

ASSESSING LEARNING

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EXECUTIVE SUMMARY

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Assessing student learning often promotes anxiety among students—and among teachers—not only because they worry about the results but because the items tested do not seem to reflect what students have learned. But when assessment is student centered, it can promote learning and even motivation. Moreover, assessment is essential to student-centered approaches to learning, which value differentiation, active engagement, and self-management as critical to learning.

To paint a picture of what student-centered assessment can be, Heidi Andrade, Kristen Huff, and Georgia Brooke have examined the full range of assessment practices, including classroom-based, local, state, and national assessments. They conclude that a blend of practices, each with different purposes, advantages, and limitations, can create a balanced, student-centered assessment system, with great benefits for efforts to prepare students for college and careers. The authors pay particular attention to large-scale, standardized tests, which are ubiquitous in U.S. schools, and to computer-based assessments, which hold special promise in a balanced system.

Andrade, Huff, and Brooke observe that:

- > Student-centered assessment is individualized. It is focused on learning and growth, motivating, amenable to students regulating their own learning, and informative and useful to a variety of audiences.
- > No single type of assessment can inform learning and instruction and simultaneously aid policy decisions. Student-centered assessment should be part of a balanced system of formative, interim, and summative assessments—both formal and informal.
- > A variety of classroom-based assessments are associated with significant gains in student learning and achievement. These include self- and peer assessments, portfolios, assessments using new technologies, and formative uses of summative tests.

- > Large-scale tests can provide useful feedback to students, teachers, and others, particularly when tests that are based on theories of learning, sensitive to the context in which they are administered, and provide instructionally relevant reports.
- > Schools and districts across the nation report impressive gains in student achievement via teacher-created interim assessments, which directly measure the curriculum enacted in classrooms and foster professional collaboration.
- > Modern assessment technologies hold great promise for their ability to give immediate feedback to each student and because teachers can respond to individual learning needs with greater speed, frequency, focus, and flexibility.

A DEFINITION OF STUDENT-CENTERED ASSESSMENT

Student-centered assessment has defining qualities:

It is **individualized**, focusing on each student's strengths, needs, and interests. This is as essential as it is obvious. It involves differentiating learning targets, assignments, and tasks; providing focused feedback on learning alone or in groups; and adjusting teaching and learning processes as needed.

It **promotes learning and growth**. The goals go far beyond measuring and reporting learning (or lack thereof). Student-centered assessment advances learning by providing useful feedback about what students need to do to progress toward the target.

Key for college and career success, student-centered assessment **actively engages young people in the regulation of their own learning**. Students set individual goals, monitor their own progress, and figure out how to fill gaps.

Student-centered assessment is **motivating**. Recent studies show that formative assessment—particularly detailed, task-specific comments on student work—can activate student interest and result in better performance.

To support learning, student-centered assessment is **useful to a variety of audiences**—young people, teachers, administrators, parents, districts, and states. Despite the availability of reams of data, the U.S. education system still does a poor job of using assessment information to adapt curricula and instruction.

Student-centered assessment shares many qualities with any good assessment. For example, it articulates developmentally appropriate learning targets, and it provides feedback to students, teachers, districts, and states about how to deepen learning. It is also valid, reliable, practicable, and efficient.

THE IMPORTANCE OF BALANCED ASSESSMENT

No single type of assessment can inform classroom practice as well as school, district, and high-level policy decisions. Therefore, student-centered assessment requires a balanced system of formative, interim, and summative assessments that, taken together, provide the detailed information educators and other stakeholders need. Such a system may include everything from informal observations of student work to standardized tests.

Formative assessments are the ongoing, minute-by-minute, day-by-day classroom assessments administered in the course of a unit of instruction. The intent is to identify individual strengths and weaknesses, assist educators in planning subsequent instruction, and aid students in guiding their own learning, revising their work, and developing self-evaluation skills.

Interim and summative assessments are more formalized processes of measuring student achievement through the school year. The chief goal of interim assessments is to provide information to educators and policymakers, who can adjust curricula and instruction as needed. The primary purpose of summative assessments—which are often standardized and typically administered at the end of a unit of instruction, semester, or year—is to categorize performance of a student or education system to inform accountability processes and decisions about grades, graduation, or retention.

Ultimately, a system using all three types of assessment, created both inside and outside the classroom, is needed to support student-centered approaches to learning.

STUDENT-CENTERED ASSESSMENT PRACTICES

While all assessment processes have some student-centered qualities, only a few meet all the characteristics of student-centered assessment. Hence, the need for a balanced approach. Generally, formative assessment tends to be more student-centered than interim and summative assessment (*except for end-of-year exhibitions of student work: see box on next page*). The table presents an overview of select assessment processes, along with the “student centeredness” of each.

Despite the need to use different types of assessment for different purposes, when it comes to the critical work of improving student outcomes, research has shown that formative,

TABLE 1
STUDENT-CENTERED QUALITIES OF SELECT ASSESSMENT PROCESSES

	INDIVIDUALIZED	FOCUSED ON LEARNING AND GROWTH	MOTIVATING	STUDENT SELF-REGULATION	INFORMATIVE TO A VARIETY OF AUDIENCES
FORMATIVE					
Self-assessment	●	●	●	●	
Peer assessment	●	●	●	●	●
Portfolios	●	●	●	●	●
Tests		●	●	●	●
INTERIM					
Criterion-referenced tests		●			●
SUMMATIVE					
Exhibitions	●	●	●	●	●
Tests based on learning progression		●			●
Diagnostic items		●			●
Large-scale tests					●

classroom-based assessments are associated with significant gains in learning and achievement. These include self-assessments, peer assessments, portfolios, and formative uses of summative tests.

SELF-ASSESSMENT

Self-assessment is feedback for oneself from oneself. The point is to help students identify their own areas of strengths and weaknesses, take responsibility for their performance, monitor their achievement, and improve their learning. Self-assessment is not a matter of students determining their own grades. Rather, it involves articulating goals, checking progress, and revising one's work. Research suggests this can boost achievement and autonomy in a range of subjects.

A common self-assessment tool is a one- or two-page list of criteria for a specific assignment, with descriptions of varying levels of performance. Using this rubric, each student compares her or his own work to the expectations and makes a plan for improvement. Students generally react well to self-assessment but need support and practice to reap the full benefits.

PEER ASSESSMENT

With peer assessment, learners provide feedback to one another. Like self-assessment, it is available more quickly and in greater volume than teacher feedback. Students can help one another identify strengths and weaknesses in the quality of a product or performance—and target areas for improvement. Research suggests that peer assessment can improve the quality and effectiveness of learning across grade levels, particularly in writing. Furthermore, both the student being assessed and the assessor benefit from the process.

PORTFOLIOS

An academic portfolio is a collection of one student's work. It typically consists of physical artifacts presented in a deliberate order, assembled in a folder or binder or on a computer, incorporating audio, video, graphics, and text.

The student takes part in the construction of the portfolio, and its contents include his or her reflections. Some portfolios showcase a student's best work; others trace progress from novice to mastery.

The portfolio scaffolds self-regulated learning and provides nuanced information about a student's knowledge, motivations, and needs. For example, a writing process portfolio includes several successive drafts and the students' comments on each. Research suggests that portfolios are best used formatively, for classroom assessment, rather than for summative purposes.

FORMATIVE USES OF SUMMATIVE TESTS

Traditionally, tests come at the end of a unit of study; teachers use them summatively to determine grades. In contrast, formative uses of summative tests involve two testing events: one in the middle of a unit (or even during a lesson on a concept)

and one following further instruction. The results of the first test are used formatively, while the results of the second test are used summatively.

Formative uses of summative testing are individualized: they provide information about what each student does and does not know, at least in terms of what was tested. This approach to testing is designed with learning and growth in mind. The explicit goal of the first test is to activate learning about the content of the second test. It is not hearing the correct answers to the test that makes formative use of testing work. Rather, it is the hard thinking that happens in between the tests that matters.

Research shows that this process—called mastery learning—is related to learning gains, especially for struggling students, and has positive effects on student attitudes toward course content.

EXHIBITIONS

Exhibitions are public demonstrations of mastery that occur at culminating moments (e.g., the end of a unit of study; graduation). Their purpose is to support sustained, personalized learning while assuring commitment, engagement, and high-level intellectual achievement aligned with established standards.

Exhibitions exemplify the characteristics of student-centered assessment. They are individualized to student interests. They involve personalized, ongoing feedback from diverse sources before the exhibition. They actively engage students in regulating learning by requiring them to set goals and seek feedback. Because the audience for exhibitions typically includes practicing experts, they provide an authentic, real-world task that can motivate students to do well. By definition, exhibitions provide information about student learning to students, teachers, parents, administrators, and community members.

LARGE-SCALE ASSESSMENT

Large-scale assessments—those that states use for K-12 accountability and those that measure performance based on national norms—tend to be less student-centered than any of the processes discussed here. However, they are ubiquitous in U.S. schools and unlikely to go away any time soon. Policymakers use the information to compare performance within states and nationally. Local and policymakers analyze the data and often use it to determine where to allocate resources and what kinds of educational programs have the most success with particular groups.

On a positive note, recent advances in large-scale tests suggest they can do more than measure and report on a narrow band of student knowledge and skills. Large-scale assessment can provide useful feedback to students, teachers, and policymakers when they are: based on theories of learning; address the educational context of a wide array of students; and provide instructionally relevant score reports.

For example, recent research suggests that K-12 accountability assessments could enhance student learning by providing test takers with elaborated, task-level feedback. Such an

augmentation to large-scale tests would go a long way toward making them more effective in promoting learning and growth.

TEACHER-CREATED, CRITERION-REFERENCED ASSESSMENTS

Schools and districts across the nation are reporting impressive gains in student achievement through the use of criterion-referenced assessments that teachers create. Teams of teachers—within and across schools—in particular grades and subject areas collaborate to design questions that directly measure the curriculum enacted in their classrooms. The teachers use the same assessments on an interim basis throughout the school year (usually about every six weeks). They get together to discuss the results at length and share pedagogical approaches to helping students succeed. The key to the success of these efforts is that teachers work together to develop the tests and discuss the results, and then adjust their pedagogy accordingly when they return to their classrooms.

ASSESSMENT TECHNOLOGIES

Modern assessment technologies hold great promise for student-centered approaches to learning. They provide immediate feedback and enable teachers to respond to individual learning needs with greater speed, frequency, focus, and flexibility.

Key features of student-centered assessment technologies include: systematic monitoring of student progress to inform instructional decisions; the identification of misconceptions that may interfere with student learning; rapid feedback to students, teachers, and others; and information about student learning needs during instruction.

Computer-based assessment software integrates the management of learning (e.g., organizing student assignments, assessments, and performance), curricular resources, embedded assessments, and detailed student-level and aggregate reporting of strengths and weaknesses. Examples include DreamBox

Learning, Time To Know, Wowzers, Carnegie Learning, and WriteToLearn. While some products, like DreamBox Learning and Time To Know, integrate instruction and assessment into one platform, others such as WriteToLearn focus just on assessment. Continued research on the effectiveness of assessment technologies in student-centered learning environments would be valuable, yet there is already some information on their value.

WriteToLearn is an example with strong research support. WriteToLearn promotes reading comprehension and writing skills by providing students with immediate, individualized feedback. Designed for grades 4 through 12, it consists of Summary Street, where students read and summarize articles or book excerpts, and the Intelligent Essay Assessor, where students write topic-prompted essays. One study found a positive relationship between the use of Summary Street and student summary scores after just two weeks. It also found that students spend significantly more time generating summaries than do students not using the program, suggesting it may promote motivation and engagement. Another study found that eighth graders using Summary Street have significantly higher comprehension scores and better writing skills than students who do not use the program.

ASSESSING THE ASSESSMENTS

It is clear that a balanced system of formative, interim, and summative assessments can support student-centered assessment and learning. Yet even an exquisitely balanced assessment system would present challenges. For one thing, the sheer quantity of assessment data threatens to be overwhelming. Even as new assessment processes are created, educators must work to ensure they are useful to and used by the appropriate audiences—students, teachers, schools, districts, and policymakers alike. It is also critical to continually assess the assessments to make sure that advances in design—and their implementation—are as student centered as possible.

Students at the Center synthesizes existing research on key components of student-centered approaches to learning. The papers that launch this project renew attention to the importance of engaging each student in acquiring the skills, knowledge, and expertise needed for success in college and a career. *Students at the Center* is supported generously by funds from the Nellie Mae Education Foundation.

To download *Assessing Learning* and all papers in the *Students at the Center* series, go to the project website: www.studentsatthecenter.org



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