Quality Enhancement Plan

Atlanta Metropolitan College

Building Bridges of Success

Math Links

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QEP Purpose Statement

The purpose of the Quality Enhancement Plan is to equip students with the prerequisite math skills, through active learning and technology, to improve performance on the Developmental Math Exit Exam (COMPASS) and College Algebra.

INTRODUCTION AND DESCRIPTION OF ATLANTA METROPOLITAN COLLEGE

History

In June 1965, the Board of Regents of the University System of Georgia authorized a junior college for the west metropolitan area of Atlanta at an undesignated location. After a great deal of discussion, the Atlanta School Board and the Board of Regents made the decision to build the college on land adjacent to Atlanta Area Technical School, which was under the jurisdiction of the Atlanta Board of Education.

The Atlanta School Board authorized their Superintendent in February 1971 to develop a financial plan to build the new college. On October 9, 1972, the Board of Regents reconfirmed, in principle, the construction of the college. In February 1973, the Board of Regents authorized the plans and specifications for Phase I of the construction at a projected cost of $2,000,000. Construction began on the first building in 1973 and was completed in August 1974.

The College became the thirty-first institution of the University System of Georgia and began classes in September 1974 with an initial enrollment of 504 students. During the 1976-77 academic year, construction of the Central Energy Plant was completed. In 1978-79 two multi-level academic buildings were added to the resources of the college: an academic classroom building and the college library. The 1987-1988 academic year, brought the decision to change the institution's name from Atlanta Junior College to Atlanta Metropolitan College, with the permanent transition becoming effective July 1, 1988. A new Health and Physical Education Complex was completed and occupied during the 1991-92 academic year. Additionally, the Student Center was completed during the fall 2000 semester.

Organizational Structure

Atlanta Metropolitan College (AMC) has four academic divisions: (1) Science, Math, and Health Professions, (2) Business and Computer Science, (3) Humanities and Fine Arts, and (4) Social Sciences. Each division is headed by a Dean, who, with the assistance of department heads, is responsible for the administration and management of the academic divisions. Deans report to the Vice President for Academic for Affairs, who in turn reports to the President of the College. There are also five Vice Presidents (VPs) of the College, one for each of the following areas: (1) Academic Affairs, (2) Fiscal Affairs, (3) Institutional Effectiveness, (4) Institutional Advancement, and 5. Student Affairs.

Demographics

The fall enrollment headcount (2006-2010) and race demographics for AMC are provided in Tables 1 and 2. The female/male ratio is 2:1. The College enrolls fifty-one percent (51%) traditional students and forty-nine percent (49%) non-traditional students, with non-traditional students being those who enroll in college five years or more after graduation from high school. A high percentage, about fifty-six percent (56%), of AMC students are first-generation college students. The average and median age for the student body is 26 and 24, respectively.

Table 1. Enrollment for Fall Terms 2006-2010

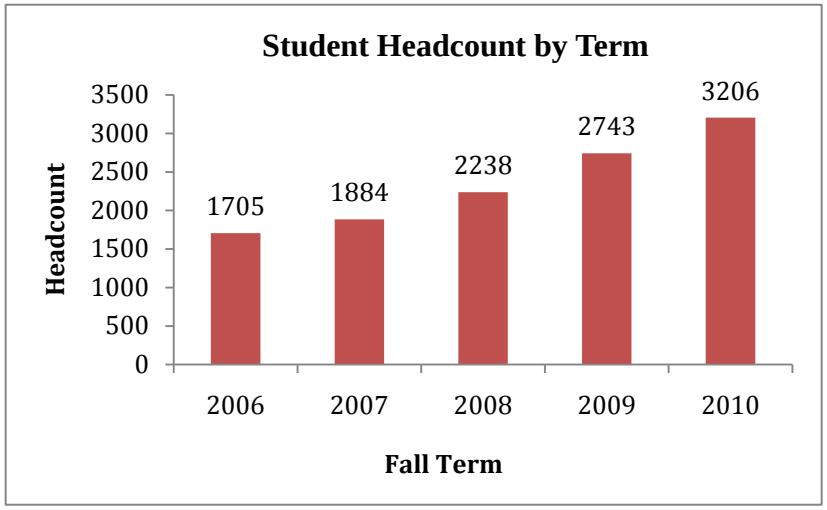


Table 2. Race Demographics

Race	Percent
African-American	94%
Caucasian	1%
Asian	2%
Hispanic	2%
Undeclared	1%

Academics

The College offers 50 programs of study, seven career programs (where students go directly into the job market), two one-year certificate programs, and 41 transfer programs. The student teacher ratio is 22:1. The graduation rate (8.8%) and retention rate (52%) have increased by 40% and 8%, respectively, since fall 2006. The College offers courses in the traditional face-to-face format and two online programs, Business Administration and General Studies. An additional instructional site is located at 34 Peachtree Street, which offers courses in the Business Administration and Teacher Education Programs.

Employees

In fall 2010, the College had 344 employees: 189 full-time and 155 part-time. The College has 57 full-time faculty, and the number of part-time faculty range from 60-65% of the total faculty.

General Student Data

Seventy-five percent (75%) of students receive the Pell Grant and approximately twelve percent (12%) of students receive the HOPE scholarship, a state-wide funding source requiring students to maintain a 3.0 GPA. This program provides full tuition and book vouchers to students who qualify for the scholarship. The student FTE for fall 2010 semester was eighty-one percent (81%) of the student population.

QEP Topic Selection

Introduction

Beginning spring 2010 semester, the Reaffirmation Leadership Team attended the SACS orientation session and created the Committee structure, consisting of members from all areas of the College to complete the activities for reaffirmation of Atlanta Metropolitan College. The Reaffirmation Committee membership list is composed of faculty, students, staff, Board of Regents Staff, and representatives from the community, and is provided in Appendix I. The Reaffirmation Director initially made the College aware of the reaffirmation requirements and activities through the following means: spring 2009 and fall 2010 faculty institutes, Reaffirmation newsletters, and campus-wide email distributions, Unit Head meetings, and Student Commission activities which involved participation from all of the College's student clubs and organizations.

From the outset, and throughout the QEP development process, the central focus of the Quality Enhancement Plan (QEP) was to improve student learning. It was critical that the topic selection process engaged all stakeholders of the College in a systematic and open process. The QEP Leadership Team used various criteria to guide the topic selection process, ensuring that the process was broad-based, comprehensive, research-based, and consistent with the College's mission and strategic plan. A brief description of these various components is provided below.

The Topic Selection Process

The goal of the QEP Topic Selection Team (Appendix I) was to lead the AMC campus in a process that would identify the greatest student learning need. A QEP Marketing Team was created and assigned to work with the Topic Selection Team to ensure that information was properly disseminated and publicized to all members of the AMC faculty, staff, and student population. The Topic Selection Team created and planned a series of surveys (Appendices II, III, IV) and focus groups during the spring 2010 semester. All constituencies of the College were required to participate in the topic selection process in a manner that was fair, open, with no pre-determined outcomes, and with the central goal of capturing what the AMC community viewed as the greatest student learning outcome need.

Student Surveys

Students were given a QEP Topic Selection Survey (Appendix II) asking about their experiences at AMC, as well as ways in which AMC can improve student learning. Surveys were first sent electronically, through AMC e-mail. Every student was encouraged to participate. In order to encourage increased student participation, students who completed the survey were given the opportunity to automatically enter a bookstore gift card drawing.

The survey included embedded general demographic questions relating to gender, full- or part-time status, and number of credit hours completed. Students were also asked when they take most of their classes: day, evening, or weekend. These questions allowed the Topic Selection Team to make sure all major groupings of students were represented in the survey results

Survey responses were monitored throughout the process. At one point the electronic

responses from evening and weekend students were low, so paper versions of the survey were distributed to students in selected evening and weekend classes, thereby continuing to promote and ensure broad-based participation from students. In addition to the surveys distributed in classes, tables were set-up outside during the AMC annual "Earth Day Celebration" for students to complete a hardcopy of the survey. It was very important to the team to gather as many responses as possible to a key question on the student survey: "What subject do you have the most trouble learning?"

Faculty and Staff Surveys

To solicit broad-based participation from faculty, both full-time and adjunct faculty members were strongly encouraged to contribute ideas/suggestion through the QEP leadership team, as well as through the unit heads. An electronic faculty QEP Topic Selection Survey (Appendix II) was sent to all faculty members soliciting their input related to student learning at AMC. Faculty respondents were asked general demographic questions related to teaching status, full-time or adjunct classification, number of years teaching, and at what time they teach most of their classes, to ensure that the survey responses were representative of a broad, diverse, and strong cross-section of faculty members.

Focus Groups

The Topic Selection Team planned a series of focus groups to help clarify the results of the surveys and to give all AMC stakeholders a chance to provide input. To plan for the focus groups, The Topic Selection Team first researched the principles for structuring, moderating, and writing questions to develop the most efficient and effective method for conducting focus groups. Each focus group session was audio recorded in order to capture an accurate record of the focus group discussion; individual responses were kept anonymous. The Team also scheduled student focus groups for a wide variety of days and times, galvanizing broad-based participation. The focus group for staff members from the Academic Support Center and from Student Affairs included representatives from all areas of academic and student support, including personnel, tutors, and advisors.

Nine focus groups were held for students, faculty, and staff. To accommodate class schedules, six student focus groups were conducted during day, evening, and weekend time periods. One focus group was held for staff members from the Academic Support Center and from Student Affairs. Two faculty focus groups were held, one for faculty members in all disciplines and the other specifically for math faculty.

The following guidelines guided the focus group discussions: (1) Everyone was afforded the opportunity to speak and individuals asked to make their responses brief and to-the-point; (2) All participants were given the opportunity to discuss any issue in greater detail at a later date. A sign-up sheet was distributed to allow participants to provide their names and contact information to make arrangements to participate in individual, small-group or personal interview

sessions; 3) No specific names of students, faculty, or staff were mentioned as responses were given. Having a general faculty focus group (for full-time and adjunct faculty in all disciplines), followed by a focus group targeted at math faculty promoted the opportunity for broad-based input from the various discipline and demographic groups.

Ensuring Broad-based Participation

In order to facilitate and reinforce broad-based survey participation in the determination of the QEP topic, the QEP Marketing Team (Appendix I) developed a marketing plan that focused on maximizing and maintaining campus-wide survey participation and dissemination of information. The QEP Marketing Team consisted of currently enrolled students, staff, faculty, and administration. The team determined several areas where advertisements could be placed campus-wide in order to access a maximum number of participants. Additionally, a tentative two-year marketing plan calendar was designed.

Initially, a small group of individual students were informally interviewed to determine their thoughts on ways to enhance student learning. The interview consisted of a single question, "What do you think would improve academics at AMC?" Some of the responses were placed in an article in the QEP newsletter, *Insight*. The *Insight* newsletter was designed to promote interest in participating in the QEP survey and to provide continued updates regarding the QEP process.

The first Campus Campaign (Appendix IV - Photos) marketing initiative occurred in March 2010. The primary purpose for this initiative was to promote the online survey which would be used to determine the QEP topic. Electronic surveys were available for all AMC on-campus constituents. The initial Campus Campaign included (1) providing eight (8) randomly drawn $15.00 bookstore prizes for all students who participated in the completing the survey, (2) placing survey information on both of the scrolling marquees located on campus, (3) running a PowerPoint poster on the monitors in all campus buildings, (4) setting up and running a table with computers where students, staff, and faculty could complete the survey online, (5) distributing candy with advertisement tags reminding students to participate in taking the survey throughout the campus.

To promote focus group participation, a second Campus Campaign occurred in April 2010. For this initiative, 24" x 36" posters were placed in all buildings and on outside display boards that provided dates, times, and location information for all focus groups. Also, focus group meeting dates were placed on both of the College's scrolling marquees, and information could be found on the monitors in all campus buildings. Tagged candy was distributed campus-wide by QEP Marketing team students who wore large buttons that said "Ask Me!". The candy tags were used as reminders to participate in a focus group. *"Insight,"* the official AMC Reaffirmation newsletter, was distributed through the reaffirmation process. Samples of *Insight* are provided in Appendix V. In addition, several reaffirmation articles (Appendix VI) were written in the official AMC Newsletter, *Headlines at the MET*.

Outcome/Results of the Topic Selection Process

The QEP topic selection was determined from a combination of three processes: surveys, focus groups, and empirical data. The results of these combined assessment processes led to the selection of the QEP topic. The results of the topic selection processes are described below.

Student Survey Results

In total, 536 students completed the survey. The following student responses were given to the most fundamental survey question asked:

Which subject do you have the most trouble learning?
Response (N= 536)

Math	59%
English	16%
Other	39%

The student focus group results corroborated the survey findings that Math is the area that students have the most trouble learning, and are the area in which the QEP should focus.

Faculty and Staff Survey Results

In total, 38 full-time faculty members completed the survey and 18 adjunct faculty members completed the survey. The key question on the survey was, "What subject do you think students have the most trouble learning?" Fifty-eight percent (58%) of the full-time faculty respondents and eighty-six percent (86%) of the adjunct faculty respondents identified Math as the subject students have the most trouble learning,

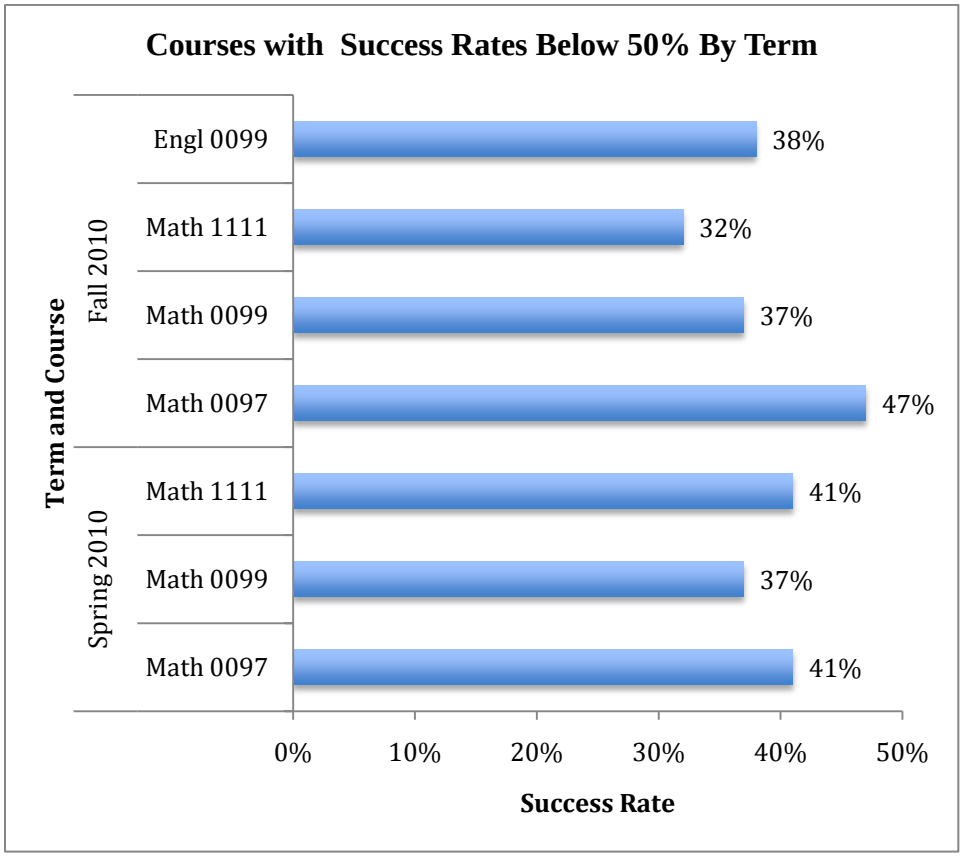
Four (4) out of six (6) of the Academic Support Center Staff completed the survey; one hundred percent (100%) of the participants identified Math as the subject students have the most trouble learning and performing. Additionally, surveys were sent to top administrative staff (e.g. Vice Presidents & Deans). Of the nineteen (19) administrative staff members who completed the survey, forty-seven percent (47%) identified Math as the subject students have the most trouble learning.

Both faculty and staff focus groups unanimously identified Math as their recommendation for the QEP Topic and focus. Based on the data, the QEP Topic Selection Team clearly determined to select Math as the QEP topic and area of focus. The unresolved question at this point was the Math area that should be the focus of the QEP. To address this critical question, the Team analyzed empirical data and additional focus groups were convened.

Empirical Data

Upon evaluation of several semesters of empirical data, student performance in math consistently showed the lowest success rates. An example of these data is provided in Figure 1. The student success rate here is defined as students receiving a grade of A, B, or C.

Figure 1. Courses with lower than a 50% Student Success Rate for Academic Year 2010-11.



Math Faculty Focus Group

A focus group consisting of the full-time Math faculty, a QEP Co-Chair, and the Reaffirmation Director was convened to determine the most strategic Math focus for the QEP that would make the greatest impact on student learning. Because students have difficulty with Math at both the developmental level and in the gateway College Algebra courses, the most question for the Math Faculty focus group was what the QEP focus should be, given the human and fiscal resources of the institutions. Three possible levels of focus were discussed for the QEP: 1. The lowest level developmental Math courses, Math 0097; 2. The highest level developmental Math courses, Math 0099; or 3. College Algebra, the entry level course that most students who transfer to senior-level colleges are required to complete.

Impact was the primary criterion used to narrow the focus of the Math QEP. Math 0099 was selected as the primary level of concentration for the QEP based on the following rationale:

1. Because an overwhelming majority, ninety percent (90%), of students who take College Algebra are required to take learning support Math 0099, more students would have the opportunity to benefit from QEP Math assistance earlier in their matriculation,

2. Because Math 0099 is a prerequisite course for Math 1111, successful QEP implementation in Math 0099 has the potential to not only produce stronger Math 0099 student performance, but also to improve the success rates for students in their next level of math, the gateway College Algebra course,

3. Because the retention and graduation rates of students in developmental courses were lower than those in college courses, an improvement in Math at the developmental levels would have the potential of positively impacting student retention and graduation rates,

4. While a QEP focus in Math 0097 would be impactful, the effect would not be as strong as that of a concentration on Math 0099 for the following reasons: (a) it does not lead directly to the College Algebra course; thus its effects would not be as strong and measurable, and; (b) Math 0097 is the first and lowest level Math course in the developmental math sequence, students in this course have a weaker, more undefined math skills-set, mostly defined by their high school academic experience. Many students in lower level developmental math courses have competing interests and are less likely to focus and benefit from the QEP. Conversely, students who take the higher level developmental course, Math 0099, possess a more comprehensive math skills-set and are more focused, lending themselves to benefit more from the QEP.

Therefore, the QEP focus of math at the second developmental level (Math 0099) was recommended to and approved by the Reaffirmation Leadership Team.

QEP Need

With thirty-three percent (33%) of students failing Math 0099 and thirty percent (30%) of students failing College Algebra (Math 1111) on the first attempt, the need for the QEP in math is critical and the impact far-reaching. Moreover, eighty-five percent (85%) of the first-time, full-time freshman cohort require one or more learning support courses, and during any given semester approximately forty percent (40%) of AMC students are enrolled in at least one learning support math course. Many students are placed on probation, suspended and/or subsequently lose financial aid because they exhaust the three attempts allowed to pass developmental math courses and cannot enroll in the College Algebra course.

Purpose of the Quality Enhancement Plan

While the College has implemented stop-gap measures, the QEP allows the institution to focus and consolidate its collective efforts in tackling the problem of student success in Math. Increasing time-on-task, student engagement, ongoing faculty training, and policies that make students more accountable are the key components of this QEP. The flexibility of the QEP courses will provide students an alternative path to move through Math courses at a faster self-governed pace, with increased support systems for success. For many students, the QEP courses will provide a cost-effective solution to receiving necessary assistance and reduce the time taken to reach graduation.

Through an integrated approach, including course policy changes, curriculum changes, and changes in responsive and adaptive teaching and learning strategies, the College is confident that the QEP will have a dramatically positive effect on student success in math courses.

Relevance to the Strategic Plan

The QEP topic addresses Strategic Goal #4 (Table 3) of the College's Strategic Plan. Specifically, the QEP topic addresses a critical need within a developmental education program of the College - preparing students for success in the developmental math course Math 0099, which equips students with the requisite skills for passing the Math COMPASS exam, the University System of Georgia (USG) College admissions placement exam.

Table 3. QEP Focus and the AMC 2008-2013 Strategic Plan: Strategic Goal #4

Strategic Goal	
1	Capacity/Access
2	Enrollment/Retention
3	Quality/Affordability
4	**Effective Educational Programs/Services**
5	Customer Service/Student Support
6	Public Outreach/Awareness
7	Collaborations

Developmental education accounts for 40-45% of the educational program resources of the College, primarily because AMC operates under an open-door admissions policy, which results in a large population of underprepared students who do not meet the SAT/ACT exemption and who are subsequently required to take developmental education courses. While this QEP focuses on Math, the College strongly believes that this QEP course redesign model can be easily adapted to and beneficial for other development courses.

QEP Theme and Logo Competition

Having determined the QEP topic, a QEP logo and theme proposal contest was launched to capture the most innovative and creative ideas for packaging and communicating the QEP information in an effective and efficient manner to the AMC community. The QEP proposal contest description is provided in Appendix VII. In May 2010, students, staff, faculty, and administration were invited by e-mail, unit meetings, posters, campus digital monitors, and through the *Insight* newsletter, to participate in the QEP Theme and Logo Competition.

A total of ten (10) proposals were submitted. The proposals were judged anonymously and evaluated at two levels. The screening of proposals was done through a survey vote by the full AMC community, from which the proposals were narrowed to three finalists. A second round of screening identified the winning proposal. Participants were able to vote for a theme that was different from the logo. After the results of the votes were counted, the *Math Links* theme and logo were selected (Cover Image), presented by Dr. Sherrye Smith, Associate Professor of Teacher Education and QEP Co-Chair. The winning proposals received a $600 price (1st place) and $300 prize (2nd place).

LITERATURE REVIEW

Introduction

For two-year colleges, the literature clearly shows that college developmental education and gateway courses, such as College Algebra and English Composition, are the highest-risk points that threaten student retention, momentum, and completion insert citation. Moreover, any successful intervention should be a comprehensive approach that engages policy, course structure, and content. A review of the literature indicated that the most commonly used intervention strategies targeting developmental math and gatekeeper courses such as College Algebra include:

College Entry Intervention Strategies

a. *Intake*

Mandatory Orientation, Financial Aid Counseling/Awareness, Assistance in Navigating Systems and Services, User friendly, easy-assess documents, and policies to ensure that students do not miss class time and have time to complete orientation

b. *Assessment*

Clear instructions on placement testing impact; pre-placement test preparation; test preparation programs; accurate diagnostics; pre-college early testing; and assessments linked to student advising,

1. Developmental Education and Gatekeeper Course Strategies

a. *Alternative Course Structure and Content* – creating modules which allow students to move at their own pace; contextualization/project-based courses which allow students to learn through real-life activities,

b. *Peer/Cohort Learning Communities* - placing students together to build supportive and collaborative relationships to address emotional and academic educational challenges,

c. *Early Intervention/Warning Systems* – providing professional assistance to at-risk students that will allow attendance and progress monitoring and support student re-engagement and re-entry,

d. *Technology* – using technology which enables self-paced learning, reinforces class instruction, and alternatives to seat time

e. *Accountability for Out-of-Class Study Activities* – integrating out-of-class tutoring, recitation, and supplemental instruction with course requirements, outcomes, and grades

Literature Review Results

The QEP Literature Review/Research Team conducted a thorough review of literature to supplement and support techniques for improving students' math learning. The success of two multi-faceted strategies, 1) implementing a variety of active learning assignments and 2) requiring mandatory work to be completed in a Math Center learning environment, is well-documented in research studies and in QEPs at both two- and four-year schools:.

Active Learning

In an effort to improve the quality of developmental mathematics instruction at community colleges in Massachusetts, developmental mathematics professionals created a project called the 100% Math Initiative and produced *Building a Foundation for Student Success in Developmental Mathematics* (http://www.masscc.org/pdfs/mathinitiativefinal.pdf). To improve student performance and retention, members of the 100% Math Initiative support the use of varied content delivery and active learning. A cornerstone of effective teaching is using classroom methodologies that engage students.

This typically involves moving away from a reliance on lectures and readings. Hunter Boylan, Director of the National Center for Developmental Education, points out that, " most developmental education students have an attention span of approximately 15 minutes. If faculty members are not varying their teaching approach every 15 minutes during class, they are losing many students." Boylan adds that simple adjustments--such as allowing students to discuss concepts through group discussion or giving students a chance to demonstrate concepts—can be effective (100% Math Initiative, 2006, p 11).

Furthermore, according to the 100% Math Initiative, "The research is very consistent in saying that the diverse students we [community colleges] serve require wide-ranging instructional techniques. About two thirds of today's developmental students are either visual or hands-on learners. They learn best through video clips, computer graphics, and other visual stimuli; by working in problem-solving or other groups; and by being actively involved in the classroom" (2006, p12).

Research shows that people learn in different ways. Therefore, the traditional lecture-based math teaching format may not work for everyone. The American Mathematical Association of Two-Year Colleges (AMATYC) stresses that "An effective mathematics curriculum is one that provides students of every learning style an opportunity to engage in a topic, connect with the material, and then stretch their learning capacity in other learning modes" (2005, p 20). Studies show the importance of a match between faculty teaching techniques and student learning styles.

According to Nolting (2005), because most instructors teach the way they learn best or the way they were taught, about 2/3 of the faculty teach to approximately one third of the students. Faculty members need to understand student learning styles, become aware of their

own teaching style, help students identify their math learning style, and implement multiple instructional strategies to address multiple learning styles. When mismatches exist, the students may become bored and inattentive, do poorly on tests, and get discouraged about the course and themselves (Nolting, 2005).

As Ewell (1997) notes, active learning is also interactive, which connotes that a learner is engaged with others. Ewell emphasizes the importance of the relationships between a learner and faculty and between a learner and other learners. "A learner-faculty relationship in which the learner experiences the faculty member as mentor, coach, and facilitator signals a depth of relationship" (page #), Ewell says. Additionally, Ewell points out that "Another level of interaction between learner and faculty is one in which the faculty member regularly models what it means to be a learner. Such modeling creates a particularly powerful learning environment and higher levels of learning".

Use of Small-Group Instruction in Active Learning

Reynolds et al. (1995), in *A Practical Guide to Cooperative Learning in Collegiate Mathematics*, give a comprehensive overview of group work, also referred to as cooperative learning. One of the most significant components noted as essential to cooperative learning is that "a significant amount of the work of the course is done in cooperative groups" (p. 5). Reynolds et al. explains that, whether the work occurs in places such as the classroom or the computer lab, the structure of the course should require that students communicate with each other frequently.

This communication may include "reflection on mathematical ideas and discussion of alternative approaches to problem solving" (p. 3). According to the National Mathematics Advisory Panel (2008), "the increased use of cooperative learning groups and peer-to-peer learning (e.g., structured activities for students working in pairs) in the teaching and learning of mathematics" has been advocated and implemented (p. 46). The Panel also notes that cooperative learning is used for a variety of purposes that include tutoring, enrichment, and remediation.

However, Lindblad (1994) points out some of the potential pitfalls of cooperative learning. For example, teachers should "continue to emphasize the importance of individual effort and accountability at the same time that they use cooperative learning techniques." Additionally, related to any type of grouping, such issues as personality clashes, low or inflated self-esteem, and work approaches may be problematic. Further, with group assignments, typically "the group as a whole processes the concept or information presented by the teacher." If, "only the final product is graded, there is no way for the teacher to know which members of the group understood the concept."

Still, citing the research of Slavin (1989), Lindblad does acknowledge that with the following elements, cooperative learning can be successful: "Students must have the aptitude to carry out the cooperative learning experience. Instruction must be at the appropriate level of understanding. There must be time for the teacher and student to complete the necessary tasks. And, finally, incentives must exist for the teacher to commit to the extra work involved and for

the student to complete the cooperative learning tasks" (You can avoid the traps of cooperative learning, 1994).

Cooper and Robinson (1997) have done extensive research on small-group instruction in college-level Science, Mathematics, Engineering and Technology (SMET) disciplines. They offer an assessment of three issues: impact on student outcomes, solidity of the research/theory base, and issues needing further research.

Impact on Student Outcomes: In regard to the effect of small-group instruction, Cooper and Robinson cite the meta-analysis of research studies by Springer, Stanne, and Donovan (1997). This meta-analysis concludes that small-group instruction has strong effects on three student outcome measures: achievement, persistence, and attitudes. Various measures, including grades and test scores, indicate that small group instruction results in achievement differences. Student persistence rates are also higher for students exposed to small group instruction.

Furthermore, student attitudes toward the subject matter and their own competence are positively affected by exposure to small group instruction. Although the following information is less substantiated, small group instruction also has a powerful effect on critical thinking skills and cognitive development. An additional less documented claim is that small group instruction has powerful effects on women and minority groups. Although studies attempting to study these relationships have many methodological problems, these issues did not deter Springer, Stanne, and Donovan from reporting that minority students may be particularly affected in the area of achievement and women, in the area of attitude.

Cooper and Robinson are interested in the reasons why small group instruction might have these positive effects, and suggest the relevance of cognitive, humanistic oriented (constructivist), and motivational theorists. Few researchers of small-group instruction have directly addressed which or which combination of these theories might be responsible. Cooper and Robinson note that pre-collegiate small group work is at least a decade ahead of the college work and can prove a model.

The field of research on small-group instruction in collegiate SMET disciplines holds promise but is undeveloped. The absolute number of such studies is small, and most do not meet traditional standards of quantitative research control. Research reports in math are superior in quantity and quality to those in science. A drawback of existing research is that authors do not relate their work to existing theory positions and to prior research. The work at the K-12 level is comparatively mature and useful to college level researchers. The lack of research focusing on classroom-based small-group work is particularly problematic.

Cooper and Robinson suggest that vocabulary, i.e. the numerous terms for techniques related to small-group instruction, might be one of the problems. Not all researchers believe it is important to rigorously define their understanding of each term. However, it does appear that not all forms of small group instruction are equally effective. Faculty dissension splits faculty because of adherence to constructivist approaches versus more traditional formats of instruction, such as the lecture. Cooper and Robinson argue that the two kinds of instruction can be combined.

Although some scholars are pessimistic about what can be learned about the effects of small group instruction, Cooper and Robinson believe important information can be obtained when one combines qualitative and quantitative methods. Issues yet to be resolved include how groups should be formed, how large they should be, and how long they should stay together. Related issues are what to do about freeloaders/dominators, how to grade when using small groups, and when to use a specific procedure to achieve a given outcome. The issue of faculty resistance needs to be addressed in addition to assessment problems, such as finding more authentic measures to assess critical thinking. When leading researchers were asked to identify the most important issues relating to the future of small group work at the college level, virtually all responded that it was the role of technology. The authors believe the computer-assisted instruction with the most potential for impact on student outcomes will be those encouraging interaction, particularly between student-student and student-teacher.

Use of Technology in Active Learning

One way of promoting active learning is through the use of technology. In developmental mathematics in two-year colleges, technology is not as widely used as in four year colleges and universities. Technology available is almost exclusively from publishers with an emphasis on procedural rather than conceptual knowledge, and fewer two year college students have home computers than those at four year colleges (Epper & Baker, 2009). Nevertheless, though evidence through rigorous research is lacking, some studies indicate good results for developmental math classes that use technology.

Many of these studies are from programs that have redesigned course structure to limit the topics covered in the classes, for example by tailoring instruction to students' needs as indicated by placement tests. An example of the latter is the Tennessee Board of Regents' three-year project to develop more efficient delivery of developmental math at four colleges: one university, two two-year colleges, and a technical college. Thus, it is difficult to attribute success in such courses to the use of technology alone, but it seems to play a role.

Computer assisted technology encourages students to spend more time on math by offering online homework and 24/7 support. It provides another option for delivery of content and can replace some lecture time (NCAT, 2006). According to Epper and Baker (2009), two-year colleges can create effective math programs by the inclusion of practices that are found to be effective with developmental students, such as multiple learning modalities and alternate delivery of instruction. It is therefore important for two year colleges to integrate technology into courses and ensure technology access to developmental students.

Math Centers

Math Centers have become prevalent because they offer students services outside those typically offered in traditionally structured classes (one teacher lecturing to a large group of students). These services may include individualized instruction, flexible scheduling, monitoring of student activity, technological resources, trained tutors, lab testing in lieu of classroom testing, placement testing, classrooms for alternative forms of instruction, renting of calculators, borrowing of books, use of videos, publication of resources (private tutors available, math websites). These services may be paid for by assessing students a fee. For example, at the

University of Nevada at Reno (2010), students pay a $25 fee per semester to fund the math and writing centers. Tutors in the lab are typically students, who take exams to assess their math skills and knowledge (http://www.unr.edu/mathcenter/index.html).

The Math Center permits greater individualization of instruction. Students get instruction through their teacher, tutors, and computer software. Computer programs deliver instruction based on answers students have given to questions testing for mastery. At Pellissippi State Technical Community College, located in Tennessee (2009b), Learning Support students who do not complete course work in one semester receive a grade of E, which allows them to continue to do coursework until they have completed it. Coursework is mastered through computer software with tutors available to offer graded review work before students are tested. This flexibility encourages students to take responsibility for their own learning (http://www.pstcc.edu/transitional_studies/).

For students who have difficulty meeting at regularly scheduled class hours, FLAG (Flexible Learning for Achievement and Growth) sections of developmental and credit math courses are offered. The students work in the Math Center and attend classroom activity days for a designated number of hours per week equivalent to that done by students in traditional classes. Additionally, FLAG courses have flexible starting and ending dates. According to the Pellissippi State Technical Community College Flag Center (2009a), ". . . students have the opportunity to start a course before the beginning of a normal semester. All students are eligible to work at an accelerated pace and finish coursework early. Ideally, a motivated student can finish a course before the end of a semester or complete two sequential courses in one semester (http://www.pstcc.edu/transitional_studies/flag.html).

Students in Learning Support classes at Pellissippi are required to spend an additional two hours a week in the Math Center. Their attendance is recorded by scanning a picture ID when they log in and out of the Center. Their total time of attendance is recorded (2010, http://www.pstcc.edu/transitional_studies/math.html).

Monroe Community College, located in New York (2010), has a mediated learning class within the Math Center, where a teacher can bring his/her section for alternative activities in which the teacher is a coach, advisor, and facilitator of instruction rather than a lecturer. Computer programs deliver instruction based on answers students have given to questions testing for mastery (http://www.monroecc.edu/depts/math/mathlearn.htm). These resources suggest that greater consideration is being given to students' needs and that colleges are being highly creative in designing ways to meet those needs.

THE QEP PROCESS, STRUCTURE, AND CONTENT

Introduction

The need and purpose of the QEP was clarified through the topic selection process. Based on literature reviews, the implementation of a Math Center concept emerged as the most useful method to address the math needs of AMC's students. Based on the format of the first phases of the pilot for course redesign, the Math Center has the following advantages over other methods used to address student developmental math needs:

1. Effective Pedagogy (Active and Contextualized Learning, Technology, Learning Community Concept)

2. Portable (can be implemented across campus, on various platforms) (e.g., face-to-face with technology integration, Online, and hybrid courses)

3. Scalable and Adaptable (effective and efficient method to deliver high quality teaching/learning pedagogy and curriculum in a cost-effective manner. For example, with appropriate scheduling of classes, the Math Center Staff can provide multiple sessions for a large number of classes or a single flexible session with a large number of students)

4. Aligns with National Best Practices (Math Centers, as demonstrated in the Literature Review, have proven effective and have high success rates, nationally)

Though the literature provides examples of various institutions having success utilizing Math Centers, AMC thought it prudent to ask these question: Will a Math Center be effective at Atlanta Metropolitan College? What would be the form of a Math Center at AMC? What would be the Math Center's: (1) structure and implementation, (2) potential for success, (3) ability to "tailor" and address the specific student needs? To address these questions, the QEP Committee, in conjunction with the Reaffirmation Leadership Team, committed to the resources to carry out pilot courses for the fall 2010 and spring 2011 semesters. The QEP Planning Committee utilized the summer 2010 to design the pilot courses to address the following seven fundamental questions:

1. Will AMC's math students respond positively to an active learning pedagogical approach, and if so, what will be the impact on student learning outcomes?
2. Which weekly course scheduling, if any, is more effective with a Math Center: days a week (Monday, Wednesday, and Friday or 2 days a week (Monday and Wednesday, or Tuesday & Thursday
3. What Math Center structure is most effective?
4. What is the most effective way to use the Math Center with the developmental math courses, specifically MATH 0099?
5. Will the Math Center learning activities result in improved student math performance?
6. What are the most appropriate Math Center learning outcomes that will lead to improved student performance?
7. What is the impact of the Math Center if it is integrated with the Math 0099 course, if 1/3 of the normal weekly lectures are replaced with Math Center active learning activities?

Through an intense summer planning session, the Pilot course was constructed to answer the aforementioned questions. Following is a brief overview of the fall 2010 pilot course and results. Math faculty on the QEP Committee Planning Team unanimously agreed that prerequisite skills are a major barrier for students succeeding in Math, both in the upper level developmental math course (Math 0099) and the lower level developmental math course (Math 0097). Therefore, the pilot course learning outcomes focused the (Table 4) on any gaps that might exist in a student's background so he or she students could successfully move forward with the Math 0099 content and improve performance on the COMPASS exit exam and in the Math 1111 College Algebra course.

Table 4. Pilot Course (Fall 2010) Student Learning Outcomes

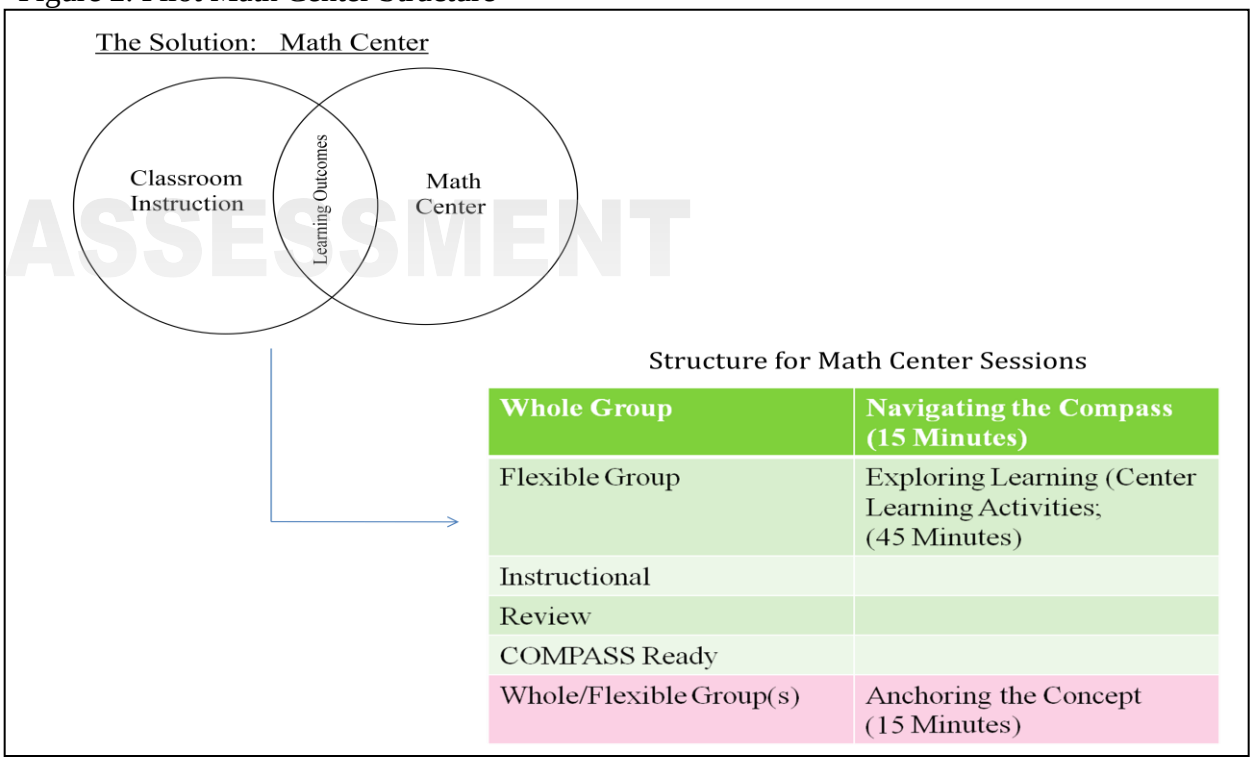
Week	Learning Outcomes
1	Learning Outcome #1: Add and subtract polynomials.
2	Learning Outcome #2: Multiply and divide using the laws of exponents.
3	Learning Outcome #3: Identify and factor the greatest common factors. Learning Outcome #4: Factor quadratic expressions.
4	Learning Outcome #5: Recognize and apply the appropriate factorization patterns to polynomials.
5	Learning Outcome #6: Solve polynomial equations (2nd and 3rd degree) by using factorization
6	Learning Outcome #7: Determine the values for which a rational expression is undefined Learning Outcome #8: Find the least common denominator (LCD) for 2 or more polynomials
7	Learning Outcome #9: Using factorization, add, subtract, multiply, and divide rational expressions
8	Learning Outcome #10: Solve rational equations
9	Learning Outcome #11: Simplify radical expressions using the laws of exponents. Learning Outcome #12: Simplify radical expressions using properties of radicals.
10	Learning Outcome #13: Simplify exponential expressions using laws of exponents.
11	Learning Outcome #14: Perform the four operations (multiply and divide) with radical expressions. Learning Outcome #15: Solve and check (single) radical equations.

The Structure of the QEP Math Center

The QEP Math faculty agreed that a major impediment in classroom settings is students entering at various learning levels. Therefore, it was determined that the pilot courses should accommodate the various student learning levels, allowing students to move at a self-pace that would not limit their progress through the course.

Consequently, the Math Center's sessions consist of the following three (3) groups, based on their level of preparedness: Instructional, Review, and COMPASS-Ready; with the instructional group being the most underprepared students, and the COMPASS-Ready group being the fastest pace group. The mandatory Math Center period was divided into three sections, Navigating the COMPASS, Exploration, and Anchoring the Concept, each designed to address the course learning outcomes at the various learning levels. Figure 2 provides the structure of the Math Center.

Figure 2. Pilot Math Center Structure



Whole Group	Navigating the Compass (15 Minutes)
Flexible Group	Exploring Learning (Center Learning Activities; (45 Minutes)
Instructional	
Review	
COMPASS Ready	
Whole/Flexible Group(s)	Anchoring the Concept (15 Minutes)

The teaching schedule for the fall pilot included a 2-day and a 3-day format. In courses using the 2-day schedule, classroom (lecture style) instruction occurred the first day and for the first 35 minutes of class on the 2nd day. The final 75 minutes of class on the second day were spent in the Math Center, where students participated in interactive learning activities. The class using the 3-day schedule received lecture-style instruction the first two days and participated in Center activities on the third day.

Pilot Course Curriculum and Pedagogy

The redesign of MATH 0099 consisted of moving from a primarily lecture-oriented delivery model to a "Replacement Model" which, "reduce(d) the number of in-class meetings and a) replace(d) some in-class time with out-of-class, online, interactive learning activities, or b) also ma(de) significant changes in remaining in-class meetings" (NCAT, 2006). "Reared in a digital age, many of today's students have an approach to learning that differs dramatically from norms of even ten years ago."

The current, traditional instructional delivery model in MATH 0099 consists of in-class lectures and activities and out-of-class homework and technology use (*MyMathLab*). The proposed Replacement Model redesign restructures the use of the 225 minutes per week course into a data-based decision making course with the following components:

(a) 150 minutes per week classroom instruction period
(b) 75 minutes per week mandatory Math Center participation which includes
    i. Small-group activities
    ii. Interactive technology-based activities
        1. TI-83 graphing calculators
        2. Online supplementary materials such as *Explore Learning*
        3. *My Math Lab*
    iii. Contextualized (problem-based) learning activities
(c) Restructuring of homework requirements
(d) Open Math Center hours

In addition to restructuring the schedule and instruction, the model increased the number of instructional staff during Math Center times. Three professionals were available at all times while classes were in the Math Center. While classes were in the Math Center, the course instructor was still an integral faculty member. In addition to the instructor, the Math Learning Center was staffed by a math professor who was an active member of the QEP Math Center design team and by a Teaching Assistant who excelled in math and possessed excellent interpersonal communication skills for working with adult learners. Dependent upon the learning outcome and student need, Center 'staff' worked with any student in the Center as needed or with small student learning groups.

Student Learning Groups

Prior to participating in the mandatory Math Center period, students were to complete a 15 minute instructor-designed, learning outcome based diagnostic test (Appendix VIII) at the beginning of the 150 minute instructional period of the course. The tests were scored by a Math Center faculty member who determined student ability to complete three pre-identified critical concepts that students must know in order to complete each problem. To reduce bias in scoring, inter-rater reliability was used. Two possible scorers were to independently score the same exams, place students in groups based on the results of the assessment, and meet to compare scores and placements. Scorers were to continue this process with exams given in class until

scorer calibration was reached. It was discussed that scorers should meet at least 3 times during the semester and the comparisons would be used to recalibrate the scoring process.

The results of the diagnostic will be used to determine the following three groups in the Math Center:

(a) Instructional – Due to lack of readiness, this group requires more teacher-directed instruction to practice the specific learning outcome.
(b) Review – This group will be facilitated by faculty and the instructional assistant. Group members would complete learning outcome-based interactive activities, independently or in small groups.
(c) COMPASS-Ready – This group shows mastery of the concept during class and would work independently or in small groups on COMPASS-like activities in order to further prepare for taking the COMPASS.

Flexible grouping would occur since the group would change based on the score results for the learning outcomes for the week. Additionally, during Center time, the groups would remain flexible in that if a student showed success or experienced difficulty (frustration) while participating in a group, the instructor could suggest the student move to a different group. These flexible groups were designed to provide a venue for differentiating instruction and for contextualizing learning so that students could learn within their own frame of reference.

Instructional Design

The QEP Math Center provided an active learning environment where instructors act as guides and facilitators while students were actively involved in interactive lessons. These interactive lessons provided a contextualized learning type environment using tiered instruction. With tiered instruction, student groups worked in the Math Learning Center towards the same learning outcome using instructional strategies that were more specific to their current level of understanding of the concept. In this contextualized learning environment, the framework for each session consisted of the learner (1) assessing his/her own level of understanding by taking a pre-assessment where immediate feedback occurred, (2) working within his/her own level of understanding by participating in interactive learning experiences, and (3) comparing his/her own pre-/post-assessments to determine the level of success. The 75 minute per week mandatory Math Center was divided into three sections:

1. *Navigating the COMPASS* – During the first 15 minutes, all students were to complete an instructor-designed 3-5 item test that reflected COMPASS-like math problems. Questions were designed to correlate with Math Center learning outcomes for the week. While still in the Center, after students completed the test, a mini-lesson would occur that would review the test and provide brief instruction in those areas based on test results.

2. *Exploration* – During this 45 minute period, students would participate in small interactive 'tiered' learning groups. In the tiered lessons, student activities were based upon the group in which the student was placed (Instructional, Review, COMPASS-Ready). Interactive

group activities may include, but were not limited to, computer-based learning (*MyMathLab* and *Explore Learning),* games, using graphing calculators.

3. *Anchoring the Concept* – During the final 15 minutes, all students were scheduled to complete a *Navigating the COMPASS* parallel test that would determine competency for the learning outcome and measure the effectiveness of student participation in the Math Center. At the end of this time, students would be able to compare the *Navigating the COMPASS* and the *Anchoring the Concept* scores to determine areas of success and need.

Math Center Assessment

All classes used the same formative and summative assessment tools. The following summaries address the implementation of each assessment tool:

1. Math Attitudes Survey (Appendix IX)

Tapia's (1996) *Attitude Towards Mathematics Inventory* was scheduled to be administered the first day of the course and at the end of the course to assess the extent to which the Math Center experience created a more positive attitude in student's towards Math.

2. Weekly Pre-Assessment/Diagnostic (PAD) tools

These instructor-designed 10 minutes tests were administered at the beginning of each week during the instructor-led classroom period. The purpose of the PAD was to determine group placement in the Math Learning Center based on student areas of need. A sample placement form provided in Appendix X. PAD designers determined three critical concepts in which students must show proficiency in order to be considered *COMPASS-Ready*. Students who showed proficiency in 0-1 critical concepts were placed in the *Instructional* group. Students who showed proficiency in 2 concept areas were placed in the *Review* group. Students proficient in all three areas were placed in the *COMPASS-Ready* group.

Calibration for scoring the *Pre-Assessment/Diagnostic* and determining placement in groups was to occur between two of the Math Center staff, both MATH 0099 instructors. Initial calibration included staff independently scoring the same assessments, comparing results, and discussing any differences. Upon initial scoring, staff found that there were only three discrepancies in the placement of students in groups, but that scores were the same. Upon discussion, staff members were able to determine the areas of the discrepancy and to agree upon how to place students in groups.

3. Navigating the COMPASS

This assessment was administered when students initially entered the Math Center. This 2-3 item test was used to determine student readiness in relation to the learning outcome scheduled for the week. The design for this section of the course included administering and reviewing the test and providing feedback and mini-lessons when needed. A copy of the assessment was kept in the Math Center while the original document was returned to the student.

4. Exploration

Depending upon the activity, students completed scored exams and assignments during online interactive learning experiences, with *Explore Learning* software.

5. Anchoring the Concept

The Anchoring the Concept assessment was administered during the last 10-15 minutes of the mandatory Math Center period. This test was designed as a parallel post-test to Navigating the COMPASS, an assessment that occurred at the beginning of the Math Center session. The Anchoring the Concept assessment is intended to be more summative in nature, assessing the full effect of a student's weekly Math Center experience. After completing this assessment instrument, students and Math Center faculty compared results between the pre- and post-tests to measure progress. The results were then used for data-based decision making to improve instruction.

6. Departmental Exams

Four departmental exams that were design by the math faculty and were already in place in the traditional MATH 0099 course were given during the semester. Each of these exams was administered to all MATH 0099 classes during the same week. The departmental exams served as an external benchmark to assess total effect of the QEP pilot course. The scores of students who took the QEP math courses were compared to those who did not participate in the QEP pilot courses in order to determine improvement in student learning and teaching effectiveness, and to improve the QEP Math Center objectives.

7. COMPASS Exam

For all MATH 0099 courses, including QEP pilot courses, the students who were recommended by their professor as being prepared to take the COMPASS completed the COMPASS exam at the end of the semester. At AMC, completing the COMPASS is necessary to exit learning support classes and register for College Algebra. The COMPASS exam was used in a similar fashion as the department exams as an external benchmark to determine improvement in student learning and teaching effectiveness, and to improve the QEP Math Center objectives.

QEP Math Center Staffing

The Math Learning Center staff consists of two instructors (one who was also concurrently a Center Director), 2 Center Directors, and two Teaching Assistants. Center-specific instructor responsibilities included assisting with administering and scoring assessments, making certain students were placed in appropriate groups and adjusting placement when necessary, working with individuals or small groups in both pencil-and-paper and computer-instructed or enhanced environments, collecting and maintaining assessment data, attending

weekly Math Center team meetings, developing assessment tools, and keeping an anecdotal center log.

The Center Directors' responsibilities included administering and scoring assessments, placing students in appropriate groups and adjusting when necessary, working with individuals or small groups in both pencil-and-paper and computer-instructed or enhanced environments, collecting and maintaining assessment data, keeping an anecdotal center log, and running open center hours. The Center Directors, one a fulltime member and the other a part-time member of the math faculty, were also responsible for maintaining accurate records that determined instructional groups, updating online records such as attendance, training and directing teaching assistants, and making certain that assessments were reproduced and available when needed by the instructors.

Teaching Assistants were responsible for communicating with faculty and Center Directors. They were also responsible for working with individuals or small groups in both pencil-and-paper and computer-instructed or enhanced environments as instructed by the Center's Directors.

Open Center Hours

As a component of the pilot, the Math Center is open to students during hours when there are no classes in the Center. During these hours, the Center's math staff/faculty are scheduled to be available to assist students or to re-teach in areas where needed. Additionally, students are able to use time spent in the Center to continue using online sources to practice and review skills. Although the Center is open regularly, a challenge remains in getting students to take advantage of the open center hours, outside of normal class time.

LESSONS LEARNED FROM THE QEP PILOT MATH COURSES

Management of the QEP Math Center Process

The day-to-day management of the Pilot Math Center led to the following list of "lessons learned" and best practices that the College will benefit from when implementing the QEP:

- A central data-gathering and record-keeping system is needed and must be in place when the semester starts.
- Complete faculty and staff readiness and training (e.g., technology, pedagogy) are necessary. Any shortfalls cannot be "made-up" after the course starts, without a loss in effectiveness and efficiency.
- Weekly meetings are critical for formative assessment and making plans to evaluate and eliminate new problems and situations that frequently arise.
- Weekly Math Center Staff meetings must be mandatory. All parties must be synchronized.
- The course faculty must work "hand-in-hand" with the Math Center Staff for the redesign to be effective. There must be a clear understanding that both are necessary for success.
- Accountability by all parties is required.
- Data collection and analysis should occur as soon as possible.
- Innovative strategies must be used to motivate and encourage students to attend the Open Center Hours, beyond normal class hours.

Scope of the Quality Enhancement Plan

When balancing the cost and resource commitment of the QEP against the student needs and other limiting parameters such as space and facilities, the QEP will be implemented in approximately 50% of the Math 0099 courses, 8-10 classes per semester, affecting 350-400 students per year. Because the QEP Math Center will be implemented in Math 0099 and 53% % of students must take MATH 0099 prior to taking the COMPASS exam and enrolling in College Algebra, its effect is expected to extend far beyond the classes in which it is implemented. Improved COMPASS scores and success in College Algebra, expected outcomes of the QEP, will improve student retention and graduation rates. Success in the developmental course Math 0099 will allow faculty and support staff to redirect efforts to new initiatives of the College.

Oversight of the Quality Enhancement Plan

The day-to-day management and implementation of the QEP is the responsibility of the QEP Director. Several offices will provide the necessary support services. For example, the Office of Institutional Research will provide the expertise in data collection and manipulation for the QEP assessments and evaluation processes. The AMC Center for Excellence in Teaching and Learning (CETL) will provide the professional development support for planning and implementing effective QEP faculty and staff training. The Office of Institutional Effectiveness will assume the lead role in QEP planning and assessment. The Vice President for Academic Affairs (VPAA) and Vice President for Institutional Effectiveness (VPIE) will ensure the development, implementation, and accountability of the QEP learning and program outcomes.

The VPIE will ensure that the QEP is incorporated and given institutional prominence and visibility in the annual strategic planning, budgeting and assessment processes of the College. The QEP Leadership Committee will be responsible for the QEP administration. This Committee consists of a broad-based cross-section, representing all sectors of the college, including faculty, staff, students and top administration. Two members of the QEP Leadership Committee are members of the President's Cabinet which links the QEP to top administration of the College, including the President. On an annual basis, the President's Cabinet will review and evaluate the QEP to ensure that it has the top administrative oversight for appropriate resources and leadership to ensure success.

Math Center Scalability, Adaptability, and Portability

The QEP Math Center can be constructed to be scalable, portable, and adaptable, all important factors to the various stakeholders of the College. With strategic class scheduling, the Math Center could be scaled to accommodate multiple courses during the course of a week, utilizing the same space, staff, and resources. Because the Math Center is portable, it could be easily modified and tailored for any math course, or a course of any discipline at the College.

Fall 2010 Pilot Course Results

Following are the results from an AMC fall 2010 Pilot course survey, primarily addressing the original questions designed to address the feasibility and effectiveness of the Math Center.

1. Will AMC's math students respond positively to an active learning pedagogical approach, and if so, what will be the impact on student learning outcomes?

Result: Students were overwhelmingly positive regarding Math Center experiences (Figure 3). A mid-semester survey (Appendix XI) was administered, and, for example, students were asked:

Figure 3. Representative Questions: Mid-semester QEP MATH 0099 Survey

1. The Math Center is a good idea, and it should be in all math classes.

	Response Total	Response Percent	Points	Avg
Yes	32	100%	n/a	n/a
No	0	0%	n/a	n/a
Total Respondents		32		

2. The Math Center activities have improved my math skills.

	Response Total	Response Percent	Points	Avg
Strongly Agree	12	38%	n/a	n/a
Agree	9	28%	n/a	n/a
Neutral	11	34%	n/a	n/a
Disagree	0	0%	n/a	n/a
Strongly Disagree	0	0%	n/a	n/a
Total Respondents		32		

3. The Math Center activities have helped me perform better on exams.

	Response Total	Response Percent	Points	Avg
Strongly Agree	8	25%	n/a	n/a
Agree	12	38%	n/a	n/a
Neutral	12	38%	n/a	n/a
Disagree	1	3%	n/a	n/a
Strongly Disagree	1	3%	n/a	n/a
Total Respondents		32		

2. Which weekly course scheduling, if any, is more effective with student QEP Math Center activities: M,WF or T, Th?

   When asking QEP faculty and staff the question:
   Which weekly schedule, if any, works better for offering the QEP Math Center?

   100% of respondents indicated that Monday, Wednesday, and Friday is the preferred scheduling for the QEP Math Center. When probed further for an explanation, respondents indicated that the M, W, F arrangement allows for better logistics and process time for students to study between lectures and Math Center activities, with an intervening day between each event, allowing time for out-of-class study by students between daily activities. Conversely, the two-day sequence does not allow for process time and out-of-class study, as students move directly from the 2nd day's lecture to the Math Center exercises.

3. What Math Center structure is most effective?

   The three sessions, Navigating the Compass, Explore Learning, and Anchoring the Concept proved to be a very effective structure for the Math Center. In addition, study groups, by preparedness level, were effective in providing students more individualized instruction. The small group sessions also created "learning community" environments that were motivating and re-enforcing for students.

4. What is the most effective way to use the Math Center with the Math courses?

   The ratio of 2/3 lecture and 1/3 Math Center proved to be an appropriate distribution of course time between the Math Center and Course. Prior to the pilot study, QEP faculty were apprehensive about relinquishing lecture time for Math Center activities, but the pilot results demonstrated that all course material was covered, with the added benefit of students gaining valuable time-on-task activities.

5. Will the Math Center learning activities result in improved student math performance?

   Based on the COMPASS scores (Tables V and VI), students who participated in the Pilot QEP courses outperformed other Math 0099 students in all categories, including

the percentage passing the test. Notable is the number of students tested, which is among the most difficult to achieve for Math 0099 courses. The Pilot course exceeded the division average by 17%, which is a very encouraging result.

COMPASS Score Comparisons: QEP Pilot Student Scores vs. Other Student Scores

Table V. QEP Pilot Student Scores

CRN	Enrolled	Withdrew	Didn't Test	Tested	Satisfied	% Tested	% Passed by Enrollment	% Passed by Tested
80188	26	1	12	14	11	54%	42%	79%
80536	19	1	14	15	12	79%	63%	80%
80537	18	1	6	12	11	67%	61%	92%
Math Center	**63**	**3**	**32**	**41**	**34**	**65%**	**54%**	**83%**

Table VI. Other Division Student Scores

CRN	Enrolled	Withdrew	Didn't Test	Tested	Satisfied	% Tested	% Passed by Enrollment	% Passed by Tested
Division	**386**	**23**	**211**	**185**	**147**	**48%**	**38%**	**79%**

6. What are the most appropriate Math Center learning outcomes that will lead to improved student performance?

   The learning outcomes implemented in the pilot course proved to be effective. By design, the learning outcomes (Table xx) were written in an integrated and progressive manner. For example, more basic learning outcomes for weeks 1 and 2 were combined into a more comprehensive, integrated, and higher learning-level outcome for week 3.

7. What is the impact of the Math Center if it is integrated with the Math 0099 course, if 1/3 of the normal weekly lectures are replaced with Math Center active learning activities?

   As indicated in question 4, the impact of replacing 1/3 of the normal weekly lectures with the Math Center activities was positive. The performance of Math Center students verified that the arrangement and time distribution of Math Center and traditional lectures is appropriate.

QEP Assessment

The QEP assessment is a multi-layered process that encompasses all aspects of the Quality Enhancement Plan. Consistent with "best practices", multiple assessment methods/instruments (formative and summative assessment, internal/external, baseline and benchmarking) will be utilized including throughout the QEP implementation to ensure multiple measures of success. The assessment plan, schedule, and persons responsible for various assessment activities are provided in Table VII.

Table VII. Assessment Plan and Schedule

	Person(s) Responsible	**Year 1** 2012-13	**Year 2** 2013-14	**Year 3** 2014-15	**Year 4** 2015-16	**Year 5** 2016-17
Course Planning/Implementation	----------	----------	----------	----------	----------	----------
Identify/Recruit Math 0099 QEP Faculty	QEP Committee/VPAA	April-May	April-May	April-May	April-May	April-May
Develop Course Assessment Instruments	QEP Math Faculty/Staff	June	June	June	June	June
QEP Course Planning/Organization	QEP Faculty and Staff	July-Aug	July-Aug	July-Aug	July-Aug	July-Aug
QEP Student Assessment Administer Pre Attitudinal Survey	QEP Staff	August	August	August	August	August
Formative/Administer Math Center Learning Outcome Assessment	QEP Faculty	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Administer Post Attitudinal Survey	QEP Faculty	April	April	April	April	April
Summative/Administer Course Departmental Exams	QEP Staff	May	May	May	May	May
QEP Course Assessment Administer Course Evaluation	Students, QEP Math Center Staff, QEP Faculty	October	March	October	March	October
Administer Math Center Evaluation	Students, QEP Math Center Staff, QEP Faculty	----------	March	----------	March	----------
Mid-Term Student Surveys	Students	October		October		October
Compile Course Assessments For Term	QEP Staff, Office of IR	December, May	December, May	December, May	December, May	December, May
Compile Course Assessments For Year	QEP Staff, Office of IR	May, June	May, June	May, June	May, June	May, June
Program Assessment	External Evaluator	----------	June	----------	June	----------
Course Learning Outcomes	QEP Faculty, Staff, and QEP Committee	December, May	December, May	December, May	December, May	December, May
Review Academic Year Assessment	QEP Faculty, Staff, QEP Committee, Leadership Team	June, July	June, July	June, July	June, July	June, July
Restructure Program Based on Assessment Results	QEP Faculty and Staff	July, Aug	July, Aug	July, Aug	July, Aug	July, Aug
Overall QEP Program Assessment	QEP Leadership Team, QEP Staff/Faculty, President's Cabinet	----------	August	----------	August	August

FACULTY DEVELOPMENT

The importance of faculty training and professional development is among the most important lessons learned from the QEP pilot course results. The ability for faculty to adapt lectures, restructure the class schedule, and align pedagogy with curriculum, are but a few qualities that the College must ensure of instructors to have QEP success. To that end, AMC has committed significant resources, both for pilot courses and the implementation of the QEP, to ensure that faculty and Math Center Staff are appropriately trained. Table VIII outlines the faculty training schedule and the associated assessment instruments.

Table VIII. Faculty Training: Activities, Assessment, and Schedule

	Person(s) Responsible	Year 1 2012-13	Year 2 2013-14	Year 3 2014-15	Year 4 2015-16	Year 5 2016-17
Faculty/Staff Development *Planning and Delivery*	----------	----------	----------	----------	----------	----------
Plan Math Center Staff Training Workshops	VP Institutional Effectiveness, QEP Director, CETL	April, May	April, May	April, May	April, May	April, May
Deliver QEP Faculty Training Workshops Deliver Faculty Workshops (Topics: Course Outline, Syllabus, Outcomes, pedagogy strategies, etc.)	QEP Director, Faculty Workshop Coordinator, CETL	June	June	June	June	June
Plan Faculty Training Workshops (Pedagogy Strategies)	QEP Director, CETL	February	February	February	February	February
Deliver QEP Faculty Training Workshops	VP Institutional Effectiveness, QEP Director, Faculty Workshop Coordinator, CETL	June, July	June, July	June, July	June, July	June, July
Assessment Workshop Feedback Surveys	QEP Faculty, Faculty Workshop Coordinator	July	July	July	July	July
QEP Courses Evaluations	Students, QEP Director, Faculty	October, March	October, March	October, March	October, March	October, March
QEP Consultant	----------	May	----------	May	----------	May
Assessment Instruments and Learning Outcomes	QEP Staff, QEP Leadership Team, VPAA, VPIE	----------	May	----------	May	May
Assessment of Overall QEP	QEP Faculty, QEP Director, QEP Staff, Dean of SMHC, QEP Leadership Team, and President's Cabinet	June	June	June	June	June

INSTITUTIONAL CAPABILITY FOR INITIATION AND CONTINUATION OF THE QEP

Atlanta Metropolitan College is committed to student success. As such, the College is committed to providing the resources, human and fiscal, to ensure success in the initiation and completion of the QEP implementation. The College stands firmly with its mission to provide quality education and success in student learning outcomes. The budget for the 5-year QEP implementation period is provided in Table IX.

Table IX. QEP Budget

Line Item	**Year 1** 2012-13	**Year 2** 2013-14	**Year 3** 2014-15	**Year 4** 2015-16	**Year 5** 2016-17
QEP Administration					
Director (2/3 Time)	*$37,000*	*$37,000*	*$37,000*	*$37,000*	*$37,000*
Project Coordinator (1/2 Time)	*$15,500*	*$15,500*	*$15,500*	*$15,500*	*$15,500*
Students Teaching Assistants*	*$14,400*	*$14,400*	*$14,400*	*$14,400*	*$14,400*
Total QEP Administration	$66,900	$66,900	$66,900	$66,900	$66,900
Instruction/Course Support					
*Course releases***	*$5,600*	*$5,600*	*$5,600*	*$5,600*	*$5,600*
Office and Course supplies	*$3,000*	*$3,000*	*$3,000*	*$3,000*	*$3,000*
Printed materials	*$800*	*$800*	*$500*	*$500*	*$500*
Faculty Course Coordinator Replacement Salary (Summer)	*$2,800*	*$2,800*	*$2,800*	*$2,800*	*$2,800*
Summer Course Revision Retreat	*$2,500*	*$2,500*	*$2,500*	*$2,500*	*$2,500*
Total Instruction/Course Support	$14,400	$14,400	$14,100	$14,100	$14,100
Faculty/Staff Development					
Workshops/Training	*$8,000*	*$8,000*	*$9,000*	*$10,000*	*$10,000*
Professional Association Membership Dues	*$500*	*$500*	*$500*	*$500*	*$500*
Outside Speakers	*$1,000*	*$1,000*	*$1,000*	*$1,000*	*$1,000*
Conference Travel	$8,000	*$8,000*	*$8,000*	*$8,000*	*$8,000*
QEP Staff Retreat	*$2,000*	*$2,000*	*$2,000*	*$2,000*	*$2,000*
Campus Community Workshops (Summer)	*$800*	*$800*	*$800*	*$800*	*$800*
Refreshment for Workshop, Forum, and Training Activities	*$500*	*$500*	*$500*	*$500*	*$500*
Faculty/Staff Development Total	$20,800	$20,800	$21,800	$22,800	$22,800
Planning/Seminars					
Salary Seminar Co-chairs	*$2,800*	*$2800*	*$2800*	*$2800*	*$2800*
Seminar Materials	*$1,000*	*$1,000*	*$1,000*	*$1,000*	*$1,000*
*Consultants & External Evaluators****	*$5,000*	*$8,000*	*$5,000*	*$8,000*	*$8,000*
Planning/Seminar Total	$8,800	$11,800	$8,800	$11,800	$8,800
Annual Grand Total	**$110,900**	**$113,900**	**$111,900**	**$115,900**	**112,900**

Based on 7-8 Student Teaching Assistants working 10 h/week @ $10-$12/h
** Based on One Faculty Reassigned for each semester @ 2,800 each/semester
******* Based on QEP and Math Faculty (x8) Per Diem - $100 Each
******** External Evaluations will occur years 2 and 4

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APPENDICES

Appendix I. Reaffirmation Committees

Reaffirmation Leadership Team

1. Dr. Gary A. McGaha, President
2. Dr. Jerome Drain, Vice President Academic Affairs
3. Dr. Barbara Morgan, Interim VP Academic Affairs (Retired)
4. Mrs. Cynthia Evers, VP Student Affairs
5. Mr. Bobby Olive, VP Student Affairs (Retired)
6. Mr. Larion Williams, VP Institutional Advancement
7. Mr. Freddie Johnson, VP Fiscal Affairs
8. Dr. Mark Cunningham, VP Institutional Effectiveness
9. Ms. Lisa Mallory, QEP Co-Chair (Humanities and Fine Arts)
10. Dr. Sherrye Smith, QEP Co Chair (Social Science)

Compliance Certification Committee

1. Dr. Mark Cunningham, Chair (VP- Institutional Effectiveness)
2. Ms. Kenja McCray, Member (Faculty - Social Sciences Division)
3. Mr. Robert Quarles, Member (Staff - Libruary Director)
4. Ms. Terry Ngobili, (Staff – Fiscal Affairs)
5. Mr. Freddie Johnson (VP – Fiscal Affairs)
6. Mr. Keith Williams (Director – Plant Operations and Facilities Management)
7. Mrs. Alicia Scott (Director – Financial Aid)

Quality Enhancement Plan (QEP) Committee

1. Ms. Lisa Mallory, Co-Chair (Faculty - Humanities and Fine Arts Division)
2. Dr. Sherrye Smith, Co-Chair (Faculty – Social Sciences Division)
3. Mr. Jasper Wilson, Member (Faculty – Business, Math, and Computer Science Division)
4. Ms. Iris Shanklin, Member (Staff – Student Affairs)
5. Dr. Joan Hildenbrand, Member (Faculty, Humanities and Fine Arts Division)
6. Dr. Melanie Richburg, Member (Staff – Student Affairs)
7. Ms. Jasmine Worthen, Member (Student, President Student Commission)
8. Mr. Walter Bennett, Member (President, Phi Theta Kappa)
9. Ms. Keila Cash, Member (Student)
10. Dr. Marcia Middleton, Member (USG Representative)
11. Joy Peters, Member (Community Representative)
12. Member (Advisory Council)
13. Mr. Brian Mitchell, Member (Interim Chair, Business, Math, and Computer Science Division)
14. Ms. Shelia Tenney, Member (Staff, Media Relations Director)
15. Mr. Vincent Strickland, Member (Staff, Fiscal Affairs)
16. Mr. Curtis Todd, Member (Faculty, Social Sciences Division)
17. Dr. Sandra Demons, Member (DCP, Natural Sciences)
18. Ms. Cyra Davis, Member (Student)

Technology Committee

1. Mr. Antonio Travis, Chair (Staff, MIS)
2. Ms. Denise Stewart, Member (Staff, Admissions Office)
3. Ms. Tichina Powers, Member (Staff, MIS)
4. Mr. Walter Cummings, Member (Staff, MIS)
5. Mr. Chuck Eddins, Member (Staff, MIS)

Editing Committee

1. Ms. Lisa Mallory, Member (Faculty, Humanities and Fine Arts)
2. Ms. Zarinah Muhammad, Member (Staff, IRPA Office

Appendix II. Topic Selection - Student Survey

Please answer the following questions to assist Atlanta Metropolitan College in improving student learning and to develop a topic for the Quality Enhancement Plan (QEP), a part of Atlanta Metropolitan College's reaccreditation process. Your identity will remain completely anonymous. Thank you for your participation. Please click the done button when you have completed the survey.

1. What is your gender?

   - ☐ Male
   - ☐ Female

2. How are you currently enrolled?

   - ☐ Full-time (12 or more credit hours)
   - ☐ Part-time (less than 12 credit hours)

3. When do you take most of your classes?

   - ☐ Day
   - ☐ Evening/Night
   - ☐ Weekend

4. Which subject do you have the most trouble learning? Please choose one.

   - ☐ Math
   - ☐ English
   - ☐ Other, please specify _____

5. How many credit hours have you completed at Atlanta Metropolitan College?

   - ☐ 0-30
   - ☐ 31+

6. Are you an International student?

- ☐ Yes
- ☐ No

7. Are you currently enrolled in any Learning Support courses?

- ☐ Yes
- ☐ No

8. Which classroom learning activities are difficult for you? Check all that apply.

- ☐ Writing
- ☐ Reading
- ☐ Problem-Solving
- ☐ Speaking
- ☐ Oral Presentations
- ☐ Understanding Class Instruction
- ☐ Computer Use
- ☐ Taking Tests
- ☐ Group Assignments
- ☐ Other, please specify

9. Which classroom circumstances make your learning difficult? Check all that apply.

- ☐ Distracting Behavior from Other Students
- ☐ Coursework Too Difficult
- ☐ Coursework Too Easy
- ☐ Class Pace
- ☐ Gaps in Your Knowledge

☐ Other, please specify

10. Which part of the college experience is most difficult for you? Please choose one.

☐ Managing college and personal responsibilities

☐ Financial responsibilities associated with college

☐ Adjusting to the demands of class assignments and exams

☐ Meeting instructors' expectations related to behavior and attendance

☐ Working with students and instructors who have different views and beliefs

☐ Other, please specify

11 Rank the following items for their importance to your learning:
.

	Very Important	Important	Little importance	Not Important
Instructor Feedback	☐	☐	☐	☐
Real-Life Assignments	☐	☐	☐	☐
Class Lectures	☐	☐	☐	☐
In-class Group Assignments	☐	☐	☐	☐
Student-Student Interaction During Class	☐	☐	☐	☐
Class Size	☐	☐	☐	☐
On-line Tools	☐	☐	☐	☐
Out-of-class Group Assignments	☐	☐	☐	☐
Explanation of Syllabus	☐	☐	☐	☐
Understanding AMC Policies	☐	☐	☐	☐
Involvement in Campus Activities, Programs, and Organizations	☐	☐	☐	☐
12:30-2:00 PM Activity Period on Tuesdays and Thursdays	☐	☐	☐	☐

12. Which skills greatly contribute to your learning? Check all that apply.

- ☐ Computer Skills
- ☐ Reading Skills
- ☐ Writing Skills
- ☐ Study Skills
- ☐ Listening Skills
- ☐ Note-taking Skills
- ☐ Time-management Skills
- ☐ Research Skills
- ☐ Speaking Skills
- ☐ Other, please specify

13 Evaluate the adequacy of the following Atlanta Metropolitan College services:
.

	More Than Adequate	Adequate	Inadequate
Job Preparation	☐	☐	☐
Computer Lab and Library	☐	☐	☐
Academic Support Center/Math Lab	☐	☐	☐
Personal Counseling	☐	☐	☐
Extra Help from Instructors	☐	☐	☐
New-Student Orientation	☐	☐	☐
Registration	☐	☐	☐
Orientation Class	☐	☐	☐
Academic Advising	☐	☐	☐
Campus Communication	☐	☐	☐
Financial Aid	☐	☐	☐
Student Government	☐	☐	☐

14 Evaluate the importance of the following possible services to your learning:
.

	Very Important	Important	Little Importance	Not Important
Extending Computer Lab and Library Hours	ss	☐	☐	☐
Extending Academic Support Center Hours	☐	☐	☐	☐
Alcohol and/or Drug Counseling	☐	☐	☐	☐
Daycare During Classes	☐	☐	☐	☐
Online Tutoring	☐	☐	☐	☐
Organized Study Groups	☐	☐	☐	☐
Organized Group and Peer Tutoring	☐	☐	☐	☐
Transportation to Class	☐	☐	☐	☐

15. What one thing can Atlanta Metropolitan College do to improve your learning most?*

16. Thank you for completing this survey. The results will be used to improve student learning. If you would like for your name to be included in the gift card drawings, please include your cell number (or a contact number) below.

Appendix III. Topic Selection – Faculty Survey

Please answer the following questions to assist Atlanta Metropolitan College in improving student learning and to develop a topic for the Quality Enhancement Plan (QEP), a part of Atlanta Metropolitan College's reaccreditation process. Your identity will remain completely anonymous. Thank you for your participation. Please click the done button when you have completed the survey.

1. What is your teaching status?

   - ☐ Full-time
   - ☐ Adjunct

2. How many years have you taught at Atlanta Metropolitan College?

   - ☐ 1-4
   - ☐ 5-10
   - ☐ 11+

3. When (or how) do you teach your classes? Check all that apply.

   - ☐ Day
   - ☐ Evening/Night
   - ☐ Weekend
   - ☐ Online

4. Which subject do you think students have the most trouble learning? Please choose one.

   - ☐ Math
   - ☐ English
   - ☐ Other, please specify _____

5. Do you currently teach any Learning Support courses?

   - ☐ Yes
   - ☐ No

6. Based on your teaching experience, which classroom learning activities are difficult for students? Check all that apply.

- ☐ Writing
- ☐ Reading
- ☐ Problem-Solving
- ☐ Speaking
- ☐ Oral Presentations
- ☐ Understanding Class Instruction
- ☐ Computer Use
- ☐ Taking Tests
- ☐ Group Assignments
- ☐ Other, please specify

7. Which classroom circumstances make student learning difficult? Check all that apply.

- ☐ Distracting Behavior from Other Students
- ☐ Coursework Too Difficult
- ☐ Coursework Too Easy
- ☐ Class Pace
- ☐ Gaps in Students' Knowledge
- ☐ Other, please specify

8. From your perspective, which part of the college experience is most difficult for students? Please choose one.

- ☐ Managing college and personal responsibilities
- ☐ Financial responsibilities associated with college

- ☐ Adjusting to the demands of class assignments and exams
- ☐ Meeting instructors' expectations related to behavior and attendance
- ☐ Working with students and instructors who have different views and beliefs
- ☐ Other, please specify

9 Rank the following items for their importance to student learning:
.

	Very Important	Important	Little importance	Not Important
Instructor Feedback	☐	☐	☐	☐
Real-Life Assignments	☐	☐	☐	☐
Class Lectures	☐	☐	☐	☐
In-class Group Assignments	☐	☐	☐	☐
Student-Student Interaction During Class	☐	☐	☐	☐
Class Size	☐	☐	☐	☐
On-line Tools	☐	☐	☐	☐
Out-of-class Group Assignments	☐	☐	☐	☐
Explanation of Syllabus	☐	☐	☐	☐
Understanding AMC Policies	☐	☐	☐	☐
Involvement in Campus Activities, Programs, and Organizations	☐	☐	☐	☐
12:30-2:00 PM Activity Period on Tuesdays and Thursdays	☐	☐	☐	☐

10. What are the top three skills that contribute most to student learning? *
Select at least 3 and no more than 3.

- ☐ Computer Skills
- ☐ Reading Skills
- ☐ Writing Skills
- ☐ Study Skills

- ☐ Listening Skills
- ☐ Note-taking Skills
- ☐ Time-management Skills
- ☐ Research Skills
- ☐ Speaking Skills
- ☑

11 Evaluate the adequacy of the following Atlanta Metropolitan College services:
.

	More Than Adequate	Adequate	Inadequate	Insufficient Knowledge to Determine
Job Preparation	☐	☐	☐	☐
Computer Lab and Library	☐	☐	☐	☐
Academic Support Center/Math Lab	☐	☐	☐	☐
Personal Counseling	☐	☐	☐	☐
Extra Help from Instructors	☐	☐	☐	☐
New-Student Orientation	☐	☐	☐	☐
Registration	☐	☐	☐	☐
Orientation Class	☐	☐	☐	☐
Academic Advising	☐	☐	☐	☐
Campus Communication	☐	☐	☐	☐
Financial Aid	☐	☐	☐	☐
Student Government	☐	☐	☐	☐

12 Evaluate the importance of the following possible services to student learning:
.

	Very Important	Important	Little Importance	Not Important
Extending Computer Lab and Library Hours	☐	☐	☐	☐
Extending Academic Support Center Hours	☐	☐	☐	☐
Alcohol and/or Drug Counseling	☐	☐	☐	☐
Daycare During Classes	☐	☐	☐	☐

Please answer the following questions to assist Atlanta Metropolitan College in improving student learning and to develop a topic for the Quality Enhancement Plan (QEP), a part of Atlanta Metropolitan College's reaccreditation process. Your identity will remain completely anonymous. Thank you for your participation. Please click the done button when you have completed the survey.

Online Tutoring	☐	☐	☐	☐
Organized Study Groups	☐	☐	☐	☐
Organized Group and Peer Tutoring	☐	☐	☐	☐
Transportation to Class	☐	☐	☐	☐

13. What one thing can Atlanta Metropolitan College do to improve student learning most?*

1. What is your employment status?

☐ Full-time

☐ Part-time

2. How many years have you worked at Atlanta Metropolitan College?

☐ 1-4

☐ 5-10

☐ 11+

3. When do you work? Check all that apply.

☐ Day

☐ Evening/Night

☐ Weekend

4. How often do you work directly with students? Please choose one.

☐ Often

☐ Occasionally

☐ Seldom

☐ Never

5. Which subject do you think AMC students have the most trouble learning? Please choose one.

- ☐ Math
- ☐ English
- ☐ Other, please specify

6. Based on what you know from working with AMC students, which classroom learning activities are difficult? Check all that apply.

- ☐ Writing
- ☐ Reading
- ☐ Problem-Solving
- ☐ Speaking
- ☐ Oral Presentations
- ☐ Understanding Class Instruction
- ☐ Computer Use
- ☐ Taking Tests
- ☐ Group Assignments
- ☐ Other, please specify

7. Which classroom circumstances make learning difficult for AMC students? Check all that apply.

- ☐ Distracting Behavior from Other Students
- ☐ Coursework Too Difficult
- ☐ Coursework Too Easy
- ☐ Class Pace
- ☐ Gaps in Students' Knowledge
- ☐ Other, please specify

8. From your perspective, which part of the college experience is most difficult for AMC students? Please choose

one.

- ☐ Managing college and personal responsibilities
- ☐ Financial responsibilities associated with college
- ☐ Adjusting to the demands of class assignments and exams
- ☐ Meeting instructors' expectations related to behavior and attendance
- ☐ Working with students and instructors who have different views and beliefs
- ☐ Other, please specify _____

9. Based on what you know from working with AMC students, rank the following items for their importance to student learning:

	Very Important	Important	Little importance	Not Important
Instructor Feedback	☐	☐	☐	☐
Real-Life Assignments	☐	☐	☐	☐
Class Lectures	☐	☐	☐	☐
In-class Group Assignments	☐	☐	☐	☐
Student-Student Interaction During Class	☐	☐	☐	☐
Class Size	☐	☐	☐	☐
On-line Tools	☐	☐	☐	☐
Out-of-class Group Assignments	☐	☐	☐	☐
Explanation of Syllabus	☐	☐	☐	☐
Understanding AMC Policies	☐	☐	☐	☐
Involvement in Campus Activities, Programs, and Organizations	☐	☐	☐	☐
12:30-2:00 PM Activity Period on Tuesdays and Thursdays	☐	☐	☐	☐

10. Based on what you know from working with AMC students, which skills contribute most to student learning?

Check all that apply.

- ☐ Computer Skills
- ☐ Reading Skills
- ☐ Writing Skills
- ☐ Study Skills
- ☐ Listening Skills
- ☐ Note-taking Skills
- ☐ Time-management Skills
- ☐ Research Skills
- ☐ Speaking Skills
- ☐ Other, please specify

11. Evaluate the adequacy of the following Atlanta Metropolitan College services:

	More Than Adequate	Adequate	Inadequate	Insufficient Knowledge to Determine
Job Preparation	☐	☐	☐	☐
Computer Lab and Library	☐	☐	☐	☐
Math Lab	☐	☐	☐	☐
Academic Support Center	☐	☐	☐	☐
Personal Counseling	☐	☐	☐	☐
Extra Help from Instructors	☐	☐	☐	☐
New-Student Orientation	☐	☐	☐	☐
Registration	☐	☐	☐	☐
Orientation Class	☐	☐	☐	☐
Academic Advising	☐	☐	☐	☐
Campus Communication	☐	☐	☐	☐
Financial Aid	☐	☐	☐	☐
Student Government	☐	☐	☐	☐

12 Evaluate the importance of the following possible services to student learning:
.

	Very Important	Important	Little Importance	Not Important	Insufficient Knowledge to Determine
Extending Computer Lab and Library Hours	☐	☐	☐	☐	☐
Extending Academic Support Center Hours	☐	☐	☐	☐	☐
Alcohol and/or Drug Counseling	☐	☐	☐	☐	☐
Daycare During Classes	☐	☐	☐	☐	☐
Online Tutoring	☐	☐	☐	☐	☐
Organized Study Groups	☐	☐	☐	☐	☐
Organized Group and Peer Tutoring	☐	☐	☐	☐	☐
Transportation to Class	☐	☐	☐	☐	☐

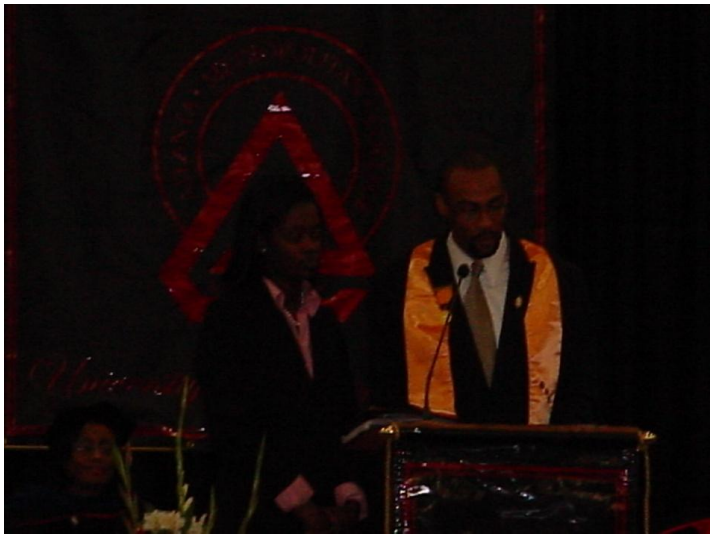
13. What one thing can Atlanta Metropolitan College do to improve student learning most?*

Appendix IV. QEP Marketing Campaign

QEP Student Representatives at AMC Earth Day

QEP Student Representatives – Topic Selection Survey

Student Commission and Honor's Club Presidents Talk about Importance of QEP at Annual Honor's Day



Academic Support Staff Focus Group

Appendix V. Reaffirmation Newsletter Samples

INSIGHT

THE OFFICIAL NEWSLETTER FOR THE AMC REAFFIRMATION OF ACCREDITATION

Atlanta Metropolitan College Reaffirmation of Accreditation 2010-2012

Dear Faculty, Staff, and Students:

On January 25, 2010, Atlanta Metropolitan College (AMC) began a process called "Reaffirmation of Accreditation." Occuring once every ten years, this process involves a thorough evaluation of AMC's educational programs, services, fiscal and physical resources. The Southern Association of Colleges and Schools (SACS) conducts the reaffirmation of accreditation. This process provides an excellent opportunity for the College to reflect, self-evaluate, and promote continuous achievement of student learning outcomes. The collective effort and support of the entire AMC faculty, staff, and student community is invaluable and necessary for the success of the reaffirmation process.

The Leadership Team has carefully planned and committed significant resources to make certain that AMC is equipped to successfully complete the reaffirmation process. There will be three primary committees/teams: 1) Leadership Team, 2) Quality Enhancement Plan (QEP) Committee, and 3) Compliance Certification Committee. All members of AMC will be asked to participate in various reaffirmation activities/events. Dr. Sherrye Smith, Assistant Professor of Teacher Education, and Ms. Lisa Mallory, Associate Professor of English, have been appointed as Co-Chairs of the Quality Enhancing Planning Committee, which is a new SACS reaffirmation requirement allowing AMC the opportunity to devise a five year plan to address the most important student learning need.

In particular, we request your participation in three activities: 1) selecting the QEP topic, 2) developing a QEP plan, and 3) hosting of the SACS team, which will visit AMC's campus during the fall 2011 semester. In addition, all members of the AMC community will have the opportunity to participate in a QEP proposal writing contest, with a prize to be awarded to first-place proposals in both the faculty/staff and student categories.

We will keep you informed of the progress of the reaffirmation process through various means, including a monthly newsletter. Thank you in advance for your support and participation.

Regards,

Mark A. Cunningham, Ph.D.
Director of Reaffirmation of Accreditation

Important Dates

Date	Event
January 25, 2010	AMC Reaffirmation Kickoff Orientation
March/April 2010	QEP Campus-wide Surveys
April 2010	Focus Groups (Faculty, Staff, and Students) and Topic Selection
May 2010	QEP Proposal Contest
February 4, 2011	Campus Visit, SACS Liaison, Dr. Cheryl Cardell
March 15, 2011	1st SACS Report Due, Compliance Certification
June 15, 2011	2nd SACS Report Due, Focused Report
August 1, 2011	3rd SACS Report Due, QEP
October 25-27, 2011	SACS On-Site Team Visit
December, 2012	SACS Reaffirmation Announcement

FAQ's

QUESTION 1. What is Reaffirmation of Accreditation?

ANSWER: Reaffirmation of Accreditation is an evaluation of the programs and services that a college offers to determine if it will retain its accreditation. Accreditation is achieved when a college meets the requirements (or standards) set forth by the state and federal government to ensure that students receive a quality education. Reaffirmation of Accreditation occurs once every ten years.

QUESTION 2. What standards or criteria are used to determine if a College is accedited?

ANSWER: There are 86 standards used to determine if a college is eligible for accreditation (or reaccreditation if a college has already been accredited). These 86 standards are divided into three areas: 1) Core requirements, 2) Comprehensive Standards, and 3) Federal Requirements. The standards for accreditation are found in the SACS document titled, "Principles of Accreditation: Foundations for Quality Enhancement" http://atlm.compliance-assist.com/.

Appendix VI. A Sample QEP Article Published in the College's Official Newsletter – *"Headlines at the Met"*

Atlanta Metropolitan College's Reaffirmation of Accreditation

The AMC Reaffirmation of Accreditation is moving forward with great success. The reaffirmation process is currently in phase 3 of a multi-phase, three-year planning and implementation process: Phase 1. Quality Enhancement Plan (QEP) Topic/Logo Selection, Phase 2. QEP Pilot Course Implementation, Phase 3. Submission of Reaffirmation Documents (i.e. QEP and Compliance Certification Reports), and Phase 4. Visit of the SACS On-site Reaffirmation Committee. "Faculty, staff, and students have provided enthusiastic broad-based support and as a result AMC is in a stronger position as we navigate through the reaffirmation process," says Dr. Sherrye Smith, QEP Co-Chair. This summer, AMC's faculty, staff, and students finalized the selection of a QEP logo, shown below, emphasizing math as the area with the greatest learning needs. Math was the topic that students, faculty, and staff unanimously decided that AMC address and focus its concerted effort and resources for improvement through the Reaffirmation process.

Several strategies have been planned and implemented that will improve student success in AMC math courses, including three pilot QEP Math 0099 courses currently underway for the fall 2010 semester. These courses incorporate an "out of the box" approach for teaching and learning incorporated into selected Math 0099 courses.

In the pilot QEP courses, students spend approximately 33% of their scheduled class time in the Math Center where they participate in hands-on exercises in a "student-centered" learning environment. The course instructor, a Math Center professional, a staff member and a student teacher assistant serve as learning facilitators in each Math Center session, utilizing a range of active and contextualized teaching/learning strategies. This is a different pedagogy when compared to the traditional lecture where students are in a passive learning environment. "Students are engaged in the learning process and we are using a variety of pedagogical teaching tools (e.g. computer/technology, small learning communities, chalkboard problem-solving sessions) to bring math alive for students. We are very pleased with the success of the pilot courses," says Dr. Mark Cunningham, the AMC Reaffirmation of Accreditation Director.

The Reaffirmation Leadership Team requests that all faculty, staff, and students remain engaged to make Reaffirmation 2012 the best experience ever for Atlanta Metropolitan College. For more information about the reaffirmation process, you may visit the SACS Reaffirmation Office located in room 209 of the Library/Administrative building, or email or call for assistance at sacs@atlm.edu or 404-756-2701, respectively. Visit the Reaffirmation of Accreditation website at http://atlm.compliance-assist.com/accreditation/

AMC QEP Logo

Appendix VII. QEP Proposal Contest Guidelines and Description

INSIGHT

The Official Newsletter of the AMC Reaffirmation of Reaccreditation
April 2010, Issue #2

Staff Focus Group

Student Focus Groups

Student Survey Campaign

"AMC students that grasp student learning can help other students pick up work" ~ Sharrieff Hall

"More interactions between teachers and students" ~ Brittney Robinson

Here's what students have to say:

"Increase student or alumni volunteers and tutors in the Academic Support Center" ~ Lindsey Jenkins

"Extend hours on the Academic Support Center" ~ Michael Gonzalez

Upcoming Events

April 27- May 14, 2010	Proposal Contest
May 3, 2010	Compliance Certification Team Meeting
May 16, 2010	Leadership Meeting

SACS Reaffirmation Important Dates

February 4, 2011	SACS Liason Campus Visit
March 15, 2011	Compliance Certification Report Due
June 15, 2011	SACS Focused Report Due
August 1, 2011	QEP Report Due
October 25-27, 2011	SACS On-Site Team Visit
December 2012	SACS Reaffirmation Announcement

Appendix VIII. QEP Math Center Diagnostic Assessment Instrument (Example)

NAME: _____ DATE: _____

MATH 0099

<u>Week Four Pre-Assessment</u>

Find the GCF.

1. $45a^2b^3$, $75ab^2c$

Factor out the GCF.

2. $-4y^2 + 8y$

Factor by grouping.

3. $2x^3 - x^2 - 4x + 2$

Appendix IX. Math Center Student's Attitudes Test

ATTITUDES TOWARD MATHEMATICS INVENTORY

Name _____ *School* _____

Teacher _____

Directions: This inventory consists of statements about your attitude toward mathematics. There are no correct or incorrect responses. Read each item carefully. Please think about how you feel about each item. Enter the letter that most closely corresponds to how each statement best describes your feelings. Please answer every question.

PLEASE USE THESE RESPONSE CODES:

A – Strongly Disagree
B – Disagree
C – Neutral
D – Agree
E – Strongly Agree

1.	Mathematics is a very worthwhile and necessary subject.	
2.	I want to develop my mathematical skills.	
3.	I get a great deal of satisfaction out of solving a mathematics problem.	
4.	Mathematics helps develop the mind and teaches a person to think.	
5.	Mathematics is important in everyday life.	
6.	Mathematics is one of the most important subjects for people to study.	
7.	High school math courses would be very helpful no matter what I decide to study.	
8.	I can think of many ways that I use math outside of school.	
9.	Mathematics is one of my most dreaded subjects.	
10.	My mind goes blank and I am unable to think clearly when working with mathematics.	
11.	Studying mathematics makes me feel nervous.	
12.	Mathematics makes me feel uncomfortable.	
13.	I am always under a terrible strain in a math class.	
14.	When I hear the word mathematics, I have a feeling of dislike.	
15.	It makes me nervous to even think about having to do a mathematics problem.	
16.	Mathematics does not scare me at all.	
17.	I have a lot of self-confidence when it comes to mathematics.	
18.	I am able to solve mathematics problems without too much difficulty.	
19.	I expect to do fairly well in any math class I take.	
20.	I am always confused in my mathematics class.	
21.	I feel a sense of insecurity when attempting mathematics.	
22.	I learn mathematics easily.	
23.	I am confident that I could learn advanced mathematics.	
24.	I have usually enjoyed studying mathematics in school.	
25.	Mathematics is dull and boring.	
26.	I like to solve new problems in mathematics.	
27.	I would prefer to do an assignment in math than to write an essay.	
28.	I would like to avoid using mathematics in college.	
29.	I really like mathematics.	
30.	I am happier in a math class than in any other class.	
31.	Mathematics is a very interesting subject.	
32.	I am willing to take more than the required amount of mathematics.	
33.	I plan to take as much mathematics as I can during my education.	
34.	The challenge of math appeals to me.	
35.	I think studying advanced mathematics is useful.	
36.	I believe studying math helps me with problem solving in other areas.	
37.	I am comfortable expressing my own ideas on how to look for solutions to a difficult problem in math.	
38.	I am comfortable answering questions in math class.	
39.	A strong math background could help me in my professional life.	
40.	I believe I am good at solving math problems.	

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Appendix X. Mid-term QEP Student Survey

Math Center Survey

Please complete the survey questions below. Your responses will be used to improve the course and help students perform better in math courses. Thank you for your participation.

1. The Math Center is a good idea, and it should be in all math classes.

   - ○ Yes
   - ○ No

2. The Math Center activities have improved my math skills.

   - ☐ Strongly Agree
   - ☐ Agree
   - ☐ Neutral
   - ☐ Disagree
   - ☐ Strongly Disagree

3. My grades in Math 0099 have improved because of the Math Center activities.

   - ☐ Strongly Agree
   - ☐ Agree
   - ☐ Neutral
   - ☐ Disagree
   - ☐ Strongly Disagree
   - ☐

4. The Math Center activities have helped me perform better on exams.

   - ☐ Strongly Agree
   - ☐ Agree
   - ☐ Neutral

- ☐ Disagree
- ☐ Strongly Disagree

5. At this point in the class, based on my effort, I should earn a grade of

- ☐ A
- ☐ B
- ☐ C
- ☐ F

6. I will perform better in Math 0099 if I...

- ☐ study more outside of class
- ☐ go to office hours or the Math Center for help more often
- ☐ take the class more serious
- ☐ put more into the class
- ☐ Other, please specify

7. What do you like most about the Math Center?

8. What do you like least about the Math Center?

9. AMC wants to help you improve your math skills. What can the College do that would really assist you in math?

Thank you for contributing to the QEP Math Center Success.

Appendix XI. Math Center Placement Form – Week One (Example)

Week One

Exponents and Polynomials

Dr. Manare
MW 10-11:50

Last	First	Laws of Exponents	Operations of Signed Numbers	Order of Operations	Math Center Groups		
					Instructional	Review	COMPASS-Ready