

2. List educational objectives for each goal.

EDUCATIONAL OBJECTIVES: the knowledge, skills, abilities, capacities, attitudes or dispositions you expect students to acquire in your program.

Educational objectives should be clearly stated, realistic and achievable. They should meaningfully define the related goal, and, where possible, indicate desired level of attainment. Finally, educational objectives should be assessable.

Examples: Goal I. Understand and can apply fundamental concepts of the discipline.

Educational Objectives connected to Goal I

1. Demonstrate understanding of basic concepts in the following areas of the discipline: _____, _____, _____ and _____.
2. Recognize the source(s) of major viewpoints in discipline.
3. Apply concepts and/or viewpoints to a new question or issue.
4. etc.

Goal VII. Respect persons from diverse cultures and backgrounds.

Educational Objectives connected to Goal VII:

1. Interact positively with those from groups other than the student's own.
2. Entertain, empathetically, viewpoints from a variety of perspectives.
3. Demonstrate awareness of cultures and backgrounds other than the student's own.
4. etc

3. State clearly the learning outcomes you are seeking.

LEARNING OUTCOMES: are specific, observable behaviors evidenced by students who have achieved your educational objectives. Learning outcomes are stated operationally, and describe the observable evidence of a student's knowledge, skill, ability, attitude or disposition. State clearly each outcome you are seeking: How would you recognize it? What does it look like? What will the student be able to do?

Example: Goal I. Understand and can apply fundamental concepts of the discipline.

Educational Objectives connected to Goal 1:

1. Demonstrate understanding of basic concepts in the following areas of the discipline: _____, _____, _____ and _____.

LEARNING OUTCOMES evidencing Educational Objective I:

- Describe _____.
- Classify _____.
- Distinguish _____.
- Give examples of _____.
- Explain _____.
- Interpret _____.
- Etc.

**LEARNING OUTCOMES ASSESSMENT PLANNING GUIDE:
ALIGNING PROGRAM COMPONENTS WITH EDUCATIONAL OBJECTIVES AND
LEARNING OUTCOMES**

4. Identify program components that are designed to achieve each educational objective.

The curriculum and courses required by your program should be designed to meet your program goals and educational objectives. Clearly, students will not demonstrate the desired learning outcomes if your program components have not provided sufficient opportunity to develop them during coursework and related experiences. According to Mary Allen, “curricula should be structured to introduce key learning opportunities early and to reinforce this learning throughout...”

The Cal Poly Center for Teaching and Learning (<http://www.academics.calpoly.edu/ctl/>) is committed to the ideal of outcomes-based curriculum development, and frequently offers faculty development courses in this area.

The **MATRIX** is a tool commonly used to summarize the relationship between program components (curriculum, courses) and program goals and objectives:

Course	Objective I	Objective II	Objective III	Objective IV	Objective V
125	I				
170		I			I
225	P				
231			P		P
331			P		P
335			P		P
400	R				R
435			R		R

I = Introduced, P = Practiced, R = Reinforced

Note that this program formally introduces, consistently practices and reinforces just one objective, objective V. Objective II is introduced, but never practiced or reinforced. Objective III is never formally introduced. And objective IV is not included in the curriculum at all.

(adapted from M. Allen, 2002, page 44)

LEARNING OUTCOMES ASSESSMENT PLANNING GUIDE: SELECTING AND IMPLEMENTING ASSESSMENT METHODS

5. Understanding that not every goal or educational objective can always be assessed, identify those that you prize most highly, and that can be meaningfully measured.

It is daunting to look at a list of thirty, forty or even more learning outcomes and try to plan the assessment of all of them. Good assessment, according to Mary Allen (2002) is meaningful, manageable and sustainable. In other words, planning for assessment requires setting priorities; it is neither prudent nor productive to measure everything that moves. Select carefully those outcomes that your department is most interested in having students achieve. And, since you may not be able to assess all of your important learning outcomes in a single year, remember that outcomes assessment is an ongoing process.

6. Select methods or instruments for gathering evidence to show whether students have achieved the expected learning outcomes related to educational objectives and goals.

Methods of assessment will vary depending on the learning outcome(s) to be measured. Following is a partial list:

Assessment Methods

Capstone Courses: could be a senior seminar or designated assessment course. Program learning outcomes can be integrated into assignments.

Case Studies: involve a systematic inquiry into a specific phenomenon, e.g. individual, event, program, or process. Data are collected via multiple methods often utilizing both qualitative and quantitative approaches.

Classroom Assessment: is often designed for individual faculty who wish to improve their teaching of a specific course. Data collected can be analyzed to assess student learning outcomes for a program.

Collective Portfolios: Faculty assemble samples of student work from various classes and use the “collective” to assess specific program learning outcomes. Portfolios can be assessed by using scoring rubrics; expectations should be clarified before portfolios are examined.

Content Analysis: is a procedure that categorizes the content of written documents. The analysis begins with identifying the unit of observation, such as a word, phrase, or concept, and then creating meaningful categories to which each item can be assigned. For example, a student’s statement that “I learned that I could be comfortable with someone from another culture” could be assigned to the category of “Positive Statements about Diversity.” The number

of incidents that this type of response occurred can then be quantified and compared with neutral or negative responses addressing the same category.

Embedded Questions to Assignments: Questions related to program learning outcomes are embedded within course exams. For example, all sections of “research methods” could include a question or set of questions relating to your program learning outcomes. Faculty score and grade the exams as usual and then copy exam questions that are linked to the program learning outcomes for analysis. The findings are reported in the aggregate.

Exit Interviews: Students leaving the university, generally graduating students are interviewed or surveyed to obtain feedback. Data obtained can address strengths and weaknesses of an institution or program and or to assess relevant concepts, theories or skills.

Focus Groups: are a series of carefully planned discussions among homogeneous groups of 6-10 respondents who are asked a carefully constructed series of open-ended questions about their beliefs, attitudes, and experiences. The session is typically recorded and later the recording is transcribed for analysis. The data is studied for major issues and reoccurring themes along with representative comments.

Interviews: are conversations or direct questioning with an individual or group of people. The interviews can be conducted in person or on the telephone. The length of an interview can vary from 20 minutes to over an hour. Interviewers should be trained to follow agreed-upon procedures (protocols).

Locally developed essay questions: Faculty develop essay questions that align with program learning outcomes. Performance expectations should be made explicit prior to obtaining results.

Locally developed exams with objective questions: Faculty create an objective exam that is aligned with program learning outcomes. Performance expectations should be made explicit prior to obtaining results.

Matrices: are used to summarize the relationship between program objectives and courses, course assignments, or course syllabus objectives to examine congruence and to ensure that all objectives have been sufficiently structured into the curriculum.

Observations: can be of any social phenomenon, such as student presentations, students working in the library, or interactions at student help desks. Observations can be recorded as a narrative or in a highly structured format, such as a checklist, and they should be focused on specific program objectives.

Primary Trait Analysis: is a process of scoring student assignments by defining the primary traits that will be assessed, and then applying a scoring rubric for each trait.

Reflective Essays: generally are brief (five to ten minute) essays on topics related to identified learning outcomes, although they may be longer when assigned as homework. Students are asked to reflect on a selected issue. Content analysis is used to analyze results.

Scoring Rubrics: can be used to holistically score any product or performance such as essays, portfolios, recitals, oral exams, research reports, etc. A detailed scoring rubric that delineates criteria used to discriminate among levels is developed and used for scoring. Generally two raters are used to review each product and a third rater is employed to resolve discrepancies.

Standardized Achievement and Self-Report Tests: Select standardized tests that are aligned to your specific program learning outcomes. Score, compile, and analyze data. Develop local norms to track achievement across time and use national norms to see how your students compare to those on other campuses.

Surveys: are commonly used with open-ended and closed-ended questions. Closed ended questions require respondents to answer the question from a provided list of responses. Typically, the list is a progressive scale ranging from low to high, or strongly agree to strongly disagree.

Transcript Analysis: are examined to see if students followed expected enrollment patterns or to examine specific research questions, such as to explore differences between transfer and freshmen enrolled students.

Allen, Mary; Noel, Richard, C.; Rienzi, Beth, M.; and McMillin, Daniel, J. (2002). Outcomes Assessment Handbook. California State University, Institute for Teaching and Learning, Long Beach, CA.

**LEARNING OUTCOMES ASSESSMENT PLANNING GUIDE:
USING EVIDENCE GATHERED IN ASSESSMENT**

7. Specify procedures for analyzing and interpreting the evidence gathered in assessment.

8. Identify the means by which information that results from assessment can be used for decision-making, strategic planning, program evaluation and program improvement.

9. Where data have already been gathered, evaluate the success of your program in terms of the expected learning outcomes of students. Use your evidence and evaluation for continuous program improvement as well as for reporting during review cycles.

LEARNING OUTCOMES ASSESSMENT PLANNING GUIDE: GLOSSARY

Assessment: Learning outcomes assessment is designed to produce accurate and meaningful evidence that can inform answers to a central question: are our students learning what we think we are teaching them? And we promote the view that such evidence is meaningful only to the extent that it is carefully gathered, critically interpreted and reflectively used to guide program planning and improvement.

Direct Measure of Learning Outcome: Students demonstrate an expected learning outcome. (Allen, 2002).

Educational Objectives: include the knowledge, skills, abilities, capacities, attitudes or dispositions students are expected to acquire as a result of completing your academic program. Objectives are sometimes treated as synonymous with outcomes, though outcomes are usually more detailed, behavioral in nature, and stated in precise operational terms (see Learning Outcomes).

Evaluation: The use of assessment findings (evidence/data) to judge program effectiveness; used as a basis for making decisions about program changes or improvement.

Formative Assessment: is designed to give feedback to improve what is being assessed. (Allen, 2002).

Goals: are the general aims or purposes of a program and its curriculum. Effective goals are broadly stated, meaningful, achievable and assessable. Goals provide a framework for determining the more specific educational objectives of a program, and should be consistent with program and institutional mission.

Holistic Scoring: is one global, holistic score for a product or performance. (Allen, 2002).

Indirect Measure of Learning Outcome: Students or others report their perception of how well a given learning outcome has been achieved.

Learning Outcomes: are operational statements describing specific student behaviors that evidence the acquisition of desired knowledge, skills, abilities, capacities, attitudes or dispositions. Learning outcomes can be usefully thought of as behavioral criteria for determining whether students are achieving the educational objectives of a program, and, ultimately, whether overall program goals are being successfully met. Outcomes are sometimes treated as synonymous with objectives, though objectives are usually more general statements of what students are expected to achieve in an academic program (see Educational Objectives).

Objective: see Educational Objectives

Observer Effect: the degree in which the presence of an observer influences the outcome.

Outcome: see Learning Outcomes.

Summative Assessment: is designed to provide an evaluative summary. (Allen, 2002).

Triangulation: involves the collection of data via multiple methods in order to determine if the results show a consistent outcome.

Allen, Mary; Noel, Richard, C.; Rienzi, Beth, M.; and McMillin, Daniel, J. (2002). Outcomes Assessment Handbook. California State University, Institute for Teaching and Learning, Long Beach, CA.