

Direct and Indirect Learning Outcome Assessment Measures

Principles of good assessment

- Assessment tools should be cost-effective, efficient, valid, reliable, and actionable. Consider triangulating evidence from several measures.
- Employ more direct measures, as such performance indicators reflect the degree to which the students have attained outcomes.

Steps in assessment

1. Select outcomes and define competencies.
2. Collect information: Select assessment tools, collect evidence on outcome achievement. Analyze the results and discuss implications with colleagues.
3. Take action: close the loop! What steps do the assessment results suggest we might take to improve the student learning environment?

Direct measures: Assessment of student behavior or work which demonstrate attainment of competencies supporting learning outcomes.

Examples: Exam questions designed to represent achievement of specific course and program outcomes. Quizzes, minute papers, pre-test/post-test. Thesis, portfolio, or capstone project scored with a rubric, such as the quantitative literacy VALUE rubric: <https://www.aacu.org/initiatives/value>

Strengths of direct measures: Can be administered mid-semester, providing formative feedback that may suggest immediate improvement of the learning environment. Provide strong evidence that students have attained the outcome. Support consistency and quality within and across programs and the institution.

Issues with direct measures: It is difficult to measure values and beliefs with direct measures. Portfolios and projects are not constant across students.

Indirect measures: Assessment of self-reported attitudes, beliefs, and perceptions about achievement of competencies and learning outcomes.

Examples: Surveys, Focus Groups, Interviews, Questionnaires. National Survey of Student Engagement (NSSE), department and graduate surveys. NSSE: Indicates the degree of student immersion in the college experience, both academic and non-academic.

Benefits of indirect measures: Surveys are cost-effective to administer, and can be distributed to many students. Interviews permit open-ended answers.

Challenges with indirect measures: Responses given may be the response that the students think the examiner wishes to receive. The answer may not accurately represent the students' own thoughts, beliefs, knowledge, or behaviors. It is difficult to ensure that the survey responder is the intended recipient. Surveys of seniors and alums are summative, and thus do not give feedback that can be used from semester to semester to improve the learning environment at SMC. Response rates are not high. Interviews and focus groups are costly.