# Student assessment: Go beyond test scores

The benefits of direct and indirect measurement in assessment

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Strong assessment strategies include both direct and indirect measurements of student learning. Supplementing direct measures with indirect measures makes it possible to get a 360° view of how well students are meeting program-based learning outcomes and build a culture of continuous improvement on your campus.
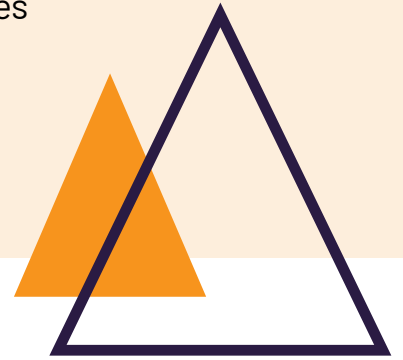
What are direct measurements?

Direct measurements provide actual proof of student learning. They include artifacts like essays, exams, or capstone projects, and are often scored with rubrics.

Direct measurements are conducted throughout a course or program, as faculty conduct exams, quizzes, demonstrations, and reports. Over time, you begin to gain insight into what students know or can do, and build a body of evidence of student learning directly from students and the work they submit.

Direct measurement requires pulling data related to actual student behavior or work. This can come from course assignments and tests within the LMS, standardized test results, and student eportfolios. They are quantitative measures that rely on numerical scores or ratings.

What are indirect measurements?

Indirect measurements involve other indicators of success like self-reported surveys, sentiment scores, course evaluations, graduation rates, or job placement rates. These types of measurement require faculty to infer student abilities, knowledge, and values rather than observing them directly.

Indirect measurements supplement direct measures of learning by assessing opinions or thoughts around student knowledge or skills. These types of measurement usually take place at a single point in time rather than throughout a course (for example, an end-of-course evaluation).

Indirect measurement data can be taken from course evaluation and survey responses, along with feedback collected in interviews and focus groups. They can also include perspectives from faculty and alumni around the success of the course, program, or institution.

QUICK TIP:

To determine whether a measurement is direct or indirect, consider whether the assessment is measuring tangible proof that an outcome is achieved. Can you directly observe student knowledge or skills? If so, you're making a direct measurement.

Do I need both direct and indirect measurements for a successful assessment strategy?

The answer: a resounding yes. Aside from the fact that most accreditors require both, these two types of measures go hand in hand in supporting and improving teaching and learning.

You can correlate the data from direct and indirect measurements to create a broader picture of student learning. While tangible results like grades tell one story about student success, student feedback can add a new dimension. Indirect measures help supplement direct measures by assessing student perceptions of their own learning.

Using a combination of direct and indirect measures makes it easier to:

- ⊘ **Understand the student experience.** If course evaluations reflect that students feel they learned something (an indirect measurement) but exam results don't demonstrate this (a direct measurement), you can take a closer look at course or program content to figure out what went awry.

- ⊘ **Refine your teaching strategy.** If a course evaluation or survey reveals that students with low scores don't fully understand the value of a learning outcome, faculty can rework their approach to emphasize its value in a job scenario or within the overall major.

- ⊘ **Evolve your measurement approach.** Student feedback can also help you adjust your direct measurement strategy going forward. As you begin to note trends in course evaluation results, you can adapt the curriculum and refine your testing approach to ensure you're measuring the most important outcomes in the most effective way.

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CONSIDER THIS SCENARIO:

Let's give an example. When a college, let's call them Northwest Abacus University, completed their assessment cycle for the last school year, one of the programs identified a trend: students were having trouble meeting a written communication program outcome. They decided to make some curriculum changes, including making one elective course required and reworking other courses to more thoroughly cover the material.

Around the same time, a key faculty member in the department stepped in as their assessment coordinator. With a background in learning assessment and a fresh perspective, they noticed that the assessment strategy was also incomplete. The program was relying on only one direct measure of the outcome. While it did use an acceptable rubric and an assignment that everyone agreed allowed for direct observation and assessment of learning, this approach only captured one perspective at a specific point in time.

The team needed to both validate the recent curriculum changes and ensure rapid improvement in student learning. To do this, they decided to implement at least two direct and one indirect measurements for the program outcome. This would provide additional insights and allow for some triangulation of the results to determine student achievement of the outcome while allowing the team to make just-in-time improvements to their new curricular changes.

For the direct measures, they settled on two course-embedded measures: one in the capstone course and one in the previous elective course that was now required. Because Northwest Abacus was already running a successful end-of-course evaluations, they decided to embed questions to gauge the student's perception of their writing skills for the indirect measurement. To further support rapid improvement, a new mid-term evaluation would also be deployed to give them another data point along with potential actionable feedback for faculty to affect student success.

Fast forward a year: they now have four data points to compare and better inform additional changes, and have been able to continually improve student success both at the program level and for the individual faculty and course.

The bottom line

There are a lot of variables when it comes to student learning, which can make measurement and analysis difficult. Even when you've clearly defined your learning outcomes and established what you're trying to measure, it's not always easy to pinpoint where improvements can be made.

To simplify using both direct and indirect measurement as part of your assessment strategy, consider purpose-built solutions like Watermark Planning & Self-Study and Course Evaluations & Surveys. By using both of these tools, you can capture a wide range of data that broadens your perspective and offers insights to drive progress.

Watermark gives higher education institutions the tools they need to easily track, manage, and examine their data. For over twenty years, colleges and universities have used Watermark solutions to complete assessment and accreditation requirements, capture and analyze student feedback, showcase faculty accomplishments, and improve student engagement. Watermark's Educational Impact Suite (EIS) puts data into context so faculty and staff can focus on what matters most: institutional and student success.

Learn why Watermark is trusted by over 1,700 colleges and universities to support continuous improvement at www.watermarkinsights.com.

Sources: Dr. Erica Eckert, Assistant Dean for Assessment and Accreditation and Assistant Professor in the College of Education, Health and Human Services at Kent State University.
Watermark Assessment Foundations Webinar Series | Suskie, L. (2009).
Assessing student learning: A common sense guide. (2nd ed.). San Francisco: Jossey-Bass | Palomba, C.A., & Banta, T.W. (1999). Assessment essentials: Planning, implementing, and improving assessment in higher education. San Francisco: Jossey-Bass.