

Introduction

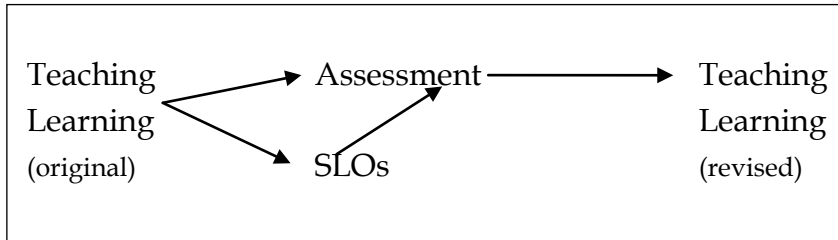
- Faculty constantly seek out accurate ways to gauge student learning, as we recognize the value of assessment in teaching.
- Faculty select appropriate ways of evaluating students' work, according to the subject matter, the aims of the course, and class's progress during the course.
- Faculty continually incorporate their evaluations of student learning into their future planning, adjusting lessons and student feedback accordingly in order to provide excellent instruction.
- In the brave new world of Student Learning Outcomes, Assessment becomes more formalized, so consequently, the underlying concepts that govern assessment design have to become more explicit.

Background

- We need to make these terms and concepts explicit so that we understand the constructs that govern how we measure our students' learning.
- These constructs determine an assessment's design (what specifically students do during the assessment) so that the assessment measures what an instructor intends it to, and also determine how the assessment results should be analyzed and interpreted.
- In other words, each type of assessment has specific purposes and limits of what it can tell us. If we are not *explicitly* aware of either, and consequently employ an assessment whose activities are best suited to measuring a different type or form of learning than we hoped it would, we *may not* obtain an accurate sense of student strengths and needs.
- This becomes important since the community college system is designed to support multiple ways of teaching the same subject matter: these differences in how we teach lead to variation in our assessment methods. It is not uncommon for faculty teaching the same course to use different sorts of exams and main assignments.
- So when faculty start identifying their preferred means of evaluating student learning outcomes, we will need a framework with which to discuss multiple ways of measuring the same outcome.

How does this relate to SLOs?

- Link between assessments, outcomes, teaching/learning



- Why do we use the term “assessment”?
 - Because “testing” is essentially one specific type/form of assessment (Sternberg)
 - Usually a uniform exam given at one time to many students
 - May not be tailored to the specific curriculum of the course
 - May be normed on a population *different* from De Anza students
 - Assessment includes multiples ways of evaluating work
 - Portfolios, surveys, interviews, capstone projects, assignments, etc.
 - May vary per course (though not by student w/in a course)
 - Can be tailored to the specific course, not an outside agency
 - May be based (normed) on a population similar to De Anza’s.
- How do the various types of assessment relate to SLOs?
 - After a workshop on SLOs and assessment models held in Fall 2008 for the Academic Senate and the Curriculum Committee, Senators supported using assessments faculty already use in their courses (often referred to as “course-embedded assessment”).
 - Therefore, please note that the Academic Senate and the SLO/SAO Coordinators strongly encourage using assignments (all or portions of) for your assessments.
 - With this in mind, the Academic Senate and the Outcomes coordinators are providing a brief overview of assessment types, so that faculty are aware of both the broad categories of assessment and their uses/functions, so they can better understand the use and limits of the assessments they offer.

Brief Overview of Assessment— corresponds to rows in chart below**Row 1**

- Can the demonstration be directly observed?
 - Note that if it is a product, you are evaluating the *result* of learning, not the learning itself, so you will have to ensure that what was observed could have been produced only by understanding the knowledge or abilities gained or developed in your course.
 - You will also have to see whether the end result does not require a prohibitive set of other skills/knowledge in order to produce your assessment activity.

Row 2

- In what form are you collecting assessment results?
 - Frequently, numerical data are assumed to be summative, and narrative forms to be formative, but the opposite may hold as well, depending on the instructor's (assessor's) purpose and assessment design.
 - Often the number of assessments to be reviewed or the amount of time available for the assessment influence the form in which the results are collected.
 - Is it possible or desirable to directly observe without influencing assessment results?
 - Does the test measure what is actually covered in the curriculum (course outline)? How do you determine and prove this?

Row 3

- On what basis will you score the assessment?
 - Addresses the fundamental philosophy of how an instructor grades students.
 - Are abilities to be measured stable or flexible (developing)? (Sternberg & Grigrenko)
 - How does the assessment design reflect that stability/flexibility?
 - What is assessed— a product or a process?
 - When is feedback on the assessment given— during or at the end of instruction? Why?
 - Does the instructor (or do other students) interact with the student undergoing assessment, or not? Why (not)?
 - Consider effects on students, as well (Dweck)
 - Collaboration or competition among students
 - Attitudes to learning and approach to studying— mindset (fixed or growth?)
 - fixed— ability pre-determined, every attempt is constantly judged
 - growth— ability can develop, with assistance and student's effort
 - effects of mindset influence student's perseverance, resilience, and confidence, which in turn affect student's test results.
 - Both types of assessment are useful at different times during the course.

Brief Overview of Assessment (cont.) – corresponds to rows in chart below

Row 4

- How will you use the assessment results?
 - Will students be able to understand assessment results w/o help?
 - Will students understand results if instructor were able to explain meaning of results to students?
 - Also, will students be able to use assessment results to tell them how (or on what) to focus their studies/efforts?
 - Most interesting part is what your assessments tell you about what your students are learning well, and what they are struggling with!

Brief Overview of Assessment

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		Definition	Purpose (when to use) (how to use)	Examples	Pros	Cons (limits of data)
Collection of assessment info	Direct	Knowledge or skills can be directly measured or observed.	Directly observe measuring intended knowledge, skills, abilities.	Observations Assignments Portfolios Exams	Greater certainty of assessment measuring targeted skills.	Accuracy depends on whether assessment does not require <i>other</i> skills for high score.
	Indirect	Knowledge or skills must be measured through proxy activities or self-report.	When knowledge, skills difficult to directly observe.	Surveys, Interviews, Exams Other...	Good for sensitive topics (reduces bias). Attitudes/intent.	May not be as accurate as direct measures.
Form of assessment info	Quantitative	A numerically based evaluation, in which the focus is on the assessment's scores, or data points.	Gives score or assessment result only (the what). To compare w/others. Focus on general overview of group being evaluated.	Placement tests Licensure exams Often used for formal (standardized) exams.	Way to interpret or evaluate large numbers of examinees. Way to compare to other groups when formal assessments used.	May be reductionistic if regarded as the total potential of a student, or as the only information needed about a student.
	Qualitative	A narrative based evaluation, in which the focus is on the <u>details</u> (description) of the assessed work.	Explains usually how a students' work earned a particular score. Often helps explain the quantitative results (the why).	Case study reports. Summaries of interviews.	Good for when a group of assessors unsure of what they may need to analyze at first.	Needs a clear focus to logically organize detail, for it to be useful.

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		Definition	Purpose	Example	Pros	Cons
Scoring of assessment info	Criterion-Referenced	The assessment data are evaluated based on previously established, specific criteria detailing the level of knowledge, skills, or abilities being assessed.	When info needed about level of skill proficiency.	Assessments that use a <u>rubric</u> for grading. Licensure exams?	Can be based on local population.	Difficult to compare to results of other assessments. Takes time, thought, practice to articulate criteria.
	Norm-Referenced	The assessment data are evaluated in comparison to peers.	Selecting a top % of applicants. Group scores too low in criterion-referenced assessment.	SATs, GREs, etc. Grading on a curve.	Standardized assessment results can be compared.	If norming population is too different from population to be assessed, then results may not be useful.
Use of assessment info	Summative	A final evaluation of students' learning. Occurs at the <u>end</u> of instruction.	Feedback for instructor's use in evaluating student progress.	Placement tests. Final exams.		Results may <u>not</u> be enough to guide students. Results w/o interpretation can be misleading.
	Formative	An evaluation in which the feedback is designed to guide <i>students'</i> future work. Occurs at the <u>beginning or during</u> instruction.	Feedback intended for student to improve.	Feedback to students on homework or assignments. "Diagnostic" exams to plan quarter's work.	Closer to aim of teaching – student improvement.	Often different feedback for student & assessor, so... 2 nd layer of analysis required for this type of assessment.

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