Assessing Student Learning: Benefits & Strategies

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What is Assessment of Student Learning?

- Deciding what we want our students to learn
- Making sure they learn it!

--Jane Wolfson, Director, Environmental Science & Studies Program, Towson University
The Teaching-Learning-Assessment Cycle

1. Learning Goals

2. Learning Opportunities

- Pause
- It Happens!

3. Assessment

- Reflect
- Regroup
- Pause

4. Using Results

It Happens!
Student-Level Assessment

- Assesses *individual students* on *course-level goals*

- Tests & assignments, summarized into a grade

- Generally *in isolation*
Course-Level Assessment

- Assesses *students as a whole* on *course-level goals*

- Tests and assignments, with item scores aggregated across students
  - *For multi-section courses, also aggregated across sections*

- In isolation or collaboratively
Program-Level Assessment

- Assesses students as a whole on program-level goals

- Tests and assignments in capstones and other key courses
- Field experience supervisor evaluations
- Portfolios
- Published tests
- Surveys, interviews, etc.

- Collaboratively
General Education Assessment

- Assesses *students as a whole* on *general education goals*
- Tests and assignments in key courses
- Portfolios
- Published tests
- Surveys, interviews, etc.
- Collaboratively
Institutional-Level Assessment

- Assesses *students as a whole* on *institutional-level goals*
  
  - Tests and assignments in key courses and co-curricular activities
  - Portfolios
  - Published tests
  - Surveys, interviews, etc.

- Collaboratively
What the Heck is Going on with Accountability & Assessment?
The US Accreditation System

- Regional accreditors
  - All require liberal arts foundation
  - Oldest, strongest reputation
  - Historically examined inputs, not outcomes

- National accreditors
  - Mostly colleges without liberal arts foundation

- Specialized accreditors
  - Mostly programs, not colleges

- State licensure

- All accreditors voluntary, membership-controlled
1965 Higher Education Act (HEA)

- Title IV funds go only to colleges accredited by Federally recognized accreditors.
  - Pell, SEOG, Trio, Migrant grants
  - Federally-insured student loans

- Accreditors must comply with HEA criteria to be recognized.
1980s and 1990s

- **HEA reauthorization**
  - 1986: First outcomes assessment language
  - 1998: Assessment language strengthened
  - Regional accreditors rewrote standards to emphasize assessment of student learning outcomes

- **“Learning-centered” movement**
  - 1980s: Movement—and assessment movement—began
  - 1995: Barr & Tagg’s seminal article in *Change* published
  - Research on what promotes student learning & success
Recent Decades: A Changing World

- Shifting public policy
  - Higher education more private than public good
  - Students pay more and expect money’s worth

- Broadening market for higher education
  - Most well-paying jobs require post-secondary education.
  - “Money’s worth” is better pay.
    - Not necessarily a richer education
2000s: Calls for Accountability

- 2007 Spellings Commission
- 2008 Higher Education Act negotiations

- Public information on quality & effectiveness
  - *Transparent - easy to find & understand*
- Systematic information, not anecdotes
- Comparable assessments
- Value-added assessments
Will Assessment Ever Go Away?

- Federal regulations
- Other calls & mandates for accountability
- "Learning-centered" focus
Documenting Your Assessment Efforts:

Answer Four Questions.
1. How do you define a successful student?

- What knowledge, skills, competencies, and attributes does a successful student have?

- Why do you think these are important?
2. How do you know your students are successful?

- Do your students meet your definition of success?
- Outcomes, not just strategies & processes
- Systematic, not anecdotal
- Include "direct" evidence
3. Are you satisfied with your results?

- **Why** or why not?

- Go beyond navel-gazing!

- Get some external perspectives.
  - *Peer institutions/programs*
  - *Employers*
  - *Faculty at four-year institutions*
  - *Disciplinary associations*
4. If you’re not satisfied, what are you doing about it?

- When, where, and how are you doing it?
Getting This All Done as Painless as Possible!

Start with clear, important goals.
Map goals to curricula and other requirements.

- How & where do students achieve
  - *Institutional goals?*
  - *Gen ed goals?*
  - *Program-level goals?*

- Does every student have sufficient opportunity to achieve each goal?
  - *Course and co-curricular experiences*
  - *Assignments within those courses & experiences*
Keep things simple.

- Start with what you have.
- “Start small.”
- Start with important goals.
- Start with high-enrollment courses.
- Use quick & easy assessment tools.
- Look at samples.
- Stagger assessments.
- Be realistic about quality.
- Only do what’s useful.
- Don’t create unnecessary rules.
Be flexible.

- Diverse approaches to assessment
- Diverse ways of documenting & reporting on assessment
- Diverse deadlines
- Start with successes
Useful and Not Too Much Work

- Rubric (rating scales/grading criteria)
  - to assess papers, projects, performances, presentations, portfolios, field experiences

- Set of questions on final exams
  - Identical on all exams in multiple courses
  - Identical on all exams in one course

- Reflective writing
  - for “fuzzy” goals
Useful But More Time & Work

- Portfolios
- Locally developed tests
- Locally developed surveys
- Interviews & focus groups
Articulating Assessable Learning Goals

- Learning objectives
- Learning competencies
- Learning outcomes
Why Are You Here?

- What do you need to learn in this session?
- Why?
- What do you want to be prepared to do when you get “back home”?
- How do you want to use what you’ll learn “back home”?
What is a Good Learning Goal?

- **Outcomes** — what graduates should be able to do

- **Clear** — no fuzzy terms
  - Demonstrate (how?), critical thinking, communication skills

- **Observable** — what grads should be able to DO
  - Action words
  - Understand, appreciate

- **Skills and/or attitudes/values**

- **Important** — meet student/employer needs
Examples of Effective Goals

1. Use appropriate laboratory safety procedures.
2. Synthesize, analyze and evaluate visual information.
3. Work collaboratively with others.
4. Explain the relationships between nutrition and health and disease states.
5. Describe the fundamental characteristics of living organisms.
6. Understand and apply the scientific method.
7. Collect and exhibit data from simple case studies.
8. Write with a strong sense of audience and purpose.
9. Assess form and pattern in literary works.
1. Know the definition of a ___
2. Learn how to work in small teams to accomplish a specific goal.
3. Understand basic math operations.
4. Demonstrate proficiency in personal presentation skills.
5. Write an in-class final exam of at least 500 words.
6. Record thoughts and impressions in a journal.
7. Improve thinking, writing, and reading skills.
8. Read and react to class members’ writing.
Learning Goals as a Continuum

Use a rubric to define broad goals.
Program Parallels: Why Are Your Students in Your Program?

- What do they need to learn in your program?
- Why?
- What do they need to be prepared to do after they graduate?
- How do they need to use what they’ll learn after they graduate?
Time to Practice!

1. Draft a learning goal for a Gen Ed requirement in **visual communication**.

2. Check:
   - Clear? No fuzzy words?
   - Observable? Action words?
   - Outcomes?
   - Important? Lasting?
Time to Work!

- Try drafting 2-3 learning outcomes for your program.
- Pat has given some of you suggestions and forms.
- Spend the next half hour working on whatever will be most useful to you and your colleagues.
- Don’t worry about identifying assessment strategies.
  - Just focus on getting a clear sense of your goals.
- Pat and I will float around in case of questions.
- Reconvene here at 11:40 for a wrap-up before lunch.
Six Fundamental Expectations for Assessment

1. Read the directions.
2. Keep it useful…and used.
3. Tie assessments to important goals.
4. For student learning, include some “direct” evidence.
5. Use multiple measures.
6. Keep doing something everywhere, every year.
Bottom Line on Moving Ahead

- Keep assessment useful.
- Keep things simple.
  - Especially in terms of time
- Value assessment.
- Just do it!
HOW TO ACHIEVE DEEP, LASTING LEARNING

A growing body of research evidence indicates that students learn most effectively when:

1. They understand course and program goals and the characteristics of excellent work.
2. They are academically challenged and given high but attainable expectations.
3. They are graded on important goals. While students do pick up some things through faculty and staff modeling, discussions, and the like, they focus their time and energy learning what they'll be graded on...and therefore learn those things more effectively.
4. They are taught with enthusiasm.
5. New learning is related to their prior experiences.
6. They spend significant time studying and practicing.
7. They use or apply memorized facts in some way, because facts memorized in isolation are quickly forgotten.
8. The diversity of their learning styles is respected. They are given a variety of ways to learn and to demonstrate what they've learned.
9. They spend more time actively involved in learning through hands-on practice and receiving information visually. They spend less time listening to lectures and reading long texts.
10. They engage in multidimensional "real world" tasks in which they explore, analyze, justify, evaluate, use other thinking skills, and arrive at multiple solutions. Such tasks may include realistic class assignments, field experiences, and service learning opportunities.
11. They spend more time interacting with others—face-to-face and/or online. They receive individual attention from faculty and work collaboratively with fellow students.
12. They participate in co-curricular activities that build on what they are learning in the classroom.
13. They reflect on what and how they have learned and see coherence in their learning.
14. They have a synthesizing experience such as a capstone course, independent study, or research project.
15. Assessments are learning activities in their own right.
16. They receive prompt, concrete feedback on their work.
17. They have opportunities to revise their work.


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1. Think of one course that you teach. Look through the above list, and think about whether you’re now doing this in that course. Write one of the following codes next to each:
   Yes! = I’m already doing this!
   OK = I’m already doing this pretty well, but I could do this even better.
   Think = I’m not doing this as well as I’d like; I have to think about how to do this better.
   ??? = I’m not sure if I could realistically do this in this particular course.

2. Share one of your “Yes!” strategies with a colleague: Take 2 minutes (no more) to explain how you’re doing this in your class.

3. Share one of your “Think” strategies with a colleague: Take 2 minutes (no more) to brainstorm some ways to do this better in your class.
**Examples of Evidence of Student Learning**

\[ C = \text{evidence suitable for course-level as well as program-level student learning} \]

**Direct (Clear and Compelling) Evidence of What Students Are Learning**

- Ratings of student skills by field experience supervisors
- Scores and pass rates on appropriate licensure/certification exams (e.g., Praxis, NLN) or other published tests (e.g., Major Field Tests) that assess key learning outcomes
- “Capstone” experiences such as research projects, presentations, theses, dissertations, oral defenses, exhibitions, or performances, scored using a rubric
- Other written work, performances, or presentations, scored using a rubric (C)
- Portfolios of student work (C)
- Scores on locally-designed multiple choice and/or essay tests such as final examinations in key courses, qualifying examinations, and comprehensive examinations, accompanied by test “blueprints” describing what the tests assess (C)
- Score gains between entry and exit on published or local tests or writing samples (C)
- Employer ratings of employee skills
- Observations of student behavior (e.g., presentations, group discussions), undertaken systematically and with notes recorded systematically
- Summaries/analyses of electronic discussion threads (C)
- “Think-alouds” (C)
- Classroom response systems (clickers) (C)
- Knowledge maps (C)
- Feedback from computer simulated tasks (e.g., information on patterns of actions, decisions, branches) (C)
- Student reflections on their values, attitudes and beliefs, if developing those are intended outcomes of the course or program (C)

**Indirect Evidence of Student Learning**

*(Signs that Students Are Probably Learning, But Exactly What or How Much They Are Learning is Less Clear)*

- Course grades (C)
- Assignment grades, if not accompanied by a rubric or scoring guide (C)
- For four-year programs, admission rates into graduate programs and graduation rates from those programs
- For two-year programs, admission rates into four-year institutions and graduation rates from those institutions
- Quality/reputation of graduate and four-year programs into which alumni are accepted
- Placement rates of graduates into appropriate career positions and starting salaries
- Alumni perceptions of their career responsibilities and satisfaction
- Student ratings of their knowledge and skills and reflections on what they have learned in the course or program (C)
- Questions on end-of-course student evaluation forms that ask about the course rather than the instructor (C)
- Student/alumni satisfaction with their learning, collected through surveys, exit interviews, or focus groups
- Voluntary gifts from alumni and employers
- Student participation rates in faculty research, publications and conference presentations
- Honors, awards, and scholarships earned by students and alumni

**Evidence of Learning Processes that Promote Student Learning (Insights into Why Students Are or Aren’t Learning)**

- Transcripts, catalog descriptions, and course syllabi, analyzed for evidence of course or program coherence, opportunities for active and collaborative learning, etc. (C)
- Logs maintained by students documenting time spent on course work, interactions with faculty and other students, nature and frequency of library use, etc. (C)
- Interviews and focus groups with students, asking why they achieve some learning goals well and others less well (C)
- Many of Angelo and Cross’s Classroom Assessment Techniques (C)
- Counts of out-of-class interactions between faculty and students (C)
- Counts of programs that disseminate the program’s major learning goals to all students in the program
- Counts of courses whose syllabi list the course’s major learning goals
- Documentation of the match between course/program objectives and assessments (C)
- Counts of courses whose final grades are based at least in part on assessments of thinking skills as well as basic understanding
- Ratio of performance assessments to paper-and-pencil tests (C)
- Proportions of class time spent in active learning (C)
- Counts of courses with collaborative learning opportunities
- Counts of courses taught using culturally responsive teaching techniques
- Counts of courses with service learning opportunities, or counts of student hours spent in service learning activities
- Library activity in the program’s discipline(s) (e.g., number of books checked out; number of online database searches conducted; number of online journal articles accessed)
- Counts of student majors participating in relevant co-curricular activities (e.g., the percent of Biology majors participating in the Biology Club)
- Voluntary student attendance at disciplinary seminars and conferences and other intellectual/cultural events relevant to a course or program (C)

Examples of Effective Program-Level Learning Goals

*Business Administration*
- Write articulate, persuasive and influential business reports, proposals and letters.
- Make articulate, persuasive and influential individual and team presentations.
- Develop graphic, spreadsheet and financial analysis support for positions taken.
- Use software for writing, spreadsheets, databases, presentations, and decision support.
- Resolve interpersonal and team conflicts.
- Use critical thinking to produce to comprehensive, supported, integrated conclusions.
- Distinguish fact from opinion and critical from non-critical information.
- Develop several workable solutions to a problem.
- Promote benefits of good ethical behavior while recognizing practical ethical challenges.
- Value the relevance of each business discipline in today's business world.
- Interact as a business professional with people of other cultures and sub-cultures.
- Foster leadership potential in self and others.

*Chemistry*
- Design an experiment to test a hypothesis or theory in chemistry.
- Collect and interpret experimental data within the framework of the appropriate chemical theory.
- Deduce implications for a hypothesis or theory by drawing conclusions from experiment.
- Prepare written laboratory reports that provide a description of the experiment, explain the experiment and reasoning clearly, and provide an appropriate conclusion.

*Classical Languages*
- Recognize the influence of Greco-Roman history, art and architecture, literature, and philosophy on one’s own world; make comparisons and draw conclusions based on that knowledge.
- Comprehend and interpret selections from Latin and/or Greek prose and poetry.

*Communications*
- Apply the principles of effective listening, disclosure, and conflict resolution in interpersonal relationships.
- Apply knowledge of media history and the principles of media criticism to understand and evaluate media messages.

*Computer Science*
- Construct large-scale technology applications.
Electronic Media & Film
- Write proficiently for and about the media.
- Develop and articulate reasoned critical and aesthetic analyses of content and functions of electronic media and film.

English
- Present original interpretations of literary works in the context of existing research on these works.
- Organize and deliver an oral presentation based on research/literature.

Environmental Science & Studies
- Apply knowledge of the environmental sciences and the scientific method to assess new information as it becomes available.
- Apply understanding of the cultural, economic, and political facets of environmental programs in a manner that helps one develop potential solutions.
- Analyze environmental problems and identify the stakeholders that need to be included in developing resolutions for the problem.
- Critically evaluate the effectiveness of agencies, organizations and programs addressing environmental problems.

Finance
- Identify financial problems, analyze their impact, and design solutions that will withstand critical examination.

Theater
- Present an acting audition or design portfolio in a professional manner.
- Use voice, movement, and understanding of dramatic character and situation to affect an audience.
- Express through clear writing and critical thinking a unique point of view on theatre subjects.

Compiled from programs at College of Notre Dame, Siena College, and Towson University by Linda Suskie
SEMINAL READINGS ON ASSESSING STUDENT LEARNING


Compiled by the Middle States Commission on Higher Education
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Information on Assessment Models and Best Practices

If you are interesting in finding models and best practices for assessing student learning, here are some resources you can explore:

**Attend a conference.** They are the best places to network with colleagues and learn about the latest assessment practices. Some of the best-known conferences include the following:

- **The Assessment Institute in Indianapolis**, held in late October or early November, is the country’s largest conference devoted solely to assessment in higher education. For more information, visit [http://planning.iupui.edu/conferences/national/nationalconf.html](http://planning.iupui.edu/conferences/national/nationalconf.html).
- **The Association for Institutional Research Annual Forum**, held each May, devotes a track to assessment. For more information, visit [http://www.airweb.org](http://www.airweb.org).
- **The National Conference on First Year Assessment**, sponsored by the National Center on the First Year of College and Students in Transition, offers models and best practices that can often be applied beyond the first college year. For more information, visit [http://www.sc.edu/fye/index.html](http://www.sc.edu/fye/index.html) and click on Events.

**Subscribe to Assessment Update.** This peer-reviewed quarterly publication is the closest thing the American higher education community has to an assessment journal. It always includes articles on cutting-edge practices by assessment practitioners. To subscribe, visit [http://www.josseybass.com/WileyCDA/WileyTitle/productCd-AU.html](http://www.josseybass.com/WileyCDA/WileyTitle/productCd-AU.html).

**Search the massive Internet Resources for Higher Education Outcomes Assessment** sponsored by North Carolina State University ([http://www2.acs.ncsu.edu/UPA/assmt/resource.htm](http://www2.acs.ncsu.edu/UPA/assmt/resource.htm)). Among its hundreds of links are assessment “handbooks,” institutional assessment websites, and information on assessment of specific disciplines and skills.

**Join the ASSESS listserv.** This is a fairly low-traffic but useful unmediated listserv in which higher education assessment practitioners share ideas on the nuts and bolts of assessment. To join or search the archives, visit [http://lsv.uky.edu/archives/assess.html](http://lsv.uky.edu/archives/assess.html).

**Read key publications.** Among them:

From the Spring 2008 MSCHE Newsletter