Making Assessment Meaningful

Turning Assessment Into More Than Numbers

David W. Marshall, PhD
California State University San Bernardino
Overview

- **Facing the Right Way**
  Participants can explain a purposeful rationale for assessment

- **Two Cultures: A Contrast in Emphasis**
  Participants can explain the distinct approaches to assessment and their ramifications

- **Evaluating Program Effectiveness**
  Participants can evaluate their own programs’ readiness for assessment and apply principles of authentic assessment to their own programs

- **Authentic Assessment’s Payoff**
  Participants can pursue program improvement as a result of authentic assessment
Looking at the (W)hole

A Diagnostic Exercise
# Intentionality: A Process of Questions

## Research Questions

1. What do we want students to know, understand, and be able to do?
2. Where do students learn what we expect them to learn?
3. How well did students learn what we expected them to learn?
4. How do we know how well they learned what we expected them to learn?
5. What does our evidence tell us? How can we use what our evidence tells us to make appropriate decisions?

## Program activity

1. Operational Learning Outcomes
2. Curriculum/Program Mapping
3. Assignment/Outcome Alignment
4. Rubrics and Evaluation
5. Analysis of Results and Causes
1. To what extent do you think your course and program-level outcomes are operational and appropriate?

2. To what extent are your courses (and their outcomes) aligned to the program (and its overarching outcomes)?

3. To what extent are assignments aligned clearly to the outcomes you want to assess?

4. To what extent are expectations held in common and defined for review of students’ assignments?

5. To what extent are you able to interpret data in ways that lead to well-defined courses of action?

Self-Diagnostic

Take 20 minutes to discuss with your colleagues the degree of your satisfaction in each of the five areas of intentional education.
Given your answers to the preceding questions:

1. **What steps need to be taken to put your program in a stronger position to engage in meaningful assessment?**

2. **Who needs to be involved to make that work most efficacious?**

3. **Who else might be able to help you?**

4. **When might that be done?**

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**Self-Diagnostic**

Take 10 minutes to discuss with your colleagues the degree of your satisfaction in each of the five areas of intentional education.
Evaluating Outcomes

Building a Plan
Are Outcomes Clear & Strong?

Unclearly written outcomes can cause very different perceptions of meaning and result in confusion about assessing the outcomes.

- Does it begin with the end in mind?
- Does it state, exactly, what you want your students to be able to do?
- Does it state, exactly, what you want your office, department, or program to do with regards to administrative process or procedure?
- Does it accurately reflect the end you have in mind?
- Does it utilize operational verbs that clearly articulate the expected action?
- Is it specific?
- Is it measurable or observable?
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Are Outcomes Clear & Strong?

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- **Subject**: Who
- **Verb**: will do
- **Object**: what?

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- Does your outcome accurately reflect the end you have in mind?
- Does it utilize operational verbs that clearly articulate the expected action?
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Do Outcomes Imply Activities?

Operational verbs imply a student response to an experience.

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### Are Outcomes Clear & Strong?

Take 15 minutes to review, evaluate, and revise your outcome.

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Aligning Outcomes

Building a Plan
Mapping Up

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Mapped to</th>
</tr>
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<tbody>
<tr>
<td>Hardware Proficiency</td>
<td>Institutional Learning Outcomes: Critical Thinking, Information and Computer Literacy</td>
</tr>
<tr>
<td>Confidence</td>
<td></td>
</tr>
<tr>
<td>Operating a wide variety of microscopes, including phases, DAPI, and epifluorescence.</td>
<td></td>
</tr>
<tr>
<td>Software Proficiency</td>
<td>Institutional Learning Outcomes: Critical Thinking, Information and Computer Literacy, Quantitative Reasoning</td>
</tr>
<tr>
<td>Routine maintenance of microscope, software programs.</td>
<td></td>
</tr>
<tr>
<td>Specimen Preparation</td>
<td>Institutional Learning Outcomes: Critical Thinking, Quantitative Reasoning</td>
</tr>
<tr>
<td>Prepare specimens for microscopic examination.</td>
<td></td>
</tr>
<tr>
<td>Experimental Design</td>
<td>Institutional Learning Outcomes: Civic Engagement and Ethics, Communication, Critical Thinking, Information and Computer Literacy, Quantitative Reasoning</td>
</tr>
<tr>
<td>Design experiments, critically analyze data, and interpret results.</td>
<td></td>
</tr>
<tr>
<td>Troubleshooting</td>
<td>Institutional Learning Outcomes: Communication, Critical Thinking, Information and Computer Literacy, Quantitative Reasoning</td>
</tr>
<tr>
<td>Troubleshoot problems with the optics of microscopes</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking for Microscope Technology</td>
<td>Institutional Learning Outcomes: Communication, Critical Thinking, Information and Computer Literacy, Quantitative Reasoning</td>
</tr>
<tr>
<td>Assess and utilize new microscope technologies.</td>
<td></td>
</tr>
<tr>
<td>Competitive Workforce Skills</td>
<td>Institutional Learning Outcomes: Civic Engagement and Ethics, Communication, Critical Thinking</td>
</tr>
<tr>
<td>Assess employment in medical, high tech, and other growth fields.</td>
<td></td>
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Mapping Down

# PLO/SLO-Curriculum Map

<table>
<thead>
<tr>
<th>B = beginning</th>
<th>D = developing</th>
<th>A = advancing</th>
<th>Utilize higher order thinking in applying basic research methods in psychology including research design, data analysis, and interpretation of findings, and, reporting of result both in written and oral forms that are in conformance with APA format.</th>
<th>PLO 2</th>
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- Identify basic research methods and ethical considerations in the study of behavior.
- Analyze the results of two different kinds of personality tests and birth order for college age adults especially introversions versus extraversion.

<table>
<thead>
<tr>
<th>SLO 2.1</th>
<th>SLO 2.2</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Course 1</th>
<th>B</th>
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<tbody>
<tr>
<td>Course 2</td>
<td>B</td>
</tr>
<tr>
<td>Course 3</td>
<td>D</td>
</tr>
<tr>
<td>Course 4</td>
<td>A</td>
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<td></td>
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<td></td>
<td>B</td>
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<tr>
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<td>D</td>
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Course Level Outcomes
Referenced On Course Outlines
# Mapping Down

## SAO-Activities Map

<table>
<thead>
<tr>
<th>Activity</th>
<th>SAO 1</th>
<th>SAO 2</th>
</tr>
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<tbody>
<tr>
<td>Activity 1</td>
<td>B</td>
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ACADEMIC PROGRAMS:
1. Is the LO aligned up to either ILOs (if you’re working with a PLO) or PLOs (if you’re working with a CLO)?
2. Is the outcome aligned down to courses & CLOs and their assignments?

SERVICE AREAS:
1. Is the SAO aligned up to a unit mission statement and/or ILOs?
2. Is the SAO aligned down to particular activities?

THEN:
1. Can you align the outcome up and down yourself?
2. Who needs to be involved to align this outcome both up and down? How can you involve them?

Are Outcomes Aligned?
Take 20 minutes to review your chosen outcome and determine the extent to which it is aligned both up and down.
How well did they learn it?

Assessment data is produced all the time in educational practice. Three types are frequent:

1. **Direct**
   - Student essays, exams and presentations
   - Case studies and field work
   - Group projects and service learning
   - Journals and article critiques
   - Performances and artworks

2. **Indirect**
   - Student meta-cognitive reports
   - Internship supervisor reports

3. **External**
   - Non-degree standardized tests
How well did they learn it?

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
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<tbody>
<tr>
<td>Identify &amp; locate specific outcomes</td>
<td>Align assignments/ assessments to the expectations of a given outcome or set of outcomes.</td>
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- **Operational Verb**
- **Correlating Assignment**
Where in your unit’s activities/courses might be the best possible place(s) to and what assignments/activities can you use to:

- provide students with opportunities to demonstrate their learning,
- gather information about what students have taken from an activity,
- gather information about the extent to which your unit has met goals?
Assessing Outcomes

Building a Plan
1. How can you gather results?
2. When will you gather results?
3. Who would you like to participate in reviewing the results?
4. When will that review happen?
5. What support do you need?

How Will You Talk?

Take 20 minutes to discuss a strategy for gathering, reviewing, and responding to results.
Responding to the Results

Students benefit from an institution’s thoughtful response to an honestly undertaken attempt to determine a program’s strengths and weaknesses in educating them.
Thank You

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