

Course Assessment Form

Economics: 2011-12

Course Assessed	Learning outcomes from students enrolled in sections of the course 10809195, Economics, during Spring Semester 2012.
Assessment Process/Design	<p>All students who complete a Technical Diploma or Associate Degree program at Wisconsin Indianhead Technical College should demonstrate basic knowledge of how a market-oriented economic system operates and the factors which influence national economic policy. During the academic year, faculty in the Social Sciences Division of General Studies met monthly to develop a plan aimed at assessing three of the Wisconsin Technical College System competencies for the course. The faculty determined that the following competencies would be assessed (a copy of the test is available upon request):</p> <p><u>Microeconomics</u> Competency 4: Apply supply and demand analysis to price determination (Test Items 1-6)</p> <p><u>Macroeconomics</u> Competency 9: Assess causes and consequences of changes in output, employment, and prices due to fluctuations in the level of economic activity (Test Items 7 -12)</p> <p>Competency 10: Assess macroeconomic stabilization policies (Test Items 13 -18)</p> <p><u>International Economics</u> Competency 12: Assess the impact of the globalization of economics (Test Items 19 – 24).</p> <p>At the Spring 2011 Divisional Meeting, the Social Sciences faculty decided to assess the Economics course as part of the ongoing General Studies Districtwide assessment procedure. The members of the faculty who had taught this course or who were assigned to teach it in the future decided on the appropriate competencies to assess. Based on this decision, these teachers reviewed the test bank for the current text, and each selected six questions deemed appropriate for inclusion in the assessment instrument. At the Fall 2011 Divisional Meeting, the faculty reviewed their selections and came to consensus on the 24 most appropriate questions that would be used in the assessment instrument. All sections of the Economics course were assessed during the Spring 2012 academic term.</p>

Table 1 Summary of Participation by Campus				
Delivery	Campus	Number of Students	Missing Pre or Posttest	Valid Number of Students
Face-to-Face	Ashland	16	5	11
	Rice Lake	34	10	24
	Superior	17	13	4
Online		82	21	61
Total		149	49	100
	New Richmond*	47	8	39
* New Richmond data not included in individual competency t-test analyses. Included in separate overall analysis.				

Results and Analysis	<p>A paired t test analysis was conducted to determine whether there was a significant change in the mean scores from the Pretest to the Posttest. Overall, students averaged 5.23 higher scores on the Posttest compared with the Pretest. ($t = -14.91$ (99), $p < .0001$). A separate Pretest and Posttest analysis of New Richmond students indicates that students averaged 3.05 higher scores on the Posttest. ($t = -5.42$ (38), $p < .0001$). See Tables 7 and 8 in Appendix A.</p>						
	<p style="text-align: center;">Table 2 Overall Pretest vs. Posttest Comparison</p>						
	Number of Valid Cases	Mean	SD	SE of Mean	t-value	df	2-Tail Sig.
	100	5.23	3.51	.350	-14.91	99	.000
	New Richmond Overall Results						
	Number of Valid Cases	Mean	SD	SE of Mean	t-value	df	2-Tail Sig.
	39	3.05	3.51	.563	-5.42	38	.000
	<p>Further analyses were conducted to determine whether there was a significant change in the mean scores for the summary of test items for each competency (note: these data do not include New Richmond results). As Tables 3-6 show, there was a significant positive change from the pretest to the posttest for items measuring all four competencies</p>						

Table 3
Competency 4

Paired Samples Statistics

Competency 4	Mean	N	Std. Deviation	Std. Error Mean
Pretest Mean	1.5550	100	.18959	.01896
Posttest Mean	1.6417	100	.20566	.02057

Paired Samples Test Items

Pretest vs. Posttest	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2- tailed)
				Lower	Upper			
				.0867	.23864			

Table 4
Competency 9

Paired Samples Statistics

Competency 9	Mean	N	Std. Deviation	Std. Error Mean
Pretest Mean	1.43	100	.205	.021
Posttest Mean	1.68	100	.224	.023

Paired Samples Test Items

Pretest vs. Posttest	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2- tailed)
				Lower	Upper			
				.252	.278			

Table 5
Competency 10

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pretest Mean	1.34	100	.167	.017
Posttest Mean	1.71	100	.198	.020

Paired Samples Test Items

Pretest vs. Posttest						t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
	.370	.236	.024	.417	.323	15.65	99	.000

Table 6
Competency 12

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pretest Mean	1.43	100	.187	.019
Posttest Mean	1.58	100	.243	.024

Paired Samples Test Test Items

Pretest vs. Posttest						t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
	.164	.298	.030	.223	.105	5.23	99	.000

Observation of Overall Results

The results indicated a statistically significant improvement from the pretest to the posttest. When further analyzed by competency, there was also a statistically significant improvement from the pretest to the posttest in all four competencies tested.

Casual observation implied student improvement occurred the most for competencies 9 (Assess causes and consequences of changes in output, employment, and prices due to fluctuations in the level of economic activity) and 10 (Assess macroeconomic stabilization policies). Although still a statistically significant increase, competencies 4 (Apply supply and demand analysis to price determination) and 12 (Assess the impact of the globalization of economics) did not appear to increase by as large of a margin.

<p>Action Plan Based on Results</p>	<p>Based on the observed results, current teaching methodologies, materials, and platforms (face-to-face, online, blended, and ITV) will continue to be used with slight modification for continued success.</p> <p>Overall the Pretest and Posttest proved to be a valid measure of learning outcomes, however the increased gain in the mastery of competency 4 may have been mitigated by the delayed assessment of the Posttest. Being a Microeconomic topic, competency 4 is covered during the first quarter of the semester.</p> <p>Therefore in the future, a midterm Posttest will be implemented to evaluate mastery of Microeconomic competencies that are covered during the first half of the semester. It is suggested that two Microeconomic competencies are Posttested at midterm and two Macroeconomic competencies are Posttested at the end of the course.</p> <p>The mastery of competency 12 may have been mitigated by constraints of time at the end of the semester. Therefore it is suggested that international and global Economic topics be intertwined through the semester in various Micro and Macroeconomic topics.</p> <p>In the future, faculty will continue to improve the assessment process. One recurrent problem that needs to be addressed is motivating students to take the Posttest at the end of the semester. Lack of motivation leads to missing data and careless test-taking, which lowers the overall success rate. On the other hand, if the test is graded, instructors must ensure that it is proctored, which can be challenging with certain course delivery modes.</p> <p>One possible solution to the motivational/grading issue is to utilize common chapter reading quizzes during the semesters for which Posttest questions have been embedded. This would potentially alleviate the motivational issues currently found at the end of the semester for the students.</p> <p>These concerns, however, do not appear to detract from the general validity of the assessment instrument, and instructors agree to continue with the same approach modifying the process for improved validity.</p>
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Appendix A

Table 7
 Pretest vs. Posttest Mean Scores
 Ashland, Rice Lake, and Superior

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	100	3.00	16.00	10.5000	2.44330
Posttest	100	7.00	24.00	15.7300	3.53869
Valid N (listwise)	100				

Table 8
 Pretest vs. Posttest Mean Scores
 New Richmond

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PRECORRECT	39	7.00	19.00	11.2564	2.52063
POSTCORRECT	39	7.00	20.00	14.3077	2.79241
Valid N (listwise)	39				