# **Planning Objective Report**

# **Objective Report:**

Objective ID:	1502	Objective Title: Dual Enrollment Assessment Project: Social Sciences
Unit Manager:	Dennison, Rodney	Planning Unit: 162102 - AA - Humanities, Communication and Social Science
Obj. Status:	Implementing	Obj. Purpose: Operational Outcome
Unit Purpose:		

2009-2009

### **Objective Description:**

Once the Dual Enrollment Assessment plan is implemented fully, the department will ensure that dual enrollment demonstrate achievement on all assessed SLOs to the same extent as traditional college students

Institutional Goals			Objective Types	Planning Priorities	Planning Priorities	
<ul><li>A. Develop a robust program review model</li><li>A. Develop a shared understanding, application and accountability of learning-centered culture</li></ul>		review	No Objective Types to Display	No Planning Priorities	No Planning Priorities to Display	
Tasks Due Date	Status	Priority	Task		Budget Amount	
09/10/2011	Incomplete	High	Faculty meeting will yield comn implemented in both DE and tra		\$0	

#### **Assessment Measures**

Date	Assessment Measure
09/09/2011	Common Assessment (approved and implemented)
09/09/2011	Student Performance on common assessment

#### **Intended Results**

Date	Intended Results
09/09/2011	By the end of the 2011-2012 academic year, 5 of the 7 courses that provide DE and traditional sections will include common assessment measures
09/09/2011	By the end of the 2011-2012 academic year, DE students will meet or exceed traditional college students performance on all assessed SLO's

### **Status Reports**

Report Date	Status Report
1/4/2012	On January 4, 2012, the Associate Dean and Social Sciences Chair approved common assessment for PSY 2012 courses. The assessment will be implemented during the spring 2012 term.
1/4/2012	On January 4, 2012, the Associate Dean and Social Sciences Chair approved common assessment for PSY 2012 courses. The assessment will be implemented during the spring 2012 term.
1/4/2012	On January 4, 2012, the Associate Dean and Social Sciences Chair approved common assessment for AMH 2010 courses. The assessment will be implemented during the spring 2012 term.
1/4/2012	On January 4, 2012, the Associate Dean and Social Sciences Chair approved common assessment for AMH 2020 courses. The assessment will be implemented during the spring 2012 term.
1/4/2012	During the 2011 Fall semester the Test of Understanding College Economics (TUCE) was administered by the Social Science Department during the week of December 2nd through 8th. The TUCE exam was part of each instructor's macroeconomics final exam.
12/1/2011	On December 1, 201,1 the Associate Dean and Social Sciences Chair approved common assessment for POS 2041 courses. The assessment will be implemented during the spring 2012 term.
9/9/2011	The social sciences faculty met on 09/09/2011 and implemented appropriate common methods for both dual enrollment and traditional sections of ECO 2013 courses. The National Council on Economic Education "Test of Understanding in College Economics" multiple choice exam was selected.
9/9/2011	On September 9, 2011, the Associate Dean and Social Sciences Chair approved common assessment for PSY 2012 courses. The assessment will be implemented starting fall 2012.
Actual Results Date	Actual Results
01/17/2012	In the Fall2011 term, the Department of Social Sciences piloted the Test of Understanding in College Economics (TUCE) to gauge validity of learning outcomes and quality of instruction for ECO 2013.
	At Edison State College, the TUCE was administered as a posttest or part of the final exam. Thus, the normed results used for comparison purposes were the TUCE "unmatched" posttest data. Overall, the TUCE results indicate that the quality of student learning, and therefore quality of instruction, is of a very high order at Edison State College when compared to the sampled institutions.
01/17/2012	On 21 questions (70% of the TUCE exam) Edison State students scored at or above the TUCE posttest norm. Also, on twelve questions Edison State students scored either above or below the
	norm by ten percent or more; nine questions (30% of the TUCE exam) above the norm by ten percent or more, three questions below (items 3, 24, 25 or 10% of the TUCE exam).

Use of Results

Date	Use of Results
01/17/2012	As planned, the Social Sciences Department plans to use the results of the TUCE to: (1) establish baseline data for the exam; and, (2) assess the following course learning outcome: "assess the purpose, tools and limitations of fiscal policy". Students will be asked to respond to the thirty exam questions to establish a baseline score. Then the results from question numbers 8,17,20,24 and 27 will be specifically analyzed to determine if students achieved the learning outcome.
01/17/2012	As planned by the Social Sciences department, TUCE exam scores will be compared to the nationally normed statistics listed in the TUCE manual. In addition, the goal is for 80% of the students to have achieved the established learning outcome.
02/20/2012	<ul> <li>The TUCE results will be used as an indirect assessment of content validity for ECO 2013 learning outcomes. Additionally, the exam results afford the department a reserve of baseline data for subsequent cross-sectional analyses of student performance and instructional quality in the course.</li> <li>Subsequently, the economics faculty plans to review instruction on Monetary &amp; Fiscal policies through the following as well as other sound practices:</li> <li>1) Review all assessments for learning outcomes concerning fiscal policies</li> <li>2) Search for best teaching practices on the concepts and share findings with colleagues</li> <li>3) Evaluate the TUCE and similar items for content targets</li> <li>4) Monitor question results on subsequent TUCE administration</li> </ul>

## Gap Analysis

SWOT

Units Impacted No Units Impacted data

**Associated Standards** 

Associated Outcomes

Documents

File Name	File Size	Date Modified
AMH 2010 Handout Page.docx	12.133 KB	1/6/2012
AMH 2020 DE Common Assessment.docx	21.334 KB	1/6/2012
DEP 2004 Course Assessment Measure (rationale) (2).docx	31.983 KB	1/4/2012
DEP COURSE ASSESSMENT MEASURE KEY.docx	23.358 KB	1/4/2012
DEP COURSE ASSESSMENT MEASURE.rtf	71.236 KB	1/4/2012
Hello Everyone.docx	10.805 KB	1/4/2012
Implementation of TUCE exam.htm	39.045 KB	1/4/2012
Instructions for TUCE exam administration (2).docx	15.92 KB	1/4/2012
POS 2041 American Government Common Assessment.docx	22.605 KB	1/4/2012
PSY 2012 Course Assessment Measure (rationale).docx	39.542 KB	1/4/2012
PSY COURSE ASSESSMENT MEASURE KEY.docx	27.478 KB	1/4/2012
PSY COURSE ASSESSMENT MEASURE.rtf	182.882 KB	1/4/2012
TUCE REPORT of FINDINGS FALL 2011.doc	77.312 KB	1/17/2012

### EDISON STATE COLLEGE

### ECON 2013 TUCE / FALL 2011

### Harold Van Boven

### Professor of Economics

January 14, 2012

During the 2011 Fall semester the Test of Understanding College Economics (TUCE) was administered by the Social Science Department during the week of December 2<sup>nd</sup> through 8<sup>th</sup>. The TUCE exam was part of each instructor's macroeconomics final exam.

Total enrollment in the Eco.2013 (Eco.I, Macroeconomics) ground or classroom sections was 636 students. This includes classes held at the Lee, Charlotte, and Collier County campuses and the Hendry/Glades center. Of the 636 enrolled 339 students participated in the TUCE macro exam (see Table 1). Due to technical reasons, online Eco.2013 classes did not participate in the project.

### Table 1

### Summary of participation in Econ 2013 TUCE / Fall 2011

	Enrolled (E) $^1$	Participated (P)	<u>P-to-E ratio</u> <sup>2</sup>
Lee campus	395	174	44%
Charlotte campus	56	47	84%
Collier campus	145	118	81%
Hendry/Glades center	40	0	0%
Total	636	339	

<sup>1</sup> The enrollment number includes students who stopped attending class and did not withdraw as well as students who officially withdrew. These individuals did not participate in the project because it was administered as a posttest or part of the final exam.

<sup>2</sup> Participation-to-Enrollment ratio. On the Lee campus four instructors taught Eco.2013 during the 2011 Fall semester. Two instructors participated in the TUCE project (total enrollment 225), two did not (enrollment 170). The one instructor at the Hendry/Glades center did not administer the TUCE exam. All five instructors on the Charlotte (two) and Collier (three) campuses who taught Eco.2013 gave the TUCE exam.

The TUCE-4 exam has two objectives:

- (1) to offer a reliable and valid assessment instrument for students in principles of economics courses; and
- (2) to provide norming data for a large, national sample of students in principles classes, allowing instructors to compare performance in their classes on both pretests and posttests to the performance of the national sample of students and instructors (p. 1, Walstad, Watts, Rebeck, *TUCE Manual*).

The TUCE exam uses multiple choice questions based on three cognitive levels (CL): (1) recognition and understanding (RU), (2) explicit application (EA), and (3) implicit application (IA). Twenty four of the thirty questions, or 80% of the test, involve either EA or IA items. As stated in the *TUCE Manual*: "The test will emphasize the ability to apply economic principles to real problems, including issues of public policy" (p.7, Walstad, Watts, Rebeck).

Using a norm-referenced measure of economic knowledge like TUCE defines achievement relative to an external standard, not relative to other students in the classroom or at Edison State College. Thus, fair comparisons of achievement across colleges and across students at different colleges are possible. In determining the optimal setting of standards some economists conclude that a more centralized setting of standards, e.g., state or national achievement exams, results in higher standards, achievement, and social welfare than decentralized setting of standards, e.g., teacher grading or colleges' graduation requirements (Costrell, 1994). Thus the results from a secure TUCE exam can be used as one of many factors to certify the quality of instruction and economics competence of students. This should attract additional students to the subject, upgrade the quality of economics instruction, and improve student study incentives.

Overall, the TUCE results indicate that the quality of student learning, and therefore quality of instruction, is of a very high order at Edison State College when compared to institutions included in the norming sample. Using Carnegie-style classifications, 57 percent of the students came from master's colleges and universities, 25 percent from doctoral-granting institutions, 11 percent from baccalaureate colleges, and 7 percent from associate's colleges (Walstad and Rebeck, 2008). The TUCE exam may be given as a pretest and posttest. A pretest – posttest sequence allows students to familiarize themselves with the questions. At Edison State it was administered as a posttest or part of the final exam. Thus, the normed results used for comparison purposes were the TUCE "umatched" posttest data.

On 21 questions (70% of the TUCE exam) Edison State students scored at or above the TUCE posttest norm. Also, on twelve questions Edison State students scored either above or below the norm by ten percent or more; nine questions (30% of the TUCE exam) above the norm by ten percent or more, three questions below (items 3, 24, 25 or 10% of the TUCE exam).

The TUCE exam contains six items that involve the cognitive category Recognition & Understanding. Edison State students scored below the norm on one of them, question 4. For the cognitive category Explicit Application the test contains sixteen items. Edison State students scored below the norm on four EA items (25% of EA), questions 3, 13, 16, and 18. There are eight questions on the TUCE exam which involve the cognitive category Implicit Application. Edison State students scored below the norm on four IA items (50% of IA), questions 15, 24, 25, and 28. See Table 2 for the summary of results for Econ 2013 TUCE / Fall 2011.

# Table 2

# Summary of results for Econ 2013 TUCE / Fall 2011

Question	<u>CL</u>	Correct Answer (%) <sup>3</sup>	Norming posttest (%) <sup>4</sup>	Difference f	rom norm <sup>5</sup>
1	RU	62.8%	53%	+ 9.8	[18%]
2	EA	69.0	61	+ 8.0	[13]
3	EA	59.0	68	- 9.0	[13]
4	RU	45.1	47	- 1.9	[4]
5	RU	63.4	59	+ 4.4	[7]
6	EA	48.4	45	+ 3.4	[8]
7	EA	69.9	60	+ 9.9	[17]
8	RU	53.7	49	+ 4.7	[10]
9	RU	37.5	34	+ 3.5	[10]
10	EA	41.6	40	+ 1.6	[4]
11	EA	58.1	59	- 0.9	[same]
12	EA	59.6	55	+ 4.6	[8]
13	EA	57.2	63	- 5.8	[9]
14	EA	47.2	47	- 0.2	[same]
15	IA	57.5	60	- 2.5	[4]
16	EA	33.9	36	- 2.1	[6]
17	RU	41.6	37	+ 4.6	[12]
18	EA	41.3	45	- 3.7	[8]
19	EA	44.8	40	+ 4.8	[12]
20	IA	59.9	60	- 0.1	[same]

Question	<u>CL</u>	Correct Answer (%) <sup>3</sup>	Norming posttest (%) <sup>4</sup>	Difference f	rom norm <sup>5</sup>
21	EA	42.2%	42%	+ 0.2	[same]
22	EA	35.4	33	+ 2.4	[7]
23	EA	35.1	36	- 0.9	[same]
24	IA	26.8	32	- 5.2	[16]
25	IA	53.1	59	- 5.9	[10]
26	IA	30.1	31	- 0.9	[same]
27	IA	37.8	32	+ 5.8	[18]
28	IA	46.6	50	- 3.4	[7]
29	IA	36.3	34	+ 2.3	[7]
30	EA	49.0	43	+ 6.0	[14]

<sup>3</sup> Data compiled by the Department of Institutional Research, Planning and Effectiveness, Edison State College, from scantron sheets provided by the instructors.

<sup>4</sup> Norming posttest data is from the *TUCE Manual, Fourth Edition*, Table A6 (Unmatched), p.33.

<sup>5</sup> Difference from norm. The first number is the number of percentage points above or below the norm; the number in brackets is the percent (rounded) above or below the norm. Bold faced indicates ten percent or more above or below the norm.

Possible explanations why the scores for questions 3, 24, and 25 fell below the normed data by ten percent or more.

Question	Content Category	Cognitive Category
3	Aggregate Supply & Demand	Explicit Application
24	Monetary & Fiscal Policies	Implicit Application
25	Monetary & Fiscal Policies	Implicit Application

Question 3:

In the short run, how will an increase in aggregate demand most likely affect the overall price level and real GDP?

	Price level	Real GDP	
A. B. C.* D.	Decrease Decrease Increase Increase	Decrease Increase Increase Decrease	
<u>Choice</u>	<u>Brea</u>	akdown <sup>6</sup>	Norming posttest <sup>7</sup>
A. B. C.*	20 59	1.5% 0.4 9.0	2% 13 68
D.		8.6	17
Other		0.6 [E, no answer	] 0.4

<sup>6</sup> Data compiled by the Department of Institutional Research, Planning and Effectiveness, Edison State College, from scantron sheets provided by the instructors.

<sup>7</sup> Norming posttest data is from the *TUCE Manual, Fourth Edition*, Table A6 (Unmatched), p.33.

Fifty-nine percent of students chose the correct answer, which is very good but for some reason thirteen percent below the posttest norm. This item involves the cognitive category EA which means the question involves no unstated assumptions or concepts. Therefore, one possible explanation for the "low" Edison score may be that this question is best answered when thinking in terms of an aggregate supply – aggregate demand graph. Graphs give students difficulty, especially if their math abilities are low. Also, having the answers arranged such that students had to answer the effect on the price level first and GDP second may have caused some confusion. Some instructors, after drawing a graph, may explain the effect of a change in economic circumstance on GDP first and then the price level.

Question 24:

See page 12 below.

Question 25:

Actual GDP in a country is estimated to be 10 percent below potential GDP. Prices are virtually unchanged from one year ago. Unemployment is 12 percent of the civilian work force, much higher than it has been in many years. Which of the following policies would be the most appropriate for improving these economic conditions?

- A. reductions in the federal debt
- B.\* decreases in interest rates by the central bank
- C. increases in corporate and personal income taxes
- D. increases in reserve requirements on deposits at commercial banks to protect depositors

<u>Choice</u>	Breakdown	Norming posttest
А.	14.5%	12%
B.*	53.1	59
C.	15.3	15
D.	16.5	13
Other	0.6 [No answer]	1.3

Fifty-three percent of students chose the correct answer which is good, but this is 10% below the TUCE posttest norm. This item involves the cognitive category IA. Thus students must deal with unstated assumptions or concepts that are not explicitly given. In question 25, many students recognized from the stem that the economy was suffering from deficient aggregate demand and thus in a recession. Detractor A might have been chosen because, given our current large federal debt, a reduction in the federal debt may be seen by some as a "good" policy. Debt reduction might be seen as having a positive effect on household and business confidence and expectations.

Detractor D may have been chosen because they liked the phrase "protect depositors" not understanding that an increase in the reserve ratio is part of a tight money policy. Those who chose detractor C could not distinguish between probable and improbable outcomes of an increase in taxes.

The *TUCE Manual* states that instruction should be focused more on teaching students to use and apply economic concepts, thus the emphasis on EA and IA test items. But according to some economists, "The emphasis on realistic application questions, most of which have a fairly lengthy quotation in the stem, has caused some instructors . . . to question the extent to which we might be testing reading, intelligence, or sorting skill, and not economics" (p.191, Saunders, Fels, Welsh). This could be another reason why Edison students scored below the norm on this complex item.

From the Academic Discipline / Program Assessment Plan Template / Edison State College, Student Learning Outcomes, Target Outcome(s) with the Course, Program, or Student Activity:

The assessment will serve as a measurement for a discipline specific learning outcome. The TUCE exam will serve a dual purpose: (1) establish baseline data for the exam; and (2) assess the following course outcome: "assess the purpose, tools and limitations of fiscal policy." Students will be asked to respond to the thirty exam questions to establish a baseline score. Then the results from question numbers 8, 17, 20, 24 and 27 will be specifically analyzed to determine if students achieved the course learning outcome.

The analysis of the five questions listed above indicates that Edison State students scored at or above the norm on four questions, below the norm on one item, question 24.

### Table 3

### Summary of results

Question	Correct Answer (%) <sup>8</sup>	Norming posttest (%) 9	Difference	from norm
8	53.7%	49%	+ 4.7	[10%]
17	41.6	37	+ 4.6	[12]
20	59.9	60	- 0.1	same
24	26.8	32	- 5.2	[16]
27	37.8	32	+ 5.8	[18]

<sup>8</sup> Data compiled by the Department of Institutional Research, Planning and Effectiveness, Edison State College, from scantron sheets provided by the instructors.

<sup>9</sup> Norming posttest data is from the *TUCE Manual, Fourth Edition*, Table A6 (Unmatched), p.33.

Question	Content Category <sup>10</sup>	Cognitive Category <sup>11</sup>
8	Monetary & Fiscal Policy	Recognition & Understanding
17	Aggregate Supply & Aggregate Demand, Monetary & Fiscal Policy	Recognition & Understanding
20	Aggregate Supply & Aggregate Demand, Monetary & Fiscal Policy	Implicit Application
24	Monetary & Fiscal Policy	Implicit Application
27	Monetary & Fiscal Policy	Implicit Application

# <sup>10</sup> Content Category (p.5, *TUCE Manual*)

Aggregate Supply & Demand

Description: Potential GDP, economic growth and productivity, determinants and components of AS and AD, income and expenditure approaches to GDP, the multiplier effect

Monetary & Fiscal Policy

Description: Tools of monetary policy, automatic and discretionary fiscal policies

<sup>11</sup> Cognitive Category (pp.6 and 7, TUCE Manual)

Recognition & Understanding

Description: (1) Selects the best definition of a given economic term, concept, or principle.

- (2) Selects the economic term, concept, or principle that best fits a given definition
- (3) Identifies or associates terms that have closely related meanings.
- (4) Recalls or recognizes specific economic rules.

## **Implicit Application**

Description: (1) Applies economic concepts needed to define or solve a particular problem when the concepts are not explicitly mentioned.

- (2) Distinguishes between correct an incorrect application of economic concepts that are not specifically given.
- (3) Distinguishes between probable and improbable outcomes of specific economic actions or proposals involving unstated assumptions.
- (4) Judges the adequacy with which the conclusions are supported by data or analysis involving unstated assumptions.

### Question #8:

Which of the following best explains the statement "every government has a fiscal policy, whether it realizes it or not?"

- A. Every government is forced to do something about recessions and inflation, whether it wants to or not.
- B. In many cases, decisions to spend money must be made even though the expenditure runs contrary to the policy indicated.
- C.\* Every government sets tax and expenditure programs, which influence economic activity and components of GDP.
- D. Every government makes decisions about the quantity of money in the economy, which influences credit conditions and the rate of interest.

Choice	Breakd	lown <sup>12</sup>	Norming posttest <sup>13</sup>
A.	20.4%		22%
B.	7.7		9
C.*	53.7		49
D.	16.8		19
Other	1.5	[No answer]	0.6

<sup>12</sup> Data compiled by the Department of Institutional Research, Planning and Effectiveness, Edison State College, from scantron sheets provided by the instructors.

<sup>13</sup> Norming posttest data is from the *TUCE Manual, Fourth Edition*, Table A6 (Unmatched), p.33.

The content category is Aggregate Supply & Aggregate Demand and the cognitive category is Recognition and Understanding. Edison State students scored 4.7 percentage points **above** the TUCE posttest norm. The fact that more students did not choose the correct answer may be due to the additional complexity imposed by the length of the potential answers.

The 20.4% of students (69) who picked A may have been thinking about the automatic stabilizers and confused the word "forced" with built-in or automatic. Since the stem included the term "fiscal policy," those students who picked D (16.8%, 57) do not recognize the difference between fiscal and monetary policy. The 7.7% of respondents (26 students) who chose B were probably guessing.

### Question #17:

Which of the following would most likely result if the federal government increased spending without increasing tax revenues during a period of full employment?

- A. a recession
- B. a decrease in interest rates
- C.\* an increase in the price level
- D. a decrease in the national debt

<u>Choice</u>	<u>Breakdown</u>	Norming posttest
A.	35.7%	35%
В.	15.0	19
C.*	41.6	37
D.	7.1	9
Other	0.6 [No answer]	0.9

The content category is Aggregate Supply & Aggregate Demand and the cognitive category is Recognition and Understanding. Edison State students scored 4.6 percentage points **above** the TUCE posttest norm.

A posttest norm of 37% is somewhat low. One explanation for this may be that "aggregate supply and demand models are used in most principles courses and textbooks, but not always, and some recent textbooks written by prominent economists have made a major point not to use them" (p.548, Walstad and Rebeck). Our textbook uses AS-AD models which may explain the above norm score for Edison State students. But due to the conceptual, analytical nature of the AS-AD model many students may have had difficulty visualizing and understanding a question that is best answered with the aid of a graph.

Only 7.1% (24 students) chose D. Thus, over 90% of students may have recognized that increased government spending with no offset in taxes will increase the national debt.

Noting that 35.7% (121) chose distractor A poses an interesting question, especially since the phrase ceteris paribus was not explicitly attached to the stem. Given the current low approval rating of Congress and high federal debt levels some students may feel that increased government spending is wasteful or harmful to the economy. Thus, they might reason that the uncertainty created by the additional government spending, and deficits, may be more than offset by decreased investment spending, thereby slowing the economy. Or, they might reason that taxes will eventually be increased causing households to save more today, again, causing the economy to slow down.

### Question #20:

Which of the following best explains why a \$7 billion tax cut can lead to a \$9 billion increase in consumer spending in the short run?

- A. Tax cuts reduce government spending, which encourages consumer spending.
- B. Tax cuts reduce interest rates, which stimulates consumer spending and borrowing.
- C.\* Tax cuts increase disposable income, which leads to higher national income and additional consumer spending.
- D. Tax cuts increase government transfer payments, which leads to higher national income and additional consumer spending.

<u>Choice</u>	Breakdown	Norming posttest
А.	11.5%	12%
B.	20.6	21
C.*	59.9	60
D.	7.4	6
Other	0.6 [No answer]	1.2

The content category is both Aggregate Supply & Demand and Monetary & Fiscal Policy making it a complex item. The cognitive category is Implicit Application meaning that students must deal with unstated assumptions or concepts that are not explicitly given. Edison State students scored **at** the posttest norm, which was relatively high.

The high score for this specific item indicates that the cognitive skills developed during the semester does not heavily depend on student characteristics, e.g., age, gender, work experience, etc. Most students realize that lower taxes leads to more after-tax income.

Question #24:

Assume that the economy is at full employment and is experiencing rapid inflation. Which of the following combinations of monetary and fiscal policies would reduce inflation most, assuming the dollar values for both policy changes are the same amount?

	Monetary Poli	<u>cy</u>	Fiscal Policy
A. B. C. D.*	Buy governme Buy governme Sell governme Sell governme	ent securities ent securities	Increase the federal budget deficit Decrease the federal budget deficit Increase the federal budget deficit Decrease the federal budget deficit
Choice	<u>Breakc</u>	lown	Norming posttest
A. B. C. D.* Other	15.3% 29.5 26.8 26.8 1.5	[E: 0.3%, No answer: 1	15% 28 24 32 1.7

The content category is Monetary & Fiscal Policy and the cognitive category is Implicit Application. Edison State students scored 5.2 percentage points **below** the posttest norm of 32%. For the TUCE exam, this item had the worst results in terms of percent below the norm, 16% below the posttest norm.

An IA item requires the student to answer a question when an economic concept is not specifically given. From the stem most students realize that if we "assume that the economy is at full employment and is experiencing rapid inflation" then the economy is in a boom or experiencing demand-pull inflation. Thus, only 15.3% of Edison students (posttest norm 15%) chose the distractor A which indicates expansionary policies. Since B, C, and D were chosen about equally may indicate that the portion of the stem that says "assuming the dollar value for both policy changes are the same amount" makes the question somewhat complex and probably confuses students.

Also, confusion may arise because the textbook, and maybe some instructors, talk in terms of a "deficit" or "surplus" affecting the economy and not enough in terms of an "increase or decrease in the federal budget deficit." According to our textbook "to eliminate the inflationary gap . . . [government] can (1) decrease government spending, (2) raise taxes, or (3) use some combination of the two policies . . . fiscal policy should move toward a government budget surplus (p.616, McConnell, Brue, Flynn). When explaining built-in stability the authors state "increase [government's] budget surplus (or reduce its budget deficit) during an expansion without requiring explicit action by policymakers" (p.618, McConnell). In other words, the phrase "decrease (or increase) in the federal budget deficit" appears only once in Chapter 30: Fiscal Policy, Deficits, and Debt, and not in terms of discretionary fiscal policy.

The results of question 20 should be used to improve classroom instruction.

### Question #27:

"For the past fifteen months, unemployment has been under 5 percent. Consumer prices increased by 2 percent over the level a year ago. Total production of goods and services is projected to be 5 percent higher this year than it was last year."

Which of the following policies would be most appropriate for short-run stabilization objectives?

- A.\* relying on the automatic stabilizers
- B. increasing both personal and corporate income taxes
- C. passing new corporate tax incentives to encourage investment
- D. increasing the minimum wage and expanding the number of jobs covered by minimum wage laws

Choice	Breakdown	Norming posttest
A.*	37.8%	32%
B.	21.8	23
C.	17.7	25
D.	22.7	20
Other	0	1.7

The content category is Monetary & Fiscal Policy and the cognitive category is Implicit Application. IA taps the student's ability to apply basic concepts in more sophisticated ways and to judge the adequacy with which conclusions are supported by data or analysis involving unstated assumptions. Even though only 37.8% of Edison students chose the correct answer, this is 5.8 percentage points **above** the posttest norm of 32%. Both numbers are low. Also, it is interesting that the distractors were chosen with about equal probability. A characteristic of a good question used for norming purposes is that all three distractors should be considered plausible by students who do not know the answer. Was the stem too vague?

The stem states "short-run stabilization **objectives**" when "short-run stabilization **policy**" may have been a better choice of words. Also, "For the past fifteen months, unemployment has been under 5 percent" is somewhat vague. Is the official unemployment rate 3% or 4.5% or some other number under 5%? A very low unemployment rate may not be consistent with relying on the automatic stabilizers. Is the natural rate of unemployment 4%, 5%, 5.5%? Also, low inflation of 2% could be the result of an increase in productivity. Thus, some students may have chosen distractor B reasoning that the federal government may be trying to nip inflation in the bud before it gets out of hand, especially since the economy is projected to grow at 5% or above its long-run growth trend. This may achieve "stabilization objectives."

Even though minimum wage policy is not considered part of "short-run stabilization fiscal policy," increases in the minimum wage may promote "short-run stabilization objectives." Knowing that the minimum wage is not indexed to inflation, some students (low income?) exhibiting solidarity with struggling, low-income workers may have chosen distractor D, reasoning that the additional income to minimum wage workers might somewhat offset the cost-of-living increase. The "objective" being to "stabilize" potential social unrest.

In conclusion, the primary purpose of the TUCE exam in general, and the responses to questions 8, 17, 20, 24, and 27, in particular, is to determine if students taking principles of macroeconomics are meeting course learning outcomes and how they compare to nationally normed data. The Common Course Syllabus states one Learning Outcome as "assess the purpose, tools, and limitations of fiscal policy." Based on items 8, 17, 20, and 27, even though Edison students meet or exceed the normed data, the reference norms for questions 17 and 27 are somewhat low. Only on question 24 did students score below the norm (also a low norm). This indicates that there may be room for instructional improvement. When looking at the big picture, the entire TUCE posttest, comparison of student responses to normed data suggests that, on average, the macroeconomic competence of Edison State College students is of a high order.

### References

Costrell, Robert M., A Simple Model of Educational Standards, *American Economic Review*, 1994, 84:4, pp.956-971

McConnell, Campbell R., Stanley L. Brue, and Sean M. Flynn, *Economics: Principles, Problems, and Policies, 19<sup>th</sup> edition, 2012, McGraw-Hill Irwin* 

Saunders, Phillip, Rendigs Fels, and Arthur L. Welsh, The Revised Test of Understanding College Economics, *American Economic Review: Papers and Proceedings*, 1981, 71(2), pp.190-194

Walstad, William B. and Ken Rebeck, The Test of Understanding College Economics, *American Economic Review: Papers and Proceedings*, 2008, 98:2, pp.547-551

Walstad, William B., Michael Watts and Ken Rebeck, *Test of Understanding College Economics: Examiner's Manual*, 4<sup>th</sup> edition, 2007, National Council on Economic Education