

Construction Science, BS

BS-COSC

Submit Date: Feb 17, 2020

Last Updated: Jan 15, 2020 at 2:07PM by Elizabeth Piwonka

Assessment Reflections

The purpose of this section is to reflect on the program's assessment activities over the course of the last year. Specifically, please address each of the following:

- 1. The role of faculty and program leadership in the assessment.** That is, provide a brief summary of how faculty were involved in the data sense-making process and decisions regarding continuous improvement efforts.

The 20 undergraduate student learning outcomes (SLOs) were adopted by the Construction Science (COSC) faculty directly from the 20 student learning outcomes of the COSC accreditation agency ACCE. The assessment plan (assessment cycle, assessment matrix, and performance criteria) was developed by the assessment coordinator and approved by faculty vote. In collaboration with the assessment coordinator, faculty identified appropriate courses and direct assessment instruments for each of the COSC SLOs. The direct assessment for each SLO is an authentic assessment consisting of either a course exam or assignment from either a single course or multiple courses. The direct assessment instrument and rubric are developed and administered by the course instructor and results of the assessment(s) from all sections of the course(s) are provided to the assessment coordinator. The assessment coordinator with input from faculty and department administration developed a Senior Exit Survey (SES) to capture indirect assessment data using students' self-reported confidence with each COSC SLO at a stated Bloom's Taxonomy level. The SES is administered to all graduating seniors in their last semester of the program through the Capstone course. The assessment coordinator analyzes SLO direct and indirect assessment data against the performance criteria and reports to departmental administration and the undergraduate curriculum committee when performance criteria are not met or assessment data indicates a trend of decreasing performance on an SLO. In such instances the course leader for the SLO(s) in question will meet with the course group responsible for the SLO to identify potential interventions or course changes to address the issue

- 2. Lessons learned regarding assessment practices and processes.** For example, what data was particularly useful to help inform continuous improvement efforts? What data was not particularly useful?

The qualitative results from the direct and indirect data only provide information as to the achievement or non-achievement of a performance criteria. These data do not provide information as to potential underlying factors which may be affecting student mastery of an SLO. Therefore faculty are making educated guesses as to factors and potential changes needed to address student mastery and performance.

- 3. Changes related to assessment practices.** For example, what new measures or data-gathering strategies are being implemented in the current year? What new strategies for data analysis are being employed?

In addition to the quantitative analyses of direct and indirect SLO results, student comments as to why a particular course was most/least challenging and most/least enjoyable collected in the Senior Exit Survey (SES) will be shared with the undergraduate curriculum committee in order to not only gain a deeper understanding as to underlying causes of poor SLO performance, but to also pin-point potential areas of concern and improvement in particular courses to improve student mastery of SLOs.

- 4 The role of faculty and program leadership in assessment is sufficiently described

Yes ▼

- 5 Lessons learned regarding assessment practices and processes are sufficiently described

Yes ▼

- 6 Changes related to assessment practices are sufficiently described

Yes ▼

- 7 Feedback on Reflections:

Great response!

Closing the Loop

The purpose of this section is to reflect on the impact of previously implemented action plans or continuous improvement strategies. Identify at least one specific previously implemented action plan for which the targeted student learning outcome has since been assessed. That is, the action plan you discuss here should (a) be focused on improving student learning and (b) be fully implemented; and (c) the program should have assessed the learning outcome again in order to report the subsequent findings after implementation. (Please note that this may mean you will be providing an update on an action plan from 2 or 3 years ago, which is acceptable.)

1. Briefly describe the **targeted student learning outcome(s)** and the **specific assessment finding(s)** that prompted the development of the action plan(s).

The targeted SLO was SLO 8 *Analyze methods, materials, and equipment used to construct projects*. The action plan was developed because direct assessment scores dropped approximately 7 percentage points from 74.43% in AY 16/17 to 67.23% in AY 17/18. The AY 17/18 direct assessment score was also below the acceptable performance criteria of 70%.

2. Describe the action plan(s) that was/were implemented, including contextual information such as what changes were made, when they were made, etc.

The action plan for SLO 8 was to place greater emphasis on helping students make the connection between the material and its application and factors that influence it through teaching strategies such as increased use of problem solving, examples, and real-world scenarios. During AY 18/19 instructors of COSC 325 & 326 (mechanical, electrical, and plumbing systems – MEP I & II) increased emphasis of the proposed strategies.

3. Summarize subsequently gathered assessment data used to determine whether or not the action plan(s) described above led to improvements in the targeted learning outcome(s). Do the findings suggest the targeted student learning outcome(s) was/were strengthened? How do you know? What's next?

The direct assessment score for SLO 8 in AY 18/19 increased approximately 12 percentage points from the AY 17/18 score of 67.23% to 79.82% in AY 18/19. The AY 18/19 direct assessment score was also approximately 5 percentage points higher than the AY16/17 direct assessment score of 74.43%. This increase in the direct assessment score above both the AY 16/17 and AY 17/18 direct assessment scores indicates the action plan developed in AY 17/18 to increase emphasis on problem-solving, examples, and real-world scenarios improved SLO 8. The faculty, undergraduate coordinator, and assessment coordinator will continue to monitor the direct assessment scores for SLO 8 to determine if the increase in direct assessment scores was due to the implementation of the action plan (indicated by continued increase in scores or stability in scores at AY 18/19 levels) or if other factors may have affected SLO 8 scores in AY 18/19 (indicated by substantial decrease in scores or instability and high variation in future SLO 8 direct assessment scores.)

- 4 Targeted student learning outcome(s) and assessment findings that prompted the development of the action plan(s) are described

Yes ▼

- 5 Action plan(s) that was/were implemented (including contextual information) are described

Yes ▼

- 6 Subsequently gathered assessment data used to determine whether or not the action plan(s) led to improvements in the targeted learning outcome(s) are summarized

Yes ▼

- 7 Implications of subsequently gathered assessment data are discussed

Yes ▼

- 8 Feedback on Closing the Loop:

Very good response. Easy to follow and clearly closes the loop.