

DIRECT AND INDIRECT MEASURES OF STUDENT LEARNING

After creating measurable student learning outcomes (SLOs), the next step is to develop direct and/or indirect measures that align with those SLOs and will provide evidence of the level of student learning the course/program has achieved. Consider using both direct and indirect measures to acquire more comprehensive evidence of student learning, which can lead to more informed curricular and instructional changes.

Using **direct measures**, qualified evaluators *directly* observe, assess, and provide tangible evidence of students' skills, knowledge, and performance of the SLOs. Accompany direct measures with a clearly defined rubric, checklist, or exam blueprint that establishes the standards of the SLOs and allows for the systematic collection of evidence of student learning.

Indirect measures provide data on students' self-reported thoughts, attitudes, beliefs, and values in regards to their learning, as well as data on the educational environment where that learning takes place. Indirect measures are often used to interpret and support evidence of student learning that was collected from direct measures.

Direct Measures of Student Learning <i>Assessed by a qualified evaluator, using a rubric</i>
Scores and pass rates on standardized, licensure, or certification exams
Capstone projects (e.g., research essays, theses, dissertations, presentations, oral defenses, exhibitions)
Written work (e.g. minute papers, short answers, essays, scaffolded writing assignments)
Annotated bibliography
Presentations and PowerPoint presentations
Poster boards
Performances
Portfolios of student work
Case studies
Role play
Simulations
Locally designed exams (e.g., final exams in key courses or qualifying exams)
Journals / double-entry journals
Team or group projects or presentations
“Think-alouds”
Knowledge maps
Classroom response systems (clickers)

Direct Measures of Student Learning, cont.
Service-learning projects or experiences
Online asynchronous student discussion threads
Wikis or blogs
Observations of student behavior (e.g., in presentations and group discussions)
Debates
Pre- and post-test or essay scores (and score gains that illustrate the value added to student learning)
Field supervisor ratings of student skills in internships, clinical experiences, practica, student teaching, or other professional and content-related experiences
Employer ratings of graduates' performance in the workplace

Indirect Measures of Student Learning
Course grades or students' average grade of several different essays and assignments
Retention rates
Graduation rates
Admission rates (such as those into other four-year colleges or graduate programs) and graduation rates from those programs
Scores on tests required for further study, such as the Graduate Record Examinations (GRE) or the Medical College Admission Test (MCAT), that evaluate skills students have learned over a lifetime
Quality and reputation of four-year and graduate programs where alumni have earned acceptance
Employment of alumni in appropriate career positions and starting salary
Alumni surveys of their career responsibilities and career satisfaction
Student reflective essays or evaluations of their acquired skills and knowledge
Other student surveys, questionnaires, exit interviews, or focus-group reports
Employer surveys
Student-earned honors, awards, or scholarships
Rate of student involvement in faculty research, collaborative publications, or service learning projects
Voluntary notes or gifts from students or alumni

Tables adopted from Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.