Module 2b: Basic Elements for Developing Student Learning Outcomes

Passport to Great Teaching
Timothy S. Brophy

Basic Element 1: Define the terms

Student Learning Outcomes (SLOs) are defined generally as what students are expected to know and be able to do by completion of a course or program of study.

BASIC ELEMENT 1: Ensure that this definition is applied consistently

Basic element 2:
Apply a categorical organizing framework

Examples:
- Content
- Communication
- Critical Thinking
- Creativity
Basic element 3: SLOs that are Recent, Relevant, and Rigorous

<table>
<thead>
<tr>
<th>SLO Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent</td>
<td>The outcome reflects current knowledge and practice in the discipline.</td>
</tr>
<tr>
<td>Relevant</td>
<td>The outcome relates logically and significantly to the curriculum.</td>
</tr>
<tr>
<td>Rigorous</td>
<td>The degree of academic precision and thoroughness that the outcome requires.</td>
</tr>
</tbody>
</table>

Student Learning Outcomes reflect the curriculum and your expectations; as these elements evolve, learning outcomes change.

Recent – the outcome reflects current knowledge and practice in the discipline.

Relevant – the outcome relates logically and significantly to the curriculum.

Rigorous – the degree of academic precision and thoroughness that the outcome requires to be met successfully.

Basic element 4: Distinguish Outputs from Outcomes

Outputs describe and count what we do and whom we reach, and represent products or services we produce. Processes deliver outputs; what is produced at the end of a process is an output.

An outcome is a level of performance or achievement. It may be associated with a process or its output. Outcomes imply measurement; quantification of performance.

Outcomes and outputs: What is the difference?

We seek to measure outcomes as well as their associated outputs; however, SLOs focus on outcomes.

For example, while we produce a number of new student musicians (the output), it is critical that we have a measure of the quality of the students as defined by our program (the outcome).

Outcomes describe, in measurable terms, these quality characteristics by defining our expectations for students.
Two Examples: Outputs or Outcomes?

- The mean scores our students received on the 2017 course history final examination increased by 10 points over the 2016 scores.

<table>
<thead>
<tr>
<th>Output</th>
<th>Outcome</th>
</tr>
</thead>
</table>

- We increased the number of students in the psychology program from 100 in 2017 to 110 in 2018.

<table>
<thead>
<tr>
<th>Output</th>
<th>Outcome</th>
</tr>
</thead>
</table>

Basic Element 5: Distinguish SLOs and Program Goals

**Student Learning Outcomes (SLOs)** describe what students should know and be able to do as a result of completing a course or program of study.

**Teachers** set targets for their SLOs. The general benchmark is 70%, although you can set it higher if you wish.

**Program Goals** describe your expectations for program elements, such as admission criteria, enrollment caps, acceptance rates, etc.

Two Examples: Program Goals or Student Learning Outcomes?

- We will increase our internship participation by 20% next fall.

<table>
<thead>
<tr>
<th>Program goal</th>
<th>SLO</th>
</tr>
</thead>
</table>

- Students discriminate musical quality based on sound musical reasoning.

| Program goal | SLO |
Basic Element 6:
Ensure the outcome is measurable

**Effective SLOs:**
- Focus on what students will know and be able to do.
- Describe observable and measurable actions or behaviors.
- The key to measurability: an active verb that describes an observable behavior, process, or product.

**Verbs and phrases that complicate measurability**
- **Understand**
  - Inner mental process, indicated by demonstrated behavior. OK for learning goals but not recommended for program or course SLOs.
- **Appreciate, value**
  - Internal process that is indicated by demonstrated behaviors. Only used to present at desire or preference. OK if the appreciation or acting is instigated by discipline-specific knowledge.
- **Become familiar with**
  - Focuses assessment on "familiarity," not familiarity.
- **Learn about, think about**
  - Not observable, demonstrable through communication or other demonstration of learning.
- **Become aware of, gain an awareness of**
  - Focuses assessment on "awareness," not actual awareness.
- **Demonstrate the ability to**
  - Focuses assessment on "ability," not achievement or demonstration of a skill.

Two Examples:
Is the outcome observable and measurable?

- Students solve multivariate quadratic problems.
  - Yes [ ] No [ ]

- Students explore and learn about grassland biodiversity.
  - Yes [ ] No [ ]
Basic Elements: A Summary

- Ensure that the definition of SLO is applied consistently
- Consider an categorical organizing framework
- Recency, Relevance, and Rigor
- Distinguish Outputs from Outcomes
- Distinguish SLOs from Program Goals
- Ensure the outcome is measurable

Check for Understanding

- Examine the student learning outcomes for one of your courses. How do these outcomes meet the basic elements described in this module?