

# UNLEASHING THE POWER OF ASSESSING STUDENT LEARNING: DESIGNING ASSESSMENT PLANS TO STRENGTHEN STUDENT LEARNING

Materials are adapted from and/or from:

Mary Allen's (2003) *Assessing Academic Programs in Higher Education*

David Marshall's "Making Assessment Meaningful: Turning Assessment into more than Numbers"

(<http://www.merritt.edu/wp/slo/wp-content/uploads/sites/296/2015/09/Merritt-SLO-Presentation-David-Marshall.pdf>)

Barbara Walvoord's (2004) *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education*

## Assessment as Action Research

Assessment of student learning can be defined as the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions about how to improve learning" (Walvoord 2).

## Making Assessment Meaningful (Marshall)

"You must conduct assessment so that it serves the department and its students" (Walvoord 51).

### A Process of Questions

1. What do you 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 you expected them to learn?
4. How do we know how well they learn what we expected them to learn?

**Question 1 (OUTCOMES): What do you want students to know, understand, and be able to do?**

*SKYLINE COLLEGE SLOAC FRAMEWORK 12-16*

**Question 2 (MAPPING): Where do students learning what we expect them to learn?**

*SKYLINE COLLEGE SLOAC FRAMEWORK 17-20*

**Question 3 (ALIGNING MEASURES TO OUTCOMES): How well did students learn what you expected them to learn?**

*SKYLINE COLLEGE SLOAC FRAMEWORK 22-25*

- I. Assessment Data is produced all the time in educational practice. Three common types are:
  - A. Direct Assessment embeds artifacts in practice. Direct measures require students to directly display their knowledge, skills, and/or abilities. They usually employ a systematic scoring system , such as a rubric or checklist.
  - B. Indirect Assessment seeks opinions of student learning. Indirect measures ask students to reflect on their learning rather than to demonstrate it.
  - C. External Assessment uses outside exams (e.g, licensure, non- degree standardized tests)
- II. Align assignments/ assessments to the expectation of a given outcome or set of outcomes.

**Question 4 (CYCLES AND RUBRICS): How do we know how well they learn what we expected them to learn?**

*SKYLINE COLLEGE SLOAC FRAMEWORK 26-29*

- I. Create evaluative criteria:
  - A. Specify the criteria that will be evaluated in the students' work.
    1. These can derive from the relevant course level SLOs; they also can derive from the primary qualities that are being evaluated.
  - B. Identify the levels of student performance.
    1. If student work is either "right" or "wrong," then a checklist may suffice.
    2. For more precise insights, determine how many levels of student performance are needed for a rubric.

- a. Four levels (e.g., superior, good, adequate, inadequate)
  - i. Four levels can integrate relevant parts of the ISLO rubrics (high proficiency, proficiency, some proficiency, no/ limited proficiency) so as to concurrently conduct a course and institutional level assessment
  - b. Three levels (e.g., above expectations, meets expectations, below expectations)
- C. Define the standards for the program's success.
  - 1. Set what percentage of students will meet or exceed expectations.

## Assessment Techniques

### Course Embedded Ways to Assess Student Learning:

1. **Direct measures** are methods of collecting information about student learning that require students to directly display their knowledge, skills, and/or abilities. Direct measures usually employ a systematic scoring system, such as a rubric or checklist.
2. **Indirect measures** are methods of collecting information about student learning that ask students to reflect on their learning rather than demonstrate it. The assessment is based on an analysis of reported perceptions about student mastery of outcomes.

---

### Strategies for Direct Assessment of Student Learning

1. Published Tests
  2. Locally-Developed Tests
  3. Embedded Assignments and Course Activities
  4. Portfolios
-

## 1. Examples of Published Tests

| <b>Some Examples of Published Tests</b>              |   |   |
|--|---|---|
| Academic Profile                                     | “college-level reading, critical thinking, writing, and mathematics in the context of materials from the humanities, social sciences, and natural sciences” | <a href="http://www.ets.org/">http://www.ets.org/</a>   |
| Collegiate Assessment of Academic Proficiency (CAAP) | “assesses college students’ academic achievement in core general education skills” (writing, reading, math, science reasoning, and critical thinking)       | <a href="http://www.act.org/caap/index.html">http://www.act.org/caap/index.html</a>   |
| ACCUPLACER   | reading, writing, and mathematics   | <a href="https://www.accuplacer.org/">https://www.accuplacer.org/</a>   |
| COMPASS e-Write                                      | writing   | <a href="https://www.act.org/content/dam/act/unsecured/documents/Compass-ewritefaq.pdf">https://www.act.org/content/dam/act/unsecured/documents/Compass-ewritefaq.pdf</a> |

### **Steps in Selecting a Published Test**

1. Identify a possible test.
2. Consider published reviews of this test..
3. Order a specimen set from the publisher.
4. Take the test and consider the appropriateness of its format and content.
5. Consider the test’s relationship to your learning outcomes.
6. Consider the depth of processing of the items (e.g., analyze items using Bloom’s taxonomy).
7. Consider the publication date and currency of the items.
8. How many scores are provided? Will these scores be useful? How?
9. Look at the test manual. Were test development procedures reasonable? What is the evidence for the test’s reliability and validity for the intended use?
10. If you will be using the norms, consider their relevance for your purpose.
11. Consider practicalities, e.g., timing, test proctoring, and test scoring requirements.
12. Verify that faculty are willing to act on results.

## 2. Locally-Developed Tests

| <b>Common Test Item Formats</b> |   |
|---------------------------------|---|
| <b>Item Type</b>                | <b>Characteristics and Suggestions</b>  |
| Completion                      | These items require students to fill-in-the-blank with appropriate terms or phrases. They appear to be best for testing vocabulary and basic knowledge, and they avoid giving students credit for guessing by requiring recall, rather than recognition. Scoring can be difficult if more than one answer can be correct.   |
| Essay                           | Essay questions are very popular and can be used to assess higher-order thinking skills. They generally ask for explanations and justifications, rather than memorized lists. Key words in essay questions are <i>summarize, evaluate, contrast, explain, describe, define, compare, discuss, criticize, justify, trace, interpret, prove, and illustrate</i> (Moss & Holder, 1988).                                |
| Matching                        | Usually these questions are presented as two columns, and students are required to associate elements in column B with elements in column A. Such items are easy to score, but they are relatively difficult to construct and they seem best suited for testing knowledge of factual information, rather than deeper levels of understanding.   |
| Multiple-Choice                 | Multiple-choice questions are popular because they can measure many concepts in a short period of time, and they generally are better than other objective questions at assessing higher-order thinking. They are easy to score, and item banks associated with popular textbooks are often available. Writing good items takes time, and there is strong temptation to emphasize facts, rather than understanding. |
| True-False                      | True-false items are relatively easy to construct and grade, but they appear to be best at assessing factual knowledge, rather than deep understanding.   |

### 3. Embedded Assignments and Course Activities

- Culminating projects, such as papers or performances
- Exams or parts of exams
- Group projects
- Major homework assignments
- In-class presentations
- Student recitals and exhibitions
- Community-service learning and other fieldwork activities
- Classroom assessment activities (Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco, CA: Jossey-Bass.)

Assignments and activities are purposefully created to collect information relevant to specific program learning outcomes. Results are pooled across courses and instructors to indicate program accomplishments, not just the learning of students in specific courses.

## 4. Portfolios

- Showcase vs. Developmental Portfolios: best work vs. evidence of growth
  - Workload and storage demands for large programs can be overwhelming!
- 

### **Some Questions to Answer Before Assigning Portfolios**

1. What is the purpose of the requirement—to document student learning, to demonstrate student development, to learn about students' reflections on their learning, to create a document useful to students, to help students grow through personal reflection on their personal goals?
  2. When and how will students be told about the requirement, including what materials they need to collect or to produce for it?
  3. Will the portfolios be used developmentally or will they be submitted only as students near graduation?
  4. Will portfolios be showcase or developmental?
  5. Are there minimum and maximum lengths or sizes for portfolios?
  6. Who will decide which materials will be included in portfolios—faculty or students?
  7. What elements will be required in the portfolio—evidence only from courses in the discipline, other types of evidence, evidence directly tied to learning outcomes, previously graded products or clean copies?
  8. Will students be graded on the portfolios? If so, how and by whom?
  9. How will the portfolios be assessed to evaluate and improve the program?
  10. What can be done for students who have inadequate evidence through no fault of their own?
  11. What will motivate students to take the portfolio assignment seriously?
  12. How will the portfolio be submitted—hard copy or electronic copy?
  13. Who “owns” the portfolios—students or the program?
  14. Who has access to the portfolios and for what purposes?
  15. How will student privacy and confidentiality be protected?
- 

### **Strategies for Indirect Assessment of Student Learning**

1. Surveys
  2. Interviews
  3. Focus Groups
  4. Student Metacognitive Journal
-



## 1. Surveys

- Point-of-contact surveys
- Online, e-mailed, registration, or grad check surveys
- Keep it simple!

## 2. Interviews

- Interviews can be conducted one-on-one, in small groups, or over the phone.
- Interviews can be structured (with specified questions) or unstructured (a more open process).
- Questions can be close-ended (e.g., multiple-choice style) or open-ended (respondents construct a response).
- Can target students, graduating seniors, alumni, employers, community members, faculty, etc.
- Can do exit interviews or pre-post interviews.
- Can focus on student experiences, concerns, or attitudes related to the program being assessed.
- Generally should be conducted by neutral parties to avoid bias and conflict of interest.

### Some Tips for Effective Interviewing

- Conduct the interview in an environment that allows the interaction to be confidential and uninterrupted.
- Demonstrate respect for the respondents as *participants* in the assessment process rather than as *subjects*. Explain the purpose of the project, how the data will be used, how the respondent's anonymity or confidentiality will be maintained, and the respondents' rights as participants. Ask if they have any questions.
- Put the respondents at ease. Do more listening than talking. Allow respondents to finish their statements without interruption.
- Match follow-up questions to the project's objectives. For example, if the objective is to obtain student feedback about student advising, don't spend time pursuing other topics.
- Do *not* argue with the respondent's point of view, even if you are convinced that the viewpoint is incorrect. Your role is to obtain the respondents' opinions, not to convert them to your perspective.
- Allow respondents time to process the question. They may not have thought about the issue before, and they may require time to develop a thoughtful response.
- Paraphrase to verify that you have understood the respondent's comments. Respondents will sometimes realize that what they said isn't what they meant, or you may have misunderstood them. Paraphrasing provides an opportunity to improve the accuracy of the data.

- Make sure you know how to record the data and include a backup system. You may be using a tape recorder—if so, consider supplementing the tape with written notes in case the recorder fails or the tape is faulty. Always build in a system for verifying that the tape is functioning or that other data recording procedures are working. Don't forget your pencil and paper!

### 3. Focus Groups

- **Traditional focus groups** are free-flowing discussions among small, homogeneous groups (typically from 6 to 10 participants), guided by a skilled facilitator who subtly directs the discussion in accordance with pre-determined objectives. This process leads to in-depth responses to questions, generally with full participation from all group members. The facilitator departs from the script to follow promising leads that arise during the interaction.
- **Structured group interviews** are less interactive than traditional focus groups and can be facilitated by people with less training in group dynamics and traditional focus group methodology. The group interview is highly structured, and the report generally provides a few core findings, rather than an in-depth analysis.

| Sample Focus Group Questions |  |
|------------------------------|--|
| Purpose of Question          | Examples   |
| Warm-up                      | <ul style="list-style-type: none"> <li>• I'd like everyone to start out by stating a word or phrase that best describes your view of the program.</li> </ul>   |
| Issue 1: Career Preparation  | <ul style="list-style-type: none"> <li>• Please tell us what career you are interested in pursuing after graduation.</li> <li>• How has the program helped you prepare for your career or future activities?</li> </ul>  |
| Issue 2: Advising            | <ul style="list-style-type: none"> <li>• We are interested in your advising experiences in the program. Could you tell us about your first advising experience in the department?</li> <li>• What did you find most useful in your interactions with your advisor?</li> <li>• What would you like our advisors to do differently?</li> </ul> |
| Issue 3: Curriculum          | <ul style="list-style-type: none"> <li>• Thinking about the curriculum and the required courses, how well do you think they prepared you for upper-division work?</li> <li>• What should be changed about the curriculum to better prepare you for your career or for graduate school?</li> </ul>  |
| Closing                      | <ul style="list-style-type: none"> <li>• We've covered a lot of ground today, but we know you might still have other input about the program. Is there anything you would like to say about the program that hasn't been discussed already?</li> </ul>   |

#### 4. Student Metacognitive Journal

Studies about metacognition—knowing about knowing, suggest that self-reflection plays an important role in academic achievement and performance. (See <http://www.chronicle.com/article/MetacognitionStudent/130327/>.) Strategic self-reflection, when combined with the major assignment, can be a powerful pedagogical tool that raises students' awareness of their relative strengths and areas for improvement.

Often meta-cognitive prompts are integrated into e-portfolios. When submitting an assignment, a question or two may prompt students to consider their growth over the semester (summative), problems they encountered and how they troubleshot them—if they did (process), the strengths and weaknesses of their fulfillment of the assignment (evaluative), or how the course helped them to master any of the five ISLOs (big picture). Excellent prompts are posted at Salt Lake City College's e-portfolio site at <http://facultyportfolioresource.weebly.com/uploads/2/1/5/3/2153229/reflectionhandout.pdf>.

## Steps to Create a Course Level Assessment Plan

### **Step One: Identify, refine, or create an appropriate major assignment or activity.**

The major assignment or activity can be used for grading and assessment (e.g. exam, essay, presentation, performance, survey, project, etc.). Ideally it will enable student demonstration of multiple SLOs. If you are using an exam or survey, identify which questions apply to which SLOs.

### **Step Two: Determine what, if any, supporting instruments need to be created.**

If you are using a rubric, indicate which parts of the rubric apply to which SLOs.

### **Step Three: Determine a rough benchmark/ success criterion.**

What are the performance standards that determine whether or not a student has achieved a given level of knowledge or skill proficiency? This question can be addressed by writing a performance criteria statement that specifies a minimum score expected or accepted for the intended SLO.

#### EXAMPLES:

*Using a five point analytic rubric, at least 75% of students will earn a minimum of 20 points on the final essay.*

*Using a four point analytic rubric, the class will average 2.5 or greater in each category.*

*Using a four level analytic rubric, 75% of students will score at least "adequate" on the thesis, organization, development, and grammar parts of the rubric.*

*At least 70% of the class will correctly answer the three common multiple choice questions that are embedded in every section's final exam.*

**Step Four: Determine if all student work will be assessed or a representative random sample.**

Ideally all sections will be assessed, with both full and part-timers. If all sections will be assessed, then will all student work be assessed, or a sample from every section? Banta and Palomba (2015) write, “If sampling is appropriate in terms of time, cost, or other issues, an important decision regards the number of cases to study. Project results based on samples are usually reported with a sampling error—the possible difference between project findings and true results...The larger the sample size is, the smaller the sampling error, and therefore the more accurate are project results” (91)... Raosoft’s online program contains an easy-to-use sample size calculator (<http://www.raosoft.com/samplesize.html> ).”

**Step Five: Identify participating faculty and communicate needed information to them to integrate assessment into their course.**

Best is to contact faculty the semester before a course is assessed so that they can conduct a course embedded assessment, not an “add on.”

For a multi- section course that does not have a common assignment, communicate the parameters of the major assignment (e.g. text-based writing? persuasive as opposed to summarizing? a common set of test questions? at what point in the semester?) Also, give them the instrument, such as a rubric.

## Rubric to Assess Assessment Plans

|   | <b>Effective</b>   | <b>Developing</b>  | <b>Ineffective</b>  |
|---|--|--|---|
| <b>Alignment of Method/<br/>Assignment to SLO(s)</b>                      | Connection between method/ assignment and SLO(s) is clear.   | Method/ assignment is not clearly linked to SLO(s) achievement.  | Method/ assignment misses outcomes or is not relevant to SLO(s).  |
| <b>Degree of Higher-Order<br/>or “Critical Thinking”<br/>Elicited</b>     | Students analyze, apply, and/or synthesize information to support their purpose.                                   | Students explain and/or summarize information but with no purpose beyond demonstrating comprehension.  | Students regurgitate isolated facts with little to no personal assimilation.                                      |
| <b>Useful</b>   | Assessment plan is likely to yield information useful for making improvements.                                     | Assessment plan is not specifically targeted toward finding areas of improvement.  | Areas of improvement cannot be associated with the assessment plan.   |
| <b>Dialogue Generated</b>   | Faculty/ staff almost always collaborate on creating assessments, implementing them, and/or analyzing the results. | Faculty/ staff sometimes collaborate on creating assessments, implementing them, and/or analyzing the results.   | Faculty/ staff rarely collaborate on creating assessments, implementing them, and/or analyzing the results.       |
| <b>Ability to Keep the<br/>Assessment Cycle<br/>Going into Perpetuity</b> | The entire assessment cycle is manageable and replicable.  | Some of the assessment cycle is manageable and replicable.   | The assessment cycle is overwhelming in scope.  |
| <b>Engagement in SLOs<br/>and Assessment</b>                              | Enough faculty/ staff assess to shape and consistently apply departmental evaluation criteria.                     | Usually enough faculty/ staff assess to shape and consistently apply departmental evaluation criteria, but some assess more frequently than others, and/or some don't assess at all. | Even when multiple faculty/ staff teach a course and/or oversee a student service area, only one person assesses. |

