COLLEGE OF THE CANYONS
Student Learning Outcomes

Student Learning Outcomes Faculty Manual

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By

Committee for Assessing Student Learning
(CASL)

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The Student Learning Outcomes Background and Assessment Mandate

While Student Learning Outcomes (SLOs) are an accreditation requirement, the Academic Senate for California Community Colleges (ASCCC) notes that assessment of SLOs is a curricular activity that can be productive for faculty who engage in SLO development and assessment by acquiring evidence to base the collegial review of their programs and the improvement and enhancement of student learning. Further, the use of assessment data can empower faculty voice in planning and in budgeting discussions. (*Guiding Principles for SLO Assessment*, Fall 2010).

The Western Association of Schools and Colleges (WASC), the accreditation agency for California Community Colleges, requires student learning outcomes assessment as part of the accrediting process.

> WASC 2002, Standard H: Section A.1.c., specifically requires community colleges to:
>
> 1. Identify student learning outcomes for courses, programs, degrees, and certificates;
> 2. Assess progress toward achievement of the identified student learning outcomes;
> 3. Use assessment results to make improvements.

Specifically, the Accrediting Commission for Community and Junior Colleges (ACCJC), the accreditation agency for California Community Colleges, requires student learning outcomes assessment as part of the accrediting process.

In Standard II: Student Learning Programs and Support Services, Section A.3. (2014) requires that:

> The institution identifies and regularly assesses learning outcomes for courses, programs, certificates and degrees using established institutional procedures. The institution has officially approved and current course outlines that include student learning outcomes. In every class section students receive a course syllabus that includes learning outcomes from the institution's officially approved course outline. (*ACCJC Accreditation Standards*, 2014)

Definition of Student Learning Outcomes (SLOs)

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. (*Guiding Principles for SLO Assessment*, Fall 2010).

Both courses and programs have SLOs. Course SLOs should be aligned with the program SLOs for the program that the course belongs to. Courses are aligned with degree or certificate program(s), some with an institutional program, while still others may belong to both a degree and certificate and also an institutional-level program (see Appendix A).

The assessment of student learning outcomes (SLOs) is a curricular activity that can be both beneficial and productive. Faculty who engage in SLO development and assessment can acquire concrete evidence upon which to base the collegial review of their programs and the improvement and enhancement of student learning both in individual classes, across a program, and the college. (*Guiding Principles for SLO Assessment,* Fall 2010).

Benefits to the Faculty, Department, Program, and College of Implementing This Assessment Process

All people involved in higher education care about the results of the instruction they provide to students. For faculty, learning outcomes and assessment are not new ideas. Effective faculty frequently developed ways to evaluate whether students were successful in meeting the outcome from the assessment. This information provides faculty with an avenue to consider how instruction can be improved.

The WASC and ACCJC standards formalize into a concrete process. It asks faculty, department chairs, program directors, and administrators to document the ways in which they are assessing the results of student learning and then use that knowledge to improve the instructional process.

College-wide Responsibility for the Process

The Academic Senate California Community Colleges (ASCCC) recognizes that faculty are in direct contact with student, have the greatest knowledge and deepest understanding of the students' needs and abilities, and have the responsibility for developing and delivering the curriculum and course content, and therefore faculty can better understand the context of the assessment results data. For this reason, faculty must take the primary role in all levels and aspects of SLO assessment. (*Guiding Principles for SLO Assessment*, Fall 2010).

Committee for Assessing Student Learning (CASL), an Academic Senate Committee, guides, supports, and facilitates faculty and staff implementation of the outcome and assessment process at course, program, and institutional levels.

At the course and program level, departments are responsible for identifying SLOs, assessing the results, and making decisions about what actions to take once the results have been analyzed (i.e. loop closing). Departments should decide if the best way to assess outcomes is through shared assessment tools or coordination of different assessment tools.

Departments are aided in this process through two channels: the course outline approval process in Curriculum Committee and the Academic Program Review. When a proposal for a new course or program or for modification of an existing course or program comes before the Curriculum Committee, members will assist faculty in reviewing the SLOs and the proposed assessment tools. During Program Review, departments will reflect upon the assessment results that were entered into eLumen, and they will describe the changes called for by their analysis of the data. Specifically, programs and departments will reflect: How is the department/program using and incorporating results (data) from assessments in decision making/planning? Give examples of how you have used results to improve program quality or to meet other internal or external demands.

At the institutional level, in May 2016 the Academic Senate adopted nine of the AAC&U Leap Outcomes as the Institutional Student Learning Outcomes (ISOLs). The Institutional Learning Outcomes can be found on the CASL website at https://www.canyons.edu/administration/committees/casl/learningoutcomes/. All courses are mapped to the ISLOs. Prior to 2016, ISLOs were aligned with the general education requirements for an Associate's degree and interdisciplinary groups developed assessment plans aligned with course and program SLOs.

Faculty-Led

In their broadest senses, neither student learning outcomes nor the concepts of assessment are new ideas for faculty. Effective teachers have long determined in advance what specific skills or knowledge they want their students to obtain from their courses and have designed their instruction and evaluation to measure these outcomes. (*Guiding Principles for SLO Assessment*, Fall 2010). In a general sense, and at an individual level, engaged teachers have always developed and assessed student learning outcomes, regardless of the terminology used to identify these processes and outcomes.

Faculty must take the primary role in all levels and aspects of SLO assessment because they are in direct contact with students, have the greatest knowledge and deepest understanding of the students' needs and abilities, and have the responsibility for developing and delivering curriculum and course content. Faculty engagement is needed in all areas including designing assessment processes, selecting data recording instruments, and analyzing or interpreting assessment results and directing subsequent academic decisions. (*Guiding Principles for SLO Assessment*, Fall 2010).

Of course, faculty will be more likely to invest their energy and passion into assessment processes if the college will provide resources and support ideas for curricular enrichment and innovation that arise from assessment activities.

SLOs and Planning

The ASCCC acknowledges that SLOs and SLO assessment should be connected to the overall culture of the college through mission, program review process, college curriculum, planning, and budget processes. (*Guiding Principles for SLO Assessment*, Fall 2010).

In their broadest senses, neither student learning outcomes nor the concept of assessment are new ideas for faculty. Effective teachers have long determined in advance what specific skills or knowledge they want their students to obtain from their courses and have designed their instruction and evaluation to measure these outcomes.

SLOs assessment is connected to program review. Assessment activities will be more meaningful if they are used to inform the college's evaluation and discussion of program success and needs. Broadly, SLO assessment connects logically and meaningfully to college planning. SLO data can serve as a basis for setting goals, developing strategies, and allocating resources.

The job of SLO development and assessment is never complete. SLOs are not fixed or unchangeable. For SLO data to be effective in informing decision-making at all levels of the college, the SLO assessment process should revised as necessary to reflect the changes in the college's curriculum, needs, and culture. (*Guiding Principles for SLO Assessment*, Fall 2010).

Developing Student Learning Outcomes

Student learning outcomes do not represent a completely new direction in teaching and learning but rather a continuation of a trend that began with learning objectives.

That change was from a primary focus on the subject matter or body of knowledge to a concentration on the skills or application derived from the teaching of the subject matter. Verbs from Bloom's Taxonomy emphasizing what students would be able to do or know after the learning process was complete replaced the rather vague verbs comprehend and learn. Learning objectives had to be measurable tasks or skills. The purpose was to redirect the energies of the teaching and learning process towards its effects on the students. This makes education more responsive to the needs of students and to the sectors of society that depend upon the successful results of higher education.

Student learning outcomes are like learning objectives in their focus on the measurable results of student learning. They differ in scope, however. The main difference between student learning outcomes and learning objectives is that learning objectives are discrete, individual tasks or skills that must be accomplished before the larger, broader goals of the course can be achieved. The overarching goals of the course, however, are the student learning outcomes.

While many courses in the past had 15 or more learning objectives (some science courses have over a hundred), student learning outcomes organize these skills into broader outcomes.

Because student learning outcomes need to be assessed in a more organized, concrete way than the learning objectives, and because student learning outcomes are broader than learning objectives, it makes sense for a course to have a limited number of student learning outcomes. Ideally, each course should have between one and three SLOs and between two and six for lecture/lab courses. Incorporating SLOs into curriculum should be done with the least disruption possible to the students' educational experience and the faculty's preparation and delivery of the curriculum.

Whatever assessment is chosen, it should not intrude on faculty's academic freedom. Overall guidance in terms of assessment processes and appropriate methods agreed upon by faculty can serve as a tool for faculty as they plan and design their instruction according to their own individual pedagogical preferences or philosophies. For SLO assessment to be most effective, faculty must be allowed the freedom to develop and employ the assessment methods that work best in any given situation. (*Guiding Principles for SLO Assessment*, Fall 2010).

Accreditation standards require colleges to collect data on the success of students meeting those overarching goals. Colleges are then charged with analyzing the data and making changes that will result in more effective student learning.

If you have questions as you are revising student learning outcomes for your courses or programs, please contact your school's representatives on the curriculum and/or Committee on Assessment & Student Learning (CASL), SLO Coordinator(s), and the SLO Technician.

Assessing Student Learning Outcomes

Setting goals for courses and programs is not a new idea to faculty; it is an integral part of teaching. A ssessing student learning also is not a new concept; teachers know that they have to give grades, and to do that they have to assess students.

In the day-to-day flurry of teaching, however, it is possible for the connection between a teacher's goals and the assessment of student learning to lose some clarity.

Assessment is a systematic and intentional process during which faculty:

> Articulate what the program intends to accomplish in regard to its services, research, student learning, and faculty/staff development programs. The faculty and/or professionals then purposefully plan the program so that the intended results (e.g. outcomes) can be achieved; implement methods to systemically – over time – identify whether end results have been achieved; and finally, use the results to plan improvements or make recommendations for policy consideration, recruitment, retention, resource reallocation, or new resource requests. This systematic process of evaluation is then repeated later to determine whether the program improvements contribute to the intended outcomes. (Bresciani, M.J. (2006) *Outcomes-Based Academic and Co-Curricular Program Review*.)

The ACCJC accreditation standard that launched SLOs does not micromanage the assessment process. Instead, it leaves to faculty the decisions that will determine how useful the assessment process will be in improving teaching and learning. In other words, faculty members decide how they will assess the SLOs.

Any tool that measures the degree to which students have met a learning outcome qualifies as assessment. Such tools include skills performances or demonstrations, Pebble Pad ePortfolios, productions (essay, oral presentation, visual artifact, speech), surveys, quizzes, and tests. Most outcomes can be measured in a variety of ways. See Appendix C for descriptions of various types of assessment tools and their uses.

In order to organize the assessment process, it is helpful to have a written plan (called an assessment plan) for how and when each SLO will be assessed. When developing an assessment plan, it is best to involve as many relevant faculty as possible, including full-time and part-time faculty. For assessment plan forms and sample assessment plans, please see Appendix D.

SLOs assessment v. Grades

It is also important to differentiate between SLO assessment and grading. While the skills needed to attain the student learning outcome(s) for a course can and should inform the grade a student receives in a course, there are often more factors involved in a student's grade than skill achievement. Often, missing or inconsistent work over the course of a term can significantly impact a student's grade, even if he or she has met the SLO for a course.

A student's final grade in a course should not alone be the SLO assessment measure. Instead, an assignment in the course that effectively measures the achievement of the SLO should be the assessment tool. Rather than using a student's grade on that assignment as the measure of success, criteria should be developed (either through a rubric or through setting a raw score as the threshold) for successfully meeting the SLO.

Grading implies a process of assigning a numeric score or letter grade to student work. The grade itself generally offers no explanation or analysis, and thus grades may not necessarily help students become aware of what they may need to do to improve their work. On the other hand, while grading and outcomes assessment are separate and different processes, they do not conflict with each other and both are necessary. Thus, grading and assessment both serve important though roles and, rather than conflicting, should work in concert to provide the different levels of input necessary for complete and effective student evaluation. (*Guiding Principles for SLO Assessment*, Fall 2010).

Developing or Reviewing Viability of CSLOs

Here are some steps that will help you evaluate (or create) CLSOs before creating an assessment plan for a course:

First, check your SLOs:

- **How many are there?** If there are more than three (or six for lecture and lab courses), they likely are not true SLOs – verify that they are not objectives that were moved to the SLO curriculum area. You should revise them into SLOs before creating an assessment plan.
- **Are the SLOs overarching ("big picture" learning for the course) or are they smaller objectives (things learned in just one chapter, for instance)?** If they are not overarching, you should revise the SLOs before creating an assessment plan.
- I**s the student learning described in the SLO observable and measurable?** If not, you should revise the SLOs to make them observable and measurable before creating an assessment plan.
- **Are they related to the course outline of record and the course objectives?** If not, the SLO(s), the curriculum content, or objectives should be realigned before assessment.

Next, decide on an appropriate assessment tool.

Consider:

- **What is the SLO asking the students to do?**
  - o Identify a fact?
  - o Perform a skill?
  - o Analyze a complex phenomenon?
  - o Solve a problem?
  - o Explain a concept?
  - o Create a learning product?
  - o Prepare a performance?
  - o Apply skills or knowledge to real-world situations?
  - o Evaluate options and select appropriate resources or tools?
- **What types of assignments or activities will allow students to demonstrate the SLO (see Appendix C for more information about choosing an assessment tool)?**
  - o What tool will you select?
    - Essay exams?
    - Out-of-class formal essays?
    - Skill demonstrations?
    - Surveys?
    - Pebble Pad ePortfolios?
    - Performances?
    - Oral Presentations?
- **What criteria will you use to measure success or failure to meet the SLO?**

- Rubric (see Appendix E for tips on how to develop a rubric)?
- Raw score?

- **What are the expected results? This requires answering two questions.**
  - What is success or failure for the assessment?
    - **What percentage of students do you expect to successfully meet the SLO**

Developing Assessment Plans for CSLOs

Here are some steps that will help you develop an assessment plan for a course:

Decide how and when you will do the assessment:

- **How often will you assess this course?**
  - Will it be on a three-year cycle or shorter? The Academic Senate recommends assessment of CSLOs at least once every three years.
  - For smaller programs, do you need to assess and collect the data over multiple semesters to obtain the necessary 45 data points needed to disaggregate the results?
  - Are there similar courses that could be grouped together for assessment?
  - Which semester will you begin assessing this course?
  - If you make changes, when will you reassess to evaluate the effects?
- **What do you need to do to prepare?**
  - Do you need to set up meetings for faculty teaching the course?
  - Do you need to create a departmental test or rubric?
  - How will you distribute materials?
  - Do you need any additional resources or training?

Think about how and when you will share the assessment results and use the results in decision-making about the course and/or program ("closing the loop"):

- **What needs to be done to gather and present the data?**
  - Do you need help compiling data from eLumen?
  - What format will you use to share the data? PowerPoint? Handouts? Other?

When will be a meaningful time for your department to reflect on the results? (FLEX credit is available for all faculty in discussing the results and creating action plans. See the Faculty Professional Development Committee Preapproved Professional Development Activities for more details.).

- Department retreats?
- Department meetings?
- Other?

Developing and Reviewing Viability of PSLOs

In addition to assessing the SLOs for courses, departments are also responsible for assessing the programs within that department. All degrees and certificates have PSLOs as part of their curriculum.

In order to develop an assessment plan for instructional programs within your department, follow these steps (for how to create an assessment plan for a non-instructional program, please see Appendix F):

Step 1: Decide how many programs your department has.

Title 5 defines a program as "an organized sequence of courses leading to a defined objective, a degree, a certificate, a diploma, a license, or transfer to another institution of higher education."

- Programs can be defined as "student pathways" (Pathways are currently under development. Consult with the pathway coordinators for current information).
- Programs are often organized by academic disciplines and departments, but not always
- Many departments may have multiple programs – the number will vary by the number of degrees and certificates and also by student pathways through the department's offerings
- Some departments may not have a program solely contained within the department – they may, instead, be part of the GE program and/or one of the Liberal Arts degrees

Some questions to ask:

- ***Does my department have any degrees and certificates?*** If yes, each degree and certificate is a program, and each one must have one or more program SLOs. The program SLO is included in the degree or certificate curriculum.
- ***Why do students take the courses in my department?***
  - If students take a series of courses in preparation for another program (for example, biology as pre-nursing preparation), that cluster of courses could be defined as a program.
  - If students take a sequence or concentration of courses in your department as preparation for a major they will declare after transfer, that cluster of courses could be defined as a program.

Step 2: Consider the purpose/goals of each program.

When trying to write a program SLO, it is often helpful to review a mission statement for the program within the Academic Program Review.

- Program mission statements may or may not be different from the mission statement for your department. A department with a single program may have the same mission statement for department and program, while a department with multiple programs will likely have a broader department mission statement and more specific program mission statements.
- A mission statement will often begin with the program in question, then make a statement about what that program does or provides, and to whom or for whom it is provided.

You also might ask yourself questions:

- *What will a student who completes this program be able to do?*
- *What concepts or skills run throughout all (or many) of your program's courses?*
- *What skills or knowledge will students who complete the program have?*
- *What will students gain from completing this program?*

Step 3: If creating for the first time or evaluating current PSLOs, decide how many SLOs your program needs.

Some programs may only need one SLO

- Some programs consist of courses that all develop a single skill through various topics (for example, literary analysis is a single skill developed through practice with multiple literary traditions and genres)
- Some programs have a capstone course that ties together elements from all of the other courses – in this case, the capstone course SLO(s) can also be the program SLO(s) (for example, a career education capstone course that integrates concepts from previous courses and provides students the opportunity to perfect them in a portfolio)

Other programs may need several SLOs

- Some programs' courses may develop two or more "strands" of knowledge or skills within the pro- gram (for example, a psychology program may include courses that fall into biological and social psychology or a modern language program may have goals in both linguistic and cultural competence)
- Some programs may have a split focus between content knowledge or theory and the application of that knowledge (for example, a science program that has lecture and lab components or a CE program that focuses on both content area and workplace (or "soft") skills)

Step 4: Editing or creating PSLOs.

Writing PSLOs is very similar to writing CSLOs. Keep the SLOs focused on the students (what will the student be able to do?) as opposed to the teacher (what will be taught?)

- Use critical thinking verbs (use the Bloom's Taxonomy chart – see Appendix G)
- Avoid verbs that are not readily observable (such as "understand" or "know" or "feel")

Step 5: Double-check your SLO with assessment in mind.

Make sure that the program SLO is something that is readily observable and measurable – in other words, build in assessment from the beginning. Do not create a program SLO that you cannot envision a way to ob- serve or evaluate or that requires data that you will not be able to access.

Here are some steps that will help you develop an assessment plan for a course:

Decide how and when you will do the assessment:

- **How often will you assess this program?**
  - Will it be on a three-year cycle or shorter? The Academic Senate recommends assessment of PSLOs at least once every three years.
  - Will all CSLOs be assessed before the PSLO assessment?
  - Which semester will you begin assessing this program or the courses that are included in the program?
  - If you make changes, when will you reassess to evaluate the effects?
- **What do you need to do to prepare?**
  - Do you need to set up meetings for faculty teaching the courses?
  - Do you need to create a departmental test or rubric?
  - How will you distribute materials?
  - Do you need any additional resources or training?

Think about how and when you will share the assessment results and use the results in decision-making about the course and/or program ("closing the loop"):

- **What needs to be done to gather and present the data?**
  - Do you need help compiling data from eLumen?
  - What format will you use to share the data? PowerPoint? Handouts? Other?
- **When will be a meaningful time for your department to reflect on the results? (FLEX credit is available for all faculty in discussing the results and creating action plans. See the Faculty Professional Development Committee Preapproved Professional Development Activities for more details.).**
  - Department retreats?
  - Department meetings?
  - Other?

For answers to Frequently Asked Questions about program SLO assessment, please see Appendix H.

Developing and Assessing ISLOs

Institutional SLOs have undergone transformation in the past decade. In 2008, the college created ISLOs that aligned with the General Education requirements. After analyzing the results for the ISLOs and discussions with faculty, CASL recommended the Academic Senate revise the ISLOs to align with American Association of Colleges & Universities' (AAC&U) Liberal Education and America's Promise (LEAP) Outcomes focused on authentic assessments, high impact practices, and essential outcomes. Over a two year period, faculty representing a variety of disciplines reviewed, analyzed, and evaluated the LEAP outcomes and decided to adopt the following nine:

- Collaboration
- Community Engagement
- Creative and Innovative Thinking
- Critical Thinking
- Effective Communication Oral
- Effective Communication Written
- Global Responsibility
- Information Literacy
- Qualitative Literacy

The ISLOs encompass the LEAP essential outcomes where students can prepare for both developing responsible citizenship and engaging in a global economy. AAC&U developed the essential outcomes through a multiyear dialogue with hundreds of colleges and universities about needed goals for student learning, analysis of recommendations and report from the business community, and review of the accreditation requirements.

These essential outcomes enable and empower students in a variety of skills and knowledge. Students obtain knowledge of human cultures and the physical and natural world focused by engagement with big questions, both contemporary and enduring. Students also obtain intellectual and practical skills through practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance. Students acquire personal and social responsibility anchored through active involvement with diverse communities and real-world challenges. Finally, students apply integrative and applied learning demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.

Each course has been aligned with the ISLOs. From 2019 to 2021, all of the ISLOs will be assessed.

Scheduling Assessments

In order to organize the assessment process, it is important for each department to create a schedule of assessment to ensure that all courses and programs are assessed on a regular basis. While SLO assessment for courses and programs should be regular, it is not necessary to assess every course and program each semester.

First, consider how many courses and programs your department has. The number of courses and programs will likely affect how often each course or program is assessed. Aim to assess each course at least once every 3 years per guidelines from the Academic Senate. See Appendix J.

Departments may consider grouping like courses together to assess in the same semester using a similar assessment tool. Or, if there are not clusters of like courses, departments may just split the courses evenly, assessing a similar number of courses each semester. Once each course and program has been assessed at least once, a regular cycle of assessments for courses and programs should be developed.

Each department should create a written assessment schedule so that the timelines are clear. For assessment schedule forms and sample assessment schedules, please see Appendix J.

After the assessment plan has been created and at the conclusion of the semester(s) of implementation of the assessment plan, faculty will need to enter their results into eLumen. Having faculty enter the students' outcomes will enable the department to effectively analyze results.

Because results are entered at the student level to enable disaggregation, faculty must enter their results into eLumen. For guidance on entry of students' results, please see the "***How Do I***…." section on the CASL website (https://www.canyons.edu/administration/committees/casl/resources/guides/index.php)

Disaggregation of Results In Standard I: Mission, Academic Quality and Institutional Effectiveness, and Integrity, Section B. 6. (2014) requires that:

> The institution disaggregates and analyzes learning outcomes and achievement for subpopulations of students. When the institution identifies performance gaps, it implements strategies, which may include allocation or reallocation of human, fiscal and other resources, to mitigate those gaps and evaluates the efficacy of those strategies. (*ACCJC Accreditation Standards*, 2014)

CASL has identified 7 subpopulations that faculty can disaggregate results to see if there is a disproportionate impact on some students. Those subpopulations include sex, ethnicity, age, financial aid status, first generation college student; DSPS status, and full time v. part-time status.

For faculty to disaggregate each subpopulation, CASL determined that at least 45 student data points total and at least 10 student data points for a subpopulation to disaggregate the data so that it is meaningful and reliable. Groups with fewer than 10 data points can make it easier to identify individual students and can be misleading (e.g., 10% of 100 = 10 students vs 10% of 10 students = 1). Data from courses with low enrollment, which are offered as single sections, and/or infrequently, may provide very little value to loop closing discussions.

CASL recommends accumulating at least 45 assessment results from those courses in order to compile more data for loop closing discussions.

Faculty Engagement Guidelines Faculty participation in the process is critical to having a rich dialogue about the students' results. Faculty have a myriad of responsibilities and time is limited. Below are suggestions for improving faculty engagement in the assessment process.

Before the Semester of Assessment:

- Inform faculty via email or via an announcement at the final department meeting of the semester that they will be participating in an assessment of a specific SLO the following semester.

- Depending on the assignment faculty will be assessing, they may have to add or edit an assignment from their standard assignments to include the assessment. Therefore, you may ask faculty to carve out some points for the assessment and include mention of the assessment assignment in their syllabus.
- It is helpful to assign some points to the assessment so students will potentially put forth more effort and feel more motivated to complete the assessment to the best of their ability.
- Coordinators/lead faculty/department chairs can come up with a possible approach to the assessment and then ask for faculty feedback and suggestions. Including faculty in this part of the assessment process helps to build rapport and remind them of the assessment.

During FLEX/Professional Development Week:

- Coordinators/lead faculty/department chairs could host an orientation workshop where they discuss the purpose and process of the assessment and get faculty feedback regarding items such as:
    - A common question set (if applicable)
    - A common rubric (if applicable)
    - Language they can include in their syllabus regarding the assessment

During the Semester:

- Choose 1-3 points during the semester to remind faculty of the assessment via email and/or at department meetings.
    - Consider reminding them in the first few weeks of the semester, at the midway point (after spring break possibly), and a week or two before the end of the semester.
- At each point, explain the assessment process – what assignment will be assessed, how the faculty will assess their students' work (example: will faculty use a rubric?), and remind faculty they are required to submit assessment results for each student in each of their classes in eLumen.
- Provide guidance for inputting assessment results (See "Enter Student SLO Scores for Outcomes Orientated Assessments in eLumen") on the "How Do I…? section of the CASL website.
- **Note**: it may seem repetitive or potentially excess to remind faculty of the assessment multiple times throughout the semester, but both adjunct and full-time faculty are very busy and some may feel like they need guidance regarding using eLumen to input their assessment results. Therefore, it helps to communicate frequently with faculty about the process and procedures.
- Contact the SLO Technician with the list of faculty who will be assessing to ensure that they can log in to eLumen.

After the Assessment is Complete:

Individual faculty will need to input results of all students in eLumen. In order to help facilitate the process, you could provide faculty with a screen shot document for how they can input the data. See the "How Do I…?" section of the CASL website.

- Coordinators/lead faculty/department chairs can check in eLumen which faculty have submitted assessment data. They can encourage faculty who have not yet submitted data to enter the information into eLumen.
- Coordinators/lead faculty/department chairs should present the data. One method was to share the data with faculty at the next semester's orientation (held during FLEX week). You can use the data as an entry point into discussing the course curriculum and pedagogy with faculty colleagues.
- FLEX credit is available for all faculty in discussing the results and creating action plans. See the Faculty Professional Development Committee Preapproved Professional Development Activities for more details.

Analyzing Data and Fostering Dialogue

Once an assessment is complete, the next step is to collect and analyze the data. Since the goal of assessment is improvement at the course and program level, not evaluation of individual faculty, assessment data is aggregated in eLumen at the course level, even though faculty enter assessment results at the section level. If there is only one section of a course taught each semester, a department may want to collect several semesters' worth of data before reflection and action planning.

Assessment data should lead to dialogue and affect decision-making for each department. After assessment data is available, departments should discuss improvements to the course and/or program suggested by the assessment data. **It is important to allow enough time for brainstorming and discussion – dialogue and inquiry are the most important parts of the SLO process, so this stage should not be rushed**.

If instructors teaching different sections of the same course choose to share and analyze data together, they might discover that students are preforming more or less successfully on the same outcomes in different sections taught by different faculty members, thus inspiring a collegial exploration of instructional approaches in the areas under consideration. (*Guiding Principles for SLO Assessment*, Fall 2010).

Just as departments should involve as many faculty as possible in planning the assessment (full-time and adjunct), departments should plan time to discuss and analyze the results that will allow for maximum participation.

- Consider using department meeting or retreat time
- Utilize FLEX credit
- Consider online collaboration options
- Communicate through email (or hard copies of handouts in mailboxes) with those not able to

attend As your department considers the assessment data, you might ask yourself questions such as these:

- ***If the number of students meeting the SLO is not consistent with the expected results listed in the assessment plan, why do you think that might be?***
    - Was the expected results number set at an appropriate level?
    - Would a different assessment tool be a better measure of student learning?
    - What resources could the department need to request in Academic Program Review budget process?
    - Should follow-up assessments try to target specific, smaller skills needed to achieve the SLO to help determine where students are having difficulty?
    - What could be changed about the course or program to improve student learning?
    - Should pacing or emphasis within a course or program be adjusted?
    - Should there be changes to student resources or services?
    - Are there additional resources that would help to improve student learning?
- ***If the number meets or exceeds the expected result, what factors do you think contributed to student success in meeting the SLO?***
    - How might these factors be brought to positively impact other courses and programs?
    - Are there relative weaknesses among specific, smaller skills needed to achieve the SLO? If so, how could learning be improved in those areas?
    - Does the department want to consider a different assessment tool the next time the course is assessed to get a different kind of data about student learning?

- Should the expected result be set higher the next time the course is assessed?

- ***Regardless of the results, how will these results inform other decisions for the department?***
  - How do the results of this assessment fit into the larger picture of the program or department?
  - Is there a need for professional development on specific topics?
  - Should budgeting priorities change?
  - Should staffing or other resources be adjusted?
  - Do the results inspire other ideas for improvements?

- ***It may be helpful to have faculty reflect and discuss the questions that will need to be entered into eLumen as part of the loop closing and action plan:***

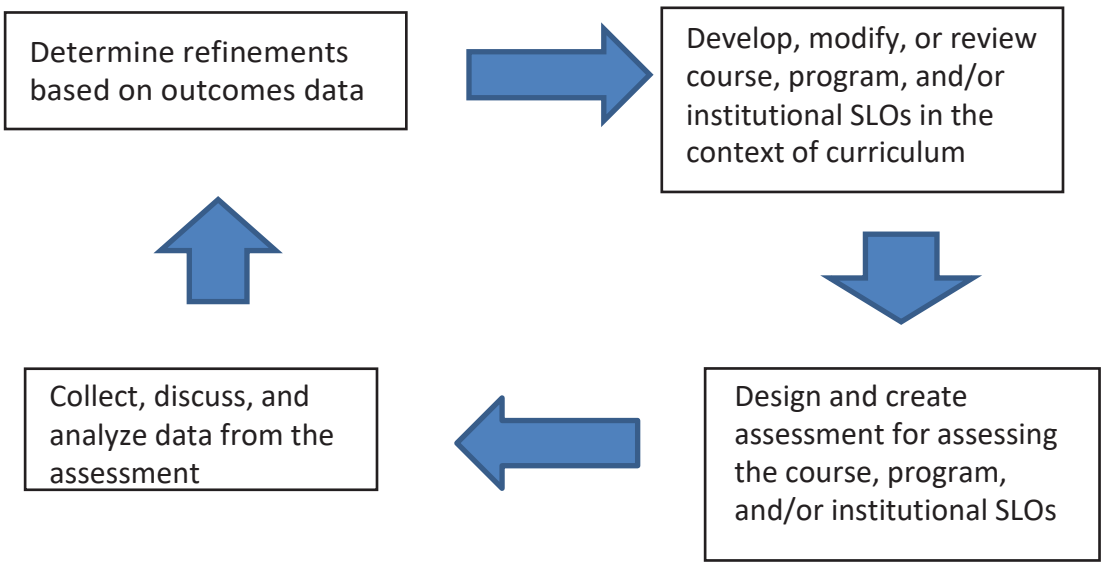
  - Describe the involvement of full time and adjunct faculty members (and students, if applicable) in the loop closing. What did you discern from the discussion with colleagues and students about the assessment results?

  - As a result of the department-wide dialogue concerning analysis of results, please give specific examples of how your department will improve student learning in the next assessment. What do you plan to do? How and when will you implement your plan? Why did you select this particular plan?

  - How does this assessment fit into larger department or campus-wide discussions or practices?

This is how the loop is closed: faculty return to the student learning outcomes and reassess them and the teaching and learning process, making appropriate adjustments based on the specific knowledge of how well students are meeting the outcomes. One of the greatest values of SLO assessment is the collegial discussion it can generate among peers who reflect on data and practices together to improve their instructional programs. If the entire faculty is not engaged in the assessment process, then this value is diminished or lost. (*Guiding Principles for SLO Assessment*, Fall 2010).

Closing the Assessment Loop



Documenting Process:

Departments should document both the assessment results and the analysis stage. The college has purchased eLumen, an online system for both curriculum and SLO assessment documentation. Because it is an integrated system, it will always have the current, approved SLOs and will allow faculty reflections in the SLO cycle.

After faculty enters the assessment results for each student into eLumen, they are presented with three questions to help foster dialogue and analysis when the loop closing occurs. It is important that faculty respond to these questions because depending upon the assessment schedule, there could be a gap of many semester between reporting/entering the assessment results and the loop closing. Some faculty may not be available to participate in loop closing or are no longer teaching at the college, but the reflection answers could still be used by the department.

Prompts for each faculty to complete after entering student data at the section level:

- Please describe your process of administering the assessment. When did you assign the assessment? How did you prepare students to take the assessment? What activities or assignments did your students complete in preparation for the overall assessment?

- Please discuss the assessment results. What surprised you? Where did students demonstrate success in achieving the SLO? Where did students struggle to achieve the SLO?

- Please describe your process for providing feedback to students throughout the semester, prior to the assessment. How often did you provide feedback? What feedback did the students receive leading up to the assessment? What opportunities were given for students to respond to feedback or improve their performance?

Likewise, there are questions to be entered into eLumen that are used to memorialize the department discussions as to course or program SLO loop closing:

- Describe the involvement of full time and adjunct faculty members (and students, if applicable) at phase 2 (analysis phase). What did you discern from the discussion with colleagues and students about the assessment results?

- As a result of the department-wide dialogue concerning analysis of results, please give specific examples of how your department will improve student learning in the next assessment. What do you plan to do? How and when will you implement your plan? Why did you select this particular plan?
- How does this assessment fit into larger department or campus-wide discussions or practices?

<u>SLO and Curricular & Assessment Coordinators</u>

The campus wide SLO coordinators and department/course Curricular and Assessment coordinators can help with analyzing and fostering dialogue as well as assisting those who have responsibility for documenting the progress of SLO assessment in eLumen.

<u>Data Coaches</u>

It is important to remember that the SLO data are a snapshot of the learning that is happening in the classroom. Departments may want to augment the SLO data with other data collected by individual faculty, the department or the College's Institutional Research office. Assistance in triangulating SLO data with other data is available through the College's Institutional Research office and faculty trained and serving as Data Coaches. The Institutional Research office, in partnering with the SLO and Center for Teaching & Learning faculty coordinators, are providing support with analyzing data and brainstorming action steps when there are student groups performing below a referent group (i.e. when there is an equity gap or proportionate impact). If you would like additional data to inform your loop closing process, please contact Dean of Institutional Research, Planning, and Institutional Effectiveness.

Glossary – *by the Academic Senate for California Community Colleges*

The following glossary was developed from existing research and feedback from faculty and researchers from the California community colleges in response to Resolution S08 2.02 that asked the Academic Senate for California Community College to address the confusion in the field by researching and developing a glossary of common terms for student learning outcomes and assessment. The glossary does not dictate terminology nor does it seek to be comprehensive.

Due to the increased collaboration between researchers and faculty, dialog about these terms increases our ability to serve our students and increase student success.

Academic Senate for California Community Colleges (ASCCC). A non-profit organization created for the promotion and advancement of public community college education in California, its general purposes are to strengthen local academic senates and councils of community colleges; to serve as the voice of the faculty of the community colleges in matters of statewide concern; to develop policies and promote the implementation of policies on matters of statewide issues; and to make recommendations on statewide matters affecting the community colleges.

Affective Outcomes. Affective outcomes relate to the development of values, attitudes and behaviors and are often associated with feelings rather than knowledge or skills. These outcomes include learning to accept an idea or concept or learning to appreciate a point of view. This practice is discussed as part of one of the three domains within Bloom's Taxonomy.

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.

Assessment. In education, the term "assessment" refers to the wide variety of methods that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or education needs of students. Assessment efforts provide faculty with the opportunity to look honestly at courses and programs, relevance of course content, self-evaluation of teaching and evaluation methodology, and whether the vision of a course or program is resulting in success of the program. Assessment is the way in which faculty ensure curriculum effectiveness and relevance, and it allows for self-reflection that encouraged enhancement or revision of curriculum when appropriate.

Assessment Cycle. The process of collecting data from assessment, using that data to develop or modify curriculum, and then assessing the new or modified curriculum to collect data for ongoing modification or development. As with any cycle, it has no beginning, and no end. The dynamic nature of curriculum includes matters such as curricular development, measurement of success, and modifications based on assessment leading to modifications of curriculum, assessment, and/or instructional methodologies.

Assessment Artifact. An assessment artifact is a student-produced product or performance used as evidence for assessment.[1] An artifact in student services might be a realistic and achievable student educational plan (SEP).

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. An assessment process conducted not as much for development and evaluation of a program, course, or other area, but more for the purpose of justifying or proving the effectiveness of the area or program being assessed. The primary drivers of assessment for accountability are external, such as

legislators or the public, and the concept usually entails indirect or secondary data. Application of accountability data for education improvement requires careful analysis of the alignment of the data and the ramifications of the actions.

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. [2]

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.[3] (Bloom, 1956)

Calibration (rubrics). The process of ensuring that multiple evaluators of a single rubric are applying that rubric in the same manner. This process is essential to maintaining reliability and validity.

CASL. The CASL Committee's mission is to ensure that the college goes through an ongoing, systematic process that clarifies and improves SLOs at every level from institutional, program, and course through certificates and degrees with specific emphasis on student success. The Committee works with faculty to ensure the methods of assessment of course SLOs and program SLOs are aligned and consistent across the college. CASL reports to the Academic Senate.

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).[4] 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 (Pacheco, 1999)[5]. A culture of evidence is characterized by the generation, analysis and valuing of quantitative and qualitative data in decision making.

Direct Assessment. To 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 in- direct 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."[6]

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.[8]

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.

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 Advisory Council (IAC). Council consisting of department chairs and instructional deans. Meetings occur monthly during the Fall and Spring to discuss matters related to instruction including schedule development, guided pathways implementation, institutional policies and procedures, and other relevant topics.

Institutional Student Learning Outcomes (ISLO). Institutional Student 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. Descriptions of ISLOs should include dialogue about instructional and student service outcomes.

IE2. The Institutional Effectiveness and Inclusive Excellence $(IE)^2$ Committee, a subcommittee of the College Planning Team, is designed to facilitate streamlined processes, improve communication and improve collaboration through its regular, coordination of meetings between student government, academic senate, student equity, S4S (basic skills), non-credit, student success and support program (SSSP), Strong Workforce, and other groups as applicable (e.g., grant funded projects). The $(IE)^2$ committee is dedicated to leveraging resources, both fiscal and human, equity and inclusion as catalysts for institutional effectiveness and student success, which are aligned with the College's institutional mission to be an institution of excellence and its strategic goal for student support to "…provide student support to facilitate equitable student success and maximize opportunity for all students."

Institutional Research, Planning, and Institutional Effectiveness (IRPIE). The mission of the Institutional Research, Planning and Institutional Effectiveness Office at College of the Canyons to provide access to quality data for planning, and to assist departments in using data to inform decision-making processes. The IRPIE office provides access to data for evidence-based planning; assists departments with understanding data; supports the district's planning activities; assists with accreditation needs; and supports grant requirements.

Learning Objectives. Learning 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.

Likert scale. Often used in the social sciences and in educational research. This scale assigns a numerical value to responses in order to quantify subjective data. The responses are usually placed along a continuum, such as responses of strongly disagree, disagree, agree, or strongly agree. Values are also assigned, such as 1 for strongly disagree to 4 for strongly agree.

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.

President's Advisory Council on Budget (PAC-B). The President's Advisory Council Budget (PAC-B) is designed to provide oversight of the development of the budget, encourage understanding of the budget on an ongoing basis and work to ensure that the budget allocation process is driven by campus-wide planning and strategic priorities.

Pedagogy. Defined as the "method and practice of teaching, especially as an academic subject or theoretical concept." It is the art and science of how something is taught and how students learn it. Pedagogy includes how teaching occurs, the approach to teaching and learning, how content is delivered, and what students learn as a

result of the process. Etymologically, "pedagogy" is applied to children and "andragogy" is applied to adult learners, but in modern English usage 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 de- fined 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. An educational program is defined in Title 5§55000(m) and in the Chancellor's Office Program and Course Approval Handbook as "an organized sequence of course leading to a defined objective, a degree, a certificate, a diploma, a license, or transfer to another institution of higher education." [7] However, in program review, colleges often define programs as relating to specific disciplines. A program may refer to student service programs and administrative units as well.

Program Review (PR). The purpose of the Program Review Committee (an Academic Senate subcommittee) is to provide training, advisement and assistance to College of the Canyons faculty and staff to facilitate and improve the program review process. The committee will provide leadership and guidance by reviewing comprehensive program reviews, annual plans, outcomes and assessment cycles, and evaluating the program review planning process.

Qualitative data. Qualitative data are descriptive information, such as narratives or portfolios. Such data is often collected using open-ended questions, feedback surveys, or summary reports, and may be difficult to compare, reproduce, and generalize. Qualitative data, such as opinions, can be displayed as numerical data using Likert scaled responses that assign a numerical value to each response (e.g., 4 = strongly agree to 1 = strongly disagree). These data sets are easy to store and manage and can provide a breadth of information. Qualitative data can provide depth and can be time and labor intensive. Qualitative data is often heuristic in nature and is able to pinpoint areas for interventions and potential solutions which are not evident in quantitative data.

Quantitative data. Consists of numerical or statistical values. Such data uses actual numbers, such as scores or rates, to express quantities of an identified variable. Quantitative data can be generalized and reproduced, but must be carefully constructed, analyzed, and interpreted 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 abilities.

Rigor. Refers to the degree to which a given sent of standards are adhered to in order to make an education experience academically or intellectually challenging. California community college faculty use the term "rigor" relating to courses in the context of Title 5 §55002, such as referring to course standards, grading policies, or intensity. [8] For example, Title 5 §55002(b)(2)(C) states, "In particular, the assignments will be sufficiently rigorous that students successfully completing each course, or sequence of required courses, will have acquired the skills necessary to successfully complete degree-applicable work." 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, instead providing more 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's, 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 (SLO). 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 refers 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.

Triangulation. The collection and study of evidence from multiple sources-including both direct and indirect assessments-to determine student learning outcome achievement.

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 an assessment consistently and effectively measures the content it is intended 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.

[1] Section 55502 of Title 5 contains the following definitions related to assessment:

(b) "assessment" means the process of gathering information about individual students to facilitate student success. Assessment may include, but is not limited to, information regarding the student's study skills, English language proficiency, computational skills, aptitudes, goals, learning skills, career aspirations, academic performance, and need for special services. Assessment involves the collection of such information at any time, before or after enrollment, except that the process of assigning a grade by an instructor shall not be considered part of the assessment process. Once a grade has been assigned and recorded in a student's transcript it can be used in the assessment process.

(c) "assessment instruments, methods or procedures" means one or more assessment instruments, assessment methods, or assessment procedures, or any combination thereof. These include, but are not limited to, interviews, standardized tests, holistic scoring processes, attitude surveys, vocational or career aptitude and interest inventories, high school or college transcripts, specialized certificates or licenses, educational histories and other measures of performance.The term "assessment instruments, methods or procedures" also includes assessment procedures such as the identification of test scores which measure particular skill levels, the administrative process by which students are referred for assessment, the manner in which assessment sessions are conducted, the manner in which assessment results are made available, and the length of time required before such results are available. Furthermore, Section 55202 states that the use of assessment as a prerequisite for placement into a course requires the use of multiple measures:

(c) The determination of whether a student meets a prerequisite shall be based on successful completion of an appropriate course or on an assessment using multiple measures. Any assessment instrument used shall be selected and used in accordance with the provisions of Subchapter 6 (commending with §55500) of Chapter 6 of this Division.

[2] 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.

[3] Bloom B. S. (1956). Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay Co Inc.

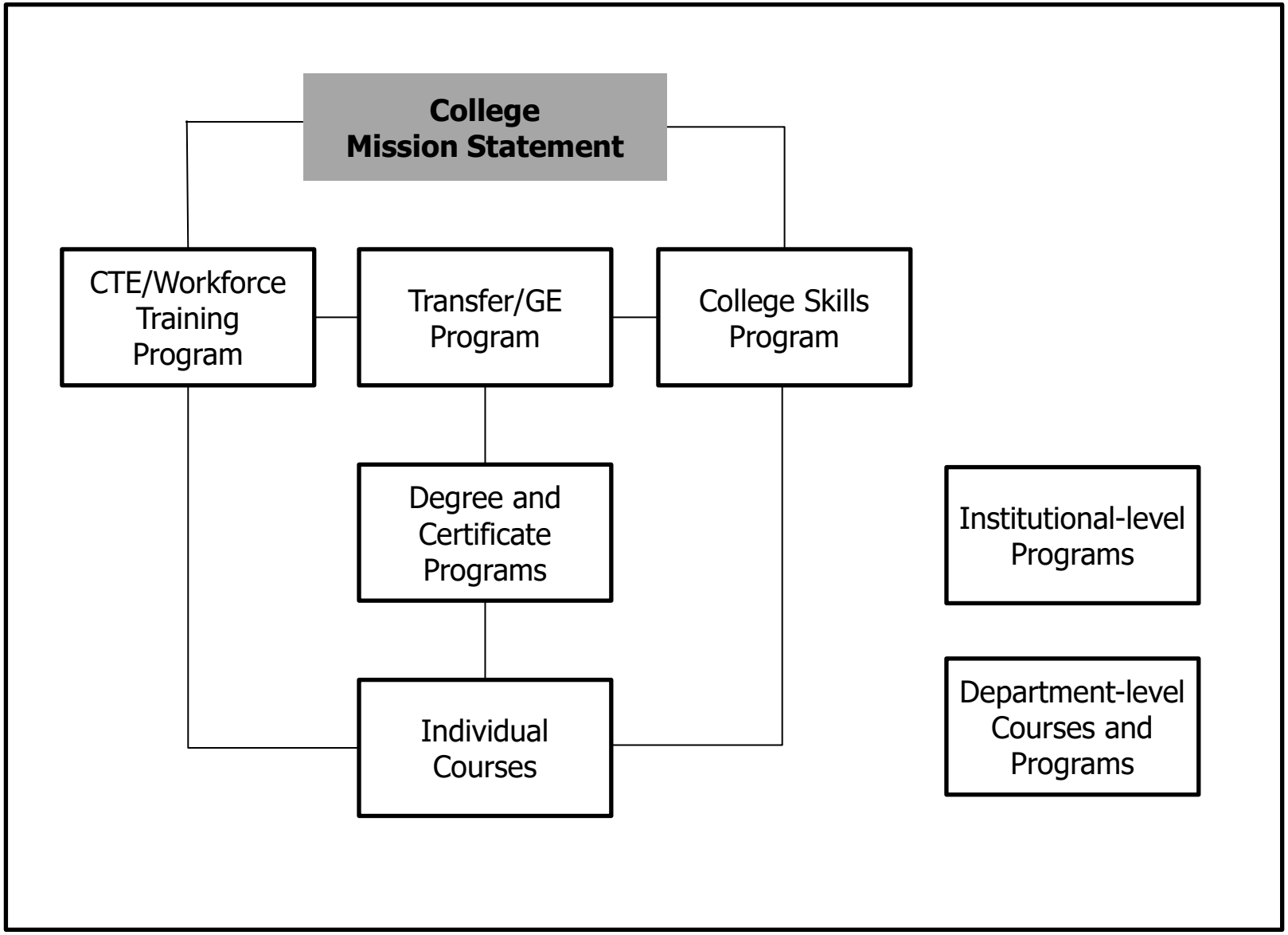
[4] Angelo, T. A., & Cross, K. P. (1993). Classroom assessment techniques: A handbook for college teachers (2nd ed.). San Francisco, CA: Jossey-Bass

[5] Pacheco, D. A. (1999). Culture of evidence. Retrieved June 1, 2003, from the California Assessment Institute, Resources Web site: ***http://www.cai.cc.ca.us/Resources/Pacheco.htm***

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

[7] Title 5 §55000(g) defines an educational program as "an organized sequence of courses leading to a defined objective, a degree, a certificate, a diploma, a license, or transfer to another institution of higher education"

[8] As one example of the use of the term rigor Title 5 §55002 (b) (2) (C) says "In particular, the assignments will be sufficiently rigorous that students successfully completing each such course, or sequence of required courses, will have acquir d the skills necessary to successfully complete degree-applicable.


College
Mission Statement
CTE/Workforce
Training
Program
Transfer/GE
Program
College Skills
Program
Degree and
Certificate
Programs
Individual
Courses
Institutional-level
Programs
Department-level
Courses and
Programs

Choosing an Assessment Tool

Tool	Often Helpful When Assessing	You Will Need . . . .
Skills Demonstration	• Learning that results in a tangible product • Learning that results in the ability to correctly perform a process or procedure	• A project or demonstration that has been discussed by discipline faculty and will allow students to demonstrate the skill or process in the SLO • A faculty-developed rubric to evaluate the success of the skills demonstration
Essays (out-of-class or essay exams)	• Identification of content-area knowledge • Application of content-area knowledge • Ability to explain concepts • Ability to evaluate and select • Analysis of complex phenomena • Writing skills	• A writing prompt that has been discussed by discipline faculty and addresses the learning in the SLO • A faculty-developed rubric to evaluate the learning or skill level demonstrated by the essay
Performances	• Application of content-area knowledge • Performing arts skills	• A performance opportunity that has been discussed by the discipline faculty and addresses the learning in the SLO • A faculty-developed rubric to evaluate the learning or skill level demonstrated by the performance
Portfolios	• Creation of a body of work • Visual or media arts skills • Writing skills	• A collection of student work that has been discussed by discipline faculty and addresses the learning in the SLO • A faculty-developed rubric to evaluate the learning or skill level demonstrated in the portfolio
Presentations	• Identification of content-area knowledge • Application of content-area knowledge • Ability to explain concepts • Ability to evaluate and select • Analysis of complex phenomena • Oral communication skills	• A presentation prompt that has been discussed by discipline faculty and addresses the learning in the SLO • A faculty-developed rubric to evaluate the learning or skill level demonstrated by the presentation
Objective Tests	• Identification of content-area knowledge • Application of content-area knowledge • Ability to evaluate and select • Mathematical skills	• A test that has been discussed by discipline faculty and addresses the learning in the SLO • An answer key
Surveys	• Student satisfaction • Student self-assessment of SLO mastery	• A faculty-developed list of questions that asks students to reflect on their satisfaction and/or learning • A process for survey administration

Department:

Course Number	Course Title	SLOs	Assessment Method	Criteria for Success	Next Assessment Term

• Sample •

Department: ENGL

Course Number	Course Title	SLOs	Assessment Method	Criteria for Success	Next Assessment Term
ENGL 103	Critical Reading, Writing, and Thinking	Evaluate the strength of written, visual, or multimedia arguments.	Students read an article and answer questions regarding the article. Answers assessed via grading rubric.	Scores of 1-3 are all considered passing. A score of 0 indicates that the student has not met the outcome. Lastly, a score of NA means that the student was not assessed (for example, they were absent on the day of assessment).	Spring 2021

Course Assessment Plan 2020-2021

Developing a Rubric

Developing a rubric can be very helpful when assessing SLOs. Rubrics allow faculty and students to more easily assess complex SLOs by:

- Clarifying the key elements of the SLO
- Documenting the standards that will be used to determine success
- Allowing for clear communication across multiple sections regarding the SLO and its assessment

To develop a rubric:

1. Work with others teaching the course – this can take place during in-person meetings, through online collaboration, or a combination of both
2. Break down the SLO and look for key features. These will become the Primary Traits and will go down the side of the rubric
3. Decide if you want a "yes/no" measure or one that includes levels. These will become the Levels ofMastery and will go across the top of the rubric
4. Describe the observable behaviors that lead to the levels in #2 for each of the Primary Traits. These goin the spaces between the Primary Traits and the Levels of Mastery.
5. Consult with SLO coordinators and/or SLO Technician for feedback or assistance setting up the rubric in eLumen.

Example:

English 103 SLO: *Compose logical, well-reasoned arguments in thesis-driven, MLA style format essays.*

- Primary Traits = Claim (identifying author's claim), Evidence (Evaluate the evidence in reading), Logical Fallacies (identifying and explaining flaws in reasoning), Rhetorical Appeals (author's use of rhetorical strategies), Efficacy of Argument (strengths and weaknesses of argument)
- Levels of Mastery = Exceeds Expectations, Meets Expectations, Approaches Expectation, Does not Meet Expectation.
- See sample rubric on the following page.

Developing a good rubric will take some time and conversation, but it will also make SLO assessment much easier once it is developed.

Resources for developing rubrics:

- http://rubistar.4teachers.org/index.php
- http://edtech.kennesaw.edu/intech/rubrics.htm#why
- https://pasadena.edu/integrated-planning/slo-assessment/course-student-learning-outcomes/planning-course-assessments.php

English 103 Student Learning Outcome Assessment Rubric

Student Learning Outcome: *Compose logical, well-reasoned arguments in thesis-driven, MLA style format essays.*

Student: Instructor and Section #:

Criteria:	**Exceeds Expectation (3)**	**Meets Expectation (2)**	**Approaches Expectation (1)**	**Does Not Meet Expectation (0)**
Question 1: Claim	Student clearly recognizes the conclusion/claim of the argument and clearly and insightfully explains their reasoning using multiple examples from the text. The student acknowledges the complexities of the argument in the text.	Student accurately recognizes the conclusion/claim of the argument and explains their reasoning.	Student only partially recognizes author's conclusion/claim/thesis and briefly explains how they arrived at a conclu.	Student does not accurately recognize the conclusion/claim of the argument. They may not explain their reasoning or their explanation is superficial.
Question 2: Evidence	Student's evaluation of the evidence's credibility and sufficiency is thorough, astute, and comprehensive. The student discusses multiple factors about the evidence, such as credibility, recency, reasoning, bias, or the research methods used in gathering the evidence.	Student evaluates the strengths and weaknesses of evidence in the argument. The student discusses more than one piece of evidence.	Student vaguely or generally addresses the strengths and weakness of evidence in the argument. They may only discuss one piece of evidence.	Student does not evaluate the strengths and weaknesses of evidence in the argument. Student's answer may rely solely on summary.
Question 3: Logical Fallacies	Student's identification and explanation of logical fallacies are thorough, thoughtful, and insightful. Student provides clear examples and explains the complexities of the flawed reasoning.	Student recognizes logical fallacies and explains why the reasoning is false.	Student vaguely or generally addresses fallacies and provides only some surface-level reasons why the fallacies demonstrate flawed reasoning.	Student misidentifies logical fallacies or does not explain why the reasoning is false.
Question 4: Rhetorical Appeals	Student's identification and explanation of ethos, pathos, and logos are clear, accurate, and address the complexities and efficacy of the appeals. They may acknowledge both strengths and weaknesses of the appeal.	Student identifies examples of ethos, pathos, and logos. They evaluate the effectiveness of the appeals.	Student partially identifies examples of ethos, pathos, and logos or only identifies one or two of the rhetorical appeals accurately. There is also little or surface-level explanation of the effectiveness of the appeals.	Student misidentifies examples of ethos, pathos, and logos. Student does not evaluate the effectiveness of the appeal.
Question 5: Efficacy of Argument	Student's explanation of the argument's efficacy is thorough, clear, and strong. Includes clear and multiple examples of strengths and weaknesses in the argument.	Student evaluates the overall strength of the argument. They provide specific examples to support their points.	Student generally or briefly evaluates the overall strength of the argument and may provide only vague reasons regarding the effectiveness of the argument.	The student does not evaluate the overall strength of the argument. Response may be off topic or rely solely on summary.

DEVELOPING STUDENT LEARNING OUTCOMES FOR NON-INSTRUCTIONAL PROGRAMS

Student learning outcomes are like learning objectives for an instructional course in their focus on the measurable results of student learning. One difference is that verbs emphasizing what students will be able to do or know after the learning process is complete replace the rather vague verbs comprehend and learn.

The overarching goals of a non-instructional program, beyond service to the student, are the student learning outcomes. An emphasis, therefore, is on results which are sometimes reflected in the term accountability.

The other change between learning objectives and student learning outcomes is that accreditation standards require colleges to collect data on the success of students meeting those overarching goals. Colleges are then charged with analyzing the data and making changes that will result in more effective student learning

Student learning outcomes are the measurable skills or accomplishments which embody the overarching goals of a non-instructional program or instructional course. They represent the most important learning that takes place through interaction with a program or participation in a course. It may be helpful to think of them this way: when students complete their interaction with your program, you want them to be in firm possession of certain abilities or knowledge, and you want them to retain those abilities or that knowledge. Those are the student learning outcomes.

Because there are numerous ways in which a student may interact and gain knowledge from a non-instructional program, managers directing those programs may choose to have more than one student learning outcome for which they assess student learning.

Getting started – preliminary discussion

In order to begin formulating your program's student learning outcomes, ask yourself the following questions:

Describe the ideal student or client to utilize your services?

What are the attributes, skills, and values that are supported and nurtured by the student's experience when in contact with your services?

What does this student know as a result of using your

services? What can this student do as a result of using your

services?

What does this student care about as a result of using your services?

What are the services provided by your unit that contribute to the development of the ideal student?

To create the SLOs

1. Develop criteria (3 domains – see the tables below)
2. Brainstorm
3. Prioritize
4. Select

Writing SLOs

Focus on what the student will be able to know, do, and feel (3

domains). Use verbs appropriate to learning based on Bloom's

Taxonomy.

Checklist for writing Student Learning Outcomes

- ***Consistency:*** Is it consistent and supportive of the Mission Statement?
- ***Reasonableness:*** Is it appropriate for the ability of the students?
- ***Measurability:*** Can it be observed and tested?
- ***Appropriateness:*** Is it important to the non-instruction service unit?
- ***Currency:*** Is it a current service?
- ***Clarity:*** Is it clear, precise, andsimple?

Double check your SLO with assessment in mind.

Make sure that the program SLO is something that is readily observable and measurable – in other words, build in assessment from the beginning. Don't create a program SLO that you can't envision a way to observe or evaluate or that requires data that you won't be able to access.

Learning outcomes related to the three domains in Bloom's Taxonomy

According to Bloom's Taxonomy, students experience several levels of learning from the acquisition of facts to the ability to think critically and solveproblems.

Student learning takes place in three domains

1. ***Cognitive domain*** – recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of defining knowledgeclassification
2. ***Psychomotor domain*** – performance defining physicalskills
3. ***Affective domain*** – defining behaviors that correspond to values, appreciation, and attitudes.

The Cognitive Domain (related to knowledge)					
Knowledge	***Comprehension***	***Application***	***Analysis***	***Synthesis***	***Evaluation***
Student remembers or recognizes information or specifics as communicated with little personal assimilation	Student grasps the meaning behind the information and interprets, translates, or comprehends the information	Student uses information to relate and apply it or to a new situation with minimal instructor input	Student discriminates Organizes, and scrutinizes assumptions in an attempt to identify evidence for a conclusion	Student creatively applies knowledge and analysis to integrate concepts or construct an overall theory	Student judges or evaluates information based upon standards and criteria, values, and opinions
Cite	Convert	Apply	Analyze	Assemble	Access
Label	Define	Chart			Appraise
	Describe		Compare	Create	Conclude
List	Discuss	Compute			
	Estimate		Contrast	Construct	Critique
Enumerate	Explain	Demonstrate			
	Generalize		Correlate	Design	Decide
Identify	Identify	Determine			
	Illustrate		Diagram	Develop	Defend
Imitate	Locate	Dramatize			
	Paraphrase		Dissect	Formulate	Diagnose
Match	Restate	Establish			
	Summarize		Differentiate	Generate	Evaluate
Name		Make			
			Distinguish	Hypothesize	Judge

Quote		Manipulate			
Recall		Prepare	Infer	Initiate	Justify
Reproduce		Project	Investigate	Invent	Rank
State Write		Solve Use	Limit	Modify	Recommend
			Outline Separate	Reframe Synthesize	Support

Observe	*Model*	*Recognize Standards*	*Correct*	*Apply*	*Coach*
Student translates sensory input into physical tasks or activities	Student is able to replicate a fundamental skill or task	Student recognizes standards or criteria important to perform a skill or task correctly	Student uses standards to evaluate own performance and make corrections	Student applies skill to real life situation	Student is able to instruct or train others to perform this skill in other situations
Hear Identify Observe See Smell Taste Touch Watch	Attempt Copy Follow Imitate Mimic Model Reenact Repeat Reproduce Show Try	Check Detect Discriminate Differentiate Distinguish Notice Perceive Recognize Select	Adapt Adjust Alter Change Correct Customize Develop Improve Manipulate Modify Practice Revise	Build Compose Construct Create Design Originate Produce	Demonstrate Exhibit Illustrate Instruct Teach Train

The Affective Domain (related to attitudes, behaviors, and values)				
Receiving	*Responding*	*Valuing*	*Organizing*	*Characterizing*
Student becomes aware of an attitude, behavior, or value	Student exhibits a re-action or change as a result of exposure to an attitude, behavior, or value	Student recognizes value and display this through involvement or commitment	Student determines a new value or behavior as important or a priority	Student integrates consistent behavior as a naturalized value in spite of discomfort or cost. The value is recognized as a part of the person's character
Accept Attend Describe Explain Locate Observe Realize Receive Recognize	Behave Comply Cooperate Discuss Examine Follow Model Present Respond Show Studies	Accept Adapt Balance Choose Differentiate Defend Influence Prefer Recognize Seek Value	Adapt Adjust Alter Change Customize Develop Improve Manipulate Modify Practice Revise	Authenticate Characterize Defend Display Embody Habituate Internalize Produce Represent Validate Verify

Write a Student Learning Outcome for the Department/Unit (Template)

*Department, non-instructional service unit:*_____

Mission statement for the department, non-instructional service unit:

Domain	Learning Outcome
Cognitive *(knowledge or concepts)*	
Psychomotor *(skills or performance abilities)*	
Affective *(Attitudes or values)*	

ASSESSING STUDENT LEARNING OUTCOMES FOR NON-INSTRUCTIONAL PROGRAMS

Setting goals for their departments or programs is not a new idea to managers and supervisors; it is an integral part of planning and directing the workflow of a program or department. Assessing a student's knowledge about services received or processes learned, on the other hand, may be a new concept.

The Student Learning Outcomes process focuses all of us on the strong links between statements of goals (SLOs) and their assessment. Here is a concise definition of assessment that explains those connections:

> Assessment is an ongoing process aimed at understanding and improving student learning. It involves making our expectations explicit and public; setting appropriate criteria and high standards for learning quality; systematically gathering, analyzing, and interpreting evidence to determine how well performance matches those expectations and standards; and using the resulting information to document, explain, and improve performance. When it is embedded effectively within larger institutional systems, assessment can help us focus our collective attention, examine our assumptions, and create a shared academic culture dedicated to assuring and improving the quality of higher education (Thomas A. Angelo, AAHE Bulletin, November 1995, p. 7).

Accreditation standards for student learning outcomes do not micromanage the assessment process. Instead, it leaves to faculty the decisions that will determine how useful the assessment process will be in improving teaching and learning. In other words, faculty along with staff and management decide how they will assess the student learning outcomes.

Any tool that measures the degree to which students have met a learning outcome qualifies as assessment. Such tools include surveys and pre- and post-tests. Most outcomes can be measured in a variety of ways.

Some of the principles of assessment to keep in mind when developing an assessment plan include:

- Assessment is an integral part of teaching and learning.
- Assessment is based on measurable criteria.
- Assessment is accomplished with a variety of methods.
- Assessment involves processes as well as outcomes.
- Assessment improves teaching and learning.
- Assessment informs planning and decision-making.

Some questions to ask:

- *What assessment instruments and methods may be used in the department or service unit?*
- *Will they provide useful information?*
- *What purpose will the assessments serve?*
- *How will the assessment results be used?*

- *Will the data collected from the assessment inform the decision making of the program or department?* Criteria for selection of assessment methods and implementation:

  - The learning outcomes selected for assessment are important.
  - The assessment methods measure student achievement.
  - The assessment methods are varied.
  - The criteria for determining success is established.
  - The time-frame for assessing student learning is doable.
  - The time and person responsible for the administration of the assessment is clear.
  - The time and person(s) responsible to collect and analyze the data is clear.

Here are some steps that will help you develop an assessment plan:

First, check your SLOs:

- ***How many are there?*** If there are more than three, they may not be true SLOs. You may want to revise them into SLOs before creating an assessment plan.
- ***Are the SLOs overarching ("big picture" learning for the department or program) or are they smaller objectives (things leaned in just one interaction with the department, for instance)?*** If they are not overarching, you should revise the SLOs before creating an assessment plan.
- ***Is the student learning described in the SLO observable and measurable?*** If not, you should revise the SLOs to make them observable and measurable before creating an assessment plan.

Next, decide on an appropriate assessment tool. Consider:

- ***What is the SLO asking the students to do?***
  - Identify a fact
  - Perform a skill
  - Analyze a complex phenomenon
  - Solve a problem
  - Explain a concept
  - Apply skills or knowledge to real-world situations
  - Evaluate options and select appropriate resources or tools
- ***What types of activities will allow students to demonstrate the SLO***
  - Pre- and post-tests
  - Skill demonstrations
  - Surveys
  - ePortfolio
- ***What criteria will you use to measure success or failure to meet the SLO?***
  - Rubric
  - Raw score

Then, decide how and when you will do the assessment:

- ***How often will you assess?***
  - Will it be on a semester cycle? An annual cycle? Other?
  - Are there similar services that could be grouped together?
  - Which semester will you begin assessing this service?
  - If you make changes, when will you reassess to see the effects?
- ***Will you assess all students? or Will you use sampling?***
  - If you are sampling, how many students will be involved?
  - How will you decide which students to involve?
- ***What do you need to do to prepare?***
  - Do you need to set up meetings with staff?
  - Do you need to create a test or rubric?
  - How will you distribute materials?
  - Do you need any additional resources or training?

Finally, think about how and when you will share the assessment results and use the results in decision- making about the service and/or program ("closing the loop"):

- ***What information do you need to gather and present the data?***
  - o Do you need data from Institutional Research?
  - o What format will you use to share the data? PowerPoint? Handouts? Other?
- ***When will be a meaningful time for your department to reflect on the results? FLEX credit is available for all faculty in discussing the results and creating action plans. See the Faculty Professional Development Committee Preapproved Professional Development Activities for more details.).***
  - o Department retreats?
  - o Department meetings?
  - o Other?
- ***What changes could be made to the service or program based on the results?***
  - o Changes to the assessment tool or method?
  - o Changes to the service, program or department?
  - o Changes to the service delivery methods?
  - o Changes to student resources or services?
- ***How will these results inform other decisions for the department or program?***
  - o How do the results of this assessment fit into the larger picture of the program or department?
  - o Is there a need for professional development on specific topics?
  - o Should budgeting priorities change?
  - o What resources could the department need to request in Academic Program Review budget process?
  - o Should staffing or other resources be adjusted?
  - o Other

Types of Data

Quantitative (numeric scores) and Qualitative (narratives, observations, interviews)

Types of Assessment

	Types	*Examples*
Performance	Use of tools/technology Interview Role-play	Tutorial Peer review Demonstration
Portfolio	Student portfolio Self-assessment	Journal
Production	Essay Oral presentation	Visual Speech
Survey	Focus group Survey of student satisfaction Survey of student services accessed Questionnaire	
Quiz	Informal evaluation	
Test	Placement test Diagnostic	Pre-test

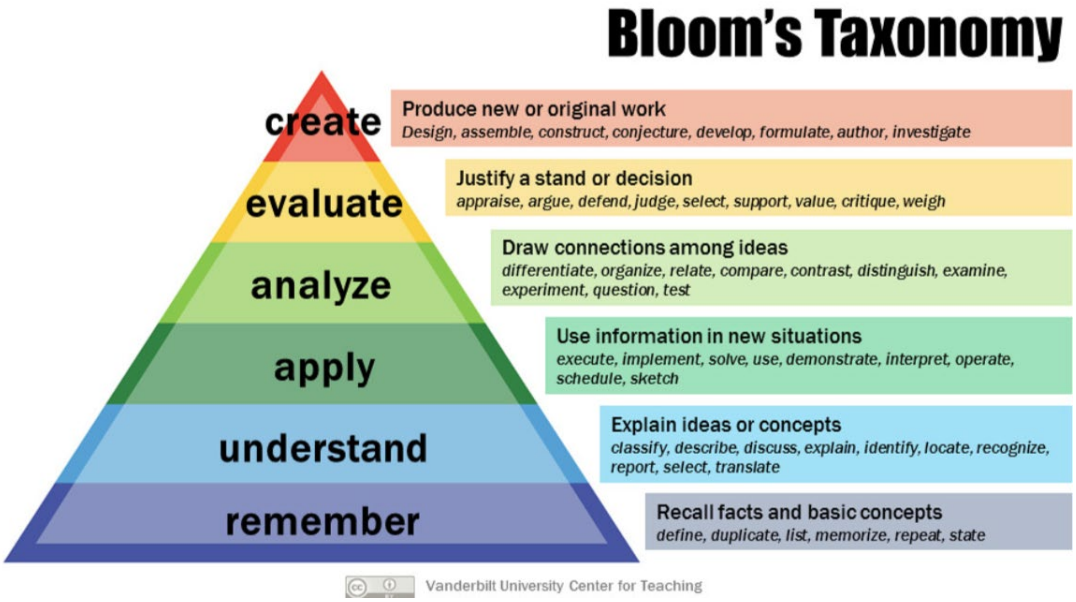
Assessing a Student Learning Outcome (Template)

Learning Outcome
Assessment method
Describe the tool or strategy
When will you assess and how often?
Resources needed (staff, equipment, materials)
What are the criteria for success?

Helpful Hints for Writing Student Learning Outcomes

The course outline of record (COR) in eLumen requests that the student learning outcomes state in specific behavioral terms the minimum skills or knowledge students should be able to demonstrate at the conclusion of the course. The purpose of the following is to assist instructors when writing instructional outcomes for new courses.

- The format typically begins with the phrase "Upon completion of this course the student will be able to:" with a list of those expectations following.
- The challenge herein lies in distilling the specific learning outcomes down. The key is grouping individual items into sets that share commonalties. For example, a sociology course might have many detailed items for students to learn in the area of cross-cultural comparison, but the collective statement in the outcomes might be "Compare and contrast traditions and behaviors in a variety of cultures."
- Degree applicable credit courses are required to demonstrate critical thinking. The incorporation of critical thinking must be evident throughout the course outline of record (COR) but particularly in the outcomes, Methods of Instruction, and Methods of Evaluation.
- The manner in which the SLO reflects critical thinking is in the higher cognitive expectations expressed in this section. Basically, critical thinking involves active higher cognitive processes that analyze, synthesize and/or evaluate information. This contrasts the more passive activities such as recognizing, describing, or understanding information.
- Note that not ALL outcomes need to reflect critical thinking. However, it should be clear that higher thinking skills are an essential component of the course. The COR must demonstrate that students are taught how to acquire these skills and must master them to pass the class.
- In the curriculum process, need to align the SLO(s) with signature assignment that will be used to assess the SLO(s).
- Refer to the most current Blooms Taxonomy Chart. Note: UC:CSU schools require a majority of the outcomes demonstrate critical thinking (analyze, evaluate, create)



SLOs must reflect the active verbs conveying critical thinking. It is usually the case that the course itself is taught in a way that incorporates critical thinking, but the course outline itself does not reflect those outcomes and methodologies. Bringing the outcomes into line is primarily a matter of reflection on the part of the faculty who teach the course upon those outcomes that require analysis, synthesis, and evaluation. Some before and after examples are shown below.

BEFORE: Know the significant art achievements of Renaissance through Modern Europe.

AFTER: Compare and contrast the art works in the same historical period with art works from other historical periods to ascertain their stylistic aesthetic and historical relationships.

BEFORE: Have learned skills in performing and in working with others to create a theatrical event for children.

AFTER: Analyze a text in preparation for rehearsals, including the choice of style, language, and pace.

Critical thinking
one
conclusions
methods
evidence
problems
information
reflective
relevant
criteria
judgment
Knowledge
involves
thought
inquiry
questions
arguments
generalizations
assumptions
applicable
disciplines
belief
recognize
within
believe
expressed
logical
determining
requires
intellectual
whether
way
conclusion
others
accuracy
clarity
well
argument
context
whenever
critically
accept
process
experience
ability
reasoning
careful
things
given
life
use
important
application
true
apply
figure
risk
confidence
problem
evaluate
etc
due
effectively
Reading
belief
significance
principles
interpret
generally
solutions
skepticism
justification
relationships
anthropological
philosophical
inference
decides
traits
one's
implications
communicates
employs
breadth
judgments
raises
expressions
solves
person
regarding
supports
relevance
sources
reader
like
mind
research
figuring
claim
attitude
written
specific
chemical
taking
teaching
precision
misinformation
question
complex
thereby
qualities
without
modes
thinks
fields
effort
musical
general
analyze
system
quality
focus
thinker's
listening
suspend
rejects
three
adopting
values
referencing
respective
consequences
words
reconstruct
gathers
often
accepts
includes
judges
come
distortion
broad
adequate
theoretical
naturally
appraise
identification
propositions
overlapping
applied
educators
define
painter
scientific
egocentrism
legal
open-mindedly
enables
state
reject
light
range
schools
self-deception
gives
understanding
techniques
vital
explain
experiences
However
concepts
forms
determination
bias
contemporary
observations
cognitive
applying
disapproval
meeting
engineer
biological
credibility
something
mathematical
comes
supposed
political
language
precisely
reasonable
subjects
skills
Irrespective
forming
warranted
evaluation
existence
consider
done
valid
cultivated
systems
study
occur
need
casual
informal
making
everyday
accurate
hand
historical
abstract
calls
element
inability
mistakes
meaning
writes
connotation
non-existence
must
well-reasoned
discrimination
pertinent
examine
psychology
expressing
well-justified
means
consideration
workable
therefore
always
wider
ideas
recognizing
influenced
acquisition
fairness
example
sculptor
professional
deliberate
patterns
comprehend
cultivating
draw
form
assessing
disposed
data
false
concerning
topic
constructs
sociological
using
beliefs
put
sets
close
basis
business
standards
substantive
though
case
might
usage
crucial
inference
philosophical
anthropological
decides
process
assumptions
generalizations
arguments
questions
inquiry
practical
character
universal
unduly
becoming
Glaser
thinker
seminal
whereas
students
judgment
writing
Edward
uncritically
permissible
formulating
decreasing
render
ethical
logic
raises
expressions
skepticism
even
speaking
test
solves
thoughtful

Program SLO FAQs:

Q: My department doesn't have any degrees or certificates – does that mean it is not a program?

What it likely means is that your department's classes are part of other programs – the GE program, for example, or a General Arts and Sciences program, or a degree or certificate housed in another department. In those cases, you'll participate in those program SLO activities as needed.

But there may also be clusters of courses in your department that are not degrees or certificates but that do form student pathways. In those cases, you may need to decide as a department whether those should be considered programs. If you decide there is a program, you may want to create program SLOs for it.

Q: If my department doesn't have any degrees or certificates, do I have to write program SLOs?

It depends. You will still want to consider whether there are student pathways through your department that should be considered programs. If so, then you should write program SLOs for those pathways. If you determine there is no program housed in your department by that definition either, then you do not need to write a program SLO within your department.

However, if that is the case, your department's courses are more than likely part of the GE program and/or one or more General Arts and Sciences degrees, so you will be involved in program SLO work for those programs.

Q: *My department has 12 different degrees and certificates. Do I really need a program SLO for each one? Why?*

Yes. Accreditation standards require that program level SLOs be developed, assessed, and used in decision-making for each degree and certificate.

Q: My department only does one program review – how can there be multiple programs within my department?

Departments are administrative units that can house multiple disciplines and programs. Especially if your department has multiple disciplines or specializations, you will likely have several distinct programs within your department. Each program must have its own SLO.

Q: I've just written my program SLOs – where do they get recorded? Does anyone need to approve them?

Program SLOs are recorded in curriculum, published in the catalog, and appear in Program Review. As degrees and certificates are created or revised, you will be asked to include one or more program SLOs. The curriculum committee will approve them at that time.

Q: I'm still thinking about what my program SLOs should be. How long do I have to get this done?

Program SLOs are to be assessed by fall 2020 and loop closed by spring 2021. To get help with this process, please contact the SLO Coordinators and/or the SLO Technician.

Q: What if my department has a course that is not part of a degree or certificate for my department?

Likely, that course fits into a program somewhere on campus. If it is not part of a program in your department, it may be part of another department's program, or it might be part of a General Arts and

Sciences degree or part of the GE program. As the college moves forward with its assessment of these larger, interdisciplinary pro- gram SLOs, you will be contacted to participate as needed.

Q: What about courses in my department that are part of another department's program?

As the other department works on its program SLOs, you will likely be contacted for information about your course-level assessments. You may also be asked to collaborate on writing the program SLO for that program.

Q: Can I use the same SLO for my department's degree and certificate?

It depends. If the only difference between the degree and the certificate is the completion of GE requirements, then it would be appropriate to use the same program SLO for both programs. However, if there is additional or more specialized learning that takes place in either the degree or certificate, you will need to adjust the program SLOs to match the learning that takes place in each degree and certificate.

Q: Can I use the SLO from one of my courses as my program SLO?

Possibly. If you have a capstone course that integrates the learning from the other courses in the program, the SLO from the capstone course could be used as the program SLO as well. Alternatively, if you have overlapping SLOs for the courses in your degree or certificate (as in the English example on page 7), you can base your program SLO on a more general statement of the overlap in the course SLOs.

Q: Once I have written program SLOs, how do I get started assessing them?

You should have a general plan for how you would go about assessing your program SLO as you are writing it. In general, it depends on how many program SLOs you have and how your program is organized.

- If you have several strands in your program, you will want to map your course SLO assessments to your program SLOs
- If you have a capstone course, you can use the same assessment for your program that you do for that course
- If you have overlapping course SLOs, you can combine the assessment data from your courses to assess your program
- You may also choose to use an indirect method (such as a survey) to measure students' perceptions of their own learning in the program and/or gain information about your students after they leave your program
- You could choose to do an additional assessment for the program SLO that integrates skills and content learned throughout the program (this may be challenging if you have a large number of students and are not easily able to track students close to completion)
- You might consider additional information such as licensing exams and/or job placement if you are able to access that data

Q: Can I include program SLOs that are measured outside the classroom (such as passing a licensure exam or job placement)?

Only if you have a way of accessing that information. For example, if you are considering a program SLO related to job placement, consider whether you have the ability to track your graduates' employment after they leave the college. If you can, then this would be an acceptable measure. If you cannot (or if it is very difficult), you would be better off using a measure that can be observed within the classroom.

Course#	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	Spring 2026

SAMPLE DEPARTMENT

Course#		Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	
1	Plan	Assess	Loop close			Plan	Assess	Loop close					
2		Plan	Assess	Loop close			Plan	Assess	Loop close				
3			Plan	Assess	Loop close			Plan	Assess	Loop close			
4				Plan	Assess	Loop close			Plan	Assess	Loop close		
5					Plan	Assess	Loop close			Plan	Assess	Loop close	

The following guidelines and recommendations were made by CASL and approved by the Academic Senate in 2019-2020.

- CASL Committee identified 7 categories for disaggregation data in eLumen. Those areas include Sex, Ethnicity, Age, Financial aid status, 1st generation college student; DSPS status and FT v. PT status.
- All departments should have their course SLOs mapped to the program SLOs by the end of SPRING 2020.
- All departments should have their Program SLOs mapped to Institutional SLOs by the end of SPRING 2020.
- All departments should have assessed their program SLOs and closed the loop, including completing an action plan in eLumen, by FALL 2020.
- Departments with single section courses should assess and collect data via eLumen until there are between 45 and 50 student assessment records before closing the loop, especially if disaggregating the data from those student records.
- Assessment data from courses that are only assessed in summer and winter intersessions will be recorded outside of eLumen. The SLO Technician will keep a repository of the data and loop closings resulting from those summer and winter courses.
- Curricular and Assessment Coordinators and Department Chairs are recommended to use the SLO coordinators and SLO technicians to assist.
- CASL unanimously voted to have the SLO columns in My Canyons grade screen removed.
- When assessing PSLOs, departments with programs that include courses outside of the department (example: Math 140 requirement in ADTs), CASL recommends departments assess courses in the department first. CASL recommends the chair or coordinator have a conversation with the chair/coordinator for the course outside the department (example: Math 140 coordinator) to identify common themes in SLO assessment and how departments can support assessment of the course(s) outside the department. (example: how business faculty can help with assessment rate of Math 140).