What Happens Between Assessments?

Not only assessment needs to change, curriculums and instructional strategies, too, must reflect a *performance* orientation. Here are seven principles for performance-based instruction.

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Growing concern over the inadequacy of conventional tests has spurred interest in performance assessments, such as performance tasks, projects, and exhibitions. To many supporters, these performance assessments are better suited than traditional tests to measure what really counts: whether students can apply their knowledge, skills, and understanding in important, real-world contexts. More teachers are using performance assessments in their classrooms, and such assessments are beginning to influence district- and state-level testing programs as well.

Increasing the use of performance assessments in and of itself will not significantly improve student performance, however. To borrow the old farm adage: "You don't fatten the cattle by weighing them." If we expect students to improve their performance on these new, more authentic measures, we need to engage in "performance-based instruction" on a regular basis.

But what does it really mean to teach for performance? Working the past six years with hundreds of teachers using performance assessments, I've seen how the development of assessment tasks and performance targets can influence instruction. Based on this experience, I offer seven principles of performance-based instruction, illustrated by vignettes from classrooms in which these principles are being applied.

Establish Clear Performance Targets

As part of a unit on nutrition, a middle school health teacher presents her students with the following performance task.

You are having six of your friends over for your birthday party. You are preparing the food for the party, but your mother has just read a book on nutrition and tells you that you can't serve anything containing artificial sweeteners or lots of salt, sugar, or saturated fats. Plan a menu that will make your friends happy and still meet your mother's expectations. Explain why your menu is both tasty and healthy. Use the USDA Food Pyramid guidelines and the Nutrition Facts on food labels to support your menu selection.[1]

To teach effectively, we need to be clear about what we expect students to know, understand, and be able to do as a result of our instruction. But performance-based instruction calls for more. We also need to determine *how* students will demonstrate the intended knowledge, understanding, and proficiency. When establishing performance targets, consider Gardner's (1991) contention that developing students' *understanding* is a primary goal of teaching. He defines understanding as the ability to apply facts, concepts, and skills appropriately in new situations.

The principle of *establishing clear performance targets* and the goal of *teaching for understanding* fit together as a powerful means of linking curriculum, instruction, and assessment. A performance-based orientation requires that we think about curriculum not simply as content to be covered, but in terms of desired *performances of understanding*. Thus, performance-oriented teachers consider assessment up front by conceptualizing their learning goals and objectives as performance applications calling for students to demonstrate their understanding. Performance assessments, then, become targets for teaching and learning, as well as serving as a source of evidence that students understand, and are able to apply, what we've taught.

Establishing clear performance targets is important for several reasons. Teachers who establish and communicate clear performance targets to their students reflect the research on effective teaching, which supports the importance of instructional clarity. These teachers also recognize that students' attitudes and perceptions toward learning are influenced by the degree to which they understand what is expected of them and what the rationale is for various instructional activities. Finally, the process of establishing performance targets helps identify curriculum priorities, enabling us to focus on the essential and enduring knowledge in a crowded field.

Strive for Authenticity in Products and Performances

Fifth graders conduct a survey to gather data about community attitudes toward a proposal that public school students wear uniforms. The students organize the data and then choose an appropriate graphic display for communicating their findings. Finally, students write letters to the editor of the local paper to present their data and their personal views on the proposal. A direct link to the larger world is established when two student letters are published in the newspaper.

Leading reformers recommend that schools involve their students in authentic work. Performance tasks should call upon students to demonstrate their knowledge and skills in a manner that reflects the world outside the classroom. Although diagraming sentences may help students understand sentence structures and parts of speech, this is not really an authentic activity, because few people outside of school diagram sentences. When students engage in purposeful writing (for example, to persuade an identified audience), however, they are using their knowledge and skills in ways much more congruent with the demands of real life.

As in the larger world, authentic work in schools calls for students to apply their knowledge and skills, with the result typically being a tangible product (written, visual, or 3-dimensional) or a performance. These products and performances have an explicit *purpose* (for example, to explain, to entertain, or to solve a problem) and are directed toward an identified *audience*. Because real-world issues and problems are rarely limited to a single content area, authentic work often provides opportunities for making interdisciplinary connections. Emphasizing authentic work does not lessen the importance of helping students develop basic skills. On the contrary, basic knowledge and skills provide an essential foundation for meaningful application. The "basics" are not ends in themselves, however; they serve a larger goal: to enable students to thoughtfully apply knowledge and skills within a meaningful, authentic context.

Research and experience confirm that when learners perceive classroom activities as meaningful and relevant, they are more likely to have a positive attitude toward them (McCombs 1984, Schunk 1990)). In addition, many teachers have observed that when given the opportunity to produce a tangible product or demonstrate something to a real audience (for example, peers, parents, younger or older students, community members), students often seem more willing to put forth the effort required to do quality work.

Remember that what we assess sends a strong signal to students about what is important for them to learn. When authentic performance tasks play a key role in teaching and assessing, students

will know that we expect them to apply knowledge in ways valued in the world beyond the classroom.

Publicize Criteria and Performance Standards

Before beginning a laboratory experiment, a high school science teacher reviews the Science Department's performance list for a lab report with her students. The list, containing the criteria for a thorough report, clearly conveys the teacher's expectations while serving as a guide to the students as they prepare their reports. Before she collects the reports, the teacher allows students to exchange papers with their lab partners, give feedback to one another based on the performance list criteria, and make needed revisions.

Like the problems and issues we confront in the real world, authentic classroom performance tasks rarely have a single, correct answer. Therefore, our evaluation of student products and performances must be based upon judgment and guided by criteria. The criteria are typically incorporated into one of several types of scoring tools: a rubric, a rating scale, or a performance list. With all of these tools, the criteria help to spell out the qualities that we consider to be most significant or important in student work.

Teachers at elementary schools in Anne Arundel County, Maryland, use a "Writing to Persuade" rubric to help students learn the qualities of effective persuasive writing. A large poster of the rubric, containing the criteria in the form of questions, is prominently displayed in the front of the classroom to provide an easy reference for teachers and students. For example, "Did I clearly identify my position?" "Did I fully support my position with facts or personal experiences?" "Did I effectively use persuasive language to convince my audience?"

Evaluative criteria clearly are essential for summative evaluations, but teachers also are recognizing their role in *improving* performance. By sharing the criteria with students, we begin to remove the mystery of how work will be evaluated, while highlighting the elements of quality and standards of performance toward which students should strive. Teachers also can help students internalize these elements of quality by having them use scoring tools themselves to evaluate their own work or that of their peers. When students have opportunities to examine their work in light of known criteria and performance standards, they begin to shift their orientation from "What did I get?" to "Now I know what I need to do to improve."

Provide Models of Excellence

A middle school art teacher displays five examples of well-constructed papier-maché sculptures of "figures in action." The examples illustrate the criteria by which the sculptures will be evaluated: composition (figure showing action), strength and stability of armature (underlying structure), surface construction (application of papier-maché), finishing techniques (texture, color, details), and overall effect. The teacher notes that the quality of her students' sculptures has markedly improved since she began sharing and discussing actual models of excellence.

Providing students with lists of criteria or scoring rubrics is a necessary piece of performance-based instruction but it isn't always sufficient. Not every student will immediately understand the criteria or how to apply them to their own work ("What do you mean by well organized?"). Wiggins (1993) suggests that if we expect students to do excellent work, they need to know what excellent work looks like. Following his idea, performance-based instruction calls for providing students with models and demonstrations that illustrate excellence in products or performances.

This approach, of course, is not unknown in schools. Effective coaches and sponsors of extracurricular activities often involve their club or team members in analyzing award-winning school newspapers or yearbooks, or reviewing videotapes of excellent athletic or dramatic performances. But providing models of quality work is also an essential piece of performance-based instruction in classrooms.

Teachers can use examples of excellent work during instruction to help students understand the desired elements of quality. Some teachers also present students with examples of mediocre and excellent work, asking them to analyze the differences and identify the characteristics that distinguish the excellent examples from the rest. In this way, students learn the criteria through tangible models and concrete examples. In some classrooms, students actually help to construct the scoring tools (rubric, rating scale, or performance list), based on their growing knowledge of the topic and the criteria they have identified in the examples. (The potential benefits of providing students with tangible examples underscore the value of saving examples of student work from performance tasks for use as models in future years!)

Some teachers are wary of providing models of quality, fearing that students may simply copy or imitate the examples. This is a real danger with activities for which there is a single correct answer (or one "best" way of accomplishing the task). With more open-ended performance tasks and projects, however, we can minimize this problem by presenting students with multiple models. In this way, students are shown several different ways to satisfy the desired criteria, thus discouraging a cookie-cutter approach.

By providing students with criteria *and* models of excellence, teachers are often rewarded with higher quality products and performances. In addition, they are helping students become more self-directed students able to distinguish between poor- and high-quality performance are more likely to be able to evaluate and improve their own work, guided by a clear conception of excellence.[2]

Teach Strategies Explicitly

An elementary teacher introduces his students to two strategies—summarizing and predicting to enhance their comprehension of text materials. He describes each strategy and models its use by thinking aloud while applying it to a challenging text. During the lesson, the teacher refers to large posters spelling out a written procedure and visual symbol for each strategy. Following the lesson, he distributes bookmark versions of the posters. Over the next two weeks, students work with a reading buddy to practice using the strategies with both fiction and non-fiction texts while the teacher monitors their progress and provides guidance.

In every field of endeavor, effective performers use specific techniques and strategies to boost their performance. Olympic athletes visualize flawless performances, writers seek feedback from "critical friends," law students form study groups, coaches share tips at coaching clinics, busy executives practice time-management techniques.

Students also benefit from specific strategies that can improve their performance on academic tasks. For example, webbing and mapping techniques help students see connections, cognitive reading strategies boost comprehension (Palinscar and Brown 1984; Haller, Child, and Walberg 1988), brainstorming techniques enhance idea generation, and mnemonics assist retention and recall.

Few students spontaneously generate and use strategies on their own, however, so we need to explicitly teach these thinking and learning strategies. One straightforward approach is to use the direct instruction model, in which teachers

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introduce and explain the purpose of the strategy;

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demonstrate and model its use;

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provide guided practice for students to apply the strategy with feedback;

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allow students to apply the strategy independently and in teams; and

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regularly reflect on the appropriate uses of the strategy and its effectiveness.

In addition to direct instruction, many teachers have found it helpful to incorporate thinking and learning strategies into tangible products, such as posters, bookmarks, visual symbols, or cue cards (McTighe and Lyman 1988). For example, students in a middle school mathematics class I'm familiar with have constructed desktop spinners depicting six problem-solving strategies they've been taught. When working on open-ended problems, the students use the spinners to indicate the strategy they are using. Their teacher circulates around the room, asking students to think aloud by explaining their reasoning and problem-solving strategies. Later, she leads a class discussion of solutions and the effectiveness of the strategies used. The spinners provide students with a tangible reminder of the value of using strategies during problem solving. These and other cognitive tools offer students practical and concrete support as they acquire and internalize performance-enhancing strategies.

Use Ongoing Assessments for Feedback and Adjustment

A middle school social studies teacher notes that the quality of her students' research reports has markedly improved since he began using the writing process approach of brainstorming, drafting, reviewing feedback, and revising. Through the use of teacher and peer reviews of draft reports, students are given specific feedback on strengths, as well as on aspects of their reports that may be unclear, inaccurate, or incomplete. They appreciate the opportunity to make necessary revisions before turning in their final copy.
The Japanese concept of *Kaizen* suggests that quality is achieved through constant, incremental improvement. According to J. Edwards Deming, guru of the TQM movement, quality in manufacturing is not achieved through end-of-line inspections; by then, it is too late. Rather, quality is the result of regular inspections (assessments) *along the way*, followed by needed adjustments based on the information gleaned from the inspections.
How do these ideas apply in an academic setting? We know that students will rarely perform at high levels on challenging learning tasks on the first attempt. Deep understanding or high levels of proficiency are achieved only as a result of trial, practice, adjustments based on feedback, and more practice. Performance-based instruction underscores the importance of using assessments to provide

information to guide improvement throughout the learning process, instead of waiting to give feedback at the end of instruction

Once again, effective coaches and sponsors of clubs often use this principle as they involve their students in scrimmages, dress rehearsals, and reviews of bluelines. Such activities serve to identify problems and weaknesses, followed by more coaching and opportunities to practice or revise.

The ongoing interplay between assessment and instruction so common in the arts and athletics is also evident in classrooms using practices such as non-graded quizzes and practice tests, the writing process, formative performance tasks, review of drafts, and peer response groups. The teachers in such classrooms recognize that ongoing assessments provide feedback that enhances their instruction and guides student revision.*Kaizen*, in the context of schools, means ensuring that assessment enhances performance, not simply measures it.

Document and Celebrate Progress

Early in the school year, a middle school physical education teacher has her students analyze their current fitness levels based on a series of measures of strength, endurance, and flexibility. The initial results are charted and used to establish personal fitness goals. The teacher then guides students in preparing an individualized fitness plan to achieve their goals. Subsequent fitness tests at the middle and end of the year enable the teacher and her students to document their progress and, if necessary, establish new goals. The teacher believes that the focus on improvement based on a personal benchmark allows every student to achieve a measure of success while cultivating the habits necessary for lifelong fitness.

Perhaps one of the greatest challenges in this current era of school reform is the gap between our goal of higher standards of performance for all and the realization that some students are functioning well below these lofty standards. Many educators struggle daily with this tension: How do we preserve students' self-esteem without lowering our standards? How do we encourage their efforts without conveying a false sense of accomplishment? Perceptive teachers also recognize that students' own beliefs about their ability to be successful in new learning situations are a critical variable. Confronted with rigorous performance standards, some students may well believe that the target is beyond their grasp and may not, as a result, put forth needed effort.

There are no easy solutions to this dilemma. But reflect for a moment on the natural inclination displayed by parents and grandparents of

toddlers and pre-schoolers. They regularly support novice performance by encouraging small steps ("C'mon, you can do it!"), celebrating incremental achievements ("Listen everyone, she said, dada'!") and documenting growth (witness the refrigerator displays ranging from scribbles of color to identifiable pictures). These celebrations encourage children to keep trying and to strive for greater competence. They focus on what youngsters *can do* and how they have *improved* as a means of spurring continued growth. Performance-based instruction demands a similar tack. Acknowledging the limitations of one-shot assessments, such as tests and quizzes, as the primary measures of important learning goals, some educators are moving toward creating collections of student work over time. One manifestation of this is the growing interest in and use of portfolios. Consider an analogy with photography. If a test or quiz represents a snapshot (a picture of learning at a specific moment) then a portfolio is more like a photo album a collection of pictures showing growth and change over time.

Just as portfolios can be extremely useful as a means of documenting student progress, they also provide a tangible way to display and celebrate student work. Grade-level teams at North Frederick Elementary School in Frederick, Maryland, for example, sponsor a "portfolio party" each fall and spring. Parents, grandparents, school board members, central office staff, business partners, and others are invited to review student work collected in portfolios. Before the party, teachers guide students in selecting examples from their portfolios that illustrate progress in key learning areas. During the party, students present their portfolios to the guests, describe their work during the year, highlight the progress they have made, and identify related goals for future improvement.

Principal Carolyn Strum says the school's portfolio program has had at least four benefits: (1) the systematic collection of student work throughout the year helps document student progress and achievement; student work serves as a lens through which the faculty can reflect on their successes and adjust their instructional strategies; (3) school-to-home communication is enhanced as students present and explain their work to their parents and other adults; and (4) students assume greater ownership of their learning and display obvious pride when involved in selecting and showing off their accomplishments and growth.

Developing content standards, creating more authentic performance assessments, and establishing rigorous student performance standards will not—in and of themselves—substantially boost student achievement. But the seven principles above reflect promising ways that teachers and schools are beginning to rethink their curriculum and

instructional strategies to ensure that *performance* is more than something measured at the end of a unit.

Endnotes

[1] This performance task was developed in 1994 by Marzano, R., and Pickering, D., Mid-Continent Regional Educational Laboratory Institute, Aurora, Colorado.

[2] For a detailed discussion and examples of classroom performance lists, see M. Hibbard and colleagues, (1996), *Performance-Based Learning and Assessment*, (Alexandria, VA.: Association for Supervision and Curriculum Development).

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