TESTING MSSC ALIGNMENT

FLATE and its college partners are working together to ensure that Engineering Technology (ET) core courses which align with the Manufacturing Skill Standards Council (MSSC) Certification are preparing students to earn a passing grade on the MSSC Certification tests. FLATE worked to align state level ET program frameworks with MSSC standards and in 2010, FLATE began taking steps to identify, evaluate, and remedy gaps between the program frameworks and actual course outcomes. In order to bring together and validate alignment with MSSC Certification for ET core courses, FLATE examined course outcomes based on student ability to achieve a passing MSSC test score.

FLATE's goal is to administer and track testing for at least 50 students for each of the MSSC tests: *Safety, Quality Practices and Measurement, Manufacturing Processes and Production, and Maintenance Awareness*. Any college teaching the ET courses may participate in the study and we are looking for a 75% pass rate pass rate for each test sample; if the pass rate is less than 75% we will investigate the gap. Colleges participating in the study by administering the test/s in 2010 are Brevard Community College (BCC), Central Florida Community College (CFCC), and State College of Florida, Manatee (SCF). For all testing scenarios, we collected basic demographics and asked if students were ET degree seeking; students who answered no to this question were either non-degree seeking or enrolled in other majors or in college credit certificates. For the next group of tests, we believe it is important to begin collecting data on test-retest scenarios as the project continues in order to provide a clear picture of the testing climate and integration between the MCCS tests and curriculum.

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Since the Safety course and assessment includes cross-functional employability skills such as communications, teamwork, customer awareness, workplace conduct, training ability). MSSC recommends that individuals take the safety course and assessment first, so our study began in Spring 2010 with the MSSC Safety Certification test for students completing the college credit course, *Industrial Safety (ETI 1701/1720)* offered by three colleges: BCC, CCF, and SCF.

MSSC Safety Certification Test Performance

Brevard Community College, College of Central Florida, State College of Florida (Manatee)

n=54

MSSC Cut Score: 76%	**Overall Ethnicity**	47 males
Avg Score Male: 84%	24% Hispanic	7 females
Avg Score Female: 80%	4% Black	Average student age:33
Combined 87% pass rate	72% White	ET Degree Seeking: 79%

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The MSSC Quality Certification test for students completing the college course Introduction to *Quality Assurance (ETI 2110)* was administered by BCC in Spring 2010 and by SCF in Fall 2010. Specific gaps were identified for three sections of the test for one school: only one student passed the MSSC category *Document the results of quality tests*, only two passed in the *Identify fundamentals of blueprint reading* category, and no (0) students in this group passed the MSSC Category, *Use common measurement systems and precision measurement tools*.

MSSC Quality Certification Test Performance

Brevard Community College, State College of Florida (Manatee)

n=17

MSSC Cut Score: 75%	**Overall Ethnicity**	17 males
Avg Score Male: 82%	29% Hispanic	0 females
Avg Score Female: na	6% Black	Average student age:30
Combined 82% pass rate	65% White	ET Degree Seeking: 88%

In December 2010, the Manufacturing Processes and Production Certification test was administered by BCC for students completing *Materials & Processes I (ETIC 1830)*. The low pass rate for the Manufacturing Processes and Production Certification test requires further analysis and may call for curriculum intervention. More testing results will be required to better identify gaps between courses and MSSC tests.

MSSC Manufacturing Processes and Production Certification Test Performance

Brevard Community College

n=12

MSSC Cut Score: 74%	**Overall Ethnicity**	11 males
Avg Score Male: 74%	58% Hispanic	1 females
Avg Score Female: 49%	17% Black	Average student age:30
Combined 42% pass rate	25% White	ET Degree Seeking: 88%

FLATE's work with college, workforce, and FLDOE partners helps ensure that Florida's college courses aligned with MSSC standards are adequately preparing students. Keeping an eye on college course outcomes by examining quantitative measures based on a successful pass of the MSSC certification tests is one way of supporting the National Association of Manufacturers (NAM) stackable certification system. At the same time, FLATE's work to strengthen the outcomes of Engineering Technology core courses helps ensure that students are consistently well prepared by their respective colleges across the state and ready to supply the skilled workforce that Florida's industries need.

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