

Assessment Report

Quality Enhancement Plan Impact Team

Fall Quarter 2010



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	14 of 22 programs completed
Math Bridged Lessons	Follows mapping and workbooks
Math Lab Renovation	100% physical, ongoing development
Embedded Classroom Tutors	To be piloted Winter Quarter 2011
Cohorts	Ongoing
Success coach	100%
Student Success Course	6 sections, 96 students (Winter)
Training, MAT faculty	Follows mapping and workbooks
Training, Occupational Program Faculty	Follows mapping and workbooks

Other items under development:

- Assessments
 - Learning Support student satisfaction survey (started Winter)
 - Program faculty survey – follows full workbook implementation
 - Math faculty survey
 - Professional development survey – follows QEP sessions
 - COL 0099 program visit pre-post test, to be implemented Winter
- COMPASS evaluation
- Early Warning System
- Professional Development for Faculty
 - Math in Career Technical Education – follows curriculum mapping
 - Assessment (March 15)
 - Collaborative learning (March 8)
 - Learning styles linked to instructional methods (March 1)
- Professional Development for Math Faculty
 - Math Instruction Techniques
 - Instructional Technology (February 22)

Student Learning Outcomes Assessment

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

	Goal	FY10	Summer 2010	Fall 2010
MAT 0097 Exit exam mean	80.00	77.53	84.49	83.79
MAT 0098 Exit exam mean	85.00	85.45	85.61	79.60
MAT 0099 COMPASS exam mean	50.00	50.13	46.38	47.14
MAT 0099 COMPASS pass rate*	tbd		92.30%	85.71%
MAT 0097 end-of-quarter students eligible for the final exam	70.00%	69.46%	75.00%	71.79%
MAT 0098 end-of-quarter students eligible for the final exam	80.00%	85.89%	96.00%	88.46%
MAT 0099 end-of-quarter students eligible for the final exam	80.00%	80.00%	81.25%	77.78%

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
MAT 1012 final exam mean	75	80.80	86.12	80.13
MAT 1013 final exam mean	70	73.13	76.63	76.45
MAT 1011 final exam mean	79	87.76	85.33	82.85
MAT 1111 final exam mean	84	87.15	86.49	88.79

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
Notes test in ACC 102, subset mean scores	85	100	100%	100%
Ohm's test in IFC 101, subset mean scores	85	88	n/o	87.2%
Drug Calculations in AHS 102, subset mean scores	85	87	90.7%	81.9%
Metric Conversion in MAS 103, mean test scores	85	n/a	n/o	n/o
Scales Worksheet in DDF 100, subset mean scores	85	88.9	n/o	85.7%

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.

MAS 103 was not offered Summer Quarter.



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

	Goal	Spr 09	Summer 10	Fall 2010
		FY08	FY09	FY10
Work Ready, math subset mean scores, diploma	5.0	4.47	4.57	4.76
Work Ready, math subset mean scores, degree	5.75	4.96	5.33	5.56
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	Spr 08	Sumer 10	Fall 2010
MAT 1011	80%	78, 50	75, 50	69, 50
MAT 1012	80%	51, 50	64, 13	56, 58
MAT 1013	80%	40, 43	69, 25	49, 50
MAT 1111	80%	74, 67	98, 100	63, 100

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
MAT 0097	80%	45%	46.15%	50.00%
MAT 0098	80%	35%	68.27%	59.15%
MAT 0099	80%	65%	60.00%	39.29%

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 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 Success Coach Student Satisfaction Survey

Fall 2010

	Strongly Agree	Agree	Disagree	Strongly Disagree	Percent Agree
In general, I feel that the COL 0099 course meets my learning expectations.	23	16			100%
My teacher use relevant course materials (textbooks, handouts, videos, etc.).	33	11			100%
In general, my instructors' grading policies are clear to me.	40	4			100%
I am satisfied that I am given adequate opportunities to demonstrate my understanding of course materials.	38	8			100%
In general, I feel that my instructor has a genuine interest in my success.	42	3			100%
I am satisfied that my instructor has sufficient background knowledge for the COL 0099 course.	36	6	1		98%
In general, I feel that attending COL 0099 is an important contributor to my learning experience.	25	17	1		98%
In general, I feel that attending COL 0099 is an important contributor to my success in my other learning support course(s).	30	12	1		98%
In general, I feel that I am a better student because of the COL 0099 course.	22	19	4		91%
I would suggest students in learning support math courses should also take the COL 0099 course.	29	11	3		93%
N=45					98%

Student comments:

...I feel he takes a vested interest in the success of his students and their education...makes you feel like you are important...I received information in this class that will help me in the future in my school career...shows interest in every student's academic success...always concerned about our studies...This class has really taught me a lot. I seriously recommend others to take this class...Being out of school for ten years, this course helped me by getting into proper study habits and was a great part of my success...with this class I feel more prepared for the courses to come in my program!...his main focus is our success and future...by using the study techniques he has taught us I have become very successful in my other class...without this class I would have been closed minded about school...I am on a different level because of this class...I know how to take better notes!...Mr. Early truly had an interest in my success...

QEP Longitudinal Study
MAT 0097 Cohort ~ Summer 2010

Summer 2010 MAT 0097							
SID#	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Final
44252	43	86	86	72	69	69	70
57988	104	75	94	90	94	84	80
86120	110	103	76	80.5	104	93	94
95210	93	103.5	105	76.5	106	91	90.5
94123	80	87.5	58	47.5	73	104	95.5
94761	84	70	78	84	76	72	72
89495	93	73	88	88	90	96	81
94702	98	90	92	91	100	100	80
88436	94	89.5	100	38.5	93	78	70
95020	78	58	82	90	74	74	78
AVG	87.7	83.6	85.9	75.8	87.9	86.1	81.1

Fall 2010 MAT 1012							
Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Final	
35	5						
80	65	81	87	66	88	72	
65	72	28					
80	83	53	57	54	44	45	
65	70	56	36	72	0	92	
AVG	65.0	59.0	54.5	60.0	64.0	44.0	69.7
MAT 0098							
Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Final	
88	58	0					
95	72	76	60				
Not enrolled							

Test Four - Multiply and Divide Fractions
Test Five - Decimals

QEP Longitudinal Study
MAT 0098 Cohort ~ Summer 2010

Summer 2010

MAT 0098								
SID#	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final
88699	102	104	94	107	76	99	46	77
30435	96	108	104	113	121	132	83	98
95015	94	93	93	85	74.5	90		79
91608	104.5	106	68	92	10	112	66	71
95410	103	102	91	109	115	111	106	101
85063	82	80	79	90	101	80	58	70
77626	67	96	82	94	113	98	88	94

33068	90	92	102	61	68	89	80	70
94952	95	97	94.5	85	95	86	67	84

Fall 2010

MAT 1013									
Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Test Eight	Final	
72	69	67	93	59	84	73	83	70	
85	80	81	82	96	80	85	89	98	
78	64	0	48	51	0	11	0		
89	68								
88	71	64	91	69	60	74	79	75	
AVG	82.4	70.4	53	78.5	68.75	56	60.75	62.75	81

MAT 0099								
Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final	Final2
35	77	73	80	88	75	73	28	51

no data

QEP Longitudinal Study
MAT 0099 Cohort ~ Summer 2010

Summer 2010									Fall 2010							
MAT 0099									MAT 1111							
SID#	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
88932	100	100	100	102	110	101	120	66	95	100	98	92	95	100	93	100
									MAT 1012							
									Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final
94765	55	94	90	65	55	83	75	46	98	99	102	100	86	102	99	102
79261*	45	67	88	58	60	67	43		Not enrolled							
95043*	45	77	70	53	68	53	40									
90587*	36	0	70	53	9	70	0									
92861	65	77	85	65	65	70	65	51	Enrolled, not in MAT course							
AVG	57.7	69.2	83.8	66.0	61.2	74.0	57.2	54.3								

* did not complete the course

Test Seven - Radicals, Exponents, Adding and Subtracting Radicals

QEP Longitudinal Study
MAT 0097 Cohort ~ Fall 2010

MAT 0097							
SID#	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Final
68576	59	38	45	50	61	80	*
46262	95	84	77	26	33	63	*
95251	85	65	61	70	59	90	85
93974	94	89	88	53	74	83	70
96644	91	78	84	69	75	82	74
93974	94	89	88	53	74	83	70
30458	104	14	65	74	97	65	92
95446	96	86	88	77	97	72	73
94972	80	105	84	108	91	105	92
95696	103	102	89	98	103	100	80
95033	45	20	19	2	18	36	*
91320	65	39	18	20	43	40	69
96663	71	79	55	38	26	35	86
93546	60	27	43	63	48	68	*
23936	96	36	78	57	55	62	*
93981	87	54	75	44	91	60	*
96439	90	94	83	46	101	74	79
95253	95	99	85	80	63	90	81
82152	88	96	72	88	92	90	88
95685	94	98	91	102	103	88	85
95846	99	114	105	105	105	106	88
AVG	85.3	71.7	71.1	63.0	71.9	74.9	80.8

* did not complete the course

Test One - Add and Subtract Whole Numbers

Test Four - Multiply and Divide Fractions

QEP Longitudinal Study
MAT 0098 Cohort ~ Fall 2010

MAT 0098								
SID#	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final
96873	39	51	56	42	72	49	47	*
95495	61	55	62	61	51	70	76	*
39058	75	65	64	73	83	87	68	70
94879	71	77	67	74	94	84	58	72
95706	78	90	82	66	90	75	47	70
96008	70	74	78	98	86	60	63	76
95187	80	89	74	78	86	77	68	78
24404	82	83	94	70	89	82	59	74
96216	82	88	95	81	68	68	84	85
96465	84	79	80	76	75	91	82	77
95989	54	62	87	49	0	67	0	*
96236	72	64	97	58	42	86	92	92
89450	64	102	100	56	72	93	24	79
93397	79	98	74	63	50	81	70	74
40313	72	80	77	61	80	91	54	76
90320	90	84	81	58	60	91	76	84
95019	68	85	99	62	114	91	46	82
95766	65	98	93	78	88	91	56	94
61266	79	95	93	94	52	89	84	88
69512	51	97	102	97	46	95	99	99
96224	80	84	81	74	85	90	105	86
96131	80	102	108	81	86	96	90	88
96425	98	73	86	77	84	87	89	71
96647	93	98	73	85	62	85	88	90
96120	85	89	92	87	100	88	87	79
92670	97	100	90	102	102	82	64	84
94511	101	96	99	88	97	99	88	80
91216	84	98	72	86	72	88	88	78
74386	97	84	66	68	102	86	66	76
58628	77	89	89	76	97	89	77	76
96395	84	88	87	88	100	72	70	82
	77.2	84.4	83.8	74.4	76.9	83.2	69.8	80.7

* did not complete the course

Test Two - Integers and Monomials

Test Seven - Inequalities, Roots and Proportions

QEP Longitudinal Study
MAT 0099 Cohort ~ Fall 2010

Fall 2010

MAT 0099								
SID#	Test One	Test Two	Test Three	Test Four	Test Five	Test Six	Test Seven	Final
33068	35	77	73	80	88	75	73	51
94411	98	88	88	55	80	65	80	38
86135	78	86	90	90	90	95	68	62
85664	75	63	70	85	73	95	52	81
96795	85	91	70	95	90	70	85	86
82360	83	98	40	75	28	0	0	*
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

Test Seven - Radicals, Exponents

COL0099 Impact

Summer 2010 Cohort

	Subject	Course	Grade	N
Took COL0099	MAT	97	1.93	14
Did Not	MAT	97	2.72	28
Took COL0099	MAT	98	3.38	40
Did Not	MAT	98	2.78	63
Took COL0099	MAT	99	1.8	5
Did Not	MAT	99	2.36	25

Fall 2010 Cohort

	Subject	Course	Grade	N
Took COL0099	MAT	95	4	2
Did Not	MAT	96	4	2
Took COL0099	MAT	97	2.36	22
Did Not	MAT	97	3.08	13
Took COL0099	MAT	98	2.78	60
Did Not	MAT	98	2.59	32