

DRAFT SLO Terminology Glossary for Vetting February 26, 2009

Abilities/Core Competencies/GE Outcomes/Institutional Learning Outcomes. This level of accomplishment relates to the integration of knowledge, skills, and attitudes in complex ways that require multiple elements of learning which are acquired during a student's course of study at an institution. Statements of intended results of student learning experiences across courses, programs, and degrees. Core competencies describe critical, measurable life abilities and provide unifying, overarching purpose for broad spectrum of individual learning experiences.

Assessment (Learning). Learning Assessment refers to a process where methods are used by a faculty member, department, program or institution to generate and collect data for evaluation of processes, courses, and programs with the ultimate purpose of evaluating overall educational quality and improving student learning. This term refers to any method used to gather evidence and evaluate quality and may include both quantitative and qualitative data.

Assessment (Placement). Assessment for placement is a standardized test or process by which a student is properly put into the proper class in a sequence, such as math, English, ESL, or reading. In addition, this process also involves the validation of the content of the standardized test by the appropriate faculty content experts.

Affective Outcomes. Outcomes related to changes in beliefs or development of certain values.

Authentic Assessment/Assessment for Improvement. Assessment that evaluates the student's ability to use their knowledge and to perform tasks that are approximate to those found in the work place or other venues outside of the classroom setting. Assessment is authentic when we directly examine student performance on worthy intellectual tasks. Traditional assessment, by contract, relies on indirect or proxy 'items'--efficient, simplistic substitutes from which we think valid inferences can be made about the student's performance at those valued challenges.ⁱ

Assessment for Accountability. Assessment done in which the primary drivers are external, such as legislators or the public.

Bloom's Taxonomy. Six levels arranged in order of increasing complexity or intellectual sophistication:

1. **Knowledge:** Recalling or remembering information without necessarily understanding it. Includes behaviors such as describing, listing, identifying, and labeling.
2. **Comprehension:** Understanding learned material and includes behaviors such as explaining, discussing, and interpreting.
3. **Application:** The ability to put ideas and concepts to work in solving problems. It includes behaviors such as demonstrating, showing, and making use of information.
4. **Analysis:** Breaking down information into its component parts to see interrelationships and ideas. Related behaviors include differentiating, comparing, and categorizing.
5. **Synthesis:** The ability to put parts together to form something original. It involves using creativity to compose or design something new.
6. **Evaluation:** Judging the value of evidence based on definite criteria. Behaviors related to evaluation include: concluding, criticizing, prioritizing, and recommending.ⁱⁱ (Bloom, 1956)

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Classroom assessment techniques. Classroom assessment techniques (CATs) are “simple tools for collecting data on student learning in order to improve it” (Angelo & Cross, 1993, p. 26). CATs are short, flexible, classroom techniques that provide rapid, informative feedback to improve classroom dynamics by monitoring learning, from the student’s perspective, throughout the semester. Data from CATs are evaluated and used to facilitate continuous modifications and improvement in the classroom.

Classroom-based assessment. Classroom-based assessment is the formative and summative evaluation of student learning within a single classroom.

Closing the Loop/Feedback Loop. Using assessment results to improve student learning through collegial dialogue informed by the results of the learning outcome assessment. It is part of the continuous cycle of collecting assessment results, evaluating them, using the evaluations to identify actions that will improve student learning, implementing those actions, and then cycling back to collecting assessment results, etc.

Collegiality. Mutually respectful discussion that leads to participative decision making.

Competencies/Exit Skills/Terminal Measurable Objective/Student Learning Outcomes (SLOs). Competencies refer to the specific level of performance that students are expected to master, such as in the arts or CTE courses. Objectives refer to the discrete course content that students need to meet in order to pass the class, whereas SLOs are the overarching behavioral, content, and/or critical thinking skills that a student has learned as a result of the course experience.

Continuous Improvement. An on-going, cyclical process to identify and implement incremental changes to improve the level of student learning.

Course Assessment. This assessment involves evaluating the curriculum as designed, taught, and learned. It involves the collection of data aimed at measuring successful learning in the individual course and improving instruction with a goal to improving learning.

Criterion-based assessments. Assessment evaluated or scored using a set of criteria to appraise or evaluate work. Criterion-referenced evaluation is based on proficiency not subjective measures such as improvement.

Culture of evidence. The term culture of evidence refers to an institutional culture that supports and integrates research, data analysis, evaluation, and planned change as a result of assessment to inform decision-making (Pacheco, 1999). This culture is marked by the generation and valuing of quantitative and qualitative data providing accountability for institutionally defined outcomes (Wright, 1999).

Direct data. Data that measures the exact value. For instance, a math test directly measures a student's proficiency in math. (Contrast with indirect data below.)

Embedded assessment. Embedded assessment occurs within the regular class or curricular activity. Class assignments linked to student learning outcomes through primary trait analysis serve as grading

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and assessment instruments. Individual questions on exams can be embedded in numerous classes to provide departmental, program, or institutional assessment information. An additional benefit to embedded assessment is immediate feedback on the pedagogy and student needs.

Evidence. Artifacts or objects produced that demonstrate and support conclusions, including data, portfolios showing growth, products, as opposed to intuition, belief, or anecdotes. “Good evidence, then, is obviously related to the questions the college has investigated and it can be replicated, making it reliable. Good evidence is representative of what is, not just an isolated case, and it is information upon which an institution can take action to improve. It is, in short, relevant, verifiable, representative, and actionable.”ⁱⁱⁱ

Evidence of program and institutional performance. Quantitative or qualitative, direct or indirect data that provides information concerning the extent to which an institution meets the goals it has established and publicized to its stakeholders.

Formative assessment. Formative assessment generates useful feedback for development and improvement. The purpose is to provide an opportunity to perform and receive guidance (such as in class assignments, quizzes, discussion, lab activities, etc.) that will improve or shape a final performance. This stands in contrast to summative assessment where the final result is a verdict and the participant may never receive feedback for improvement such as on a standardized test or licensing exam or a final exam.

General Education Student Learning Outcomes. GE SLOs are the knowledge, skills, and abilities a student is expected to be able to demonstrate following a program of courses designed to provide the student with a common core of knowledge consistent with a liberally educated or literate citizen.

Grades. Grades are a faculty report of a student’s performance in a *class* as a whole, but they are not the same as assessment of SLOs in and of themselves. Some colleges have systems in place (e.g., rubrics) so that they can make some assessment of the course. Title 5 states that a student who is able to pass a course with a C or better is able to move onto the next course.

Homegrown or Local assessment. This type of assessment is developed and validated for a specific purpose, course, or function and is usually criterion-referenced to promote validity.

Indirect data. Data that measures a variable related to the intended value. For instance a person's math skills may be indirectly measured through an employer’s questionnaire asking about the computational skills of graduating students.

Information competency. The ability to access, analyze, and determine the reliability of information on a given topic.

Institutional Learning Outcomes (ILO/GE Outcomes). These are the knowledge, skills, and abilities a student is expected to leave an institution with as a result of a student’s total experience. Because GE Outcomes represent a common core of outcomes for the majority of students transferring or receiving degrees, some but not all, institutions equate these with ILO’s. ILOs may differ from GE SLOs in that institutional outcomes may include outcomes relating to institutional effectiveness (degrees, transfers, productivity) in addition to learning outcomes.

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Knowledge. Particular areas of disciplinary or professional content that students can recall, relate, and appropriately deploy.

Learning. Particular levels of knowledge, skills, and abilities that a student has attained at the end of engagement in a particular set of collegiate experiences.

Learning Outcomes, competencies, abilities. Learning outcomes are defined in higher education assessment practice as something that happens to an individual student as a result of attendance at a higher education institution. A Learning Outcome is a statement of what a student should understand and be able to do as a result of what he or she has learned in a course or program.

Likert scale. The Likert scale assigns a numerical value to responses in order to quantify subjective data. The responses are usually along a continuum such as - responses of strongly disagree, disagree, agree, or strongly agree- and are assigned values of such as 1-4.

Metacognition. Metacognition is the act of thinking about one's own thinking and regulating one's own learning. It involves critical analysis of how decisions are made and vital material is consciously learned and acted upon.

Means of Assessment. The means of assessment refers to the instrument used to assess student learning as well as when how the instrument will be administered. The following is an illustration: "The Chinese Faculty and the Institutional Research Office collaboratively developed a rubric to assess basic conversation strategies in Chinese. The rubric will be used by instructors to evaluate students in Elementary Mandarin Chinese during an oral interview in the Spring 2009 semester."

Norm-referenced assessment. In norm-referenced assessment an individual's performance is compared to another individual. Individuals are commonly ranked to determine a median or average. This technique addresses overall mastery, but provides little detail about specific skills. This can also be used to track an individual's own improvement over time in a pre-post assessment.

Objectives. Objectives refer to the specific or discrete course content that students need to meet in order to pass the class. Objectives usually relate to lower level skills in the Bloom's taxonomy of learning. Objectives are usually more numerous and create a framework for the overarching Student Learning Outcomes which address synthesizing, evaluating and analyzing many of the objectives.

Pedagogy - Pedagogy is the art and science of how something is taught and how students learn it. Pedagogy includes how the teaching occurs, the approach to teaching and learning, the way the content is delivered and what the students learn as a result of the process. In some cases pedagogy is applied to children and andragogy to adults; but pedagogy is commonly used in reference to any aspect of teaching and learning in any classroom.

Primary Trait Analysis (PTA) is the process of identifying major traits or characteristics that are expected in student work. After the primary traits are identified, specific criteria with performance standards, are defined for each trait.

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Program. In Title 5, “Program” is defined as a cohesive set of courses that result in a certificate or degree. However, in Program Review, colleges often define programs to include the specific disciplines within the General Education pattern. It can include student services and administrative units, as well. When assessing outcomes, at a minimum, programs that meet the Title 5 definition must be included. However, how colleges strategize about their learning outcomes might include the larger definition of “program.”

Qualitative data. Data collected as descriptive information, such as a narrative or portfolio. These data often collected in open-ended questions, feedback surveys, or summary reports, are more difficult to compare, reproduce, and generalize. It is bulky to store and to report, however, it is often extremely valuable and insightful data, often providing potential solutions or modifications in the form of feedback.

Quantitative data. Data collected as numerical or statistical values. These data use actual numbers (scores, rates, etc) to express quantities of a variable. Qualitative data, such as opinions, can be displayed as numerical data by using Likert scaled responses which assign a numerical value to each response (e.g. 4 = strongly agree to 1 = strongly disagree). This data is easy to store and manage; it can be generalized and reproduced, but has limited value due to the rigidity of the responses and must be carefully constructed to be valid.

Reliability. Reliability refers to the reproducibility of results over time or a measure of the consistency when an assessment tool is used multiple times. In other words, if the same person took the test five times, the data should be consistent. This refers not only to reproducible results from the same participant, but also to repeated scoring by the same or multiple evaluators. This does not mean that statistical tests for reliability are necessary in the learning outcomes process, but indicates that the assessment is a consistent tool for testing the student’s knowledge, skills or ability.

Rubric. A rubric is a set of criteria used to determine scoring for an assignment, performance, or product. Rubrics may be holistic providing general guidance or analytical assigning specific scoring point values. A rubric often improves the consistency and accuracy of subjective assessments. A rubric can be a set of criteria specifying the characteristics of a learning outcome and the levels of achievement in each characteristic.

Sampling. Sampling is a research method that selects units such as certain groups of students from a specific population of students being studied, so that by examining the sample, the results can be generalized to the population from which they were selected when everyone in the population has an equal chance of being selected (i.e. random).

Skills. The learned capacity to do something.

Standardized assessment. Assessments created, tested, validated, and usually sold by an educational testing company e.g. GRE’s, SAT, ACT, ACCUPLACER for broad public usage and data comparison, usually scored normatively.

Student Learning Outcomes (SLO). Student learning outcomes are the specific measurable goals and results that are expected subsequent to a learning experience. These outcomes may involve knowledge

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(cognitive), skills (behavioral), or attitudes (affective) that provide evidence that learning has occurred as a result of a specified course, program activity, or process. A Student Learning Outcome refers to an overarching goal for a course, program, degree or certificate, Student Services area or the library, one that asks students to synthesize many discrete skills using higher level thinking skills and to produce something that asks them to apply what they've learned. SLOs usually encompass a gathering together of smaller discrete objectives through analysis, evaluation and synthesis into more sophisticated skills and abilities.

Summative assessment. A summative assessment is a final determination of knowledge, skills, and abilities. This could be exemplified by exit or licensing exams, senior recitals, or any final evaluation which is not created to provide feedback for improvement, but is used for final judgments. Some midterm exams may fit in this category if it is the last time the student has an opportunity to be evaluated on specific material.

Validity. An indication that an assessment method accurately measures what it is designed to measure with limited effect from extraneous data or variables. To some extent this must also relate to the integrity of inferences made from the data.

Content Validity. Validity indicates that the assessment is consistent with the outcome and measures the content we have set out to measure. For instance, you go to take your driver's license exam, the test does not have questions about validity.

ⁱ Grant Wiggins, Grant (1990). The case for authentic assessment. *Practical Assessment, Research & Evaluation*, 2(2). Retrieved February 16, 2004 from <http://PAREonline.net/getvn.asp?v=2&n=2> . Copyright 1990, PAREonline.net.

ⁱⁱ Bloom B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.

ⁱⁱⁱ ACCJC. 2008. Characteristics of Evidence. Guide to Evaluating Institutions. Page 10. Author: Novato, CA.