

Design Principles for Instructionally Relevant Assessment Systems



Aneesha Badrinarayan

Summary

The design and implementation of state assessment systems inevitably shape instruction. A growing number of states are seeking to design their state assessment systems to account intentionally for this relationship and lead to net positive impacts on teaching and learning. This brief describes six design principles that emerge as foundational for instructionally relevant assessment systems. Drawn from work alongside state leaders, assessment and curriculum designers, and teachers and leaders across several states, these design principles offer specific focus areas for assessment system design and development that can transform state assessments into tools for instructional good.

The report on which this brief is based can be found at <https://learningpolicyinstitute.org/product/design-principles-assessment-report>.

Introduction

The decisions states make regarding what their assessments look like and what kind of information they produce inevitably shape instruction. Since No Child Left Behind ushered in an era of testing-based accountability for schools, state assessments have been governed by a set of design decisions that emphasize easily generated, easily compared scores—even when these assessments are somewhat superficial proxies for the rich performances that state standards set for student learning. This makes sense if state assessments play a narrow and siloed role, focused on sending up a red flag around school performance and triggering a cascade of follow-up actions.

While this might be consistent with how designers *intend* for assessments to be used, there have been unfortunate and unintended consequences for teaching and learning. Narrow assessments can lead to limiting the kinds of learning experiences students engage in to better “match” the test, preventing many students from accessing rich and relevant learning experiences across domains. For example, many students report that rather than reading full books or other complete texts and engaging in evidence-based practices such as developing rich content understanding to support their comprehension, their reading instruction focuses on decontextualized skills and short reading passages, to better align with what they are expected to do on a test.

Many states want to construct assessment systems more deliberately to achieve their goals. By leveraging our understanding of how various groups use information from state assessments, we can design assessments and systems that have a net positive impact on instruction. We can do so by designing assessments that:

- define instructional shifts, from current practice, that assessments should be designed to incentivize and drive;
- ensure that state assessments are designed and communicated such that the most proximate logical way to “match” the state assessment in local practice (e.g., interim assessments, classroom assessment resources) mirrors activities that reflect research on how students develop disciplinary knowledge and practice;
- recognize that what happens in the classroom is shaped by decisions made by educators and leaders throughout the system and is not limited to interactions among teachers, students, and the content of instruction; and
- provide teachers and leaders with information that offers a significant perceived value-add over other kinds of information they already receive through their classroom, school, and district instructional and assessment practices and resources.

Design Principles for Instructionally Impactful Assessment Systems

Based on evidence from assessment system design and implementation, as well as lessons learned working alongside and across states, a set of design principles emerges that governs assessments intended to support teaching and learning. These principles are designed to:

- build upon current conceptions of alignment to standards;
- focus on the most discerning features of assessment system design—that is, those features that are most likely to distinguish between systems that lead to positive shifts in instruction vs. those that have neutral or negative impacts on teaching and learning, while allowing for a range of ways that states could enact these principles;
- triangulate among the most important instructional shifts, the key users, and the specific, evidence-based behaviors to influence; and
- walk the line between aspirational and doable.

It is unlikely that any state’s current large-scale assessment program fulfills all these design principles, but it is imminently conceivable that states could make different design decisions right now to bring their assessments into better alignment with instructionally impactful goals. Instructionally relevant assessment systems are intentionally designed to incorporate six principles (see [Table 1](#)).

Table 1. Design Principles for Instructionally Relevant Assessment Systems

Design principle	Summary statement
Authentic. Assessments should highlight and center the key concepts, modes of inquiry, and ways of learning in the discipline.	The assessment system should include authentic tasks that represent ambitious examples of learning and performance in the discipline. These tasks should reflect sophisticated and complete performances, signal and support engagement with science and engineering practices (SEPs) and crosscutting concepts (CCCs), and center sensemaking around meaningful phenomena and problems. Importantly, these tasks should engage students in sensemaking in ways that are expected in science and reflect the most important instructional shifts we want to see. This may include both individual and collaborative work; cascades and bundles of SEPs and CCCs; student choice, either among tasks or about how to engage within a task; and more.
Curriculum-Anchored. Assessments are connected to, and informed by, high-quality curriculum.	Assessments should signal, incentivize, and support the use of high-quality curriculum that center active engagement with the disciplines in ways that operationalize evidence from the learning sciences about how disciplinary knowledge and practice are developed. This positions assessments to provide information that can be particularly useful to instruction; encourage the use of instructional materials and models that focus on deeper learning; and provide students with assessments that are, in and of themselves, meaningful learning experiences. In some cases, assessments may be designed to closely reflect high-quality instructional materials (HQIM); in other cases, assessments may be designed to be coherent with HQIM but focus on complementing existing curriculum (e.g., providing extended transfer opportunities, providing opportunities to better attend to broader issues).

Design principle	Summary statement
Educative. Assessments build educator understanding of effective teaching and how students learn in the discipline.	Assessments—the tasks, student data, and supports for interpretation—should build educator understanding of what high-quality disciplinary teaching and learning look like, what kinds of tasks can develop and evaluate that learning, and how to provide feedback in ways that support progress toward these goals (e.g., state standards). Importantly, assessments attend carefully to the learning of teachers and students alike and are designed such that teachers too feel like they have learned something meaningful about their practice through the implementation and examination of assessments. This means that what assessments signal, measure, and provide information about should directly speak to the kinds of actions and decisions we want students, educators, and leaders to make—and help them learn both how to do so and why it is important. This may be accomplished by incorporating performance tasks into the instructional process; releasing items, tasks, and student work so that educators can see the kinds of tasks students are being asked to accomplish and what scores reflect; involving educators in designing and scoring tasks; providing task and student response annotations; providing concrete next steps to take, aligned to features of high-quality teaching and learning in science and based on student performance profiles; and making student experience data available to educators and leaders to contextualize performance.
Developmental and Asset-Oriented. Assessments recognize what students <i>do</i> know and <i>can</i> do and surface progress relative to students' own performance and along appropriate learning progressions.	Assessments should focus on providing all students with opportunities to show what they know and can do relative to sophisticated disciplinary meaning-making. This includes emphasizing scoring and reporting that focuses on recognizing facets of student understanding and supports student growth over time. Assessments should also provide information about student performance along extended, multiyear learning progressions as well as expected learning progressions within a learning sequence (e.g., accounting for how modeling is expected to develop).

Design principle	Summary statement
Reflective of and Responsive to Learners. Assessments follow principles of universal design and cultural responsiveness to ensure that each learner is supported in making their thinking visible.	Assessments should reflect students' cultural and linguistic experiences, employ multiple modalities for acquiring information and working through tasks, and include opportunities for students to demonstrate their learning in a variety of ways.
Useful for Informing Decisions That Impact Instruction. Assessments are designed to produce relevant information at appropriate times to support decision-making.	Assessment data must be made available at times when it can be used to positively impact instruction. In some cases, this might look like getting assessment data to users in a more timely fashion, particularly if the assessment design is intended to support changes in instruction for the specified cohort of students. However, it should be noted that timing is not necessarily a discerning feature—more timely assessment results are useful to instruction only if the information is designed to be supportive of instructional decisions at those intervals (e.g., through-year assessment design). In other cases, assessments may be designed primarily to help teachers reflect on their own practice and plan for improving their instruction for their next cohort of students. In these cases, states may intentionally decide to slow down the process of returning scores to students to allow teachers to engage in rich and educative scoring experiences that can have a direct impact on instruction but result in scoring on a slower cadence than more automated processes might produce.

Source: Badrinarayan, A. (2024). *Design principles for instructionally relevant assessment systems*. Learning Policy Institute.

Conclusion

By centering features of assessments that support better student learning experiences, teacher practice, and systematic supports and decision-making, we can create assessment systems that have a “net positive” impact on instruction. The design principles detailed here reflect ambitious but accomplishable goals for our assessment systems—and large-scale systems, including states as well as national and international programs, are already on the path to making this work a reality. As systems move forward, keeping “positive instructional impact” as the North Star and centering decisions on specific instructional shifts from the current state of teaching and learning that assessments should support can help system designers make the best decisions within their local contexts for better assessments.

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