

Assessment Report

Quality Enhancement Plan Impact Team

Winter Quarter 2011



Multiply Your Options with Math - Middle Georgia Technical College

Executive Summary

Middle Georgia Technical College is a public postsecondary institution offering workforce preparatory certificate, diploma, and Associate of Applied Science Degree programs of study. Though the College has achieved measurable success during its history, assessment data have continued to indicate that students entering the College not prepared for postsecondary mathematics are at a higher risk of not completing their program of study. The focus of the College's Quality Enhancement Plan (QEP) is to enhance student learning by strengthening the computational and mathematical skills of students enrolled in learning support (developmental) math courses (MAT0097, MAT0098, and MAT0099). In identifying this topic, the College considered the Mission, assessment data and input solicited from faculty, staff, students, alumni, board members, and program advisory committee members (business and industry representatives who employ the College's graduates).

Following a review of best practices and literature, the QEP Development Team created a plan built upon three interventional programs:

- Building Math Bridges: A program to contextualize the experiences of math students based on the five principles of the Math-In-CTE model.
- Survivor Math: A program to support math learners through enhanced tutoring and support services, based in a new learning environment.
- Lighthouse Program of Professional Development: A program to focus on professional development of the math faculty and on the professional development of the occupational program faculty as teachers of math.

The QEP identifies four student learning outcomes that will serve as the framework for the project's assessment plan:

- Students will demonstrate mastery of the concepts in Learning Support math courses.
- Students completing Learning Support math courses will demonstrate mastery of the concepts in their core math courses.
- Students completing Learning Support math courses will demonstrate mastery of the mathematical concepts in the math portions of their occupational courses.
- Students completing Learning Support math courses will enter the workforce with appropriate math skills.

MGTC has demonstrated its commitment to the QEP by providing the human and fiscal resources necessary for successful implementation. Renovated space has been allocated for the Survivor Math implementation and significant financial resources have been allocated for the initiation, sustainment, and completion of the College's QEP.

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Implementation Status

	Degree Implemented
Contextual Workbooks	5 of 22 programs completed*
Curriculum maps	20 of 23 programs completed
Math Bridged Lessons	Follows mapping and workbooks
Math Lab Renovation	100% physical, ongoing development
Embedded Classroom Tutors	To be piloted Spring Quarter 2011
Cohorts	Ongoing
Success coach	100%
Student Success Course	6 sections, 76 students
Training, MAT faculty	Follows mapping and workbooks
Training, Occupational Program Faculty	Follows mapping and workbooks

Other items under development:

- Assessments
 - Program faculty survey – follows full workbook implementation
 - Math faculty survey
- Early Warning System [under IT development]
- Professional Development for Faculty
 - Math in Career Technical Education – follows curriculum mapping
- Professional Development for Math Faculty
 - Math Instruction Techniques
 - Instructional Technology
 - Use of Work Ready scores

*the curriculum mapping process has revealed a number of specific math concept problem areas that will be addressed in the workbooks as they are developed.

Student Learning Outcomes Assessment

Students will demonstrate mastery of the concepts in Learning Support math courses

	Goal	FY10	Summer 2010	Fall 2010	Win 2011
MAT 0097 Exit exam mean	80.00	77.53	84.49	83.79	90.67
MAT 0098 Exit exam mean	85.00	85.45	85.61	79.60	84.14
MAT 0099 COMPASS exam mean	50.00	50.13	46.38	47.14	55.38
MAT 0099 COMPASS pass rate	85.00%	n/a	92.30%	85.71%	88.00%
MAT 0097 end-of-quarter students eligible for the final exam	70.00%	69.46%	75.00%	71.79%	88.23%
MAT 0098 end-of-quarter students eligible for the final exam	80.00%	85.89%	96.00%	88.46%	88.29%
MAT 0099 end-of-quarter students eligible for the final exam	80.00%	80.00%	81.25%	77.78%	80.64%

The data above is compiled and recorded by the General Education faculty who then share the results with the QEP Impact Team.



Students completing Learning Support math courses will demonstrate mastery of the concepts in their core math courses

	Goal	Spring 2010	Summer 2010	Fall 2010	Winter 2011
MAT 1012 final exam mean	75	80.80	86.12	80.13	82.95
MAT 1013 final exam mean	70	73.13	76.63	76.45	77.58
MAT 1011 final exam mean	79	87.76	85.33	82.85	87.68
MAT 1111 final exam mean	84	87.15	86.49	88.79	86.77

The data above is compiled and recorded by the General Education faculty who then share the results with the QEP Impact Team. The data is Gateway data from an Access database that is organized in an Excel file named Program Math Final Exam Means 201004.

Students completing Learning Support math courses will demonstrate mastery of the mathematical concepts in the math portions of their occupational courses

	Goal	Fall 09	Summer 2010	Fall 2010	Winter 2011
Notes test in ACC 102, subset mean scores	85	100	100%	100%	100%
Ohm's test in IFC 101, subset mean scores	85	88	n/o	87.2%	75.7%
Drug Calculations in AHS 102, subset mean scores	85	87	90.7%	81.9%	77.77%
Metric Conversion in MAS 103, mean test scores	85	n/a	n/o	n/o	70.77%
Scales Worksheet in DDF 100, subset mean scores	85	88.9	n/o	85.7%	85.5%

n/o = not offered this particular quarter

The data above comes from a faculty member teaching the course. For the Notes test in ACC 102, there are 10 questions calculating interest that are used. In the ohm's test in IFC 101, there are 42 questions calculating Ohm's law that are used. In AHS 102, the drug calculations test is almost completely used and involved ratios/proportions and multiplying of fractions. In MAS 103, there are a section of metric conversion problems that are used. The Scales worksheet is a course pre-test in DDF 100 that covers general math functions.



Students completing Learning Support math courses will enter the workforce with appropriate math skills

	Goal	Spring 09	Summer 10	Fall 2010	Winter 2011
Work Ready, math subset mean scores, diploma	5.0	4.58	4.86	5.02	5.00
Work Ready, math subset mean scores, degree	5.75	5.26	5.63	5.17	6.00
			FY08	FY09	FY10
Employer satisfaction survey results	100%		100%	100%	98%

The data above comes from the MGTC Intranet. The path is Banner Reports>Grade Reports>Diploma Graduate Work Ready Score for the diploma graduates scores and Banner Reports>Grade Reports>Degree Graduate Work Ready Score for the degree graduates. The scores are then inserted into an Excel file, sorted, and analyzed.

Ancillary Improvements

Program Ready versus Learning Support Course Attainment

	Goal	Spring 08	Summer 10	Fall 2010	Winter 2011
MAT 1011	80%	78, 50	75, 50	69, 50	60, 0*
MAT 1012	80%	51, 50	64, 13	56, 58	55, 50
MAT 1013	80%	40, 43	69, 25	49, 50	53, 50
MAT 1111	80%	74, 67	98, 100	63, 100	82, 100

**one student*

The data above comes from the MGTC Intranet. The path is Banner Reports>Grade Reports>Learning Support Grade Comparison to Program Ready. The scores are then inserted into an Excel file, sorted, and analyzed.

Learning Support MAT Course Attainment

	Goal	Win 09	Summer 10	Fall 2010	Winter 2011
MAT 0097	80%	45%	46.15%	50.00%	66.67%
MAT 0098	80%	35%	68.27%	59.15%	66.40%
MAT 0099	80%	65%	60.00%	39.29%	56.76%

The data above comes from the MGTC Intranet. The path is Banner Reports>Grade Reports>Grade Listing Per Course. The scores are then inserted into an Excel file, sorted, and analyzed. Attainment in this case is defined as of those students receiving a final grade other than an Incomplete, how many achieved an A, B, or C.

Learning Support Retention

Retention is defined as those students attending either the Mat 0097, 0098, or 0099 course and six quarters later have graduated or are still enrolled. Data at this point is unavailable; those students enrolled in Fall 2010 are not likely to complete a credential until the end of Summer 2011 at the earliest.

Learning Support Attrition

The data above is compiled and recorded by the General Education faculty who then share the results with the QEP Impact Team. Attrition is defined as those students attending either the Mat 0097, 0098, or 0099 course and eventually not achieving a technical certificate of credit, diploma, or degree. Data at this point is unavailable; those students enrolled in Fall 2010 are not likely to complete a credential until the end of Summer 2011 at the earliest.

Other areas:

COL 0099 Student Satisfaction Survey

Winter 2011

	Strongly Agree	Agree	Disagree	Strongly Disagree	Percent Agree
In general, I feel that the COL 0099 course meets my learning expectations.	36	8			100.00%
My teacher use relevant course materials (textbooks, handouts, videos, etc.).	38	6			100.00%
In general, my instructors' grading policies are clear to me.	39	5			100.00%
I am satisfied that I am given adequate opportunities to demonstrate my understanding of course materials.	39	5			100.00%
In general, I feel that my instructor has a genuine interest in my success.	40	5			100.00%
I am satisfied that my instructor has sufficient background knowledge for the COL 0099 course.	39	5			100.00%
In general, I feel that attending COL 0099 is an important contributor to my learning experience.	35	8	1		97.73%
In general, I feel that attending COL 0099 is an important contributor to my success in my other learning support course(s).	36	8			100.00%
In general, I feel that I am a better student because of the COL 0099 course.	34	10			100.00%
I would suggest students in learning support math courses should also take the COL 0099 course.	35	9			100.00%
N=44	371	69	1	0	99.77%

Student comments:

A good class that formally explains concepts that everyone in school experiences but may not understand the why.
COL0099 class will help you for your other classes also.

Success Coach Satisfaction Survey Winter 2011

	Strongly Agree	Agree	Disagree	Strongly Disagree	N/A	Percent Agree
My success Coach helped me identify academic problems and needs	17	9			4	100.00%
I feel comfortable sharing academic issues with my success coach.	20	8			1	100.00%
My success coach is interested in outside aspects of my life and how it may affect my learning.	18	8			1	100.00%
My success coach provides information about the resources and support on campus such as tutoring and career placement.	20	8				100.00%
My success coach is knowledgeable about MGTC certificate and degree programs.	23	5				100.00%
My success coach was able to provide me with assistance with my Math course	20	4			2	100.00%
My success coach was able to assist me with study skill techniques.	21	8				100.00%
My success coach is knowledgeable about potential careers in my area of interest.	18	7			3	100.00%
My success coach is available during his/her schedule office hours.	21	7				100.00%
I was satisfied with the amount of time my success coach spent with me.	21	8				100.00%
Overall, the sessions with my success coach were a positive experience.	21	6				100.00%
My success coach contacted me throughout the quarter to check on my academic progress or just to see how I was doing.	17	8			2	100.00%
N=30	237	86	0	0		100.00%

Student comments:

My success coach is an excellent teacher. I'd learn a lot more if he instructed core classes.
My coach is a very positive influence
Best instructor ever. You will never walk out with problems from his class.
My success coach has made a big change in the way I think and my choices in life.
I will take his teaching with me into the career field
Mr. Early is a success coach that I think everyone needs to follow

QEP Longitudinal Study MAT 0098 Cohort ~ 201102

Fall 2010																	
SID#	MAT 0098								MAT 1013								
	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Test Eight	Final
39058	75	65	64	73	83	87	68	70	76	90	95	100	100	100	100	100	95
24404	82	83	94	70	89	82	59	74	96	90	83	86	88	70	100	100	90
96216	82	88	95	81	68	68	84	85	84	68	71	20	76	85	85	24	68
89450	64	102	100	56	72	93	24	79	88	85	82	88	4	65	100	65	100
69512	51	97	102	97	46	95	99	99	84	95	57	85	76	70	80	83	84
96224	80	84	81	74	85	90	105	86	88	94	68	78	85	65	78	85	90
96425	98	73	86	77	84	87	89	71	88	80	92	100	80	100	80	100	92
96647	93	98	73	85	62	85	88	90	80	60	58	60	48	90	65	47	34
96120	85	89	92	87	100	88	87	79	84	85	69	96	20	75	100	100	100
91216	84	98	72	86	72	88	88	78	96	95	88	100	96	90	85	92	97
58628	77	89	89	76	97	89	77	76	84	43	73	95	100	75	45	83	75
AVG	79.2	87.8	86.2	78.4	78.0	86.5	78.9	80.6	86.2	80.5	76.0	82.5	70.3	80.5	83.5	79.9	84.1

QEP Longitudinal Study MAT 0099 Cohort ~ 201102

SID#	MAT 0099								MAT 1111							
	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final
33068	35	77	73	80	88	75	73	51	68	73	80	53	80	96	77	74
94411	98	88	88	55	80	65	80	38	80	98	75	63	85	82	80	83
86135	78	86	90	90	90	95	68	62	100	95	95	95	10	85	100	95
85664	75	63	70	85	73	95	52	81	100	95	100	100	90	100	100	90
96795	85	91	70	95	90	70	85	86	85	90	70	93	85	97	93	100
82360	83	98	40	75	28	0	0	*	86.6	90.2	84.0	80.8	70.0	92.0	90.0	88.4
52160	15	62	63	75	80	100	28	*								
AVG	67.0	80.7	70.6	79.3	75.6	71.4	55.1	63.6								

* did not complete the course

COL0099 Impact

Course GPA of students in or having had COL0099 above those who did not

201101 Cohort				201102			201103		
Subject	Course	Grade	N	Course	Grade	N	Course	Grade	N
MAT	97	1.93	14	1012	1.33	6	1012	1.63	7
MAT	97	2.72	28	1012	2.68	523	1012	2.59	746
MAT	98	3.38	40	1013	2.27	11	1013	2	15
MAT	98	2.78	63	1013	2.51	180	1013	2.43	247
MAT	99	1.8	5	1111	3	1	1111	3	1
MAT	99	2.36	25	1111	2.81	113	1111	2.86	179
							1015	3.67	3
							1015	2.96	158

the 201103 data includes 201102 data

201102 Cohort				201103			
Subject	Course	Grade	N	Subject	Course	Grade	N
MAT	95	4	2	MAT	1011	3	2
MAT	96	4	2	MAT	1011	2.56	89
MAT	97	2.36	22	MAT	1012	2.11	9
MAT	97	3.08	13	MAT	1012	2.44	545
MAT	98	2.78	60	MAT	1013	2.27	26
MAT	98	2.59	32	MAT	1013	2.25	175
MAT	99	1.38	8	MAT	1111	2.5	2
MAT	99	2.41	34	MAT	1111	2.73	134

201103 Cohort

Subject	Course	Grade	Count	COL course taken
MAT	96	4	2	Y
MAT	96	4	1	N
MAT	97	2.89	18	Y
MAT	97	2.8	5	N
MAT	98	2.98	43	Y
MAT	98	2.76	38	N

COL0099 Program Connection Survey Summary

N=30

Mean Scores

	Pretest	Posttest	+/-
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I know the name of the program chair of my program	2.90	3.79	0.89
I know the name of at least one faculty member that teaches in my program	3.30	3.79	0.49
I know the location of my program on campus	3.43	3.86	0.43
I know what the classrooms or labs of my program look like	2.77	3.71	0.94
I know how important Math is in my program	3.40	3.79	0.39
I know the value of my math courses in my program	3.27	3.89	0.62
I know at least one example of using math in my program	3.03	3.79	0.76
I know I feel connected to my program	3.37	3.89	0.52

Pretest cumulative mean score	3.18
Posttest cumulative mean score	3.81
Difference	0.63

1=I do not know

2=I think I know but I do not remember

3=I think I know

4=I know