- ANGEL site
- QEP Website
<table>
<thead>
<tr>
<th>Category</th>
<th>Topic Idea</th>
</tr>
</thead>
</table>
| Technology               | • More laptops and computer labs for students for hands-on practice  
|                          | • Technology exposure in every class  
|                          | • Learning support labs where students can work independently or with instructor  
|                          | • Instantaneous communication to students through text messaging  
| Student Orientation      | • Required Student Success/College Life/Study Skills course for all students  
|                          | • Required computer and technical skills placement test upon admission  
|                          | • Mandatory orientation session for all new students—planned, well designed  
|                          | • Required library orientation  
|                          | • Academic advisement center; include Banner training for self-registration  
|                          | • Preparation for excellence in learning; learning how to learn; responsibility for learning  
|                          | • Student mentoring program  
| Student Collaboration    | • Study rooms for study groups  
|                          | • Student peer study groups and tutoring  
|                          | • Student-based learning; collaborative learning in the classroom  
| Critical Thinking/       | • Problem-solving across the curriculum  
| Problem-Solving          | • Information literacy instruction; critical thinking to help identify information needed for problem-solving, academics, lifelong learning  
|                          | • Real life applications and interventions  
|                          | • Fostering intellectual curiosity to enhance decision making  
|                          | • Ethics in education and the workforce  
| Social Utility           | • Social networking and internet social media for recruitment  
|                          | • Groups/communities focused on issues that hinder students from learning  
| Learning Support         | • Reading club to improve reading comprehension skills; reading contests  
|                          | • Staff/testing facilities for students with learning disabilities/deficiencies  
|                          | • Study sessions for the COMPASS placement exam; online and video reviews  
|                          | • Increased tutoring services to accommodate student schedules  
|                          | • Required Student Success/College Life/Study Skills course for LS students  
|                          | • Full-time student learning centers w/ centralized services  
|                          | • Focus on learning support English/reading courses for success  
|                          | • Focus on learning support math courses for success  
|                          | • More visual projects in math LS; reduce cognitive overload in LS math courses  
| Writing Across the       | • Increased writing in all subject areas, including research/business correspondence  
| Curriculum               | • Credit course in APA/MLA research styles and research methods  
| Online/Distance Learning  | • All courses at least web-enhanced; increase hybrid/ blended offerings  
|                          | • Faculty development in transitioning courses to online  
|                          | • More interactive forum/community in ANGEL  

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Reaching the Summit: Conquering Mathematics

APPENDIX K: Student Topic Selection Survey Results

### Quality Enhancement Plan Survey

As a current student of West Georgia Technical College, please choose the topic that you feel would help students the most.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking / Problem Solving</td>
<td>26.3%</td>
<td>272</td>
</tr>
<tr>
<td>First Year Experience</td>
<td>22.9%</td>
<td>232</td>
</tr>
<tr>
<td>Instructional Technology</td>
<td>9.9%</td>
<td>100</td>
</tr>
<tr>
<td>Online Learning</td>
<td>15.1%</td>
<td>153</td>
</tr>
<tr>
<td>Social Utility / Information Literacy</td>
<td>3.2%</td>
<td>32</td>
</tr>
<tr>
<td>Strengthening Learning Support English</td>
<td>2.5%</td>
<td>25</td>
</tr>
<tr>
<td>Strengthening Learning Support Math</td>
<td>9.3%</td>
<td>94</td>
</tr>
<tr>
<td>Strengthening Learning Support Reading</td>
<td>0.9%</td>
<td>9</td>
</tr>
<tr>
<td>Student Collaboration</td>
<td>5.8%</td>
<td>59</td>
</tr>
<tr>
<td>Writing Across the Curriculum</td>
<td>3.5%</td>
<td>35</td>
</tr>
</tbody>
</table>

answered question: 1,011
skipped question: 0
QEP MINI-WHITE PAPER INSTRUCTIONS

1. Purpose

The purpose of this request is to obtain Mini-White Papers that identify and provide basic justification for the selection of a topic for the five-year West Georgia Technical College’s Quality Enhancement Plan (QEP). Research awards ($100) will support the development of the Mini-White Papers. The Mini-White Papers will be reviewed and four Mini-White Papers will be selected for development as more in depth proposals. Research awards ($1,000) will support the development of the Full (10-15 pages) White Papers. Based on those proposals, three viable topics will be reviewed by the QEP Planning Team and one will be nominated as the QEP topic and sent to Senior Staff for approval. After the QEP topic is selected, a QEP Development Team will be established to develop the plan that will be submitted to SACS in the summer of 2012.

2. Background

A Quality Enhancement Plan (QEP) is now required by Core Requirement 2.12 as part of the reaffirmation of accreditation process by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS), the regional accrediting body for West Georgia Technical College. The QEP is a plan that is a carefully designed and focused course of action that addresses a well-defined issue or issues directly related to improving student learning.

The student learning concept should permeate the goals of the QEP; however, its inclusion can be interpreted broadly. The QEP will be submitted to SACS no later than six weeks prior to the on-site committee visit to campus that will occur in the fall of 2012. The QEP will cover a planning period of at least five years.

The QEP Planning Team, comprised of faculty, staff and administrators throughout the college has been charged with identifying several viable QEP topics, one of which will be selected by the Senior Staff in the summer of 2011. Over the past two months, the QEP Planning Team has been obtaining suggestions from faculty, staff, students, advisory committee members, and administration for potential QEP topics, and has synthesized those suggestions into the following ten categories:

1. Critical Thinking / Problem Solving
2. First Year Experience
3. Instructional Technology
4. Online Learning
5. Social Utility / Information Literacy
6. Strengthening LS English
7. Strengthening LS Math
8. Strengthening LS Reading
9. Student Collaboration
10. Writing Across the Curriculum

A general description of each area and supporting bullet points are included in Appendix A as a starting point. The QEP Planning Team is seeking additional input in the form of proposals on these categories in order to fully assess the potential of each for selection as a QEP topic.

The QEP Planning Team is soliciting Mini-White Papers based on one or more of the selected categories. Research Awards ($100) will support the development of the mini-white papers. The mini-white papers will be reviewed by the QEP Planning Team and four will be selected for development as more in depth White Papers in March. Research awards ($1,000) will support the development of the Full White Papers. Based on those proposals, three viable topics will be reviewed by the QEP Planning Team and one will be nominated as the QEP topic and sent to Senior Staff for approval. After the QEP topic is selected, a QEP Development Team will be established to fully develop the plan that will be submitted to SACS in the summer of 2012.
3. Mini-White Paper Requirements

A Mini-White Paper will focus on one or more topics that support the selected categories listed in section 2. The proposal should then include a general description of the proposed topic and a narrative justification that addresses the following requirements:

1. The proposed topic is very important for WGTC.
2. The proposed topic has a strong bearing on affecting student learning in the classroom.
3. The proposed topic affects a well-defined and large group of credit seeking students.
4. The proposed topic displays potential for adequate resources.
5. The justification suggests the level of departmental and unit involvement.
6. The proposal identifies a way to measure changes in student learning.
7. The proposed topic is either a new endeavor or a significant extension of ongoing efforts.

The Mini-White Papers must be prepared as an MS Word document with one-inch margins and 12-point Times New Roman font. The Mini-White Papers may not exceed two (2) pages of text, but excluding the submittal form and references.

An individual or team may submit any number of Mini-White Papers; however, there will only be one $100 research award to an individual or team. However, no individual or team will be selected to prepare more than one Full White Paper.

Each Mini-White Paper will be evaluated by the QEP Planning Team. Evaluation of the Mini-White Papers will be conducted under a blind procedure so please do not include your name(s) on the body of the proposals.

4. Mini-White Paper Submittal Procedures

In order to be considered, Mini-White Papers may be submitted in electronic form as an MS Word document or in paper format. The first page is the Mini-White Paper submission form (see Appendix B). A Mini-White Paper should not exceed two pages, excluding the submittal form and references. Mini-White Papers may be submitted electronically to annie.pool@westgatech.edu or by sending a printed version to Annie Pool, Arts & Sciences Program Assistant at the LaGrange campus via inter-office mail prior to 5:00 PM on Friday, March 11, 2011.

The Mini-White Paper format includes:

1. Mini-White Paper submission form (see Appendix B)
2. Body (not to exceed two pages)
   a. Category (repeated from submittal form)
   b. Topic (repeated from submittal form)
   c. Description of the topic
   d. Justification (section 4 requirements)
3. References (if appropriate)

5. Tentative Schedule

March 11, 2011   Mini-White Papers due
March 25, 2011   Full White Paper awards announced
APPENDIX M: QEP Proposal Rubric

QEP Mini-White Paper Evaluation Form

Title: _________________________________________________________
Proposal Number: ______________________________
Reviewer: ______________________________________________________

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
</table>

Instructions: Please review the mini-white paper using the following items. Mark one rating for each of the items, and then transfer the associated score with that rating to the above table. After completing all six items, please total the score. We will use the scores as a starting point in our discussion of the mini-white papers. Please add any comments at the end of the items.

1. Very important for WGTC
   - **Exemplary (10):** Proposal identifies a current need or major opportunity for improvement.
   - **Acceptable (5):** Proposal describes a topic that could become important for WGTC or may result in higher quality learning.
   - **Unacceptable (0):** Proposal does not effectively address why the topic would be important.

2. Addresses some potential actions that might be taken to improve student learning in the classroom
   - **Exemplary (10):** Proposal includes an overview of specific planned actions for implementation of this QEP topic.
   - **Acceptable (5):** Though specific actions to improve student learning are not explicit, the proposal clearly has the potential to general such actions.
   - **Unacceptable (0):** There is no indication, either explicit or implicit, of the proposal's potential to impact on student learning outcomes.

3. Identifies a topic that is focused yet has broad interest and relevance to the credit-seeking student population
   - **Exemplary (10):** Proposal is clearly defined and well bounded in terms of planned actions yet has strong potential to appeal to and to benefit a large segment of the credit seeking student population.
   - **Acceptable (5):** Proposal has potential but either the topic needs to be more clearly focused or minor modifications may be required to ensure that the concept has broad interest and relevance.
   - **Unacceptable (0):** Topic lacks focus (too broad and vague) and/or lacks broad interest and relevance.

4. Displays potential for adequate resources
   - **Exemplary (10):** Proposal clearly states the approximate expense of the plan and the amount of resources is reasonable.
   - **Acceptable (5):** Proposal has suggested the approximate cost of the plan and has implied the resources may be available.
   - **Unacceptable (0):** Proposal lacks any information concerning the cost of the plan and/or the amount of resources needed is unreasonable.

5. Suggests the level of departmental and unit involvement
   - **Exemplary (10):** Proposal clearly identifies roles and responsibilities of the major academic and administrative units that would participate.
   - **Acceptable (5):** Proposal implicitly identifies major academic and administrative units that would likely play an active role.
   - **Unacceptable (0):** Proposal does not explicitly or implicitly identify roles and responsibilities of major academic and administrative units.

6. Identifies a way to assess change in student learning
   - **Exemplary (10):** Proposal clearly states how change in student learning will be measured.
   - **Acceptable (5):** Proposal does not explicitly state how change will be measured, but plan definitely has the potential for reliable measurement.
   - **Unacceptable (0):** Proposal does not include any suggestion on measuring changes in student learning.

7. Is either a new endeavor or a significant extension of ongoing efforts
   - **Exemplary (10):** Proposal is a new endeavor or is clearly a significant extension of an ongoing effort.
   - **Acceptable (5):** Proposal is an extension of an ongoing effort but may not represent an enhancement worthy of selection as a QEP topic.
   - **Unacceptable (0):** Proposal reflects an ongoing effort with little evidence of a significant increase in scope.

Comments:
QEP FULL WHITE PAPER GUIDELINES AND QUESTIONS

Guidelines:
The Full White Papers must be prepared as an MS Word document with one-inch margins and 12-point Times New Roman font. The Full White Papers must be between 10-15 pages of text, excluding the title page and reference page. Papers should be submitted electronically through the QEP website. **The Deadline for Full White Papers: Monday, May 2, 2011 at 10:00 AM.**

**Topic or Theme:**
Give your idea a working title that should be descriptive of the content or focus.

**Summary:**
Provide a clear and concise description of the critical issues to be addressed.

**Student Learning (major section):**
What aspects of student learning are to be affected by this topic or theme? What are the goals and objectives for improving student learning? What does the literature say about this aspect of student learning? What kind of prior research supports the need for addressing this aspect of student learning? What are the specific WGTC “needs”?

**Critical Thinking Component:**
How will you include a critical thinking component to this theme or topic? How do you feel the critical thinking aspect of your theme or plan will relate to student learning? How will you assess the critical thinking component?

**Significance and Urgency:**
Why is it important for student learning in this area to be improved at WGTC? Why is it important that this area be addressed in the immediate future as the QEP topic? What evidence is available to indicate that this is a need at WGTC?

**Description and Scope (major section):**
Describe the kinds of focused tasks that should be implemented to improve student learning. Describe the scope of application and involved parties (e.g., students, faculty members) with their roles. Identify what groups of students would be affected. What does the literature suggest regarding the ability of these activities to affect student learning? Describe what kinds of offices and departments would be involved in the implementation. In other institutions of higher education, what are the best practices that are related to this area?

**Assessment (major section):**
Describe the kinds of assessments that would be possible to demonstrate the effects of the QEP activities on student learning. What kinds of student learning outcomes would be addressed? What kinds of measures and instruments would be used? What kind of assessment schedule should be followed? How would the QEP assessment of student learning be related to the existing WGTC program or department Student Learning Outcomes?

**Schedule:**
Develop a very rough schedule of the kinds of focused activities and initiatives that would take place in 2012 (Development Year), 2013 (Pilot Year), 2014 (1st Year), 2015 (2nd Year), 2016 (3rd Year), 2017 (4th Year), and 2018 (5th Year) to prepare and implement the QEP.

**Implementation Resource Requirements (major section):**
Describe the kinds of resources that would be needed to implement your proposed topic or theme. What level of financial support would be required over the planning horizon (described above)? What would be the expectation with respect to increasing personnel involvement or adding new personnel to support the effort?

**Risk Assessment:**
Describe the problems that might be encountered in pursuing this theme or topic as a QEP? Are these tried and true methods or is there a high risk in pursuing them? What alternative courses are available if the planned actions are not successful?

**Commitment to and Support of the Topic:**
What is the likelihood that WGTC faculty members will provide enthusiastic support to these initiatives? What are the barriers to obtaining the necessary support from them? What kinds of things should be done to remove those barriers? What level of support might be expected from administrators, students, and staff for this topic?

**Available WGTC Expertise:**
Explain your interest in and experience with this topic. Describe any previous research you have conduct on this or related topics. What other individuals in the college would be well-qualified to work on this theme or topic?

**Bibliography:**
Document all sources used in your paper.
QEP FULL WHITE PAPER EVALUATION FORM

Directions: The questions to be addressed in the white paper as described in the guidelines are attached and should be reviewed prior to reviewing the white paper. Ultimately, we want to know if the white paper provides evidence that the proposed topic is viable as a QEP topic. Does it address student learning and is it important for WGTC? Are the actions assessable? Is it interesting and broad enough to generate widespread support? Score all five questions between “0” for ‘not discussed at all’ and “10” for ‘outstanding coverage’.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
</table>

1) How well does the white paper clearly identify student learning outcomes?

☐ Strong: Clearly describes broad range of student learning outcomes across disciplines; identifies underlying learning theories; identifies why this is an opportunity for WGTC.

☐ Acceptable: White paper suggests that student learning outcomes could be developed with further study and provides a basis for that suggestion; suggests that this is an opportunity for WGTC.

☐ Weak: Treatment of student learning outcomes is very weak.

2) How well does the white paper identify actions that would positively affect student learning outcomes?

☐ Strong: Provides excellent description of proposed actions and articulates their link to specific student learning outcomes.

☐ Acceptable: Provides good description of proposed actions but fails to show clear linkage to student learning.

☐ Weak: White paper does not include a clear description of the types of actions needed to affect student learning.

3) How well does the white paper identify how and when student learning outcomes will be assessed?

☐ Strong: White paper describes appropriate measures for student learning and assessment instruments and when data would be collected.

☐ Acceptable: Provides good description of assessment approach that is feasible and clearly related to the specified student learning outcomes.

☐ Weak: White paper does not demonstrate a clear potential for assessing the desired student learning outcomes.

4) How well does the white paper make the case that this topic would generate widespread support among the faculty?

☐ Strong: White paper describes a topic of significant importance for improving student learning that will generate widespread acceptance.

☐ Acceptable: Addresses a topic with broad interest that could result in strong support with appropriate education and marketing.

☐ Weak: White Paper does not demonstrate a clear potential for widespread support.

5) What is your overall impression of this white paper as a potential QEP topic?

☐ Strong: White paper describes a complete approach to an important WGTC student learning issue.

☐ Acceptable: White paper has some very significant components that could be combined with other topics to make a reasonable QEP topic.

☐ Weak: White paper does not provide sufficient evidence to demonstrate the viability of the material as a QEP topic.

Comments:

What are the major strengths of this white paper that could be applied to an eventual QEP topic?
What are the major weaknesses of this white paper that would have to be corrected before this could be a good QEP topic?
## APPENDIX O: Faculty Resources Acquired to Date

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Publication</th>
<th>Publisher</th>
<th>ISBN</th>
<th>BARCODE</th>
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<tbody>
<tr>
<td>Assessing General Education Programs</td>
<td>Allen</td>
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<td>Anker Publication</td>
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<td>Assessing for Learning</td>
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<td>Assessment Clear and Simple</td>
<td>Walvoord &amp; Banta</td>
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<td>Assessment Update</td>
<td>Banta</td>
<td>2009</td>
<td>Wiley InterScience</td>
<td>978-0-7879-9573-7</td>
<td>30056100231972</td>
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<td>Building a Scholarship of Assessment</td>
<td>Banta</td>
<td>2002</td>
<td>Jossey-Bass</td>
<td>978-0-470-62307-7</td>
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<tr>
<td>Classroom Assessment Techniques</td>
<td>Angelo &amp; Cross</td>
<td>1993</td>
<td>Jossey-Bass</td>
<td>978-1-55542-500-5</td>
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<td>Community College Assessment</td>
<td>Banta</td>
<td>2004</td>
<td>Jossey-Bass</td>
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<td>Designing Effective Assessment</td>
<td>Banta, Jones, Black</td>
<td>2009</td>
<td>Jossey-Bass</td>
<td>978-0-470-39334-5</td>
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<td>Assessing the Online Learner</td>
<td>Palloff &amp; Pratt</td>
<td>2009</td>
<td>Jossey-Bass</td>
<td>978-0-470-28386-8</td>
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<td>Developing Learner-Centered Teaching</td>
<td>Blumberg &amp; Weimer</td>
<td>2009</td>
<td>Jossey-Bass</td>
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<tr>
<td>Effective Grading</td>
<td>Walvoord &amp; Anderson</td>
<td>2010</td>
<td>Jossey-Bass</td>
<td>978-0-470-50215-0</td>
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<td>Meaningful Course revision</td>
<td>Wehlburg</td>
<td>2006</td>
<td>Anker Publication</td>
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<td>Responding to the Challenges of Developmental Education</td>
<td>Kozeracki</td>
<td>2005</td>
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<td>Student Engagement Techniques</td>
<td>Barkley</td>
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<td>Teaching with Classroom Response Systems</td>
<td>Bruff</td>
<td>2009</td>
<td>Jossey-Bass</td>
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<td>The Learning Portfolio</td>
<td>Zubizarreta &amp; Seldin</td>
<td>2004</td>
<td>Wiley, John &amp; Sons</td>
<td>1-882982-66-0</td>
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<td>The Practice of Problem-Based Learning</td>
<td>Amador, Miles, Peters</td>
<td>2006</td>
<td>Jossey-Bass</td>
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<td>Using Wikis for Online Collaboration</td>
<td>West &amp; West</td>
<td>2009</td>
<td>Jossey-Bass</td>
<td>978-0-470-34333-3</td>
<td>30056100230735</td>
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</table>
APPENDIX P: QEP Electronic Newsletter, Spring 2012

REACHING THE SUMMIT
Conquering Mathematics

Who Is This ALEKS?
I'm Hearing About?
The QEP will use Assessment and Learning in Knowledge Spaces (ALEKS), an interactive, Web-based software program designed to help students reach subject-matter mastery. The software is composed of interactive math tutorials, exercise demonstrations, practice exercises, and assessment and immediate feedback. Through this process, students are assured of mastering one concept before they can move on to the next.

QEP Implementation
The QEP will be implemented over roughly the next five years, from January 2013 until December 2017. A pilot project began in the fall on the Murphy campus, was expanded in the spring to LaGrange and Douglas campuses, and will continue through next fall term on all campuses.

What's Happening Already?
"We wanted to create an atmosphere in the developmental class that is conducive to learning and fostering success in the degree and diploma math classes required of all our students. This is a great step forward for WGTC to make this commitment and be a leader in Georgia education. WGTC will be the model that other schools will be copying." -Ron Murphy

Fall semester pilot with instructor Ron Murphy (27 of 43 students passed their learning support math course; that's 63%)

True or False?
Answer TRUE or FALSE for each question below:
1. QEP stands for Quality Enhancement Project.
2. The Southern Association of Colleges and Schools, better known as SACS, requires that all colleges develop a QEP to enhance student learning.
3. WGTC's QEP is a five-year plan that focuses on improving student learning in learning support mathematics.
4. ALEKS is the Scandinavian consultant hired to implement WGTC's QEP.

These pilot students chose the QEP logo and designed their own t-shirts, so if you see a student wearing a t-shirt that says, "I'm a Smart-ALEKS math student at WGTC" ask what it's all about.

Next story: Meet the QEP Implementation Team, including the champion faculty/STAFF who have the QEP vision cog.

For more information about the QEP, please contact the QEP Director, Dr. John McConnell, or one of the QEP Faculty Coordinators, Ron Murphy or Brian Banks.
Timeline for Student Learning Outcomes Assessment

<table>
<thead>
<tr>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>analyze and summarize previous FY</td>
<td>finalize current FY</td>
<td>Apply and collect data</td>
<td>YTD results</td>
<td>Apply and collect data</td>
<td>Ongoing review and evaluation</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

June-July:
- Perform assessment analysis for previous FY and document results:
  - Analyze data from previous year, including all campuses, courses, and sections, as relevant.
  - Summarize results from previous year and determine if outcomes were met.
- With input from all program faculty, determine how results will be used to improve outcomes in the future.
- Program chairs/directors complete last two columns (results summary/use of results) of previous FY Program Outcomes Review template (assessment plan) for programs/GE departments and GE Outcomes Review for degree programs; submit previous FY SLO assessment plans to AVP for Curriculum.

August
- Review program/department SLOs and choose outcomes for current FY assessment (may be based on previous year results).
- Determine assessment measures and courses in which to assess.
- Coordinate syllabi, assignments, and rubrics across program/department for designated outcomes assessment.
- Program chairs/directors complete first two columns (outcomes/measures) of current FY Program Outcomes Review template (assessment plan) for programs/GE departments and GE Outcomes Review for degree programs; submit current FY SLO assessment plans to AVP for Curriculum.
- AVPC post all program and GE results, including CAAP, from previous year.

September-December
- Program chairs/directors follow up with all program faculty to ensure consistent application of assessment methods and rubrics.
- Apply measures and collect data from fall semester.
- Compile results as data becomes available.

January
- Begin evaluating year-to-date results.
- Discuss possible implications and changes for next year, if needed.

February-May
- Program chairs/directors follow up with all program faculty to ensure consistent application of assessment methods and rubrics.
- Apply measures and collect data from spring semester.
- Compile results as data becomes available.

Ongoing
- At any time in the cycle, work with program-designated SLO contact for assessment help.
- At any time in the cycle, department/program/school may use results to suggest changes for the following term.
- At any time in the cycle, faculty may request that IE review available data for recommendations.
### 1. Professional Development Sample

<table>
<thead>
<tr>
<th>Initiative:</th>
<th>Enhance faculty development opportunities in order to improve student learning.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy:</td>
<td>Provide ALEKS training to full-time and adjunct faculty on all campuses.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>Coordinate ALEKS training sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline</td>
<td>Beginning fall semester 2011; each semester thereafter</td>
</tr>
<tr>
<td>Objective</td>
<td>To acquaint full-time and adjunct math faculty members with the student and administrative features of ALEKS computer-aided instruction in order to more fully prepare them to implement the new teaching methodology of the QEP course redesign. The initial training will involve the five full-time faculty scheduled to teach pilot sections of ALEKS-facilitated learning support courses on three campuses; all full-time faculty will receive training in summer 2012, followed by training in fall 2012 and spring 2013 of all adjunct faculty teaching MATH 0090.</td>
</tr>
</tbody>
</table>

| Activities | Consultants will be contracted for initial presentations to faculty coordinators and full-time math faculty to present interactive training, including instructional capabilities and features of ALEKS and faculty and student resources. Thereafter, training will be developed and delivered by QEP Faculty Coordinators and, as the project progresses, by seasoned math faculty. Each faculty member in training will receive access to an individual account and experience the environment and components of the system through the student view and instructor view. Faculty coordinators will develop an ALEKS procedural manual to be distributed and discussed in training and used as a resource. Training will be conducted each semester as needed. |

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>QEP Faculty Co-Coordinators, Ron Murphy, Chad Mathews; Math Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>Training budget allocation: $4000 consultant fees to deliver initial full-time faculty training; $5000 faculty stipends--$1000 for 5 faculty champions; $1250 adjunct faculty (at $15/hr training rate)</td>
</tr>
<tr>
<td>Assessment</td>
<td>Session evaluation instrument distributed after each session to gauge effectiveness of training and trainer(s) and usefulness of resources</td>
</tr>
</tbody>
</table>
### Initiative: Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.
### Strategy: Develop emporium model math labs.

<table>
<thead>
<tr>
<th>Task</th>
<th>Recruit and train math lab facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline</td>
<td>Summer/Fall/Spring semesters 2012-2013; first sessions scheduled June 29 and July 6, 2012</td>
</tr>
<tr>
<td>Objective</td>
<td>To facilitate a smooth implementation of computer-aided instruction, specifically ALEKS student features; ensure that facilitators are familiar with ALEKS these features and can lend timely assistance to students in the emporium labs. Progressively hire and train additional math lab facilitators as needed in order to provide adequate services to LS math students.</td>
</tr>
<tr>
<td>Activities</td>
<td>QEP Tutoring/Scheduling Subcommittee will develop position announcement and update as needed each semester; will send to HR to post position. Campus DIs will interview/hire facilitators according to campus scheduling needs (full-time faculty will staff labs as well as MATH 0090 classes). QEP Faculty Coordinators will develop and schedule sessions to provide ALEKS training to all newly hired learning support math lab facilitators each semester.</td>
</tr>
<tr>
<td>Responsibility</td>
<td>QEP Tutoring/Scheduling Subcommittee; QEP Faculty Co-Coordinators, Ron Murphy, Chad Mathews; Campus Directors of Instruction</td>
</tr>
<tr>
<td>Budget</td>
<td>Adjunct budget allocation: $1250 (at $15/hr training rate)</td>
</tr>
<tr>
<td>Assessment</td>
<td>Session evaluation instrument will be distributed after each faculty training session. Student course exit survey instrument will be conducted each semester with targeted questions regarding quality of math lab assistance from facilitators.</td>
</tr>
</tbody>
</table>

### Initiative: Increase the percentage of students who successfully complete the learning support mathematics course MATH 0090.
### Strategy: Develop emporium model math labs.

<table>
<thead>
<tr>
<th>Task</th>
<th>Schedule math lab facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline</td>
<td>Beginning fall 2012; each semester thereafter</td>
</tr>
<tr>
<td>Objective</td>
<td>To facilitate a smooth implementation of computer-aided instruction, specifically ALEKS; ensure adequate staffing of labs on each campus during all hours of operation. Progressively hire and train additional math lab facilitators as needed and assess students’ use of the math labs in order to provide adequate services to LS math students.</td>
</tr>
<tr>
<td>Activities</td>
<td>Develop expanded math lab schedule for each campus that includes day and evening hours, minimum 40 hours/week, dependent on needs of individual campus. Schedules will be distributed to campus advising centers, posted to SharePoint, and announced the first week of each semester in the WGTC Update and in all LS math classes.</td>
</tr>
<tr>
<td>Responsibility</td>
<td>QEP Faculty Co-Coordinators, Ron Murphy, Chad Mathews; Campus Directors of Instruction</td>
</tr>
<tr>
<td>Budget</td>
<td>Adjunct budget allocation: $192,000 upon full implementation (at $20/hr facilitation rate)</td>
</tr>
<tr>
<td>Assessment</td>
<td>Student use of labs will be tracked through ALEKS administrative function and through lab sign-in to determine the hours of greatest need on each campus and develop schedules around those times. Student course exit survey instrument will be conducted each semester with targeted questions regarding math lab assistance, including convenience of available hours of operation.</td>
</tr>
</tbody>
</table>
### 3. Collegewide Support Sample

<table>
<thead>
<tr>
<th>Initiative: (Supports all initiatives through promoting awareness of the QEP)</th>
<th>Strategy:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task</strong></td>
<td>Conduct QEP Student Summits</td>
</tr>
<tr>
<td><strong>Timeline</strong></td>
<td>Fall 2012-fall 2013 (each semester thereafter as warranted)</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>To maintain momentum and interest in the QEP project; to promote awareness of the new learning support opportunities available through the QEP course redesign; to communication and disperse updated information regarding the QEP initiatives and activities</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td>During the last week of the month for the first three months of fall and spring semesters, each campus will host events revolving around the mountain climbing theme of the QEP and will distribute promotional items to students, faculty, staff, and campus visitors. Each campus will set up a tent and table with the QEP banner prominently displayed. A two-minute video developed by the digital media specialist will play continuously to provide student experiences and faculty perspectives on the QEP pilot. Informational literature, including QEP Quick Facts postcards and bookmarks, will be distributed, along with t-shirts and carabiners. Associate Provosts will designate campus personnel to set up tents and tables with displays and materials and will schedule faculty and staff to be available during summit activities; staff will also ensure that attendees complete and submit the brief POC survey of the activities. Full-time faculty and QEP faculty coordinators will be available at all events to share experiences and provide more information about the course redesign and its benefits to students.</td>
</tr>
<tr>
<td><strong>Responsibility</strong></td>
<td>QEP Director, Sindi McGowan; Marketing Subcommittee; Associate Provosts; QEP Faculty Coordinators, Ron Murphy, Chad Mathews; Math Faculty; representative College personnel</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>Marketing allocation: $5000 campus events</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>Point-of-contact survey at each summit with brief questions regarding the effectiveness of the preparation and activities</td>
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</table>

<table>
<thead>
<tr>
<th>Initiative: (Supports all initiatives through promoting awareness of the QEP)</th>
<th>Strategy:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task</strong></td>
<td>Design and develop/order/distribute QEP Student Summit materials</td>
</tr>
<tr>
<td><strong>Timeline</strong></td>
<td>Fall 2012-fall 2013 (each semester thereafter as warranted)</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>To promote interest in the QEP project; to ensure that all campuses have abundant materials to disperse during summits</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td>T-shirts, bookmarks, pencils, flyers, postcards, banners, and yard signs will be designed by the marketing specialist and orders placed through the purchasing department. The digital media specialist will recruit faculty and select pilot students to provide short clips and voice overs for a two-minute video highlighting the QEP. Flyers will be delivered to campuses the two weeks prior to each event in order to advertise to students. Promotional and display materials will be couriered or delivered to designated campus personnel at least two days before the event to ensure timely preparation. QEP Director will prepare the POC survey with brief questions to gauge effectiveness of promotion and information provided at summits.</td>
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<tr>
<td><strong>Responsibility</strong></td>
<td>QEP Director, Sindi McGowan; Marketing Subcommittee; Business Office</td>
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<tr>
<td><strong>Budget</strong></td>
<td>Marketing allocation: $13,750 promotional items/giveaways; $1750 banners, flyers</td>
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<tr>
<td><strong>Assessment</strong></td>
<td>Point-of-contact survey at each summit with brief questions regarding the effectiveness of the preparation and activities</td>
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