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# Student Learning Outcomes

**For more detailed information on learning outcomes, including tutorials on how to write outcome statements, see the SDSU Center for Teaching and Learning Web site at <http://go.sdsu.edu/dus/ctl/>**

Nearly every accrediting agency in the United States now expects colleges and universities to use student learning outcome statements to clarify the educational purpose of programs and courses and to provide a basis for assessment and improvement. The ability of SDSU faculty and administrators to use learning outcome statements as a basis for planning instruction, measuring results, and devising improvement strategies will be critical to future accreditation success and resource allocations.

As early as 1990, the CSU Board of Trustees endorsed the use of learning outcomes as a cornerstone for academic planning. Later it adopted learning outcome statements to articulate broad, system-wide priorities for CSU graduates. For example:

- Integrate knowledge across discipline boundaries.
- Locate, analyze, and synthesize information.
- Make both qualitative and quantitative assessments.
- Appreciate and value cultures other than one's own.

SDSU policy requires that all course syllabi and course proposals include statements of expected student learning outcomes.

*Although policies do not dictate specific numbers of outcome statements, 5-10 outcomes, carefully aligned with the major course purposes and themes, are often enough to communicate essential expectations.*

## What are Learning Outcome Statements?

Student learning outcome statements succinctly describe student capacities – observable and measurable manifestations of knowledge, skills, and attitudes—attained as a result of some learning process or educational experience. The simplest format for outcome statements consists of an action verb and a noun phrase:

- Classify vertebrate specimens.
- Employ metaphors in rhetorical arguments.
- Explain convective effects.
- Predict returns on invested capital.
- Choose to participate in civic affairs.

Learning outcome statements express intentions for learning and describe how students can demonstrate what they have learned. In this sense, they describe some of the ways learning will empower or enable students. Thus, learning outcomes provide a foundation for communicating (and in some cases negotiating) with students about academic responsibilities.

At a collegial and programmatic level, learning outcome statements can help faculty and administrators understand and plan the structure of the curriculum, estimate student and instructor work loads, communicate with SDSU stakeholders, and market degree and certificate programs.

Learning outcomes seem strange to some faculty, perhaps because traditional approaches to academic learning often emphasize transmission of topical information (“covering the content”) with little regard for explicit student competencies. It is therefore unsurprising that, in their first attempts at writing outcomes, faculty often merely amend conventional topical expressions with very general verbs such as “know,” “understand,” “demonstrate knowledge,” and “appreciate.” These are essentially placeholders for more considered and precise action verbs.

**For brief guidance composing student learning outcomes, reference [http://www-rohan.sdsu.edu/~acserv/files/Action\\_Verbs\\_Developing\\_Objectives.pdf](http://www-rohan.sdsu.edu/~acserv/files/Action_Verbs_Developing_Objectives.pdf)**

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Place holder verbs	More precise action verbs		
<b>Know</b> the policies.	<i>Identify</i> the policies	<i>Analyze</i> policies	<i>Apply</i> policies to new circumstances.
<b>Understand</b> the margin of error.	<i>Define</i> "margin of error."	<i>Predict</i> the effect on the margin of error.	<i>Compute</i> the margin of error.
<b>Demonstrate knowledge</b> of catalysis.	<i>Describe</i> examples of catalysis.	<i>Explicate</i> catalytic effects.	<i>Predict</i> catalytic effects.
<b>Appreciate</b> mid-century 20th century jazz composition.	<i>Analyze</i> thematic development.	<i>Recognize</i> innovative technique.	<i>Choose</i> to attend jazz performances.

Syllabi often contain seeds of intention that can be developed into more concrete descriptions of expected learning outcomes.

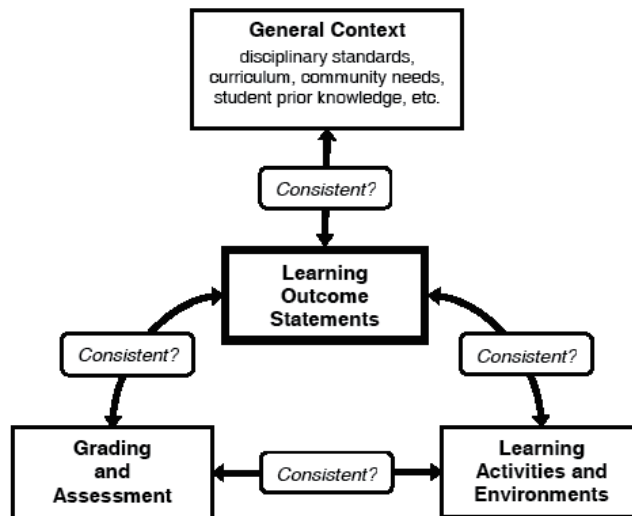
### Syllabus Excerpts

Broad Statements of Abstract Intent	Possible Learning Outcome Statements
Students should have a thorough understanding of the statistical margin of error.	You should be able to <b>describe</b> and <b>explain</b> how the margin of error changes when standard deviation, population size, or confidence interval are altered.
We will explore the influence of traditional, modern, and post-modern perspectives on the role of religion in contemporary American spiritual life.	We will learn to <b>compare and contrast</b> the influence of traditional, modern, and post-modern perspectives on the role of religion in contemporary American spiritual life.
Discussion of political issues will encourage open exchanges and tolerance of other views.	During discussions about politics, students will be able to listen to other speakers well enough to: <b>verbally summarize</b> the other speakers' views, <b>seek clarification</b> from the original speaker, <b>incorporate clarifications</b> in a revised summary.

There is no final answer regarding what it means to "know the content" other than clarification through discussion and negotiation. Yet many students benefit from clarity of expectations and find clear outcome statements to be a useful guide to preparation, study, and engagement.

## Outcome Statements as a Foundation for Student Grading and Program Assessment

Learning outcome statements serve as anchors for grading individual student performance as well as for measuring the overall effectiveness of courses and programs. As suggested in the diagram below, the underlying assumption in either case is that assessment instruments should be consistent with course or program learning outcome statements and learning activities and environments.



## Examples of Consistency Between Outcomes and Assessments

Outcome Statement	Grading or Assessment Item	
	Inconsistent	Consistent
Identify the formula for the standard deviation.	Calculate the standard deviation.	Mark the formula for the standard deviation.
Predict effects of convection.	Define convection.	Use arrows to indicate air flow.
Critique pointillist compositions.	Match these impressionist paintings with the appropriate artist.	Outline the artist's presumed intentions and the likely effects on viewers of this painting.
Analyze environmental policy.	List the major causes of environmental degradation in the Coastal Redwood Forests.	Which of these is not a direct implication of the policy except on mitigation?

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**Assessment of Individual Student Performance for Grading.** Instructors can promote understanding of grading and assessment by reviewing learning outcome statements with students in conjunction with discussion of exams and assignments and by using outcome statements as a basis for designing exam questions and rubrics for evaluating assignments. Consistency between learning outcome statements and grading methods/policies reduces confusion about grading which is, according to the Office of the University Ombudsman, the most frequent source of student complaints and grievances.

Aligning grading methods with learning outcome statements also provides a framework for diagnosing individual student learning problems by allowing instructors or programs to target specific competencies for improvement. Some departments maintain individual student records of outcomes attained to ensure that students meet minimum competency requirements.

**Assessment of Courses and Program Effectiveness.** Measuring the effectiveness of courses and academic programs involves many questions about learning outcomes that transcend mere summation of student grades. Does a course promote lifelong learning? Will a program meet professional standards or employer expectations? Does it prepare students for civic engagement or appreciation of diverse cultural expressions?

These questions clearly go beyond what can be measured within the boundaries of course requirements or grades, but that does not mean such questions cannot be measured periodically as a basis for improvement or adjustment of courses or academic programs. When the purpose of such assessment is primarily improvement of SDSU courses and programs, methods of data collection and analysis need not be as comprehensive or rigorous as might be required for generalizable research studies.

### Using Outcome Statements to Guide Assessment

Outcome	Examples of Possible Assessment Strategies (occasional or periodic)
Promote lifelong learning.	Randomized survey of students following graduation to estimate the extent they continue to learn on their own through reading or self-study.
Meet performance standards in a profession or occupation.	Focus groups with selected employers. Student performance on standardized tests.
Engage in civic affairs and appreciate diverse cultural expressions	Telephone interviews with students regarding volunteer community work, voting activity, participation in cultural events.

### Instructional Quality and Continuous Improvement

SDSU has entered an era in which, more than ever, it must adjust educational programs and courses to changing realities: rapid expansion of human knowledge, changing demographics and cultural values, new global problems and opportunities, increased demands for cost-effectiveness and innovative technologies for learning and knowledge management.

Major accreditation standards and stakeholder expectations will increasingly challenge the university to employ systems of continuous assessment to replace older periodic or occasional data collection conducted primarily in response to pending academic reviews. Yet ultimately, as suggested by the diagram below, course and program assessment have little value unless faculty and program administrators employ assessment data to drive decisions about how to improve the effectiveness of teaching and learning.

