

CBE AOL Closing the Loop Form

Program: BS Economics Date: 5/4/20

Learning Goal: 2. Students who graduate will be knowledgeable of modeling techniques to solve macroeconomic problems.

Learning Objective: 2A. Students who graduate will formulate mathematical models to solve macroeconomic problems.

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Closing-the-Loop

1. Review Learning Objective (LO) assessment data in the current Assessment Report.
2. Review previous LO assessment data and improvement actions taken since then in the AOL Summary Report.
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”).

As of Fall 2018, BS Economics students are required to take an additional class in mathematics and statistics taught by the economics faculty: ECON 210: Quantitative Methods for Economists. The class builds upon a required class in calculus (or business calculus) and offers the economics department an opportunity for remediation (if necessary) and the introduction of more advanced skills before, or while, students take upper-division economics classes, in particular ECON 300, 301, and 305. Problem-solving skills relevant to this objective require algebra, basic graphing, and calculus. These skills are emphasized in ECON 210.

A portion of the final exam was used to assess this learning objective. The portion selected for assessment is a cumulative multi-step/multi-questioned problem that measures student proficiency in the knowledge-based learning objective. 89% scored above the benchmark of 70%. An analysis of the scores indicates that, of the 43 students who took the exam, 23 BA Economics students or from another program and 20 were BS Economics students. 83% of BA Economics or other students met the benchmark and 100% of BS Economics students met the benchmark. Since only BS Economics are required to take ECON 210, the results provide evidence that changes to the Economics program to include ECON 210 have been successful in raising the quantitative skills of students.

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.

As noted above, 89% of students met the benchmark of 70% on the final exam question. This exceeds the target of 70% of students meeting the benchmark. Furthermore, since the BA Economics program is no longer offered, there is reason to believe the proportion of students meeting the benchmark will rise in the future. We therefore do not believe there is any need for major improvement actions. However, we list some smaller improvement actions below.

There is a concern that the current assessment artifact does not accurately assess students' skills since it requires students to apply a familiar model in a familiar setting. The Economics Department intends to change the assessment method to mirror the approach currently taken in ECON 301, in which one portion of the final exam will require students to apply the models they learn in class to unfamiliar settings. Specifically, a sample macro problem (mathematical in nature) will be constructed that can be tweaked each year. The question would involve some kind of policy or economic shock (that can be varied each year) and students would be asked to analyze its implications using the quantitative tools that they have learned in macro. Faculty can submit questions for this purpose.

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.

- Construct a sample macro final exam problem (mathematical in nature) that can be tweaked each year. The question would involve some kind of policy or economic shock (that can be varied each year) and students would be asked to analyze its implications using the quantitative tools that they have learned in macro. Faculty can submit questions for this purpose. Program leader is Ryan Lampe. The question will be introduced on the Spring 2021 final exam. No additional resources are required. Use of this exam question will be highly beneficial in allowing us to compare assessment results over time.
- Additional quantitative assignments that match the level of students' quantitative skills. This will have medium impact and will require little resources. Project leader is current ECON 305 instructor.