



A Basic Assessment Plan for Academic Programs

What is “assessment”? At UW-Madison “assessment” of student learning is the term for asking what we expect students to learn. Where in the curriculum do we provide these learning experiences? How do we know that students are learning? How and when do we use evidence of learning to keep what works or make improvements in our programs?

Every academic program is required to have an assessment plan and conduct at least one assessment activity annually.

Program Assessment Requirements

- A. Have an up-to-date and active assessment plan
- B. Conduct one assessment activity annually
- C. Submit the annual program report using the specified collection method

Assessment has also been defined this way: The systematic gathering of information about student learning and the factors that affect learning, undertaken with the resources, time, and expertise available, for the purpose of improving the learning (B. Walvoord, 2006).

Why is assessment necessary? Assessment is a way to know if students are learning what program faculty members expect students will learn; evidence from assessment activities shows where to make changes for improvement or to show what is already working well. Faculty-driven assessment makes explicit and systematic the quality of the student learning experience.

Since the early 1990s there have been calls for universities to more clearly document how we know that students are meeting the learning goals we set for them. Since 1995, UW-Madison’s formal assessment plans have mandated that: 1. academic programs have an assessment plan and; 2. conduct at least one assessment activity annually. The program review guidelines adopted in 2010 make explicit the expectation that academic program faculty are assessing student learning. More and more students, parents, employers and other stakeholders want us to be able to show that students are learning.

Preparing the basic assessment plan. The assessment plan lays out a systematic approach to reviewing the student learning experience. A simple, straightforward assessment plan includes these components:

Part 1. WHAT – What are students expected to learn? Each undergraduate academic program should articulate at least three learning goals. Typically undergraduate programs will have 5 to 12 learning goals. Minimally, each graduate program should articulate learning goals corresponding to the Graduate Learning Goals approved by the Graduate Faculty Executive Committee.

Part 2. WHERE – Where in the curriculum are students expected to learn and apply the knowledge and skills specified as the learning goals?

Part 3. HOW – How do program faculty know – what is the evidence - that students are learning what they expect them to?

Part 4. SO WHAT – Review the assessment activity findings (evidence). Are students meeting our expectations? Validate or consider ways to improve.

More detail about the component parts

1. **WHAT:** Articulate statements that define the knowledge and skills a student is expected to have learned by completion of the program. These statements are known as learning goals.

Learning goals state what students are expected to know or are able to do when they've completed the program. Learning goals should be clear and measurable.

Start with an action verb that denotes the level of learning expected. Levels of learning and associated verbs may include the following:

- Remembering and understanding: recall, identify, label, illustrate, summarize.
- Applying and analyzing: use, differentiate, organize, integrate, apply, solve, analyze.
- Evaluating and creating: monitor, test, judge, produce, revise, compose.

Follow the verb with a statement describing the knowledge and abilities to be demonstrated. HINT: Terms such as *know*, *understand*, *learn*, *appreciate* are generally not specific enough to be measurable.

Defining learning goals or expectations can require considerable effort. For the basic approach, consider adopting or modifying

learning goals that have been articulated by others, for example:

- Undergraduate programs: Use and expand on the [Essential Learning Outcomes \(ELOs\)](#), which have been adopted by UW-Madison as overarching expectations for the undergraduate student learning experience.

THE BASIC ASSESSMENT PLAN

1. **WHAT:** Learning Goals (or learning outcomes) – Identify at least three learning goals that specify the knowledge and/or skills a student is expected to have learned by completion of the program.

2. **WHERE:** Specify or “map” where the expected learning takes place in the curriculum.

3. **HOW:** Develop assessment strategies to determine how students are meeting expectations for learning.

3.a. **HOW (Direct):** One or more direct measure of how well the students in the program, collectively, are meeting expectations for learning.

3.b. **HOW (Indirect):** One or more indirect measure of how well students in the program, collectively, are meeting expectations.

4. **SO WHAT:** Review the assessment activity findings (evidence). Are students meeting our expectations? Validate or consider ways to improve.

4.a **SO WHAT (application):** One annual program faculty meeting to discuss the evidence collected over the year, discuss what it means for the program, and define any next steps.

4.b. **SO WHAT (report):** Each academic program is required to report, annually, to the Office of the Provost on student learning assessment activities and next steps.

Assessment plans and annual reports for all programs are collected by the Office of the Provost and may be made available to the public.

Program faculty and staff are required to prepare a written plan when a program is new and to revise it at any major transition point, including at the time of the 10-year program review.

- Graduate programs: Use and expand on the [Graduate Level Learning Goals](#), which have been approved by the UW-Madison Graduate Faculty Executive Committee.
- Use learning goals or expectations articulated by a professional organization.
- Tweak the learning goal/expectation statements of a closely related discipline at UW-Madison or a peer program at another university.

Examples:

Learning goals for undergraduate Biology majors – Graduates will be able to:

- A. Describe and apply basic biological concepts and information.
- B. Design and conduct an experiment to test hypothesis in an area of biology, and communicate the results in writing and orally to a scientific audience.
- C. Follow ethical principles of the discipline.

Learning goals for Ph.D. Poultry Science

- A. Poultry Science doctoral students learning goals are inclusive of the learning goals identified for Poultry Science M.S. students. The Poultry Science Ph.D. is a research-based doctoral program that culminates in a dissertation.
- B. PS Ph.D. graduates articulate research problems and limits with respect to practice within Poultry Science.
- C. Graduates formulate ideas and techniques beyond the current realm of knowledge in their chosen subfields.

2. **WHERE:** A specification or mapping of where the learning takes place in the curriculum (a curricular map). Curriculum mapping provides an effective strategy for articulating, aligning and integrating learning goals across a sequence of courses or other learning experiences.

The mapping often takes the form of a grid. The program's courses and requirements comprise the rows. The learning goals comprise the columns. The box for a curricular element that contributes to given learning goals will be marked with a checkmark or some other notation.

This type of mapping analysis illustrates how the curriculum is being used and this activity can in itself be helpful first step in program improvement. It can highlight courses that are important to multiple learning goals and it can help identify courses that may not be contributing to the program.

3. **HOW:** Develop assessment strategies and measures (direct/indirect) to determine how students are meeting expectations for learning.

3.A. HOW: One *direct measure* of how well the students in the program, *collectively*, are meeting one or more of the programs the learning goals. This is the one activity that is specific to the academic activity and undertaken by program faculty and staff.

Examples of direct assessment:

- Capstone experiences. Faculty collect examples of student work from the capstone course. A group of faculty evaluates the work using explicit criteria, reviews the evaluation against program standards to identify areas of program strength (to be protected and amplified) or weakness (potential for improvement). Such an assessment uses a rubric, or scoring sheet, that is designed for the purpose and sets standards for the program.
- Research dissertation. For research-based graduate programs, faculty create a rubric for evaluating performance on the prelim and/or the dissertation defense. These rubrics include neither the faculty nor the student name. Periodically (annually or once every two or three years) the rubrics are reviewed to identify areas of program strength (to be protected and amplified) or weakness (potential for improvement).
- Standardized tests. A standardized test is given to all program students near graduation. A standard is set for the program of a percent of seniors who will achieve specified levels of achievement, for example 95% pass rate and 50% high achievement rate. If the standard is not met or exceeded, the program can review details of testing to identify areas for improvement. This approach is usually most effective if students are required to take a test for licensure or to be credentialed as a professional, or if there is some other natural incentive for students to strive to do their best work, or if there is some other test that acts as a benchmark for performance beyond UW-Madison.
- Embedded tests/activities. Embedded tests can be applied in many contexts, and are often ideal to assess skill acquisition. The same test is asked of all students routinely in the course of other testing. That is, the assessment is embedded within a course test or final exam. Students are graded individually, and an evaluation of how well students do collectively is also evaluated. For example; in a microbiology program an embedded test might be a practicum test of sterile technique; in a computer science program an embedded test might be the ability to solve a specific foundational coding problem; in an art history program a student may be asked to write an analysis/critique of a piece of art. The embedded test is given to all students, and the results are reviewed at the end of the year (or on a two or three year cycle) without student or instructor names.

3.B. HOW: One *indirect measure* of how well students in the program, *collectively*, are meeting expectations. Indirect measures use surveys, course evaluations, or other approaches that reveal students' perceptions of their learning. For indirect measures, there are university resources that program faculty and staff can make use of without having to implement their own survey. Indirect measures are perceived as easier to conduct but indirect measures alone are insufficient. NOTE: For programs with limited resources, a single direct measure is better than multiple indirect measures.

Examples of effective indirect assessment:

- Course evaluations. Course evaluations can align course objectives to program learning goals if questions about student learning are included and if the courses have been mapped to the learning goals.
- Student surveys. Pen/paper or on-line survey of graduating students aimed at gaining information about their perceptions of learning. The following three questions are sufficient for a very basic

survey. 1. How well did your educational experience help you [insert learning goal language]? Use a scale such as extremely well, very well, adequately, not very well, not at all, not applicable. 2. What aspects of your educational experience contributed most to your learning? Take an open-ended response to this question. 3. What elements in the program could be altered to improve the learning experience? Again, accept an open-ended response.

- Alumni surveys. These could use similar questions to the graduating student survey.
- Employer surveys. These are a useful approach if the employer base is sufficiently well identified but often the employer base is too dispersed to be useful. A more useful approach is an annual meeting and structured discussion with an advisory board comprised of employers or potential employers of graduates.
- For undergraduate programs, review the program-specific report from the Post-Graduation Plans questionnaire (asked of all graduates, <http://apir.wisc.edu/pgp.htm>). This report includes information on employment plans and perceptions of learning gains. This product was designed to serve this need for any undergraduate academic major.
- For large undergraduate programs, request the results of the National Survey of Student Engagement for seniors in your major (again from APIR).

4. SO WHAT. Review the assessment activity findings (evidence). Are students meeting expectations? Validate or consider ways to improve.

4.A. SO WHAT. Conduct one annual program faculty meeting that will discuss the evaluative evidence, analyze what it means for the program, and define any next steps.

Assessment results should be discussed at one or more meetings of the program faculty and staff annually. A small group of program faculty and staff should have responsibility for compiling assessment materials in a way to communicate them effectively to colleagues. In some cases, the structure of assessment in the program may require that faculty members bring the results of their direct assessment activities and their observations to the meeting. The record of the faculty discussion of findings and any resulting recommendations are actions plans that become the basis for the annual report.

4.B. SO WHAT. Prepare an annual report that will be used as a reference for successive years' assessment activities. This report is also submitted to the Office of the Provost. The component parts of the annual report are:

1. WHAT – List of learning goals. This list will probably change little from year to year.
2. WHERE – Curricular map. Again, this may change little from year to year.
3. HOW – Each program is required to conduct one assessment activity each year. Provide a description of the year's assessment activity and which learning goal(s) were examined.
4. SO WHAT – Report on key findings and any decisions for action to improve the student learning experience. Include a description of key findings, summary of recommendations of changes, and a plan for implementing changes and any progress made so far, or barriers to progress.

Collecting Assessment Plans and Annual Reports

All academic programs are required to have an assessment plan. Starting in Fall 2015, the Office of the Provost will systematically collect program assessment plans.

Also starting in Spring/Summer 2015, all programs will submit an annual report to the Office of the Provost. In the first year, only the learning goals (what) will be required. In subsequent years a full report will be required.

Selected Web Resources

UW-Madison Assessment Web Site - <http://provost.wisc.edu/assessment/>

Making Departmental Assessment Clear, Simple, Sustainable, and Useful. Barbara Walvoord, 2006. Walvoord's document is the basis for this document and is available under the "Resources" panel at <http://apir.wisc.edu/programreview.htm>

College of Letters & Science Example: <https://kb.wisc.edu/lis/page.php?id=25242>

Undergraduate Program Profile – trends in degrees, enrollments, time-to-degree, by major: <http://apir.wisc.edu/students.htm>

Undergraduate Post-Graduation Plans Reports – see the web page for standard reports and how to request program-specific requests: <http://apir.wisc.edu/pgp.htm>

National Survey of Student Engagement – major-specific reports by request to Academic Planning and Institutional Research.

Selected Monographs

Assessment and Review of Graduate Programs. Council of Graduate Schools. Marilyn J. Baker, et. al. Council of Graduate Schools, 2011.

The Assessment of Doctoral Education: Emerging Criteria and New Models for Improving Outcomes. Peggy A. Maki and Nancy A. Borkowski. Stylus, 2006.

Making the Implicit Explicit: Creating Performance Expectations for the Dissertation. Barbara Lovitts. Stylus, 2007. This book provides sample rubrics across the disciplines.