Appendix I. Glossary

Affective Outcomes: Affective outcomes relate to the development of values, attitudes and behaviors.

Alignment: Alignment is the process of analyzing how explicit criteria line up or build upon one another within a particular learning pathway. When dealing with outcomes and assessment, it is important to determine that course outcomes align or match up with program outcomes; that institutional outcomes align with the college mission and vision. In student services, alignment of services includes things like aligning financial aid deadlines and instructional calendars.

Artifact: An assessment artifact is a student-produced product or performance used as evidence for assessment. An artifact in student services might be a realistic and achievable student educational plan (SEP).

Assessment Cycle: The assessment cycle refers to the process called closing the loop and is figuratively represented below.

1. Develop or modify Student Learning Outcomes SLOs
2. Design and Measure Student Learning as a result of the Curriculum, Course or Program
3. Collect, discuss, and analyze data.
4. Develop, modify, or review a curriculum, course, program, or service
5. Repeat

Assessment of Learning: Learning assessment refers to a process where methods are used to generate and collect data for evaluation of courses and programs to improve educational quality and student learning. This term refers to any method used to gather evidence and evaluate quality and may include both quantitative and qualitative data in instruction or student services.

Assessment for Accountability: The primary drivers of assessment for accountability are external, such as legislators or the public, and usually entail indirect or secondary data. Application of accountability data for educational improvement requires careful analysis of the alignment of the data and the ramifications of the actions.

Assessment for Placement: Assessment for placement is the process of gathering information about individual students, such as a standardized test or process to determine a student's skill level, in order to place the student in a course sequence, such as Math, English, ESL, or Reading to facilitate student success. This process involves the validation of the content of the standardized test by the appropriate faculty content experts and analysis of the cut scores to determine the effectiveness of the placement and the development of multiple measures. Title 5 §55502 defines assessment for placement and the requirements for this kind of assessment.

Authentic Assessment: Traditional assessment sometimes relies on indirect or proxy items such as multiple choice questions focusing on content or facts. In contrast, authentic assessment simulates a real world experience by evaluating the student's ability to apply critical thinking and knowledge or to perform tasks that may approximate those found in the work place or other venues outside of the classroom setting.

Bloom's Taxonomy: Bloom's Taxonomy is an example of one of several classification methodologies used to describe 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.

Classroom assessment techniques: Classroom assessment techniques (CATs) are "simple tools for collecting data on student learning in order to improve it." 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 classroom, in contrast to institutional assessment that looks across courses and classrooms at student populations.

Closing the Loop: Closing the loop refers to the use of assessment results to improve student learning through collegial dialog informed by the results of student service or instructional 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.

Competencies: See Student Learning Outcomes.

Continuous Improvement: Continuous improvement reflects an on-going, cyclical process to identify evidence and implement incremental changes to improve student learning.

Core Competencies: Core competencies are 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 regarding core competencies speak to the intended results of student learning experiences across courses, programs, and degrees. Core competencies describe critical, measurable life abilities and provide unifying, overarching purpose for a broad spectrum of individual learning experiences. Descriptions of core competencies should include dialog about instructional and student service competencies. See also Institutional Learning Outcomes.

Course Assessment: This assessment evaluates 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 the ultimate goal towards improving learning and pedagogical practice.

Criterion-based assessments: Criterion-based assessment evaluates or scores student learning or performance based on explicit criteria developed by student services or instruction which measures proficiency at a specific point in time.

Culture of evidence: The phrase "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. A culture of evidence is characterized by the generation, analysis and valuing of quantitative and qualitative data in decision making.

Direct data: Direct data provide evidence of student knowledge, skills, or attitudes for the specific domain in question and actually measuring student learning, not perceptions of learning or secondary evidence of learning, such as a degree or certificate. For instance, a math test directly measures a student's proficiency in math. In contrast, an employer's report about student abilities in math or a report on the number of math degrees awarded would be indirect data.

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 and assessment instruments (i.e., common test questions, CATs, projects or writing assignments). Specific questions can be embedded on exams in classes across courses, departments, programs, or the institution. Embedded assessment can provide formative information for pedagogical improvement and student learning needs.

Evidence: Evidence is artifacts or objects produced that demonstrate and support conclusions, including data, portfolios showing growth, 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."

Evidence of program and institutional performance: Program or institutional evidence includes quantitative or qualitative, direct or indirect data that provide information concerning the extent to which an institution meets the goals it has established and publicized to its stakeholders.

Formative assessment: Formative assessment is a diagnostic tool implemented during the instructional process that generates useful feedback for student 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. Some colleges refer to these as core competencies, while others consider general education a program.

Grades: Grades are the faculty evaluation of a student's performance in a class as a whole. grades represent an overall assessment of student class work, which sometimes involves factors unrelated to specific outcomes or student knowledge, values or abilities. For this reason equating grades to SLO assessment must be done carefully. Successful course completion is indicated by a C or better in California Community College data, such as that reported in the Accountability Report for Community Colleges (ARCC).

Homegrown or Local assessment: This type of assessment is developed and validated by a local college for a specific purpose, course, or function and is usually criterion-referenced to promote validity. This is in contrast to standardized state or nationally developed assessment. in student services homegrown student satisfaction surveys can be used to gain local evidence, in contrast to commercially developed surveys which provide national comparability.

Indirect data: Indirect data are sometimes called secondary data because they indirectly measure student performance. For instance, certificate or degree completion data provide indirect evidence of student learning but do not directly indicate what a student actually learned.

Information competency: Information competency reflects the ability to access, analyze, and determine the validity of information on a given topic, including the use of information technologies to access information.

Institutional Learning Outcomes (ILOs): Institutional Learning Outcomes 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 ILOs. 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. Descriptions of ILOs should include dialog about instructional and student service outcomes.

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 such as 1 to 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.

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 to an expected level of competency, but provides little detail about specific skills.

Objectives: Objectives are small steps that lead toward a goal, for instance the discrete course content that faculty cover within a discipline. 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, how 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): Primary trait analysis is the process of identifying major characteristics that are expected in student work. After the primary traits are identified, specific criteria with performance standards are defined for each trait. This process is often used in the development of rubrics. PTA is a way to evaluate and provide reliable feedback on important components of student work thereby providing more information than a single, holistic grade.

Program: In Title 5 §55000(g), a "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 specific disciplines. A program may refer to student service programs and administrative units, as well.

Program Learning Outcomes (SLOs): Program learning outcomes (PLOs) are the specific observable or measurable results that are expected subsequent to a learning experience. These outcomes may involve knowledge (cognitive), skills (behavioral), or attitudes (affective) that provide evidence that learning has occurred as a result of a specified sequence of courses, program activity, or process. A PLO refers to an overarching outcome attained upon completion of a program, degree or certificate.

Qualitative data: Qualitative data are descriptive information, such as narratives or portfolios. These data are often collected using open-ended questions, feedback surveys, or summary reports, and may be difficult to compare, reproduce, and generalize. Qualitative data provide depth and can be time and labor intensive. nonetheless, qualitative data often pinpoint areas for interventions and potential solutions which are not evident in quantitative data.

Quantitative data: Quantitative data are 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). These data are easy to store and manage providing a breadth of information. Quantitative data can be generalized and reproduced, but 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 scores should be similar. This refers not only to reproducible results from the same participant, but also to repeated scoring by the same or multiple evaluators. While the student learning outcomes process should be reliable, it does not suggest statistical reliability analysis for every item and aspect of classroom and program assessment, but rather indicates that assessments should be a consistent tool for testing the student's knowledge, skills or ability.

Rigor: California community college faculty use the term rigor relating to courses in the context of Title 5 §55002, such as referring to course standards of grading policies, units, intensity, prerequisites level, etc. Researchers often refer to rigor as statistical rigor or compliance with good statistical practices.

Rubric: A rubric is a set of criteria used to determine scoring for an assignment, performance, or product. rubrics may be holistic, not based upon strict numerical values which provide general guidance. Other rubrics are analytical, assigning specific scoring point values for each criterion often as a matrix of primary traits on one axis and rating scales of performance on the other axis. A rubric can improve the consistency and accuracy of assessments conducted across multiple settings.

Sampling: Sampling is a research method that selects representative units such as 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). Sampling is especially important when dealing with student service data.

Standardized assessment: Standardized assessments are those created, tested, validated, and usually sold by an educational testing company (e.g., GRE, SAT, ACT, ACCUPLACER) for broad public usage and data comparison, usually scored normatively. There are numerous standardized assessment instruments available for student service programs which provide national comparisons.

Student Learning Outcomes (SLOs): Student learning outcomes (SLOs) are the specific observable or measurable results that are expected subsequent to a learning experience. These outcomes may involve knowledge (cognitive), skills (behavioral), or attitudes (affective) that provide evidence that learning has occurred as a result of a specified course, program activity, or process. An SLO may refer to an overarching outcome for a course, program, degree or certificate, or student services area (such as the library). SLOs describe a student's ability to synthesize many discreet 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 (see definition on previous page) 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, capstone projects or any final evaluation which is not created to provide feedback for improvement, but is used for final judgments.

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 how to make sushi.

Variable: A variable is a discrete factor that affects an outcome.