

Developing Measures of Student Learning for Program Learning Outcomes

What is a measure of student learning?

A measure of student learning is the way to determine how well students are achieving the program's established program learning outcomes (PLO).

What types of measures are there?

There are two types of measures, direct and indirect.

- **Direct** - measures student learning, ability, or performance by reviewing student work produced in a course or program. Examples include essays, exams, tests, quizzes, portfolios, performances and presentations.
- **Indirect** - measures information other than student work and often attempts to evaluate students' opinions or perceptions. Examples include survey feedback from students, practicum supervisors or employers, employment data, graduation rates, exam/licensure passage rates, focus groups and interviews.

How are measures developed?

Measures can be developed by repurposing existing activities or creating new ones. Steps to assist in each manner of development are listed below.

For existing activities:

1. Consider activities your program is already conducting that relate to one of the program learning outcomes.
2. If needed, hone in on one particular aspect of the activity. For example, if an exam covers topics in anatomy, physiology, and the nervous system and anatomy relates to the PLO, only aspects of the exam that cover anatomy need to be assessed and addressed in the measure. Part of the measure may read, "Questions 5-9 of the exam, which cover anatomy, will be assessed."
3. Determine the evaluation method for the activity. Examples include rubrics, answer keys, tallies and checklists.
4. Determine what student success would look like for this measure and ensure it is stated in terms of the group providing the information. Consider the following examples:
 - a. 80% of students will score a 3 or higher on all 6 components of the rubric.
 - b. 75% of students will respond "proficient" or higher on all 10 survey questions.

- c. 85% of employers will report that their FSCJ graduate employees are "prepared" or "highly prepared" to perform their job duties.

For new activities:

1. Begin with the end in mind. What type of information do you hope to obtain about student learning from the result of the assessment?
2. Determine and design the type of activity that is most appropriate for the information your program wants to collect. Consider the examples given in the direct/indirect section above.
3. Determine the evaluation method to be used to assess the activity. Examples include rubrics, answer keys, tallies and checklists.
4. Determine what success would look like for this measure and ensure it is stated in terms of the person providing the information. Consider the following examples:
 - a. 80% of students will score a 3 or higher on all 6 components of the rubric.
 - b. 75% of students will respond "proficient" or higher on all 10 survey questions.
 - c. 85% of employers will report that their FSCJ graduate employees are "prepared" or "highly prepared" to perform their job duties.

How many measures do I need?

At least two measures are needed for each outcome assessed in a given cycle. One measure must be direct while the second may be direct or indirect.

Can I use the same measure for more than one outcome?

Yes. However, the details of the measure may need to be adjusted to apply to the second PLO. For example, a program may use an exam to assess two PLOs. Each measure will use the exam, but will hone in on different aspects of the exam that apply to the individual PLO.

Can measures be reused from cycle to cycle?

Yes. Programs are not required to create new measures every cycle. In fact, the reuse of measures between cycles is encouraged as it allows programs to look at results longitudinally.

Other Considerations

- If the course in which you are conducting the assessment is offered in multiple modalities (i.e., online, hybrid, face-to-face) or at different locations (including dual enrollment sites), the results of the assessment must be broken down accordingly. It is best assessment practice to state this within the measure description.
- Sampling of student artifacts is permissible but a rationale for the criteria of the sample must be included within the measure description. For example, part of the measure may read, "A random sample of 20% of all student artifacts will be assessed. The sample will be representative of all modalities and locations."

Example measures

Program learning outcome: Students will safely operate a “Class A” commercial vehicle as required by the Florida Department of Highway Safety & Motor Vehicles (FDHSMV).

Measure: In TRA0089 students will be required to complete a predetermined road test on a route approved by the FDHSMV. It must include right and left turns, stop and thru intersections, expressway, urban and rural highway sections, lane changes, curve negotiations, roadside start and stop areas, railroad crossings, and seven areas of general driving aptitude and behavior. Each student is given a starting score of zero, and is allowed a maximum score of no more than 30. Deductions are given for any one of 105 possible mistakes or deficiencies.

Measure type: Direct, Student Performance

Evaluation method: FDHSMV checklist

Level of expected student performance: 70% of students will complete the road test with 15 or fewer deductions.

Program learning outcome: Students will analyze, record and report financial information for external users in accordance with accounting principles, government regulations and professional standards.

Measure: All students enrolled in ACG2030 Accounting Capstone will be required to complete a survey to determine their attitude regarding the A.S. Accounting Technology program and to complete a self-assessment of the skills acquired during the program. The students will be asked to self-evaluate their skills and abilities as they relate to the program learning outcomes using a 5-point Likert scale with 5 being Strongly Agree and 1 being Strongly Disagree.

Measure type: Indirect, Student Survey

Evaluation method: Tally of student responses

Level of expected student performance: 80% of students will respond with “4-Agree” or “5-Strongly Agree” on all questions of the assessment.