*Guidelines for Student Learning and Performance Assessment Plans:
Building a Culture of Evidence

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Institutional Research, Planning and Assessment

This document is adapted from the website of San Diego State University's Division of
Undergraduate Studies.

*These guidelines have been adopted for use by Academic and Student Life units at Jackson State
University. Modifications in phraseology and terminology should be made as appropriate.

What is Assessment of Student Learning?

Faculty members are asked to describe explicitly the knowledge, skills, and values that a student should have to graduate from the program. Assessment efforts are directed toward answering three questions:

1. What do we want students to learn?
2. How well are they learning what they need?
3. How can we help them learn more effectively?

The third question exemplifies the ongoing nature of the assessment process; it does not involve assessing an outcome but rather the progress being made toward intended objectives. The most important step in assessment is the use of the results to create and implement a plan for improving student learning.

The term "assessment" is used to describe evaluation of student learning at the **program** level, rather than the evaluation of individual students at the class level. Faculty members evaluate students through testing and grading; however, these evaluations are restricted to learning that occurs within a single course. The curriculum of an academic program consists of numerous courses as well as other learning opportunities such as field experiences, internships, or service learning projects. Students are expected to develop knowledge, skills, and values as a result of this combination of experiences. Thus the assessment of student learning focuses on this "macro" level rather than the "micro" level of an individual student. [Adapted from Eastern Illinois website] Because student learning assessment is so closely linked to the curriculum, faculty must play a principal role in the assessment process. That is,

- *Faculty* establish the student learning objectives for the department/program;
- *Faculty* select the methods and measures for evaluating the objectives;
- *Faculty* determine appropriate performance standards; and
- *Faculty develop and implement* program changes based on assessment data.

Building a Culture of Evidence

Each academic discipline establishes principles of evidence, which are used to evaluate the quality of scholarly work. As scholars, it is known that evidence is used to assert that a conclusion is valid.

What is Evidence? (Adapted from Peter Ewell, NCHMS; WASC Evidence Guide)

The following five characteristics define evidence:
- Evidence is *intentional and purposeful*. It is used to answer deliberately posed questions of interest to the department or program.
- Evidence involves *interpretation and reflection* to support a conclusion. Data by themselves are not useful; it is their interpretation and the resulting actions that shape the direction of the department or program that are meaningful.
- Evidence is *integrated and holistic*. This means that multiple pieces of evidence are used and evaluated for common themes to support a conclusion.
- Evidence can be both *quantitative and qualitative*. Each department/program is in the best position to select what it deems to be the most appropriate forms of evidence.
- Evidence can be either *direct or indirect*. Direct evidence is performance-based, while indirect evidence looks at student satisfaction, perceptions, and values. Both kinds of evidence are necessary and important. Each department/program should carefully examine existing sources of evidence as well as consider new approaches and how they can be used to assess student learning.

The assessment plan provides the framework to implement an evidence-based examination of student learning. It serves as the tool that guides the department in building a culture of evidence from which informed decision-making, planning, and improvement can take place.

Student Learning Assessment Plan

Student learning assessment is a continuous and dynamic process consisting of a series of steps, each of which is dependent on the information gathered from the previous step. The process is recursive; as one cycle of steps is completed, another cycle begins. Regardless of the program or department being assessed, the process includes the following steps:

Steps of the Assessment Plan

1. Define the mission statement of the department or program.
2. Define the goals and student learning objectives for the department or program.
3. Identify and describe methods used to assess student learning.
4. Establish a timeline.
5. Analyze, summarize, and report the assessment data.
6. Describe how the results will be used to improve student learning.

Once the cycle has been completed, the process begins again. Student learning goals and objectives and assessment methods are reviewed and revised, if necessary. New data are collected and analyzed and changes are implemented to improve student learning. The remaining pages describe the elements of an Assessment Plan and are presented to assist departments/programs in developing their plans. While each department may select a format for presenting its plan, it must contain all the elements described below.

Step 1.	**Define the mission statement of the department or program.**

The **mission statement** is a brief statement of the values and philosophy of the department/program. It should guide decision-making about the curriculum and provides a framework for setting goals. It should also be aligned with the University mission.

Example 1: The mission of the Department of Biology is to prepare its graduates to engage in scientific inquiry, to communicate scientific information clearly, and to acquire basic biology knowledge and skills that prepares them for employment and/or continuing education in the life sciences. [Adapted from Department of Biological Sciences, Rutgers University, Campus at Newark]

Example 2: The mission of the College of Agriculture is to provide students with the educational experiences and environment that promote discipline competence; the capacity to attain career success in agriculture, food, or related professions; and a sense of civic responsibility. [University of Minnesota, from Diamond, 1998; *Designing & Assessing Courses and Curricula: A Practical Guide,* p. 72]

Step 2.	**Define the goals and student learning objectives for the department or program.**

Goals are statements of broad, long range intended outcomes of the program and the curriculum. They describe the knowledge, skills, and values expected of graduates. Goals flow from the mission statement and provide a framework for the objectives. It is suggested that from three to five goals be written for a department or program, although there is nothing special about this number. Limiting the number of goals will assist with

writing overarching statements and creating an assessment plan that is both meaningful and feasible to implement.

Effective goals are:
- Broad statements of meaningful expectations
- Clearly written
- Achievable
- Assessable through related objectives
- The framework for writing objectives
- Consistent with the mission statement

Objectives are brief, clear statements of learning outcomes that flow from the goals. They should be written using action words that specify observable and measurable behaviors.

Effective objectives:
- Tell us how we know when a goal has been achieved
- Use action words that specify observable behavior
- Are realistic and achievable
- Are measurable
- Use simple language

The following table presents some relevant verbs that may be useful for writing objectives. Each column represents one of the levels of Bloom's Taxonomy: [Gronlund, N.E. (1991). *How to write and use instructional objectives* (4th Ed.). New York: Macmillan Publishing Co.]

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Define	Classify	Apply	Analyze	Arrange	**Assess**
Identify	Describe	Compute	Calculate	Construct	**Estimate**
Indicate	Discuss	Construct	Categorize	Create	**Evaluate**
Know	Explain	Demonstrate	Compare	Design	**Discriminate**
Label	Identify	Illustrate	Contrast	Formulate	**Judge**
List	Locate	Interpret	Determine	Organize	**Interpret**
Name	Review	Investigate	Differentiate	Plan	**Rate**
Select	Summarize	Predict	Distinguish	Prepare	**Revise**
Underline	**Translate**	**Use**	**Relate**	**Produce**	**Support**

Two examples of a clearly stated goal with its associated objectives:

Example 1:

Goal 1.   Be familiar with major writers, periods and genres of English and American Literature and be able to place important work and genres in their historical context. [Taken from CSU San Bernardino]

Objective 1.1. Compare two or more works and authors in English and/or
American Literature, for example, analyze the character of Satan in
Milton's Paradise Lost and compare it to other satanic characters in
literature.

Objective 1.2. Analyze a novel, short story, poem, play or significant piece of
prose showing familiarity with the techniques and literary contexts
of the particular genre being examined.

Objective 1.3. Describe the historical context or literary period of the work or
author being examined, for example, a discussion of Crane's
Maggie as an example of American Naturalism.

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Example 2:
Goal 1. Use concepts and principles of ecology to explain the interactions
of organisms with their environments and with each other.
[Adapted from Department of Biological Sciences, Rutgers
University, Campus at Newark]

Objective1.1. Describe ecosystems as consisting of populations of organisms
plus abiotic inputs, nutrient cycles, energy cycles, and limiting
factors.

Objective 1.2. Explain how species and populations interact in a dynamic fashion
in communities.

Objective 1.3. Propose one or more hypotheses that plausibly suggest how
different species can occupy the same ecological niche.

Step 3.	**Identify and describe the methods to be used to assess student learning.**

Departments may find it useful to create an Objective by Course matrix to determine
where in the curriculum each objective is being met before beginning to identify methods
for assessing student learning. This process of curriculum mapping ensures alignment of
goals and objectives with the curriculum. The table below is one example of a matrix.
[Adapted from PACT Handbook, January, 2001; CSU Bakersfield]

Course	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5
Course 200	I			I	I
Course 300	P		I		
Course 350			P	P	
Course 400	P		P	P	
Course 490	R		R	R	

I = Introduce; P = Practiced; R = Reinforced

Note. This matrix indicates that the program did not include Objective 2 in the curriculum. Thus, the faculty must discuss whether Objective 2 is important to the program and embed it in several courses in the curriculum. Objective 5 is only introduced; thus graduates may not master it. Student learning should be measured using both direct (e.g., portfolios, papers, projects, internships, performances, standardized tests) and indirect (surveys, focus groups, interviews) evidence. Multiple measures should be employed and assessment should take place throughout the students' program. It is suggested that at least two assessment methods be used for each objective, at least one of which must provide direct evidence of student learning. To increase feasibility of assessment, consider using methods that can evaluate more than one objective. Specify where in the curriculum the assessment will take place.

Examples:
1. Completion of Senior Project in Comparative Lit XXX consisting of a portfolio of four papers and a reflective essay indicative of competence in several knowledge and skill objectives of the department. A departmental committee will review and evaluate the portfolios using a 5-point scoring rubric developed and approved by department faculty. [Direct Evidence]
2. A graduating senior survey will be used to examine students' perception of competence regarding all department goals/objectives. [Indirect Evidence]
3. A national field test in Psychology will be given to students in PsychXXX and PsychYYY to examine pre/post changes in knowledge of several cognate areas of psychology. [Direct Evidence]

Assessment Methods

The table below describes several methods of assessment. Each has its strengths and weaknesses. While this list is not exhaustive, it represents a variety of approaches to assessment. Select the methods that are most appropriate for the assessment of departmental student learning goals/objectives, faculty time, and faculty resources. In the case of a very large department, samples of student work might be selected to represent the larger student population. Remember that assessment should be meaningful, manageable, and sustainable.

Method	Definition	Direct or Indirect Evidence
Capstone Course	Assessments take place in a capstone course that can be program-based or required of all students. Assignments are directly related to student learning objectives.	Direct
Embedded Questions	Questions related to program learning objectives are embedded within an exam taken by all students. Faculty member grades exams as usual for course grades, but responses to the embedded question are aggregated and scored with a common rubric.	Direct
Exit Interviews	Graduating seniors are interviewed to obtain feedback regarding the strengths and weaknesses of the program in regard to student learning objectives.	Indirect
Focus Groups	A series of planned discussions for 6-10 students who are asked a series of open-ended questions related to student learning objectives.	Indirect
Portfolios	A compilation of a student's work throughout the program. Evaluated by a team of faculty using a common scoring rubric.	Direct
Scoring Rubrics	A numerical range used to evaluate the quality of a project, paper, etc. in relation to student learning objectives.	Direct
Standardized Test	Department administers a national test to all students. [Be certain that test items measure student learning objectives for department.]	Direct
Survey [of students, alumni, employers]	National or locally-developed survey to measure student satisfaction, perceptions, values in relation to student learning objectives.	Indirect

Step 4.	Establish a timeline for the assessment plan.

The development and implementation of student learning assessment is a process that takes time, particularly if the intent is to conduct meaningful, manageable, and sustainable plans for improvement of student learning. To achieve "best practices" in student learning assessment departments/programs should "start small, but think big". Good assessment should focus on things that matter. Begin the process by developing measurable objectives for one or two goals faculty deem most important to student learning. Then develop the methods for measuring these objectives. Build on assessment successes by gradually examining other goals. Remember that all goals do not have to be assessed each year.

Step 5.	Analyze and summarize the assessment results.

Describe the timeline and process used to analyze and summarize the results.

Example:

Assessment Method	Time Line	Process
Senior Project	Each semester	A faculty committee will meet each semester to evaluate the portfolios using a department approved scoring rubric. A summary report of Senior Projects for fall and spring semesters will be submitted to the department chair each June.
Graduating Senior Survey	Bi-Yearly	Data will be analyzed and a summary report will be submitted to the department chair in June of the data collection year. Responsibility for this task will be assumed by the department assessment coordinator.
Field Test	Yearly	Data will be analyzed and a summary report will be submitted to the department chair each June. Responsibility for this task will be assigned to a faculty member (on a rotating basis).

Step 6.	Describe how the results will be disseminated and used for program improvement.

Example 1:   [Description of a plan to examine evidence, when no assessment has yet taken place.]

A faculty retreat will be held in the week prior to the beginning of classes for the fall semester. The department chair will send the summary assessment reports to the faculty prior to the retreat for their review. Discussions of the results regarding implications for curricular change or assessment plan adjustments will be used to guide the assessment activities for the next academic year.

Example 2:   [Description of a plan for curricular change that is based on interpretation of assessment evidence.]

A faculty retreat was held on August 28, 2002 to discuss the assessment results obtained during Academic Year 2001-2002. Student writing was evaluated using both direct [senior project] and indirect [senior survey] evidence. These assessment methods indicated that students' actual and perceived ability to organize their thoughts clearly and coherently was less than adequate. The faculty decided to implement three strategies for improvement of student writing. First, staff from the Center for Teaching and Learning will be asked to provide a department workshop on feasible strategies for increasing student writing in classes. Second, additional student writing will be required in two core courses. Third, an assessment of student writing will take place in Course XXX, a gateway course required in the junior year. In Academic Year 2003-2004, student writing will be examined using both the senior project and the graduating senior survey to determine the effectiveness of these strategies in improving student writing.

Summary of Assessment Plan Elements

Steps	Description
Define mission, goals, objectives	Describe the knowledge, skills, and values/attitudes expected of department graduates.
Assessment Methods	How you will know that goals and objectives have been met.
Timeline	Where in the curriculum, how, and by whom the assessment will take place.
Results	Description and interpretation of evidence.
Decisions, Recommendations, Plans	Based on what was learned, a description of departmental plans for the next year.