CBE AOL Closing the Loop Form

Program: MS Business Analytics   Date: 10/15/20

Learning Goal: 2. Students who graduate will be knowledgeable in quantitative methods and tools of business analytics.

Learning Objective: 2A. Students who graduate will build expertise in quantitative methods and tools for business analytics.

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<u>Closing-the-Loop</u>

1. Review Learning Objective (LO) assessment data in the current Assessment Report.

N = 25 (2019)	Identify Key Decisions	Mathematical Models	Spreadsheet Models	Communicate Results
Outstanding (5)	16%	16%	16%	8%
Above (4)	16%	12%	28%	24%
Meets (3)	36%	32%	56%	60%
Need Improvement (2)	8%	16%	0%	8%
Below (1)	24%	24%	0%	0%

This Rubric was modified after 2016 assessment. In 2019, the assessment results are on a scale of 1-5 and in 2016 it is on a scale of 1-4.

In trait 4, we emphasize the communication of the results in the rubric modification rather than just analyzing the results. Therefore, the labeling is changed from "Result Analysis" to "Communicate results"

2. Review previous LO assessment data and improvement actions taken since then in the AOL Summary Report.

n = 30 (2016)	Trait 1: Identify Decisions	Trait 2: Build Models	Trait 3: Spreadsheet Modeling	Trait 4: Result Analysis
Exceeds Expectation (4)	23%	7%	50%	27%
Meets Expectation (3)	27%	37%	20%	33%
Needs Improvement (2)	27%	20%	30%	30%
Below Expectation (1)	23%	37%	0%	10%

3. Document below the effectiveness of past improvement actions in improving student learning or the AOL process (this is what is known as "closing-the-loop").

Starting Fall 2018, MSBA students are required to take an additional prerequisite class (BAN602-Quantitative Fundamentals for Analytics) that applies statistical and mathematical tools and technologies (R) to analyze quantitative business problems. The class builds upon college-level algebra and statistics and offers the students an opportunity to enhance and strengthen their understanding and grasp of mathematical and statistical knowledge, which is then applied to quantitative business problems implemented through R and RStudio.

The program also started to more strictly enforce GMAT/GRE requirement, particularly the requirement on the quantitative section of the test.

We also introduced various quantitative-oriented electives such as time series analytics. Students who have taken these electives benefit from additional quantitative training.

The past actions have achieved the following improvements. In trait 1, the percentage of students meeting or exceeding the expectation improved from 50% in 2016 to 68% in 2019; in trait 2, the percentage improved from 44% to 60%; in trait 3, it improved from 70% to 100%; and in trait 4, it improved from 60% to 92%.

The assessment is often done differently by different instructors with different assignments, which may cause significant variation in assessment results. We will address the issues of measurability, comparability and consistency in assessment results in Box 5.

4. Document below your evaluation of current LO assessment data compared to the benchmark and the need for new improvement actions. Consider not just the overall average LO score but also score on individual traits shown in the Assessment Report and derived from the LO rubric.

There are two targets set for this learning objective, (1) 70% of students will meet or exceed expectations, and (2) less than 10% of students will score "1" (below expectation) on any "trait" in the rubric.

Although we observed marked improvement from last assessment. There is plenty of room for improvement, particularly in traits 1 (identify key decisions) and 2 (mathematical modeling). In trait 1, 68% met or exceeded expectation, which is slightly below the target of 70%. In trait 2, 60% met or exceeded expectation and 24% below expectation.

One importation factor to consider is that some of the students included in this assessment joined the program prior to Fall 2018, thus did not take the perquisite course in BAN602. Second, the assessment was done in BAN 630 and students can potentially take this course even in their first semester in the program.

The first factor will not matter anymore in the next assessment. The program moves assessment of PLO #2 to BAN 693 Capstone Project to resolve the second issue.

5. Record below a list of recommended course-level or programmatic actions to improve student learning or the AOL process.
    a. Sort the list from most recommended to least.
    b. Given our mature AOL system, ideas should not be limited to just AOL system improvements.
    c. For each improvement action proposal, list the project leader, timeline to completion, required resources, expected ease of implementation (hard, medium, easy), and expected impact on student learning (low, medium, high).
    d. You may use ease of implementation and impact on student learning to rank improvements.
    e. There is no guarantee that improvement ideas will be approved. They need to be reviewed by the program director, curriculum committee and dean.

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1. Have PLO 2 assessed in BAN 693 Capstone instead of BAN 630
    - project leader: Chongqi Wu
    - timeline to completion: Nov 2020 (already completed)
    - required resources: faculty time
    - ease of implementation = easy
    - impact on student learning = medium
2. Revise PLO 2 assessment rubric and method for better measurability, comparability and consistency
    - project leader: Chongqi Wu and Rubric Revision Task Force
    - timeline to completion: by Dec. 2021
    - required resources: faculty time
    - ease of implementation = easy
    - impact on student learning = medium
3. more strictly enforce BAN601 and BAN602 prerequisite
    - project leader: Chongqi Wu with grad office
    - timeline to completion: by Aug. 2021
    - required resources: faculty time
    - ease of implementation = easy
    - impact on student learning = medium
4. Supplemental Instruction Model
    - project leader: Bala Rajan and Surendra Sarnikar
    - timeline to completion: by Dec. 2021
    - required resources: recruit excellent students who are capable of tutoring other students; financial resources; faculty time
    - ease of implementation = hard
    - impact on student learning = medium