



# Assessment News

A Newsletter for MTC Faculty and Staff to  
Help Us Improve Student Learning

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## **We Start at the End**

**Bob Haas**

*Assessment Coordinator*

### **H**ow do we know what to teach?

Or, more importantly, how do we know what students need to learn? Course design is really the last step in a process that begins when faculty work with advisory committees, industry connections, and each other to develop the set of skills students should have when they complete a program or certificate. Some programs, particularly health technologies, are accredited by external agencies that define the program learning objectives.

Once the program faculty develop measurable program learning objectives, they develop specific course learning objectives. The next step in the process is to develop the course, find a textbook, and create assessments that will let faculty know the degree to which students are mastering the learning objectives.

So...we really start at the end. We begin by figuring out what students need to know when they have completed a program, and then we design courses that help students gain that knowledge. ❖

## **Assessment Processes Lead to Co-Op Program in Business and IT**

**Cheryl Kellogg**

*Coordinator of Cooperative Education*

The history of success with clinicals and practicums in the healthcare and, human and social services programs at MTC, led the Business and Information Technologies department to investigate cooperative education experience as part of the curriculum. This discussion was initiated in the Management and Marketing Advisory Board meeting in May 2003.

In 2004, departmental discussion about the feasibility of a co-op experience in the curriculum, and institutional research of the ability to financially support a cooperative education program, resulted in the decision to continue development. Plans were made to replace a retiring business department faculty member with a ½ time department co-op coordinator.

In 2005, a job description was written and advertised as a ½ time faculty/½ time co-op coordinator position. A person was hired in the Fall 2005 to design and implement the program. Academic programs were re-designed to include two co-op courses, a co-op prep course and a co-op experience course. Department advisory committees wholeheartedly embraced the concept.

Pilot placements in 2006 have substantiated the value of the co-op experience, both for the learner and the co-op sponsor employer. Through Fall 2006, a total of eight business students have participated in the pilot co-op sites, and interest is high from both employers and students.

Multiple placements in Winter 2007 are in process, and improvements to the co-op experience program will be implemented with each successive term. ❖

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# Improved Scores on Math Graduate Competency Exam

Terry Metz

Professor, Math and Engineering

In Fall Quarter 2006, MyMathLab, a computer-based learning and testing tool, was added to Mathematics I (MH-101) and Basic College Algebra (MH-105). By using MyMathLab we were able to change the course format to mastery-based learning. In mastery-based learning, students must show proficiency of material in one section before they are allowed to move on to the next section. To insure that students understood the majority of the material, they were required to score a minimum of 80% on each homework assignment and quiz, and 75% on the Midterm and Final tests.

It is a known fact that students learn at different rates, and the structure of MyMathLab allowed them to work through the course material at their own individual pace. The more skilled students moved ahead quickly while the rest worked at an average, or slower pace. MyMathLab also provided the instructors with tools to identify the students who were having difficulty and provide them with additional one-on-one help.

The Math Graduate Competency Exam (GCE) was revised to match the online format of MyMathLab's homework and quizzes. The number of questions was reduced to insure that students had adequate time to complete the online exam, but the test's difficulty level was maintained. This was accomplished by removing questions which tested for

the same objective.

Although only 33 exams were given this quarter, the results are very encouraging compared to the past two years of data. The following table compares this quarter's tests with the two previous years.

	Avg Score on Math GCE Fall 2004 thru Spring 2006 (n = 316)	Avg Score on Math GCE Fall 2006 (n = 33)	Percent Increase
Basic Math (MATH.1)	85.7%	95.1%	9.4%
Calculator Use (MATH.2)	78.9%	90.6%	11.7%
Algebra (MATH.3)	77.2%	85.1%	7.9%
Graphing (MATH.4)	74.3%	88.3%	14.0%
Basic Statistics (MATH.5)	70.3%	94.7%	24.4%
<b>Overall Weighted Average*</b>	<b>76.5%</b>	<b>88.1%</b>	<b>11.6%</b>

\* Weighted average gives higher value for the algebra and graphing sections of the exam. The breakdown of weights is: 1) basic math use 8%; 2) calculator 8%; 3) algebra 44%; 4) graphing 32%; and, 5) basic statistics 8%.

Of the 33 tests given, only 1 student failed to meet the 75% requirement and had to retake the test. The results above do not include the retakes, only the student's original score.

In Winter Quarter 2007 over 120 students are enrolled in math courses where the graduate competency exam will be given. This additional data should provide us with an even greater understanding of how mastery-based instruction and MyMathLab contribute to student learning in MTC math courses. ❖

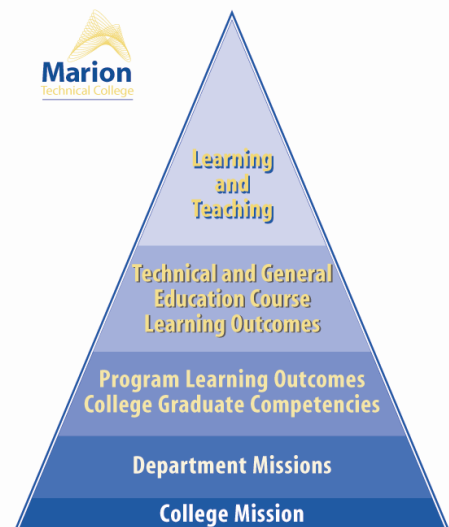
## Assessment Begins with a Question!

Is there a question about student learning that you want to explore? Talk with a member of the assessment committee to design an answer to your question! The assessment committee members can help with the data "massaging", AS400 data queries, and data analysis and interpretation.

## The Learning Equation

$$\text{Program Learning Outcomes} + \text{College Graduate Competencies} = \text{What an MTC Graduate Learns}$$

## MARION TECHNICAL COLLEGE LINKAGES



## **YOUR ASSESSMENT COMMITTEE**

BOB HAAS, COORDINATOR  
TERRY METZ  
CATHERINE CRUM  
KEN HILDEBRAND  
JIM LAVERY  
LILLIE KIRSCH  
JOY MOORE  
TERESA PARKER  
LINDA RIZZO  
DEBBIE STARK  
WENDY WISEMAN  
AL MOORE  
DENNIS BUDKOWSKI

## **DID YOU KNOW?**

“THE ASSESSMENT OF STUDENT LEARNING IS A **PROCESS**, AND THE PROCESS MUST HAVE RESULTS FOUNDATIONAL TO THE EDUCATION OF STUDENTS. THE RESULTS SHOULD TESTIFY TO ACHIEVEMENT OF STATED GOALS FOR LEARNING, AND ENABLE THE ORGANIZATION TO STRENGTHEN AND IMPROVE THE CAPACITY FOR STUDENT LEARNING”

....HLC CRITERIA FOR ACCREDITATION HANDBOOK, CRITERION THREE

## **Working Smarter Through Assessment**

**Jon Beard**

*Instructor, General Education and Coordinator of the Upper Sandusky Extension Center*

What is the mission of the college? What are the College Graduate Competencies? Do these questions sound familiar? Could you answer these questions if asked by a member of the accreditation site visit team? What else should we know?

In Fall 2006 the General Education Department created a list of questions that could be used as possible “talking points” during the upcoming site visit. With assistance from the Higher Learning Commission’s accreditation documents, fifteen questions were assembled. According to Al Moore, Dean of General Education, “These questions reflect what we think may be asked of faculty and staff during the upcoming visit.” Ten of the fifteen questions are directly linked to a criterion of the accreditation process. The following is a sample of the questions from each criterion.

### **Criterion 1**

*What are the missions of your college and department and how do they interact to support each other?*

### **Criterion 2**

*How does your department’s faculty adapt courses to plan and meet the future needs of the students?*

### **Criterion 3**

*How does your institution support faculty to promote effective teaching in the classroom?*

### **Criterion 4**

*Through the courses in your department, how does the curriculum promote global, diverse, and technological issues relevant to those that your students will encounter once they have entered the workforce?*

### **Criterion 5**

*How does your department communicate, analyze, and change to both internal and external constituencies?*

At each General Education Department meeting, faculty were given fifteen to twenty minutes to generate possible answers to these questions. This allowed for great interaction, as well as good preparation for the upcoming site visit. Overall, this was an effective beginning to a process that has definitely become an ongoing project. ❖

## **Criterion Four from the Higher Learning Commission**

### ***Acquisition, Discovery, and Application of Knowledge***

The organization promotes a life of learning for its faculty, administration, staff, and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.

- We demonstrate that we value a life of learning.
- We demonstrate that knowledge, skills, and intellectual inquiry are integral to our educational programs.
- We assess the usefulness of our curricula to the students who live and work in a global, diverse and technological society.
- We provide support to ensure that faculty, students and staff acquire, discover and apply knowledge responsibly.

# **LEARNING DOMAINS: COGNITIVE, AFFECTIVE, AND PSYCHOMOTOR**

**Lillie Kirsch** *Director, Human and Social Services*  
**Doug Warne** *Instructor, Human and Social Services*

Learning domains can be thought of as categories wherein we consider types of learning such as *cognitive (knowledge)*, *affective (attitude)*, and *psychomotor (skills)*. Involving students in a learning process that encompasses all three of these domains has been an ongoing process within the Human and Social Services Department. Albeit the increased awareness and more formalized focus on assessment at MTC has resulted in a more intentional teaching and learning process and has evoked considerable thought and some changes as to how to measure specific course objectives pursuant to program outcomes. For instance, students enrolled in HS160 Interviewing Techniques, engage in the acquisition of knowledge through their text, homework, assignments, and lectures. Students are tested to determine their abilities to recall information, analyze problems and synthesize material by combining numerous skills sets needed for an effective interview, and to evaluate the effectiveness of demonstrated active listening skills. Students are also expected to be able to structure and guide an interview and to demonstrate their awareness of multicultural issues. The affective domain is coupled with the skill domain and is incorporated in role plays throughout the course.

The value of a more formalized assessment process has increased our ability to be more conscious and more intentional in the teaching and learning process. Changes to classes have occurred in content, delivery, and assessment instruments. For instance, the HS200, Case Management, course was modified this year as a result of MTC's culture of assessment. The past few years in HS200, students spent several weeks learning how to determine an appropriate level of care based on the severity of the problem. A standardized tool that is currently used by the Ohio Department of Alcohol and Drug Addiction Services (ODADAS) was implemented. The rationale was that if students could learn to conceptualize a continuum of care in alcohol and other drug services, they would then be able to transfer this concept to other areas of human and social services. However, we discovered that by focusing so much time on this assessment tool we neglected some of the other course objectives. Specifically, there was too much of a reduction of time for students to examine how to control a case load, coordinate various components of community services, and insure continuity of service to clients.

Students were not as proficient in their ability to gather information, keep records, monitor treatment plan implementation, refer to other service providers, network, and use time appropriately, all of which are important skills in case management. The focus on increasing the student's documentation skills was a direct result of receiving anecdotal evidence from numerous practicum agencies and via direct input from our advisory committee.

This year in HS 200 the class was divided into case management teams and each team was assigned a case with a presenting problem at the beginning of the quarter. By using role plays, students were able to practice how to conduct a psychosocial interview as well as how to document this information in an organized way. The teams then developed a treatment plan that addressed the problem and identified community resources that could serve the needs of the client.

During the quarter students in HS200 are required to interview a human service worker about an unmet need in the community and document the worker's ideas of ways to address that need. Students then present their findings to the class. A larger project involves the student either shadowing a case manager for a portion of the day, participating in a case review by a multidisciplinary team, or observing a social history interview. Students write a reflection paper on this experience and present their observations and insights in class.

Next year when we teach this class we may eliminate one of these projects to allow more time throughout the quarter to present different scenarios to each team that requires an intervention and documentation in progress notes. Each team will be given a file to organize their documentation, and the case can be carried through to termination.

Within the culture of assessment at MTC we are continually working to improve our courses and, more importantly, to enhance students' learning through the use of all three learning domains to equip our graduates with both knowledge acquisition and skill application. ❖