A Guide to Choosing a Feasible (and Useful) Assessment Plan for Student Learning Outcomes

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Steps in Planning and Implementing Student Learning Outcomes Assessment at the Program Level

1. Begin with a brief statement of the mission and general goals for the program.

- A brief description of the purpose of the program (usually a paragraph)
- Can include statements about:
  - Educational values;
  - Major bodies of knowledge covered in the curriculum;
  - What the program prepares students for (e.g., graduate study)

2. Identify the intended student learning outcomes of the program.

- In the eyes of your program, what should a student be learning from your particular course or program of study? Learning outcomes should reflect clear, measurable outcomes.
- For the SACS assessment, we suggest that you select about 3-6 of the most important learning outcomes. More are acceptable, but the practical ability to adequately measure, analyze, and reflect upon the results becomes compromised when there are too many. A reasonable target might be to plan to assess at least one major outcome per year, depending upon the intensity of effort needed for the specific methods selected.

An Example

The following learning outcomes were selected for illustrative purposes from the much more detailed list of goals and outcomes listed in the *American Psychological Association's Task Force on Psychology Undergraduate Major Competencies: Psychology Major Learning Goals and Outcomes* (2002). The complete report is available online at http://www.apa.org/ed/pcue/taskforcereport2.pdf.

Knowledge Base of Psychology: Identify and explain the primary objectives of psychology: describing, understanding, predicting, and controlling behavior and mental processes.

Research Methods in Psychology: Design and conduct basic studies to address psychological questions using appropriate research methods, data analysis, and interpretation.

Critical Thinking Skills in Psychology: Use reasoning to recognize, develop, defend, and criticize arguments and other persuasive appeals.

Application of Psychology: Identify appropriate applications of psychology in solving problems and addressing personal, social, and organizational issues.

Values in Psychology: Demonstrate the ability to weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a discipline.

3. Where can we collect data on student learning outcomes? Think about student "work products." What are your undergraduate majors actually producing as part of your program's curriculum on their way to graduation?

- They take tests in certain content domains required for majors.
- They write papers for key content courses in the major.
- They conduct independent research projects.
- They give presentations and performances as part of final projects.
- They participate in certain experiences that are valued by your department, such as capstone experiences or field or service learning work.
- They prepare portfolios to summarize their work at the end of the year.
- They write thought papers where they reflect on what, how, and why they learned.

4. Map your program's student learning outcomes to useful and feasible assessment approaches.

- Other than grades, how can you demonstrate that undergraduates in your major are producing high quality work that is consistent with the learning objectives of your department?

- Course grades are poor measures of program outcomes for several reasons:
  - Since grading criteria and standards are matters decided by the individual instructor, the grades in one course are not equivalent to grades in other courses. (There is no "gold standard" to which all teachers adhere.)
  - The tests, assignments, projects, and papers in a course may not measure the program outcomes of interest to the department. Moreover, given the variability of grading practices across instructors, the grades on individual assignments are not equivalent to the grades given by teachers in other courses.
  - Some instructors' grading schemes include a variety of factors such as class participation, adherence to deadlines, and attendance. Therefore the final grade represents a range of student performance other than the strict achievement of learning goals or program outcomes.

- Using **multiple methods** of assessing outcomes is highly recommended. For example, administering a subject area test along with observing performance in a simulated situation provides feedback on both knowledge and application of content information.

- **Direct assessments** examine student work products straight from the source – the student.

- **Indirect assessments** examine secondary information about what a student learned (e.g., student opinions about what they learned, student ratings of instruction, course taking patterns within a department). Often, indirect assessments provide feedback that is useful in interpreting results of direct assessments or suggesting how processes might be improved to enhance learning. For

example, if direct methods revealed that students were not achieving the desired outcomes in a specific area of the curriculum, perhaps an examination of teaching evaluations or interviews with students might provide clues for improving learning conditions.

For the SACS assessment, we recommend that you attempt to use mostly direct assessment techniques, but encourage you to supplement those with indirect assessment methods to the extent that you find the data useful in improving learning in your discipline.

The following matrices provide a number of potential methods for assessing learning outcomes. Note that the direct/indirect characteristic of the assessment technique depends on the outcome being assessed. For example, an objective test might provide direct feedback for determining subject area knowledge, but would provide at best only indirect information on students' ability to think critically and apply knowledge in ambiguous situations.

Table extracted from the American Psychological Association's Task Force on Psychology Undergraduate Major Competencies: Psychology Major Learning Goals and Outcomes (2002). Available online at http://www.apa.org/ed/pcue/taskforcereport2.pdf.

Student Learning Outcomes. Our undergraduate majors should:	**More Direct Assessments**	**More Indirect Assessments**
Show proficiency or knowledge in a particular content domain to proceed in the major	Expert panel of independent judges using a predetermined set of criteria to rate and evaluate a random sample of: • Individual projects or other written projects • Oral presentations • Graphic tests and posters • Group teams • Research projects • Structural/situational assessments Other Assessment Approaches • Classroom Assessment techniques (e.g., thought papers) • Classroom/Course data • Embedded questions and assignments • Essay tests • Objective tests • Transcript analysis	• Summative performance assessment • Self-assessment/reflection • Collaboration • Attitudinal surveys of students, alumni • Focus groups • Archival measures, alumni databases • Syllabus audit • Exit interviews

Student Learning Outcomes. Our undergraduate majors should:	More Direct Assessments	More Indirect Assessments
Show proficiency in research methods in the content domain	Expert panel of independent judges using a predetermined set of criteria to rate and evaluate a random sample of: • Individual projects or other written projects • Oral presentations • Graphic tests and posters • Written projects from capstone experiences • Structural/situational assessments • Portfolios • Research projects Other Assessment Approaches • Embedded questions and assignments • Satisfaction surveys from employers, graduate schools, or other stakeholders • Performance reviews • Transcript analysis	• Classroom/Course data • Objective tests • Essay tests • Classroom Assessment techniques • Summative performance assessment • Standardized tests • Locally developed tests • Internships • Case and longitudinal studies of knowledge • Group teams • Self-assessment/reflection • Online activities • Attitudinal surveys of students, alumni • Focus groups • Archival measures, alumni databases • Syllabus audit • Exit interviews
Show critical thinking skills in a particular content domain	Expert panel of independent judges using a predetermined set of criteria to rate and evaluate a random sample of: • Individual projects or other written projects • Oral presentations • Graphic tests and posters • Written projects from capstone experiences • Structural/situational assessments • Portfolios • Research projects • Group projects • Collaboration Other Assessment Approaches • Essay tests • Embedded questions and assignments	• Classroom/Course data • Objective tests • Classroom Assessment techniques • Summative performance assessment • Standardized tests • Locally developed tests • Internships • Self-assessment/reflection • Online activities • Attitudinal surveys of students, alumni • Focus groups • Archival measures, alumni databases • Syllabus audit • Exit interviews • Transcript analysis

Student Learning Outcomes. Our undergraduate majors should:	**More Direct Assessments**	**More Indirect Assessments**
Show technological literacy in the field	Expert panel of independent judges using a predetermined set of criteria to rate and evaluate a random sample of: • Individual projects or other written projects • Oral presentations • Written projects from capstone experiences • Structural/situational assessments • Portfolios • Research projects • Research teams Other Assessment Approaches • Embedded questions and assignments • Self-critiques • Satisfaction surveys • Focus groups • Performance reviews • Exit interviews	• Classroom/Course data • Objective tests • Essay tests (unless directly on topic) • Classroom Assessment techniques • Graphic tests and posters • Summative performance assessment • Standardized tests • Locally developed tests • Internships • Online activities • Attitudinal surveys of students, alumni • Focus groups • Archival measures, alumni databases • Syllabus audit • Transcript analysis • Collaboration • Self-assessment/reflection • Group projects, research teams • Syllabus audit • Internships or professional applications • Case and longitudinal studies

Student Learning Outcomes. Our undergraduate majors should:	**More Direct Assessments**	**More Indirect Assessments**
Show communication skills	Expert panel of independent judges using a predetermined set of criteria to rate and evaluate a random sample of: • Individual projects or other written projects • Oral presentations • Written projects from capstone experiences • Structural/situational assessments • Portfolios • Research projects • Structural/situational assessments • Other Assessment Approaches • Classroom/Course data • Essay tests • Embedded questions and assignments • Classroom Assessment techniques • Self-assessment/reflection • Performance reviews • Exit interviews	• Objective tests • Graphic tests and posters • Summative performance assessment • Standardized tests • Locally developed tests • Internships • Online activities • Attitudinal surveys of students, alumni • Focus groups • Archival measures, alumni databases • Syllabus audit • Transcript analysis • Collaboration • Group projects, research teams • Syllabus audit • Internships or professional applications • Case and longitudinal studies

5. Make decisions about the logistics for each assessment.

- How often will the assessment be made?
- Which courses or learning experiences will be included in the assessment?
- If a sample of work or papers will be evaluated, what size sample will be drawn, and how will it be drawn?
- Who will develop the scoring rubric for each assessment?
- What steps will be taken to protect the identity of students whose work will be judged?
- Who will conduct the assessment? How many judges will there be, and how will these judges be selected?
- Who will ensure that the assessments will take place in a timely way?
- Who will store and analyze the data once the assessments have been made?
- How will the data be reported?

6. If you choose to have judges rate student work, develop a clear rubric for these evaluations.

- What 5-10 common dimensions or attributes should be present in the student work?
- What skills (consistent with the learning goals) should students have demonstrated by completing the assignment, project, or course?

Example 1

The rubric used by grant review panels at the National Institutes of Health to evaluate research proposals

1. **Significance.** Does this study address an important problem? If the aims of the application are achieved, how will scientific knowledge be advanced? What will be the effect of these studies on the concepts or methods that drive this field?
2. **Approach.** Are the conceptual framework, design (including composition of study population), methods, and analyses adequately developed, well-integrated, and appropriate to the aims of the project? Does the applicant acknowledge potential problem areas and consider alternative tactics?
3. **Innovation.** Does the project employ novel concepts, approaches or methods? Are the aims original and innovative? Does the project challenge existing paradigms or develop new methodologies or technologies?
4. **Investigator.** Is the investigator appropriately trained and well suited to carry out this work? Is the work proposed appropriate to the experience level of the principal investigator and other researchers (if any)?
5. **Environment**. Does the scientific environment in which the work will be done contribute to the probability of success? Do the proposed experiments take advantage of unique features of the scientific environment or employ useful collaborative arrangements? Is there evidence of institutional support?
6. **Overall Evaluation.** Score the proposal to reflect the overall impact of the project on the field, weighting the review criteria, as you feel appropriate for each application. An application does not need to be strong in all categories to be judged likely to have a major scientific impact and, thus, deserve a high merit rating. For example, an investigator may propose to carry out important work that by its nature is not innovative, but is essential to move a field forward.

Each of these dimensions can be rated on the following scale:

1	2	3	4	5
Outstanding	Excellent	Good	Fair	Poor

Example 2

The rubric is used to evaluate final research projects involving empirical data. Specific definitions for each section can be determined by the panel of judges.

1. **Abstract**
2. **Introduction**
3. **Experimental Hypotheses**
4. **Method**
    a. **Participants**
    b. **Materials**
    c. **Procedures**
5. **Results and Interpretation**
    a. **Descriptive information about variables**
    b. **Independent groups t-tests**
    c. **Analysis of Variance**
    d. **Correlations**
    e. **Chi-square**
6. **Discussion and Conclusion**
7. **Computer Syntax**
8. **APA Format**
9. **Overall Evaluation**

Each of these dimensions can be rated on the following scale:

1	2	3	4	5
Poor	Fair	Good	Excellent	Outstanding