



College of Business & Economics

Assurance of Learning

Program Learning Objective (PLO): Quantitative Analysis
Spring 2014

BSBA
PLO 2; LO2A

BSBA Learning Goal 2: Students who graduate will be effective data driven decision makers.

Learning Objective:

LO2A: Students who graduate will understand and apply quantitative methods and tools in evaluating business problems.

Assessed Term: Spring 2014

Mapped Course:

MGMT 3100

**Following re-mapping efforts in Spring and Summer 2013, two courses were identified as exhibiting mastery in data-driven decision making: (1) ITM 3060 and (2) ECON 3551. ITM 3060 was identified as the course for assessing Learning Objective 2B. Econ courses were experiencing major curriculum changes and could not be used to assess objectives. As a result, MGMT 3100 was selected for assessment based on previous mappings. Participating faculty in this assessment quarter were asked to analyze and review the mapping as it was revised at the end of 2013 academic year for accuracy or inaccuracies.*

Curriculum Alignment:

MGMT 3100: Decision Science (4 units) is a required course for all students enrolled in the BSBA program. The course is a survey of statistical data analysis and management science models as they are applied for decision-making in organizations. Topics include: regression, correlation, forecasting models, linear programming applications, project management, and simulation and decision analysis. Emphasis on usage of appropriate technology and applications of quantitative models. Prerequisites include MATH 1810; STAT 2010 or 1000; PC Software Proficiency satisfied.

Participating Faculty:

- Faculty member #1
- Faculty member #2
- Faculty member #3
- Faculty member #4

Methods and Procedures:

Quantitative methods and tools were assessed using an assignment designed around the use of programs Excel and/or Access. All faculty members participating in assessment of learning objective agreed on a similar assignment from which to assess a sample.

The individual artifacts selected and used in the sample were determined through random selection, in order to prevent contaminating data through self-selection. Random selection will allow for a more accurate representation of the average student's proficiency levels on particular learning objectives. Random sampling also allows assessment personnel to reinforce the differences between grading an assignment and assessing proficiency levels of a particular skill.

Prior to the assessment program redesign in 2012-2013, faculty and administrators commonly held a misperception that equated grading with assessment. This led to inaccurate assessment data and inaccurate results. Correcting this mentality has taken time and will continue to take

time. The new assessment program allows for opportunities to correct this misperception in meetings and interactions with faculty. Random sampling is one example where the grading versus assessment concept can be reinforced in a meeting. Assessment is not simply data collection and reporting but rather an extremely useful and, when conducted properly, effective tool in measuring program strengths and identifying program weaknesses.

Assessment Measurement Tool Used:

Faculty teaching the course mapped to the learning goal met in groups and were presented with the CBE version of the rubric and given an option to either modify the existing rubric or replace it entirely if the faculty had determined CBE’s internally developed rubric was insufficient and weak.

The BSBA faculty group teaching MGMT 3100, the course mapped to quantitative analysis, unanimously voted to replace the existing rubric entirely with an alternative rubric for the Spring 2014 assessment. The faculty agreed that the externally modified AAC&U Quantitative Literacy rubric best fit the course and existing assignments. The faculty were informed this would be a starting point, with opportunities to come for modify and adjust the rubric to better fit CBE’s program.

Status of Assessment: Completed: data aggregated, results produced.

Performance Targets:

- 80% of students will meet or exceed expectations.
- Less than 10% of students will score “1” (below) on any “trait” in the rubric.

Data Summary & Analysis:

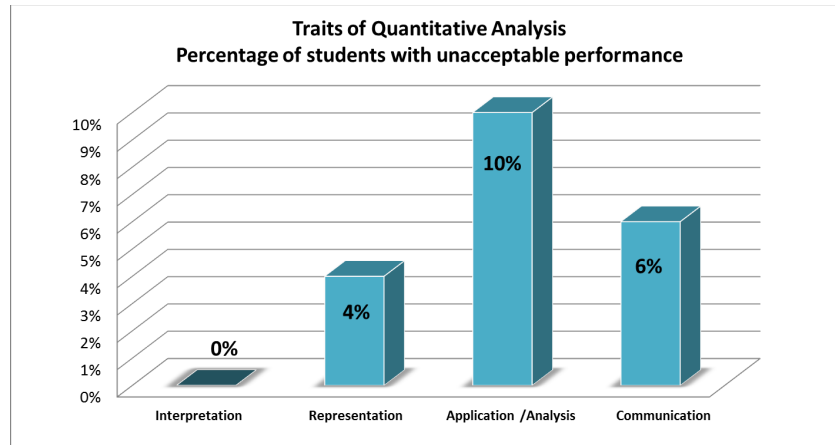
There are two targets set for this skill, (1) 80% of students will meet or exceed expectations; and (2) less than 10% of students will score “1” (below expectations) on any “trait” in the rubric. Overall, 67% of students met expectations on the learning objective.

N = 48	Trait 1	Trait 2	Trait 3	Trait 4
Meets Expectations	79%	69%	66%	69%
Does Not Meet Expectations	21%	31%	33%	31%
Total	100%	100%	99%	100%
Overall Score	67%			

Our second benchmark involves the individual components (aka “traits”) by which quantitative literacy is to be measured. These traits are outlined according to proficiency levels stated on the faculty-selected rubric used in the actual assessment. This second benchmark states that less than 10 percent of our students would score “below expectations” on any given trait.

Overall, students performed fairly well. No student received a “below expectations” score for the Trait #1: Interpretation. This trait assessed the “ability to explain information presented in mathematical forms (e.g. equations, graphs, diagrams, tables, words).” The trait that scored the most in terms of unacceptable proficiency levels and had the most “below expectations” scores was Trait #3: Application and Analysis. This trait measured the “ability to make judgments and

draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of ... analysis.”



Preliminary Closing the Loop Suggestions:

The BSBA program did not meet benchmarks set for the Learning Objective 2A (LO2A) “Students who graduate will understand and apply quantitative methods and tools in evaluating business problems;” suggested plans around this objective include the following:

- Reconvening assessing faculty to discuss increasing benchmarks for next evaluation.
- Other topics up for discussion include how to improve the program even though benchmarks are met.
- Discussions will be focused around brainstorming and ideas for what can be done to improve.

Action Oriented Timeline for LO2A in Spring 2014

Assessment Activity #1 – LO2A in Course MGMT 3100:

- **4/24 Meeting Discussion Points:**
 - Faculty input:
 - Sections have little team work elements such as projects and assignments
 - MGMT 3620 identified as a course for quantitative mastery
 - Emphasis on using excel as a program
 - Faculty discussed Spring/Summer 2014 re-mapping efforts
 - I, R, M coding on mapping reflect opinions of the group
 - Spring 2014 Assignment:
 - Faculty discussed a common assignment to use for assessing Learning Objective 2A: Data Analysis
 - Faculty members #1-3 will use case studies
 - Faculty member #4 will use an excel assignment
 - Spring 2014 Measuring tool:
 - Faculty looked at old CBE rubric and compared it to an existing rubric developed and used by other colleges
 - Sandy Luong presented faculty with option to modify existing rubric or to adopt external rubric as a starting point with the understanding that the rubric can be modified in the future to better suit the program.
 - Faculty adopted the external rubric and will be using the rubric this quarter to assess a sample of their assignments
- **Next Steps:**
 - Faculty will collect a sample of the identified assessment assignment (10-15 student assignments).
 - Sandy will convene Meeting #2 in Week 7 to meet and "norm" the rubric. [Sandy will pick one assignment and make copies for everyone to use in the meeting]
 - After the norming session, faculty will be in charge of assessing their sample of assignments on their own using the assessment form provided by Sandy
 - Faculty will turn-in assessment score sheet and actual assignments to Sandy before end of quarter.
- **Norming Meeting Scheduled for 5/15 @3**
 - Confirmed (with assignments in by meeting):
 - Faculty member #1 – open
 - Faculty member #2 – open 3-4 only
 - Asked for assignment to use to norm in norming meeting
 - Faculty member #3 – open
 - Faculty member #1 – phone conference
- **Norming meeting was held and conducted on 5/15 @3pm**
 - **Attending faculty: Faculty members #1-4**
 - Sandy discussed purpose behind a norming process
 - Discussed past flaws that were experienced in the previous assessment program when no norming process was implemented

- Discussed how a missing norming process has led to differences in interpretations of rubric traits and scoring.
 - Discussed how this led to discrepancies in data validity and various inconsistencies in terms of data results.
 - Emphasized purpose of norming is to establish a commonality in terms of how faculty are interpreting the dimensions and the scoring levels.
 - This would produce more accurate data, since the data will have come from one common interpretation of the rubric.
 - Sandy began the meeting by asking if faculty had suggestions for modifying the rubric, given it was the first academic quarter implementing the newly adopted rubric.
 - Faculty discussed modifications to rubric
 - Faculty did not want to change the rubric in any way and found the rubric a better measurement than the old rubric in terms of clarity.
 - Sandy proceeded with norming procedures.
 - Faculty examined two sample student artifacts using the projector and case studies involving excel formulations.
 - Faculty assessed the assignment using the rubric discussed reasoning for each score
 - Faculty were found to have a similar interpretation of the rubric, which was supported by the same and/or very similar scoring across all participating faculty
 - Faculty proceeded previous steps for student artifact #2
 - Sandy concluded with next steps for assessment
 - Sandy discussed the scoring template, created to simplify rubric scores of student artifacts
 - Faculty are to assess sample of assignment in class and complete the rubric score sheet
 - Faculty are to provide Sandy with the actual student artifacts for record keeping and the rubric score sheet for data aggregation, analysis and reporting
 - Faculty were briefed on the next phase in assessment, which would consist of data aggregation, analysis, reporting, publishing/disseminating to committees, task forces, directors and chairs throughout the college.
 - Faculty were briefed that following publications of the data, the data is to be reviewed by the next group of faculty teaching the identified course in Fall 2014 that may or may not include existing members of the current group.
 - The second group will review the data, discuss the results, and begin the conversations around closing the loop if students did not meet specific proficiency levels.
- Following norming meeting, Sandy emailed reminder emails to all faculty stating following:
 - *Hi Everyone,
Thanks again for coming to the norming meeting. I appreciate the time you guys took to sit down and make sure we are all on the same page in terms of assessing using the rubric.*

I've attached a soft copy of the score sheet for you all here. If everyone can have their sample assessed, the score sheet completed, and everything emailed back to me, including the actual student assignments, before the end of the quarter it would be greatly appreciated.

Any questions or issues you have along the way, please let me know and I will be happy to help in any way I can.

- At the end of the quarter Sandy sent a reminder email to all faculty members regarding assessment scores and assignment submissions.
 - *Hi All,*
As we near the end of the quarter, just wanted to send you both a quick reminder to email me your assessment score sheet and the original student work by this Friday, June 13th. I attached the score sheet here in case you need it again.
Let me know if you need anything!
- End of finals week Sandy sent another reminder email to all faculty members regarding assessment scores and assignment submissions – Aware that many of CBE's faculty disappear in the summer and are very difficult to reach.
 - *Hi _____,*
Just sending out another reminder to email me your assessment score sheet and the original student work as soon as you can. I attached the score sheet here in case you need it again.
Let me know if you need anything!

[End of Report]