

Comprehensive Annual Assessment Report 2011-2012

Overview

Student learning is central to Cerro Coso Community College's mission to educate, innovate, inspire, and serve our students and community. Student learning outcomes are defined, assessed, and used for planning and improvement for courses, programs, general education, and the institution.

Learning outcomes for courses and programs are originally defined and approved in the corresponding curriculum documents (e.g. course outline of record), given that outcomes essentially define courses and programs and all other course and program content should emerge from those outcomes. Subjecting learning outcomes to the curriculum approval process also ensures quality control and transparency, inviting input from all stakeholders.

Course learning outcomes are published in the Course Outlines of Record, accessible in the college's curriculum database, CurricUNET, (<http://www.curricunet.com/kccd/>). Program learning outcomes are published in the program curriculum document, also accessible in CurricUNET. Program learning outcomes can additionally be viewed in the college catalog, the college web site, and many program marketing materials, such as brochures. Course and program learning outcomes also automatically populate the Assessment Module of CurricUNET. All other types of learning outcomes, including institutional, general education, student services, and learning support services are defined and entered directly into the Assessment Module.

Assessment plans, results, and analysis are, likewise, accessible in the Assessment Module of CurricUNET, although some assessment data that was collected prior to the launch of CurricUNET is still in the process of being migrated to that system. Program assessments that are not yet in CurricUNET are located in the Program/Unit Outcome and Assessments wiki in the Student Learning Outcome Assessment Moodle (<http://moodle.cerrocoso.edu/mod/wiki/view.php?id=88467>). They are searchable through the Other Wikis menu in the top right portion of the screen. Both the Assessment Module of CurricUNET and the Student Learning Outcome Assessment Moodle also allow guest access.

The following is a summary of the percentage of learning outcomes that have been defined and assessed for the institution, general education, academic programs, courses, learning support services, and student services.

	Institution	General Education	Academic Programs	Active Courses	Learning Support	Student Services
Learning Outcomes Defined	100%	100%	93%	100%	100%	100%
Learning Outcomes Assessed	100%	92%	64%	71%	100%	100%

Methodology

Assessment of student learning is a faculty-driven process, and faculty members use expertise in their discipline area to determine the most authentic methods for assessing outcomes. Because Cerro Coso is a small school with many courses and some disciplines taught solely by adjunct faculty members, two methods were developed for this initial round of SLO collection and assessment. These methods were the result of much dialogue at the level of the Institutional Effectiveness Committee, within the faculty chair working group, and between individual faculty members at the department level.

For those courses that are the College's core offerings taught in several sections mostly by full-time instructors or long-time adjuncts, the method used is one that identifies SLO's through dialogue, determines the assessment artifacts, embeds them in all course sections being taught, and then assesses them in ways appropriate to standard sampling procedures. At their discretion, faculty might agree on exams (disaggregating questions that pertain to the specific outcome), essays, projects, portfolios, performances, speeches, skill demonstrations, exit interviews, surveys, or critiques for assessments. They develop rubrics and engage in norming sessions to assess non-objective assessments. Assessment outcomes are housed in the Assessment Module of CurricUNET.

But a second authentic assessment technique was also used for this first round for those courses taught predominantly (or solely) by adjunct instructors in areas where full-time department leaders have little or no expertise to guide the determination of the artifacts. To facilitate dialogue and develop effective artifacts, what these adjunct instructors do now was determined by a survey of their current practices. These practices were then collated by the faculty chairs and used as the basis for dialogue and for determining the most effective artifacts. In essence, it was important for Cerro Coso to listen carefully to what our content experts in these areas do first so that we could generate ongoing and systematic SLO assessment going forward.

Student learning outcome assessments are planned and data is recorded in the Assessment Module of CurricUNET, where all aspects of the assessment process can be documented and tracked, including:

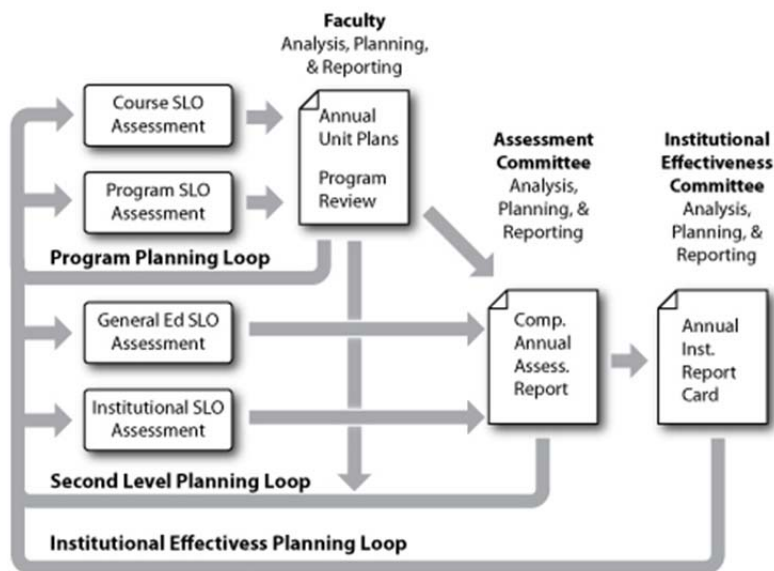
- Course/program/unit
- Learning outcome
- Institutional changes that were made in response to the previous assessment
- Assessment term
- Target for performance
- Assessment tool/scoring method
- Assessment plan, including a description of sampling method and details about how the assessment will be conducted
- Assessment results
- Analysis of results and plan for improvement and reassessment
- Date for reassessment
- Evidence (such as exam questions and results, rubrics, samples of student artifacts)

All program-level student learning outcomes are assessed at least once during the Program Review cycle, and results are used for continued improvement to the program and student learning. Course-

level student learning outcomes are also assessed at least once during the Program Review cycle, with course assessments sometimes occurring more frequently and according to a schedule that is developed by department faculty. For example, faculty may wish to assess a “gateway” course frequently in order to more closely monitor students’ preparedness to progress through a sequence of courses.

Departments use the results of assessment in a variety of ways. If outcomes are below the target level, they may identify instructional strategies that can fill the gaps in student learning. Other strategies to improve student learning may include more effectively engaging learning support services such as supplemental instruction, securing funding for needed equipment, relocating sections to smart classrooms, changing required textbooks, etc. Data can be disaggregated to show outcomes for various delivery methods, and specific strategies may be planned to improve online learning. Results of program and course assessment are summarized and published in Annual Unit Plans and in Program Reviews. They also link directly to resource allocation, as the Program Reviews and Annual Unit Plans specifically provide for resources requests to be substantiated through gaps identified in assessment.

Student learning outcomes for programs and courses do not differ among delivery methods, including distance education. Assessment methods also do not vary between delivery methods for a particular outcome. Data is collected across multiple delivery methods for a specific outcome, observations are made about the aggregated result, and the data may be disaggregated to reveal outcomes specific to delivery method. However, regardless of delivery method, the feedback loop is the same: course materials and presentation undergo scrutiny if a gap is identified because student learning falls below the target level of achievement. Department faculty engage in reflective dialogue about which practices or teaching resources need to be revised or replaced to improve student learning.



There are 3 feedback loops that disseminate assessment results and inform groups to make institutional improvements. Within the Program Planning Loop, course and program learning outcome assessment results are summarized in Annual Unit Plans and Program Reviews, which drive instructional changes, department goals, and allocation of resources. Using a scoring spreadsheet, the Student Learning Outcome Assessment Committee identifies trends and themes across programs with respect to

assessment results and identified gaps. This is aggregated into this document, the Comprehensive Assessment Report. Assessment results for general education learning outcomes and institutional learning outcomes are also published and discussed in the Comprehensive Annual Assessment Report. This report enters a Second Level Planning Loop to inform the establishment of institutional priorities and allocation of resources. This report also is used in the Institutional Effectiveness Planning Loop, which assesses the effectiveness of all institutional planning processes, including the student learning outcome assessment process.

This is the first annual Comprehensive Annual Assessment Report that has been published, which summarizes assessment data going back as early as 2006. Subsequent annual Comprehensive Assessment Reports will cover only the preceding year, published in the current Annual Unit Plans.

Results and Themes

Institutional Learning Outcomes

In the Spring of 2011, institutional learning outcomes were assessed with the Community College Survey of Student Engagement. Students rate their perceived ability or experience on a scale of 1-4, with 1 = Very little (25%), 2 = Some (50%), 3 = Quite a bit (75%), 4 = Very much (100%). With a target level of achievement of 70%, Cerro Coso Community Colleges' institutional learning outcomes and assessment results are the following.

Demonstrate foundational academic skills, including mathematical operations and reading and writing at the college level.

Cerro Coso - 2.52 (63.00%)

Cohort - 2.695 (64.25%)

Cerro Coso students scored lower (63%) than the target level of performance (70%). Cerro Coso students performed 1.25% points lower than the cohort. However, the cohort also performed lower than the target level of performance (70%).

Use technology effectively.

Cerro Coso - 2.59 (65%)

Cohort - 2.83 (71%)

Cerro Coso students scored lower (65%) than the target level of performance (70%). Cerro Coso students performed 6% points lower than the cohort. The cohort performed higher than the target level of performance (70%).

Demonstrate self- efficacy skills (or self-directed learning) and an appreciation for lifelong learning.

Cerro Coso - 2.34 (58.5%)

Cohort - 2.42 (60.5%)

Cerro Coso students scored lower (58.5%) than the target level of performance (70%). Cerro Coso students performed 2% points lower than the cohort. However, the cohort also performed lower (60.5%) than Cerro Coso's target level of performance (70%).

Demonstrate the ability to communicate and collaborate effectively.

Cerro Coso - 2.41 (60.25%)

Cohort - 2.46 (61.5%)

Cerro Coso students scored lower (60.25%) than the target level of performance (70%). Cerro Coso students performed 1.25% points lower than the cohort. However, the cohort also performed lower (61.5%) than Cerro Coso's target level of performance (70%).

Apply critical analysis and creativity to solve problems and draw reasonable conclusions.

Cerro Coso - 2.63 (65.75%)

Cohort - 2.77 (69.25%)

Cerro Coso students scored lower (65.75%) than the target level of performance (70%). Cerro Coso students performed 3.5% points lower than the cohort. However, the cohort also performed slightly lower (69.25%) than Cerro Coso's target level of performance (70%).

Respect individual and cultural diversity.

Cerro Coso - 2.37 (59.25%)

Cohort - 2.39 (59.75%)

Cerro Coso students scored substantially lower (59.5%) than the target level of performance (70%). Cerro Coso students performed very slightly lower (0.5% than the cohort. However, the cohort also performed lower (61%) than Cerro Coso's target level of performance (70%).

Demonstrate personal, civic, social and environmental responsibility and cooperation in order to become a productive local and global citizen.

Cerro Coso - 2.09 (52.25%)

Cohort - 2.23 (55.75%)

Cerro Coso students scored lower (52.25%) than the target level of performance (70%). Cerro Coso students performed 3.5% percentage points lower than the cohort. However, the cohort also performed lower (55.75%) than Cerro Coso's target level of performance (70%).

General Education Learning Outcomes

With a target level of achievement of 70%, Cerro Coso Community Colleges' general education learning outcomes (GELO) and assessment results are:

Natural Sciences

Effectively communicate scientific results, including graphically, verbally and in writing.

The following courses address the above Natural Sciences General Education learning outcome and have been assessed:

- BIOL C111
- BIOL C112
- CHEM C223
- PHSC C101

The results of these assessments have been aggregated to produce an overall result for this outcome. All 4 courses reflected 70% student attainment of this outcome or better.

Demonstrate competency of the Scientific Method, including the experimental and empirical methodologies characteristic of Science and the modern methods and tools used in scientific inquiry.

The following courses address the above Natural Sciences General Education learning outcome and have been assessed:

- BIOL C111
- BIOL C112
- CHEM C101

The results of these assessments have been aggregated to produce an overall result for this outcome. All 3 courses reflected 70% student attainment of this outcome or better.

While the result of the assessment was successful, the learning outcomes themselves may need to be revised. These Natural Sciences learning outcomes emphasize the correct application and reporting of the scientific method. However, the majority of courses that satisfy the Natural Sciences do not have any learning outcomes that pertain to the Scientific Method. There additionally seems to be a gap in the assessment of students' deep understanding of complex natural systems. Perhaps the current outcomes could be merged and a new outcome written to address understanding of natural systems.

Social and Behavioral Sciences

Describe the method of inquiry used by the social and behavioral sciences.

The following courses address the above Social and Behavioral Sciences General Education learning outcome and have been assessed. Each course has 1 learning outcome that meets this GELO.

- CHDV C106
- PSYC C101
- PSYC C112
- ECON C101
- ECON C102
- ECON C103

The results of these assessments have been aggregated to produce an overall result for this outcome. All 6 courses reflected 70% student attainment of this outcome or better.

Evaluate the operation of societies and social sub-groups.

The following courses address the above Social and Behavioral Sciences General Education learning outcome and have been assessed. There are 12 learning outcomes distributed across these 6 courses.

- CHDV C106
- PSYC C101

- PSYC C112
- ECON C101
- ECON C102
- ECON C103

The results of these assessments have been aggregated to produce an overall result for this outcome. Of the 12 learning outcomes that pertain to this GELO, 11 out of 12 had a result of students meeting or exceeding the target level of performance.

Humanities

Describe how people throughout the ages and in different cultures have responded to themselves and the world around them in artistic and cultural creation.

The following courses address the above Humanities General Education learning outcome and have been assessed. There are 12 learning outcomes distributed across these 8 courses.

- ART C101
- MUSC C101
- MUSC C118
- THEA C103
- ENGL C221
- ENGL C235
- ENGL C245
- ENGL C249

The results of these assessments have been aggregated to produce an overall result for this outcome. Of the 12 learning outcomes that pertain to this GELO, all had a result of students meeting or exceeding the target level of performance.

Evaluate the significance of artistic and cultural constructions.

This GELO is similar to the first Humanities GELO in that it emphasizes the meaning and significance of arts and humanities. What is missing, however, is a learning outcome that gets at the application of principles in the expression of ideas or aesthetics. In addition to there being redundancy, in the existing GELOs, many of the applicable courses do not align well with the GELO because of the emphasis upon creative application. Merging the existing GELOs, and creating a new one will resolve this.

As the GELO current stands, the courses for the first GELO align fairly well with the second GELO, and the results are the same. It is strongly recommended that the GELOs be revised and reassessed in the next academic year.

The outcomes that were not met were only slightly below (75%) the target of 80%. There seems to also be weak alignment between the GELO, evaluate the significance of artistic and cultural constructions and the course SLOs, which deal with the application of design principles. The significance of those are not addressed. ART C121, which has a strong SLO for this GELO, is slated to have that SLO eliminated. There was no discussion about why. Doing so will weaken the applicability to meeting a general education requirement.

Language and Rationality

Use clear and precise language to express logical thought.

The following active courses address the above Language and Rationality General Education learning outcome and have been assessed. Nine out of 10 course learning outcomes that are aligned with this GELO had satisfactory outcomes.

- ENGL C101
- ENGL C102
- ENGL C151

Use a complex symbol system to solve problems.

The following active course addresses the above Language and Rationality General Education learning outcome and has been assessed. All course learning outcomes that are aligned with this GELO had satisfactory outcomes.

- MATH C056

Information Competency

IC C075 is the only course that aligns with this GELO.

Explain the fundamentals of the research process and documentation style.

Course learning outcomes 1 and 5 align with this GELO, and both outcomes were met.

Clearly identify types of information needed to address a research problem and evaluate the credibility of sources.

Course learning outcomes 2, 3, and 4 align with this GELO, and outcomes 2 and 3 fell below the target.

For outcome 2, it was discussed that a specific term that was used in the exam questions that aligned with the outcome were not sufficiently covered in instruction. Both instruction and the wording of the exam questions will be revised to better equip students. The iTV delivery mode was also cited as a barrier for an adjunct instructor. There was no elaboration about whether the course content is not well suited for this delivery mode or whether the instructor needs more training in teaching via iTV.

Outcome 3 had the lowest results. Factors attributed to this outcome were sequencing of assignments and inconsistency in assessments. It was also discussed that the learning outcome itself does not effectively get at the skill of writing citations and will be revised in the upcoming year.

It was noted that the level of reflection and analysis for the IC C075 assessments was excellent.

Diversity

Describe and analyze the effects of race, ethnicity, class, gender, sexuality, disability or religion on human interactions.

The following courses satisfy the Diversity General Education requirement, and have been assessed. The results of these assessments have been aggregated to produce an outcome for Diversity.

- ART C101, SLO 2
- DMA C113, SLOs 3,5
- ENGL C145, SLOs 3,4,5
- ENGL C149, SLOs 3,4,5
- HMSV C102, SLOs 1,3,4,6
- MUSC C173, SLO 2

CCSSE data was also used as an indirect measure.

All 11 SLOs (distributed across 6 courses) met the target of performance of 70% or better. However, while the direct measures indicate satisfactory attainment of this learning outcome, the CCSSE survey indicated that Cerro Coso students scored substantially lower (59.5%) than the target level of performance (70%). Cerro Coso students performed very slightly lower (0.5% than the cohort). However, the cohort also performed lower (61%) than Cerro Coso's target level of performance (70%). Analysis is needed to explain this difference.

Health and Wellness

Analyze and apply the principles of health and wellness.

None of the courses that align with this General Education Learning Outcome have been assessed, or if they have been assessed, they are not yet entered into CurricUNET.

Program Learning Outcomes

Program learning outcome assessment is discussed in Annual Unit Plans and Program Reviews, and the following is a summary of those outcomes, including themes and trends in the discussion about recommendations and requests for resources.

For Liberal Arts and Sciences programs, gaps in student learning outcome achievement were attributed to:

- Need for specific instructional techniques (5 instances)
- Need for additional faculty (2 instances)

- Need for additional facilities or equipment (4 instances)
- Need for revision to assessment method, tool, sample, or target (2 instances)

For Career Technical Education programs, gaps in student learning outcome achievement were attributed to:

- Need for specific instructional techniques (6 instances)
- Need for added course requisites (1 instance)
- Need for revision to assessment method, tool, sample, or target (17 instances)

For Student Services and Learning Support Services, gaps in student learning outcome achievement were attributed to:

- Need for specific service interventions (13 instances)
- Need for specific instructional techniques (7 instances)
- Need for revision to student learning outcomes or administrative unit outcomes (2 instances)
- Need for revision to assessment method, tool, sample, or target (5 instances)

Summary of Student Learning Outcome Assessment

Outcomes fell below the institutional target for all institutional learning outcomes, and the results also fell below the CCSSE cohort, with particular concern in the areas of

- Using technology effectively (6% below cohort)
- Applying critical analysis and creativity to solve problems and draw reasonable conclusions (3.5% below cohort)
- Demonstrating personal, civic, social and environmental responsibility and cooperation in order to become a productive local and global citizen (3.5% below cohort)

Although not tied to student learning outcome achievement because assessment samples have been defined by the number of students who participated in an assessment, rather than defined by all students currently enrolled at the time of the assessment, one Annual Unit Plan identified that low technology skills are a negative factor in retention. Given that this problem was captured in institutional learning outcomes, and not in program or course learning outcomes, it appears necessary to revisit sampling guidelines so assessments at various levels return consistent results.

Additionally 3 institutional learning outcomes align fairly closely with 3 general education learning outcomes, the latter which had results meeting the target. This disparity also should be addressed, including the assessment methods. In the past cycle, institutional learning outcomes were assessed with indirect measures and general education outcomes with direct measures.

It is recommended that the learning outcomes of using *technology effectively*, *applying critical thinking skills*, and *demonstrating of personal, civic, social, and environmental responsibility* be institutional priorities. There are currently plans to implement a computer competency and self-efficacy assessment,

SmarterMeasure, for online students, which should successfully inform students of their readiness for online learning or technology-based courses and them to resources to strengthen skills, if needed.

Intra-departmental interventions were recommended for most gaps in program learning outcomes or student services outcomes, such as revising course content, instructional techniques, or service interventions or revising the assessment methods or the learning outcomes themselves. One academic program identified the need for additional full-time faculty, equipment, facilities upgrades, and an institutional researcher. All of these needs have been filled since the assessment was completed.

Evaluation of the Institutional Assessment Process

The categories of information that are required to document the assessment plans and results are appropriate and provide necessary information to constituent groups for continuous quality improvement. Conducting assessment in progressively broader loops is also an effective practice because it disseminates assessment results to the groups that are best suited to respond to the results. The Program Planning Loop informs departments about the need for localized changes (instructional and curriculum changes), and the Second Level Planning Loop informs the college of needs that require broader institutional support. The Institutional Effectiveness Planning Loop enables the college to engage in assessment of its planning processes.

Participants of assessment generally understand the process, although in many cases, analysis of assessment results was weak. In several instances where the outcome was not met, it was suggested that the outcome itself should be revised, essentially making the learning outcome less rigorous. This is not an acceptable remedy. This underscores the need to retain Curriculum and Instruction Council approval of the definition of student learning outcomes in the course outline of record to ensure that outcomes are not altered inappropriately.

Even when the outcome is met, it would be worthwhile to comment on what seems to be working well and what accounts for the successful outcome. It would also be beneficial to provide discussion and analysis for outcomes that are marginally met. The perspective should be to continually improve student learning. It is more likely than not that after the first assessment cycle, there will be room for improvement in quality of instruction. And with initial targets being relatively arbitrary, those should probably be raised if outcomes easily exceeded them. The target should be a best guess about what the level of student achievement will be if instruction, curriculum, and institution support is at its absolute highest. This should be considered in conjunction with the sampling method.

Some assessment reports identified specific institutional resources that were needed, in response to an outcome that fell below the target. However, there was no discussion about why the resource was needed or specifically how it would improve student learning. Assessors should be diligent to establish strong links between assessment results and requests for institutional support.

The mapping of general education learning outcomes to courses, provided by Faculty Chairs, was inaccurate in many instances. Some courses were aligned that do not appear on the General Education pattern in the college catalog. Officially linking these in CurricUNET would be worth pursuing.

A scoring spreadsheet was created to help Student Learning Outcome Assessment Committee members aggregate themes and trends across programs. Using separate spreadsheets for each program and combining the results of each member proved to be unduly time consuming. It would be much more efficient to simply meet as a group and score the unit plans together.