

Outcomes Assessment Essentials: Types of Outcomes Assessment Measures

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Outcomes assessment measures are divided into two broad categories: direct and indirect. **Direct** measures have a distinct advantage over **indirect** because they allow us to concentrate on what students have learned or failed to learn. Departments can use this information to highlight their strengths. And when weaknesses are found, faculty can explore causes, over which they have control, and develop solutions. Still, both kinds of measures are imperfect. Direct measures, "provide no evidence as to why the student has learned or *why* he or she has not learned."¹ Indirect measures are based on perceptions that can be subjective. The best kind of program or department assessment makes use of both kinds of measures. In addition, faculty must consider the comparative advantages and disadvantages of **course-embedded** or **add-on** assessments.

Direct and Indirect

The Middle States Commission on Higher Education indicates that a **direct** measure "demonstrates that *actual learning* has occurred relating to a specific content or skill."² Linda Suskie elaborates, noting that direct measures are "...tangible, visible, self-explanatory, and compelling evidence of exactly what students have and have not learned."³ On the other hand, **indirect** measures "reveal characteristics associated with learning, but they only imply that learning has occurred."⁴ Linda Suskie notes indirect "evidence consists of proxy signs that students are probably learning. ... [It is] less clear and less convincing than direct evidence."⁵

You will notice from the examples of direct and indirect evidence below, compiled from several sources that some items might appear in both columns. Is this the result of a lack of clarity about what is direct and indirect? Perhaps, but honest differences of opinion do exist. What is more, the research on outcomes assessment is relatively new and growing rapidly.

Examples ⁶	
Direct Evidence of Student Learning (course & program level)	Indirect Evidence of Student Learning (course & program level)
<ul style="list-style-type: none"> • Course and homework assignments • Examinations and quizzes • Minute papers • Standardized tests • Test blueprinting (provides results of how students scored on concepts and 	<ul style="list-style-type: none"> • Mid-Semester course evaluations • Evaluations of course assignments or units • Course-level surveys • Course evaluations that can be aggregated for the entire department

¹ Middle States Commission on Higher Education, *Student Learning Assessment: Options and Resources*, 2nd ed., (Philadelphia, 2007), 38.

² *Student Learning Assessment*, 35

³ Linda Suskie, *Assessing Student Learning: A Common Sense Guide*, 2nd ed. (San Francisco: Jossey-Bass, 2009), 20

⁴ *Student Learning Assessment*, 35

⁵ Suskie, *Assessing Student Learning* 20

⁶ The bulk of this list originates from the Middle States publication *Student Learning Assessment*, 36; additional ideas were taken from Linda Suskie, *Assessing Student Learning*, 21; and Walvoord, *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education* (San Francisco: Jossey-Bass, 2004), 55-58.

skills covered on tests that achieve learning goals)

- Term Papers and reports
- Observations of field work, internship performance, service learning, or clinical experiences using standard criteria
- Research projects
- Portfolios of student work
- Class discussion participation
- Think-alouds (“students think aloud as they work on a problem or assignment”)
- Classroom response system results (clickers give immediate feedback and the software can aggregate data)
- Feedback from computer-simulated tasks
- Case study analysis
- Rubric scores for writing, oral presentations, and performances
- Artistic performances and products
- Student reflections on their values, attitudes, and beliefs (Suskie lists this as direct!)⁷
- Grades that are based on explicit criteria related to clear learning goals
- Capstone projects, senior theses, exhibits, or performances
- Pass rates or scores on licensure, certification, or subject area tests (national or developed locally)
- Score gains between entry and exit exams or writing samples scored with rubrics
- Student publications or conference presentations
- Employer & internship supervisor ratings of students’ performance
- Semester-end course evaluations at Bloomsburg University could include additional questions that ask students about the course, not the instructor
- Test blueprinting (outlines the concepts and skills covered on tests that are learning goals)
- Percent of class time spent in active learning
- “Student participation rates in faculty research, publications, and conference presentations”⁸
- Honors, awards, and scholarships earned by students and alumni
- Number of student hours spent on service learning, volunteer work relevant to course or program goals
- Number of student hours spent on homework
- Document factors beyond faculty control (number of hours students study, work, reasons for attending college, literacy practices, study habits, etc.)⁹
- Number of student hours spent at intellectual or cultural activities related to the course
- Grades that are based on explicit criteria related to clear learning goals
- Focus group interviews with students, faculty, members, or employers to determine satisfaction
- Registration or course enrollment information
- Department or program review data
- Job placement rates
- Employer or alumni surveys
- Student perception surveys
- Gifts from alumni and philanthropists
- Course grades and grade distributions
- Proportion of upper-level courses compared to the same program at other institutions
- Graduate school placement rates
- Retention and graduation rates
- Scores on tests required for graduate study (GRE, LSAT, etc.)
- Department program reviews required by the university or disciplinary accrediting

⁷ See Suskie, *Assessing Student Learning*, chapter 12.

⁸ Linda Suskie describes this as indirect, but student research that results in publication or conference presentations is listed as a direct measure by Middle States.

⁹ Barbara Walvoord, *Assessment Clear and Simple*, 10.

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- Teaching strategies research on how learning is enhanced within disciplines¹⁰

The list of direct and indirect evidence should provide faculty with numerous ideas on how they might assess student learning. Both kinds of evidence are valid and provide useful data. Departments should generate evidence that will effectively measure their learning goals. While outcomes assessment plans should have multiple measures, do not make the process too complicated.

Course-Embedded Assessments & Grades

One reason faculty resist outcomes assessment: a cost-benefit analysis leads many to the conclusion that it is a time-intensive task

yielding limited benefits. Assessment might help a department see problems in their curriculum or recognize that a capstone project is not achieving the desired goals, which they gladly address. Yet given the need to juggle three professional obligations (teaching, scholarship, and service), outcomes assessment appears to be an added burden. One way to address the valid concerns about cost-benefit analysis: Departments can implement course-embedded assessments, i.e. use course work assignments, which can be a more efficient use of time and minimize the feeling that outcomes assessment is an additional task.



Can grades be used in outcomes assessment?

The short answer: yes, with the stipulation that the grades are linked to learning goals and the criteria explained, often by using rubrics or test blueprinting. A **rubric** is a criteria-based tool that communicates skill levels achieved; a **test blueprint** lists learning goals and indicates which test items measure those goals.

Expert opinions about using grades in outcomes assessment:

Middle States Commission on Higher Education: "...grades have been, and will continue to be, an excellent indicator of student learning *if they are appropriately linked to learning goals.*

The Commission recognizes that grades are an effective measure of student achievement if there is a demonstrable relationship between the goals and objectives for student learning

Advantages to Course-Embedded Assessment:

- The work that students complete is relevant to the learning goals being assessed; this increases the likelihood that they will put forth their best effort.
- The course work is created by faculty, who are experts in their discipline and have a vested interest in maintaining the standards of their profession in the next generation.
- The results are relevant to faculty, who want to improve student learning.
- As long as the results are discussed in the department, faculty are empowered to redress problems under their control; this will bring meaning to their endeavors even if the data is perceived to fall into a black hole.

¹⁰ Barbara Walvoord writes, "Do you have information about the use of teaching strategies that research has suggested can enhance learning – for example, the amount of writing assigned and the ways faculty respond to writing in your department or the amount of involvement by students in professors' research?" *Assessment Clear and Simple*, 57. Additional teaching strategies that initially originated in specific disciplines, Just-in-Time-Teaching, Inquiry-Based Learning, and Problem-Based Learning, have been extensively researched and shape how courses are taught in science and mathematics. These techniques are now used across many disciplines, and the research may be relevant to indirect measures.

and the particular bases (such as assignments and examinations) upon which student achievement is evaluated (Standard 14). In and of themselves, however, grades are not direct evidence of student learning. That is, a numeric or a letter grade alone does not express the *content* of what students have learned; it reflects only the degree to which the student is perceived to have learned in a specific context."¹¹

Barbara Walvoord, *Assessment Clear and Simple*: "An enormous amount of time, effort, energy, and faculty expertise goes into the grading process. Grading is already accepted within the culture of higher education. It is a pervasive system by which the institution communicates to various audiences about individual student learning. It makes great sense, therefore, to build an institutional or departmental assessment plan on the grading process."¹²

Linda Suskie, *Assessing Student Learning*: "Do grades have a place in an assessment program? Of course they do! Grades can be useful, albeit indirect, evidence of student learning such as tests, projects, papers, and assignments that are clearly linked to major learning goals through test blueprints or rubrics."¹³

Please note: Suskie categorizes grades themselves as an indirect measure, while the Middle States Commission on Higher Education describes them as direct **if** grading criteria are outlined in rubrics and linked directly to learning goals being assessed. Rubrics and test blueprinting are explained in separate Outcomes Assessment Essentials handouts.

Add-On Assessments

Add-on assessments occur outside of course requirements, and might include portfolios, surveys, focus groups, a published test such as NSSE (National Survey of Student Engagement), or pre- and post-program standardized tests (not including licensure tests). Unless students are convinced of the advantages of participating in an add-on assessment, they may not take them seriously. For example, if students are required to maintain a portfolio of their academic work throughout a program, they might thoughtfully complete it if they understand that it will benefit their professional growth. (Portfolios as an assessment tool will be explained in a separate Outcomes Assessment Essentials handout.) Linda Suskie discusses in detail the potential merits and weaknesses of add-on assessments in *Assessing Student Learning*, 2nd ed., pp. 28-32. (This book can be borrowed from the TALE Center.)

Years ago, the term **value-added** was common vocabulary in outcomes assessment circles; it focused on whether or not the course, program, and/or university fundamentally affected the lives of students with respect to their development (e.g. skills, intellect, morals, etc.). To assess value-added, surveys and focus groups became a popular tool. Then value-added assessment, Linda Suskie points out, fell out of use until "its resurrection," in 2006, when among other things the Commission on the Future of Higher Education stated that "'student achievement ... must be measured by institutions on a 'value-added' basis'."¹⁴ Suskie's critique of value-added assessment is substantial. The most significant problem, she notes is that we should be measuring competencies defined by professional standards, not how much students have developed since their freshmen year, a relative scale.¹⁵ The Middle States Commission on Higher

Value-Added Assessment

¹¹ *Student Learning Assessment*, 36-37.

¹² Walvoord, *Assessment Clear and Simple*, 13.

¹³ Suskie, 11.

¹⁴ Quoted by Linda Suskie, *Assessing Student Learning*, 240.

¹⁵ Suskie, *Assessing Student Learning*, 240-242.

Education shares some of Suskie's concerns about value-added assessment. While neither rejects its use, be sure that it is an appropriate measure and certainly not the only tool used for outcomes assessment.

With respect to the choices between direct, indirect, course-embedded, add-on, and value-added, departments have many choices. Suskie defines the characteristics of good assessment:

Linda Suskie's "Four Characteristics of Useful Assessments"¹⁶

- They *yield reasonably accurate and truthful information* on what students have learned, so that we can use the assessment results with confidence to make plans and decisions.
- They *have a clear purpose*, so that the assessment results are valued and don't end up sitting on a shelf.
- They *engage faculty and staff*, so the assessment becomes a useful part of the fabric of campus life.
- They flow from and focus on *clear and important student learning goals*, so the results provide information on matters the college or university cares about.

Faculty raise a number of concerns about outcomes assessment: that the process impinges on academic freedom; that we will be compelled to adopt the same teaching methods and learning goals (the so-called "cookie-cutter" approach); that the time invested is not worth the benefits; that reporting results will force departments to rely excessively on quantitative data and adopt standardized testing; that faculty will be held accountable for factors they have no control over; that outcomes assessment is an industry driven by profits not a concern for education... Barbara Walvoord addresses some of these concerns:

Barbara Walvoord's "Concerns about Assessment"¹⁷

Academic Freedom: Assessment rightly conducted ... asks faculty to work together as colleagues to assess student work fairly by criteria respected in the field and to share their knowledge of student strengths and weaknesses, in order to improve curriculum, pedagogy, and other factors that affect learning. No one has ever had the right to teach a course just as she pleases; we always are bound by the rules of responsible interaction with students, by departmental agreement about what a course will cover, and by the requirement that we assign each student a grade that is public to limited audiences. ...

Student Privacy: Assessment sometimes requires that student work, anonymously, be shared in the aggregate with colleagues beyond the classroom. For a faculty member to say to her department at a department meeting, "Forty-three percent of the capstone students scored lower than I would like on research design," is not a violation of an individual student's privacy and does not require student permission. However, if an individual student classroom work is to be evaluated by those outside the classroom, you may need to inform students about these audiences and perhaps also to get their informed consent. ...

The Real Goals of Higher Education Cannot Be Measured: True, they cannot be fully or "objectively" measured. ... We are not caught between "objectivity" (in the sense that all judges of a student performance will agree on its quality) and "subjectivity" in the sense of individual whim. In between those two poles stands informed judgment of student work using explicit criteria. ...

¹⁶ Suskie, *Assessing Student Learning*, 37.

¹⁷ Walvoord, *Assessment Clear and Simple*, 8-10.

Evaluation of Faculty: Assessment is an evaluation of student learning in order to determine what faculty as a whole can do to improve that learning. A wise institution keeps the focus on collective action, not on individual blame. ...

Student Learning is Affected by Factors Beyond Faculty Control: True, it is. But faculty, departmental, and institutional decision do affect learning. A wise assessment program focuses on those factors you can control. For some publics, you may also want to gather information about factors beyond your control, such as students' reasons for coming to college or the literacy practices in their homes, in order to present a fair picture of the context for student learning in your institution.

As a faculty member in the humanities, I have long shared the concern that outcomes assessment might lead or force departments to collect quantitative data from test results on the assumption that in the liberal arts there is an agreed upon body of content. Indeed, this concern drove me to learn about assessment: "knowledge is power." Yet Bloomsburg University's accrediting body does not dictate specific methods. The Middle States Commission on Higher Education writes:

Because there is no one perfectly accurate assessment or strategy, institutions should use multiple kinds of measures to assess goal achievement. Assessments may be quantitative and/or qualitative and developed locally or by an external organization. All assessment tools and strategies should clearly relate to the goals they are assessing and should be developed with care; they should not be merely anecdotal information nor a collection of information that happen to be on hand.¹⁸

Nowhere in this language is a specific assessment method or tool dictated. In the body of this publication, a variety of techniques are explained including the use of rubrics to assess student writing, creative projects, and portfolios. Departments should select measures that provide authentic, relevant, meaningful data of student learning, which can be accomplished through course-embedded assessment. The method of reporting currently being used by Bloomsburg University, called TracDat, does not impose quantitative methods either; it is a software program that provides for the systematic collection of evidence that can be quantitative or qualitative.

Useful Web Sources:

- Middle States Commission on Higher Education (MSCHE), "Evaluating Student Learning" (chapter 3) in *Student Learning Assessment: Options and Resources*, 2nd ed.
- MSCHE, *Assessing Student Learning and Institutional Effectiveness: Understanding Middle States Expectations* (Philadelphia, 2005)
- [Linda Suskie's List of Direct and Indirect Measures](#) (MSCHE)

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¹⁸ *Student Learning Assessment*, 76. http://www.msche.org/publications/SLA_Book_0808080728085320.pdf