



SLO Assessment Cycle for BUS 54

Business Mathematics SLO Modified: [05/14/2010]

Sandra Spencer's Team Members:

1. [David Stringer](#) (x8539) BUS
2. [Dan Salah](#) (x5563) BUS
3. [Michele Fritz](#) (x8615) BUS

Additional Team members not on list/notes about team:

Additional Notes:

Outcomes:

Outcome 1: Statement Modified: [10/22/2010]

Demonstrate an understanding of the "Time Value of Money" concept in business.

Assessment Cycle Records:

Outcome 1: Assessment Planning Modified: [05/14/2010]

Assessment Strategy Used:

Quarter: Winter 2010

Assessors: Sandra Spencer

Assessment Tools: Exams

Sections being assessed: 63Z

Outcome 1: Reflect & Enhance Modified: [05/14/2010]

Number of people involved in Phase III: 1

Changes:

Methods:

A total of nine questions were selected to assess the attainment of this learning objective. Five multiple-choice and four detailed response questions were chosen for analysis from both the midterm and final exams. These questions were further classified based on Bloom's taxonomy. Four questions addressed the lower levels of learning, namely, knowledge and comprehension. The remaining five questions addressed a middle learning level -- application.

The questions were directly related to the "time value of money" concept and covered basic concepts such as compounding, the costs of borrowing, and trade discount basics, as well as more challenging application questions that involved calculating the value of an annuity, amortizing a loan, and discounting a note.

Twenty-three students completed the midterm exam and twenty-two completed the final exam.

Summary:

Overall, the students performed very well in this area and attained an overall average score of 92.72% on these questions. Of the "knowledge" questions covering the more basic concepts outlined above, the average score was 97.46% with the scores ranging from 95.6% to 100%. The average score on the application questions was 88.97% with the scores ranging from 84.1% to 95.45%.

Enhancement (Part I):

The students performed very well and seem to have almost mastered this concept. As expected, the average score on the lower level questions is higher than the average of the higher level application questions. However, both scores are quite high.

In terms of improvement, a few students had particular difficulty with the application questions dealing with loan amortization and discounting. Both of these types of problems involve multiple steps, rules and formulas. Perhaps even more emphasis should be made on the intricacies of these calculations in the future with the hope of further increasing student success in these areas.

Enhancement (Part II):

I believe this course could be improved by adding a video component that specifically "walks" the student through complex calculations like these by incorporating both a visual step-by-step outline along with instructor commentary.

Outcome 2: Statement Modified: [10/22/2010]

Demonstrate a basic knowledge of the mathematics of pricing.

Outcome 2: Assessment Planning Modified: [05/14/2010]**Assessment Strategy Used:**

Quarter: Winter 2010

Assessors: Sandra Spencer

Assessment Tools: Exams

Sections being assessed: 63Z

Outcome 2: Reflect & Enhance Modified: [05/14/2010]**Number of people involved in Phase III: 1****Changes:****Methods:**

A total of six questions were selected to assess the attainment of this learning objective. Each required a detailed response and were chosen for analysis from both the midterm and final exams. These questions were further classified based on Bloom's taxonomy. One question addressed the lower levels of learning, namely, "knowledge and comprehension. The remaining five questions addressed a middle learning level -- "application".

The questions were directly related to demonstrating a basic knowledge of the mathematics of pricing. They covered comprehending the basic components of pricing perishable items as well as more challenging application questions that involved calculating the required selling price for perishables to attain the desired return, calculating markups and markdowns and using the conversion formula to express the markup based on cost or selling price.

Twenty-three students completed the midterm exam and twenty-two completed the final exam.

Summary:

Overall, the students performed very well in this area and attained an overall average score of 85.15% on these questions. Of the "knowledge" questions covering the more basic concepts outlined above, the average score was 81.3%. The average score on the application questions was 88.3% with the scores ranging from 72.7% to 94.5%.

The students performed well in this area also. I did not expect that the average score on the lower level questions would be lower than the average of the higher level application questions. However, on examining the questions more closely, I believe I understand why this occurred.

Only one lower level question was asked for this objective and it dealt with a somewhat complex topic -- the terminology and components of pricing perishable items. I believe that the students may have been confused by the terminology which suggests that more time should be spent explaining and distinguishing between the terms and how they are used (for example: margin, target revenue, markup amount, expected spoilage, etc.)

In contrast, several higher level questions were asked that addressed perishables as well as other types of calculations. With these questions, I noticed two problems. On one, 36.4% of the students misread (didn't read, or in their haste overlooked) the instructions and performed the wrong calculation. They computed a markdown instead of a markup.

In addition, an appreciable number of students (27%) did not even attempt to answer one question dealing with converting a markup on selling price to a markup based on cost. This is a relatively easy calculation particularly when using the conversion formula provided in the text, and considering this is an open-book online exam. Though students were advised that they needed to know this formula, perhaps

assigning additional problems requiring its use will further emphasize its importance.

In spite of these issues, the scores for both types of questions are still somewhat high which suggests the students are pretty comfortable with these concepts.

Enhancement (Part I):

In terms of improvement, in addition to the suggestions referenced above, future assessments should perhaps use more than one tool to assess a given learning level. This would help offset any anomalies and perhaps more clearly reflect the student's level of accomplishment.

Enhancement (Part II):

This course could be improved by adding a video component that specifically "walks the student through" complex calculations like these by incorporating both a visual step-by-step outline along with instructor commentary.

Outcome 3: Statement Modified: [10/22/2010]

Calculate performance measures for investments such as stocks, bonds or mutual funds.

Outcome 3: Assessment Planning Modified: [05/14/2010]

Assessment Strategy Used:

Quarter: Winter 2010

Assessors: Sandra Spencer

Assessment Tools: Exams

Sections being assessed: 63Z

Outcome 3: Reflect & Enhance Modified: [05/14/2010]

Number of people involved in Phase III: 1

Changes:

Methods:

A total of two questions were selected to assess the attainment of this learning objective. Each required a detailed response and were chosen for analysis from the final exam. Both questions addressed one of Bloom's middle learning levels -- "application".

The questions were directly related to calculating various performance levels for investment instruments. The calculations involved understanding and using inputs such as earnings per share, yield, rate of return, and price-earnings ratios.

Twenty-two completed the final exam.

Summary:

Overall, the students performed very well in this area and attained an overall average score of 89.55% on these questions with the scores ranging from 85.% to 94.1%.

The students performed very well and seem to have almost mastered this concept. Since many of the calculations here involve identifying the proper formula to use and then simply completing the calculations, I expected the scores to be even higher. They may not be as high as I expected because the data was presented in a format similar to what one would see in the financial section of the newspaper. Though students are encouraged to read this section of the paper and to subscribe to the Wall Street Journal, perhaps the presentation confused them.

Enhancement (Part I):

In terms of improvement, perhaps more emphasis should be made regarding the importance of being able to read the financial section of the newspaper and appropriately evaluate the basic materials contained therein.

Enhancement (Part II):

Perhaps reconsider packaging the textbook materials with the on-line version of the Wall Street Journal.

[Number of Outcomes for BUS 54: 3]

