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Testing What for What?

By recognizing the distinction between the academic curriculum and the socializing curriculum, we can put testing in its proper place.

Kieran Egan

Imagine that the government has just enacted new legislation that will radically change how incomes are determined. From now on, instead of working for a set salary, you will be required to attend the cinema on a given night. At the end of the movie, instead of going to a local coffee shop and chatting about it with a friend, you will stop in the theater lobby to take a multiple-choice test. You will have to answer such questions as

What was the color of the villain's car in the second chase scene?

1. Red 2. Blue 3. Taupe 4. Silver

What was the name of the heroine's dog?

1. Smudgy 2. Tiger 3. Fauntleroy
4. Rex

Your score on the multiple-choice test will determine your salary for the next week.

Each week you will be required to go

to the cinema again, and on emerging from the movie, you will be faced with another multiple-choice test, and your performance will again determine your salary for the following week.

Imagine how this legislation would affect your experience of going to the movies. At present, you go when you choose and only see movies you expect to enjoy. You pay attention to the aspects of the movie that give you pleasure, and you may derive many different

kinds of pleasure from different movies. But with this new legislation in place, you would be anxiously trying to remember the color of cars, the names of dogs and people, and everything else that you think might appear on the test. What had been a pleasure has become fraught with anxiety because your future salary depends on how well you do.

What does this remind you of? Yes, we call it school.

You may protest that school is not so arbitrary in what it tests. How well you can remember the color of a villain's car has nothing to do with the value of the work you do, and it shouldn't determine your salary. Someone might point out, however, that how well you remember the provisions of the Treaty of Augsburg or the proof that interior opposite angles are congruent also has nothing to do with how well you can perform your current work, yet your answers to such questions on tests have served as criteria for education decisions that have led you to your current job and salary. Such tests have determined the life chances of everyone who has traveled through modern education systems. Education's current testing situation resembles the cinema scenario much more closely than most of us are comfortable admitting.

Many people involved in schools—especially those who do the real work—argue that current testing systems undermine the main purposes of education. Those who energetically promote testing in schools are unmoved by such arguments. How else, they ask, can those who pay for schools make sure that they are getting value for their money?

The arguments between those who think that current testing methods constrain education and those who think that these methods increase education efficiency remain oddly imprecise, passing one another by. Those on each side of the issue cannot understand how those on the other side can be so blind. Why does this conflict about testing seem to go nowhere, like a battle of ancient armies flailing at each other in the night?

The explanation, and the path toward a solution, requires that we address our fundamental confusion about the roles that we expect our schools to perform. Such discussions of basic theoretical ideas are often unpopular in a realm of practice like education, but there is nothing to be gained by avoiding unpopular necessities.

schooling that other ideas have a hard time making much impact.

The second idea about education, introduced most forcibly by Plato, came about through dissatisfaction with the products of the first idea. Plato argued that well-socialized people's understanding was limited to the conventions of their own time and place. The best



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Education's First Two Ideas

The oldest idea about education, which remains prominent today, is that we should teach children what they need to know to participate successfully in society. This goal of education is sometimes called *socialization*. The criteria that determine what to teach children in the name of this kind of education are the current values of the society and the set of skills required to survive. In the past, this meant teaching children how to hunt saber-toothed tigers and find edible roots. Today, it means that we want students to be literate and numerate enough to perform their jobs and civic duties adequately; to know about computers and the main kinds of programs available; to know enough history to understand their nation and world; and to share the basic beliefs, values, and commitments of their society. For some people, socialization is so obviously the central purpose of

way to use a human mind, he thought, was not to learn how to fit into society, but rather to search for the truth about our condition on this planet. Plato argued that education's proper role was to teach children to perceive truth and to pursue truth above all things, regardless of society's current conventions and beliefs and regardless of self-interest. The criterion guiding this idea of education was a view of what the human mind could become. Because Plato set up a school on the outskirts of Athens in a park sacred to the hero Academus, we call this kind of education *academic*.

We assume that we promote both of these ideas in our schools today. We prepare students for the practical world of work and adult leisure in the society of today and tomorrow, and we develop their minds by teaching academic material so that they can think critically about the world around them.

But can we successfully address both ideas at the same time? In one case, we want to shape students to fit into a particular society, committed to its values and conventions. In the other case, we want to teach students to question any particular set of values and conventions and strive above all to discover the truth. This contradiction doesn't bother those who think that their society and their beliefs actually embody the truth—but this common, self-satisfied dogmatism and limited vision are precisely what the academic ideal was designed to overcome.

Confusing the Two Ideas

Consider the cinema scenario again. This hypothetical system combines a social aim (to distribute salaries appropriately) with an entertainment aim (to enlarge the experience and promote the pleasure of movie viewers). When we use the institution designed for entertainment to perform the social sorting role, we undercut the efficiency of both.

Something similar is happening in education. Part of our task is to sort students, leading them toward the future roles and careers that best fit their skills. We also recognize that the pursuit of truth about the world is an important human good. Our confusion becomes evident when we decide to attain the first goal by means of the second. Testing how well students perform on academic tasks is not a good way to determine their future job possibilities and prospects. It does not efficiently promote education's socializing role, and it undermines the academic role.

If we want to perform the social sorting role efficiently, we should indeed test students—but test them for the acquisition of skills related to the various roles and tasks that they may need to perform in the future. The instruments that we have developed for the assessment of relevant attributes, skills, and inclinations—including basic reading and math skills and foundational social studies and science knowledge—may not be highly developed, but they would likely sort students for jobs more effectively than would tests measuring

how well students recall random historical and mathematical minutiae.

If we recognize that most of our testing should be directed to our socializing goals, we can single-mindedly work toward developing more sophisticated testing instruments that will focus on our need to help direct students toward appropriate jobs and roles in

Testing how well students perform on academic tasks is not a good way to determine their future job possibilities and prospects.

life. We should accept testing student performance in the socializing curriculum because an accurate assessment of students' ability to deal with the variety of tasks required by modern society will help ensure social efficiency, economic value, and the general contentedness of future citizen-workers.

If the social sorting role is thus taken care of, what kind of testing would be suitable for the academic curriculum? The purposes of this curriculum include imaginative engagement and delight in the world; understanding; wisdom; and a number of old intellectual virtues, such as style, honesty, and fertility of inquiry. What purposes should our evaluation of such qualities serve, and what degree of precision do we need? We will largely want to know which students we should encourage to pursue further academic study and what areas they should pursue. This purpose does not require great precision. Students' self-selection will be one indicator; teachers' educated sensitivity will be another.

When we harness students' academic performance to the social sorting role of schools, we undermine the conditions for the academic pursuit of knowledge about the world and the delight that is

properly a part of this great exploration. Students' academic explorations cannot be achieved in the same way as their training in skills. In the former case, we must pay attention to individual modes of stimulating reflection and imagination and ensuring delight in understanding; in the latter case, our concern is with efficiency, definable mastery, and attaining specific objectives.

Toward a Solution

If we start thinking of education in a way that distinguishes between the socializing and academic roles of schools, we will begin to recognize that forms of testing appropriate to socializing should not be imposed on academic activity. What will that recognition mean for our current forms of teaching and testing?

Let us take mathematics as an example. We could quite easily design a socializing math curriculum and a distinct academic math curriculum. The socializing curriculum would encompass the particular math skills that students need to perform their social roles. It would include basic computations, how to use a spreadsheet, how to keep bank account records, and other math tasks derived from our analysis of the math skills that students need most today and will need in the near future. We would also recognize the importance of identifying students who show a particular aptitude for math and directing them toward more advanced work to prepare them for engineering or some other area of societal need.

The academic math curriculum would also involve numbers and their manipulation, but the whole approach would be different. In this curriculum, we might begin exploring the history of math, trying to discover why it fascinated people and why people regarded it as magical. We would explore the nature of math, learning how its patterns refer to the world. This curriculum would be altogether a more playful exploration than the utilitarian activity of the socializing curriculum.

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this same distinction between socializing and academic goals, could sort out material currently jumbled together in the curriculum. In history, for example, the socializing curriculum would concentrate on the aspects of history that lead to an understanding of the student's own society and its general place in the world, whereas the academic curriculum would explore the varieties of past human experience and how particular conditions have changed that experience.

Such a distinction demonstrates that different forms of testing are appropriate to these somewhat distinct curriculums. At the moment, the education testing system applies testing methods to both types of curriculum that are appropriate only to the socializing curriculum. This approach fails to achieve the social sorting task efficiently, and in the process undermines the academic role of schooling.

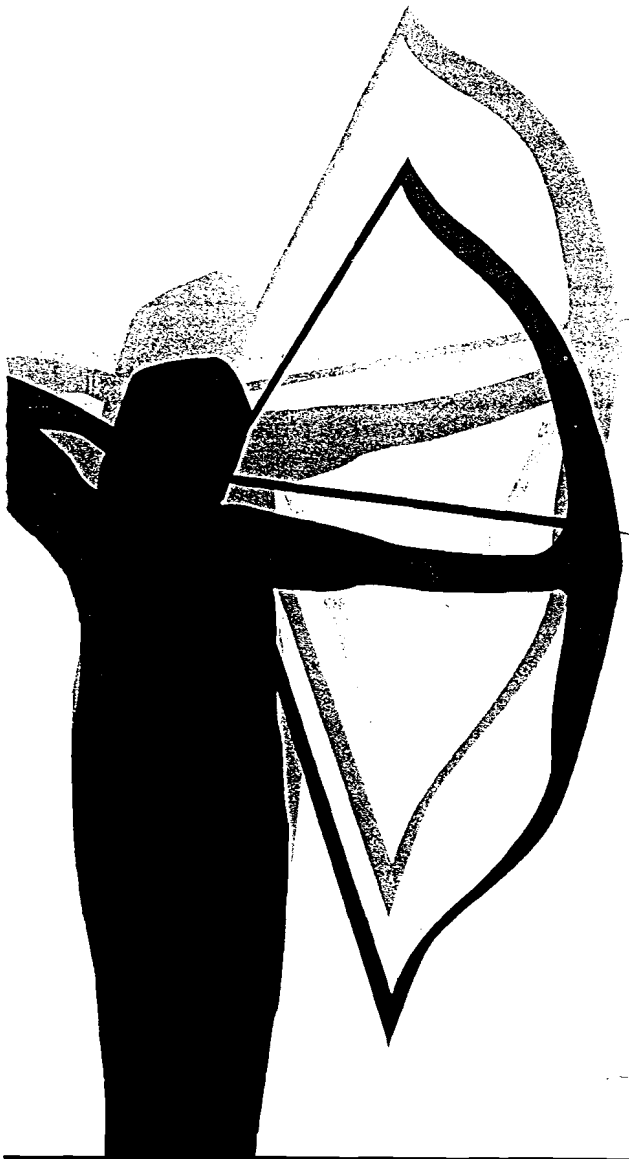
A New Direction

The vast business of testing goes ahead, bounding through the education system like a bull in a china shop—which is good if you want to make radical and evident changes, but not so good if you would like to preserve the china unsmashed. The solution I am suggesting, with its distinction between an academic and a socializing curriculum, may seem difficult. But we face a choice between a hard solution and a set of impossible ones. We have been trying the latter for decades. Those who wish to continue with them will experience many more years of deep frustration, all the while smashing lots of educational china. Those who choose the former are in for some rigorous and imaginative intellectual work, but can expect some satisfaction. ■

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Aiming Too High or Too Low?

by Sean Fine



Have you ever taken a peek at Alberta's grade 3 achievement test in reading? Or at Ontario's? The difference between the two might surprise you. Here's how Alberta's begins: "Example question: Rex is a big dinosaur. He is taller than a giraffe. Rex is as tall as a house! Rex is: a pet/bird/giraffe/dinosaur."

Tough, eh? Rex is a dinosaur.

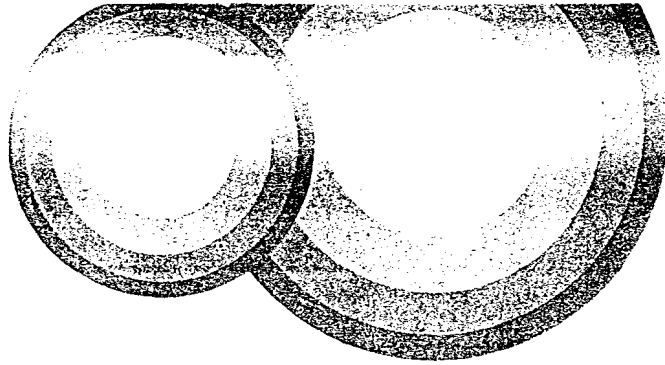
Okay, it's only the "example" question. But the real questions aren't much harder. Next to these questions, the ones Ontario puts to its grade 3 students might as well be drawn from entrance examinations for Oxford.

For those who have been scratching their heads as to why Ontario grade 3 students cannot break through a 50 percent pass rate on literacy tests while Alberta students ace theirs, the answer is simple: Alberta's tests are – let's be blunt – a joke. And Ontario's are excruciatingly difficult. Even for their parents.

In Alberta's reading test, the children are asked to read a three-paragraph story, an excerpt from a longer work called *Belle's Journey*. First question: "In the title, the word 'journey' means riding bareback/riding a horse/accident/long trip."

This is an "achievement test" for an 8- or 9-year-old? To be asked what the word "journey" means? My 5-year-old daughter, who is in senior kindergarten, could answer that one. (I asked her; she got it right.) In all, there are four brief stories and a recipe to read; the children must answer 23 multiple-choice questions. There are no essay questions on the reading test.

No wonder Alberta's students are passing with flying colours. Last year, 87.8 percent of pupils met or exceeded what the province calls its "acceptable" standard. Four years ago, 87.6 percent met the standard. What an improvement!

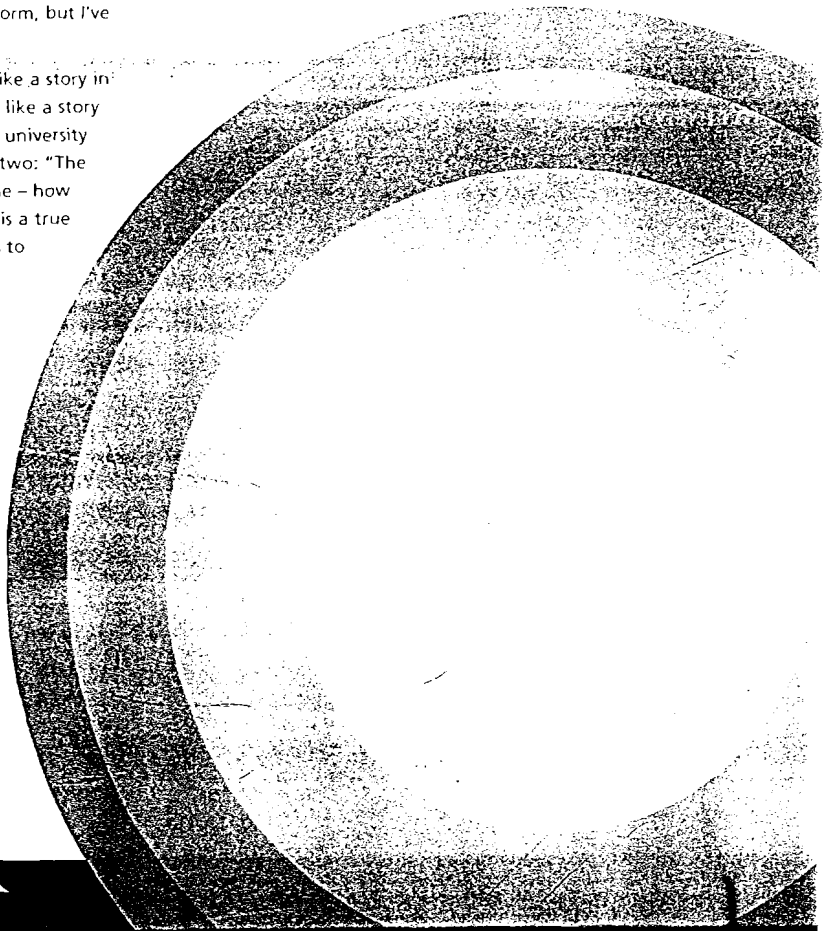


And the pathetically simple questions are not the only reason the scores are so high. The standard of acceptability is set at about 50 percent. So the pupils can fail to answer half of the questions correctly and Alberta still considers their performance acceptable. In Ontario, there are four grading levels. Only levels 3 and 4 are considered to meet or exceed the province's standard. This is much higher than a simple pass.

Now have a look at Ontario's grade 3 reading test. The test begins with a story called *Round and Round Again*. But Ontario's is five pages long. Not paragraphs – pages. And Ontario's story is written in some form of rhythmic metre. (I would tell you which form, but I've blanked out that part of my schooling.)

Here is the first question: "*Round and Round Again* is like a story in some ways and like a poem in some ways. Tell how it is like a story and how it is like a poem." That question would give a university student pause, let alone an 8-year-old. Here's question two: "The story begins: 'Let me tell you a story – it's funny but true – how Mama changed old things into new.' Do you think this is a true story? Use examples from the story and your own ideas to explain your answer." While Alberta's little kiddies are chewing on their pencil stubs pondering whether "journey" means "accident" or "long trip," Ontario's are contemplating a university-style examination. No wonder only 49 percent of grade 3 pupils reached the provincial standard last year, up only marginally in three years.

And yet Ontario is considered backward in education. Ontario schools regularly beat themselves up over their results. The media beats them up. Heck, I've beaten them up myself. Alberta, on the other hand, is flying. Its children are acing the tests. What's more, the province is scoring at the top of international tests, while Ontario is in the middle rank. So maybe Alberta is doing something right. It wouldn't do to beat the province up too much. The point here is that its test is a mirror held up on nothing. It's a wasted exercise.



grad 3

EQAO results for Ontario students at achievement level 3 and more

	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002
reading	46%	45%	49%	49%	50%
writing	49%	52%	52%	52%	55%
mathematics	43%	56%	57%	61%	58%

source | *The Schools We Need: Recent Education Policy in Ontario & Recommendations for Moving Forward, OISE/UT, January 2003*

Ontario's approach is a radical one. It sets the bar at a truly high level. It challenges the students and the teachers. For this it deserves praise and kind words. It's aiming high. But there is a real question as to whether the test is appropriate for grade 3 pupils.

A few years back, the five-page story the pupils had to read was called *The Case of the Mushrooming Zucchini*. Now how many children in grade 3 can read the word "zucchini"? How many have seen one or eaten one? I tried this test on my daughter who is in grade 4. Not to brag – well, okay: she got an A-plus in reading last year. But she still can't read the word "zucchini." (We are not big zucchini eaters in our home.)

Here's a fairly typical sentence from the story: "I'll keep those zucchinis under constant surveillance." Surveillance! How many 8-year-olds know what surveillance is? (My daughter, genius though she is, didn't know.)

The goal is to test higher-order thinking. Tony Lam, a professor at the Ontario Institute for Studies in Education who specializes in measurement and evaluation, says this approach is labelled an "authentic test." The intent is to move away from mere regurgitation to requiring a performance, a true demonstration of the activity under scrutiny. Lam, too, is skeptical about the questions on the province's grade 3 reading test. He says, "When I saw them, I asked myself, 'Grade 3 students know this stuff?'"

The test is based on the grade 3 curriculum in Ontario, and the broad purpose, says Lam, is to show teachers what they are expected to accomplish. "They want to convey to teachers what is important for students to learn. The idea is that the test sets the standard, the benchmark."

The problem goes beyond whether the material is too difficult. In testing higher-order thinking, the province is not paying enough attention to the fundamentals of reading itself – word recognition, basic comprehension and so on – so that when the schools and teachers sit down afterwards to analyse their pupils' strengths and weaknesses, they do not know what to focus on. What's more, the higher-order thinking is tested through a difficult medium: writing. A child may know the answers but be unable to express them. Writing and reading are related, yes; but they are different. The reading test is very much a writing test.

Adele Jeffrey, a former elementary school principal who is now a senior official with Ontario's Education Quality and Accountability Office, the testing body, says the schools are making good use of the test results. "I really think that teachers and schools are looking more closely at the curriculum, taking the results and using them to improve their own pedagogy."

I don't deny it for a second. But the improvement is not showing up on the test scores. Lam, who has studied the impact of the tests, was asked whether he has seen improvements in student learning as a result of the tests. "Not really – nothing."

In Alberta, Mark Cooper, a spokesman for the Learning Ministry, defended his province's grade 3 reading test. On the setting of 50 percent as the acceptable standard, he says, "Fifty percent is a score that people tend to associate with acceptable performance." How's that for a tautological answer!

About the absurdly simple questions, he says, "While most adults would find the grade 3 test items easy, teachers who understand the children and the curriculum at this grade level are able to accurately judge the level of difficulty that is appropriate." Mr. Cooper, I dare you to change your next test to *Belle's Journey*, and see how well Alberta's precocious youngsters do.

Alberta and Ontario can't both be right. Either grade 3s are just smart enough to deduce what the word "journey" means, or they can apply their knowledge of the elements of a story to explain how a story is like a poem in some ways and like a story in others. The two provinces may, however, both be wrong. Maybe Alberta's test is too easy and Ontario's is too darned difficult. I have no doubt that everyone is working very hard at this, but I'm not sure whether they're getting much for all that effort. It's time to have another look at the design of these tests. ■

Sean Fine writes for the *Globe and Mail*.

Classroom Assessment for Learning

Classroom assessment that involves students in the process and focuses on increasing learning can motivate rather than merely measure students.

Stephen Chappuis and Richard J. Stiggins

Imagine classroom assessment as a healthy part of effective teaching and successful learning. At a time when large-scale, external assessments of learning gain political favor and attention, many teachers are discovering how to engage and motivate students using day-to-day classroom assessment for purposes beyond measurement. By applying the principles of what is called *assessment for learning*, teachers have followed clear research findings of the effects that high-quality, formative assessment can have on student achievement.

We typically think of assessment as an index of school success rather than as the cause of that success. Unfortunately, largely absent from the traditional classroom assessment environment is the use of assessment as a tool to promote greater student achievement (Shepard, 2000). In general, the teacher teaches and then tests. The teacher and class move on, leaving unsuccessful students, those who might not learn at the established pace and within a fixed time frame, to finish low in the rank order. This assessment model is founded on two outdated beliefs: that to increase learning we should increase student

anxiety and that comparison with more successful peers will motivate low performers to do better.

By contrast, assessment for learning occurs during the teaching and learning process rather than after it and has as its primary focus the ongoing improvement of learning for all students (Assessment Reform Group, 1999; Crooks, 2001; Shepard, 2000). Teachers who assess for learning use day-to-day classroom assessment activities to involve students directly and deeply in their own learning, increasing their confidence and motivation to learn by emphasizing progress and achievement rather than failure and defeat (Stiggins, 1999; 2001). In the assessment for learning model, assessment is an instructional tool that promotes learning rather than an event designed solely for the purpose of evaluation and assigning grades. And when students become involved in the assessment process, assessment for learning begins to look more like teaching and less like testing (Davies, 2000).

Student-Involved Assessment

Research shows that classroom assessments that provide accurate, descriptive feedback to students and involve them



in the assessment process can improve learning (Black and William, 1998). As a result, assessment for learning means more than just assessing students often, more than providing the teacher with assessment results to revise instruction. In assessment for learning, both teacher and student use classroom assessment information to modify teaching and learning activities. Teachers use assessment information formatively when they

- Pretest before a unit of study and adjust instruction for individuals or the entire group.
- Analyze which students need more practice.
- Continually revise instruction on the basis of results.
- Reflect on the effectiveness of their own teaching practices.
- Confer with students regarding



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their strengths and the areas that need improvement.

- Facilitate peer tutoring, matching students who demonstrate understanding with those who do not.

We tend to think of students as passive participants in assessment rather than engaged users of the information that assessment can produce. What we should be asking is, How can students use assessment to take responsibility for and improve their own learning?

Student involvement in assessment doesn't mean that students control decisions regarding what will or won't be learned or tested. It doesn't mean that they assign their own grades. Instead, student involvement means that students learn to use assessment information to manage their own learning so that they understand how they learn best, know exactly where they are in

Student-involved assessment means that students learn to use assessment information to manage their own learning.

relation to the defined learning targets, and plan and take the next steps in their learning.

Students engage in the assessment for learning process when they use assessment information to set goals, make learning decisions related to their own improvement, develop an understanding of what quality work looks like, self-assess, and communicate their status and progress toward established learning goals. Students involved in

their own assessment might

- Determine the attributes of good performance. Students look at teacher-supplied anonymous samples of strong student performances and list the qualities that make them strong, learning the language of quality and the concepts behind strong performance.

- Use scoring guides to evaluate real work samples. Students can start with just one criterion in the guide and expand to others as they become more proficient in scoring. As students engage in determining the characteristics of quality work and scoring actual work samples, they become better able to evaluate their own work. Using the language of the scoring guide, they can identify their areas of strength and set goals for improvement—in essence, planning the next steps in their learning.

- Revise anonymous work samples. Students go beyond evaluating work to using criteria to improve the quality of a work sample. They can develop a revision plan that outlines improvements, or write a letter to the creator of the original work offering advice on how to improve the sample. This activity also helps students know what to do before they revise their own work.

- Create practice tests or test items based on their understanding of the learning targets and the essential concepts in the class material. Students can work in pairs to identify what they think should be on the test and to generate sample test items and responses.

- Communicate with others about their growth and determine when they are nearing success. Students achieve a deeper understanding of themselves and the material that they are attempting to learn when they describe the quality of their own work. Letters to parents, written self-reflections, and conferences with teachers and parents in which students outline the process they used to create a product allow students to share what they know and describe their progress toward the learning target. By accumulating evidence of their own improvement in growth portfolios, students can refer to specific

stages in their growth and celebrate their achievement with others.

Effective Teacher Feedback

"You need to study harder." "Your handwriting is very nice." "Good job." Traditionally, teachers use such statements to register their approval or disapproval of student performance. But such evaluative feedback, long a classroom staple, is of limited value for improving student learning and can actually have negative effects on students' desire to learn. And grades, those traditional coded symbols and markings—B-, 71 percent, 4/10, Satisfactory, F—actually communicate even less about what students have done well or need to do to improve. By contrast, teacher comments that focus on student work and not on individual student characteristics can increase students' motivation and desire to learn.

Black and William (1998) point to the benefits of replacing judgmental feedback with specific, descriptive, and immediate feedback. When the goal is to increase student motivation and learning, productive feedback tells students what they are doing right, pinpointing strengths and helping learners develop those strengths even further. For some students, receiving this feedback in writing and having time to reflect on it is sufficient. Other students need face-to-face teacher feedback to reinforce what they have done well.

Effective teacher feedback describes why an answer is right or wrong in specific terms that students understand. Students can also generate their own descriptive feedback by comparing their work with teacher-provided exemplars or posted samples. They can then compare their own feedback with that of their teacher.

Descriptive feedback should provide

ways for students to improve in clear, constructive language. Instead of simply labeling student errors or omissions, effective feedback guides students to better performance throughout the learning process. Useful comments focus specifically on improving only one area at a time.

Finally, teacher feedback for learning

more like instruction, students need to learn to self-assess so that they can use the descriptive feedback from the teacher to its best advantage. Sadler (1989) and Atkin, Black, and Coffey (2001) describe a model of formative assessment in which learners continually ask themselves three questions as they self-assess.



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draws an even bigger picture by telling students where they are now relative to the defined learning targets—and where teachers ultimately want them to be. By modeling for students a variety of suggestions designed to narrow the gap between where they are and where they should be headed, teachers can help students learn to generate their own strategies for improvement.

The Skills of Self-Assessment

Eventually, we want students to be able to direct their own learning. Yet it often seems unclear just how students will achieve this goal. Assessment for learning helps students become self-directed learners by developing their self-assessment skills. The principles of assessment for learning are interrelated: Just as involving students in the assessment process helps make assessment

Where Am I Trying to Go?

Students need clearly articulated, concise learning targets to be able to answer this first question. Learning is easier when learners understand what goal they are trying to achieve, the purpose of achieving the goal, and the specific attributes of success. Teachers should continually help students clarify the intended learning as the lessons unfold—not just at the beginning of a unit of study. Teachers share learning intentions with students when they

- Phrase objectives in terms that begin with "We are learning to . . ." or "I can . . ."

- Ask students to read the objectives aloud and ask clarifying questions.

- Separate what they want students to do—the instructions for completing the task—from what they want students to learn. Otherwise, the directions

might overshadow the intended learning.

- Inform students why they need to learn what comes next and how it connects to previous and future learning.

- Display the learning objectives in the classroom.

- Provide students with examples of outstanding work as well as samples of lesser quality so that they can see the differences.

- Ask students to rephrase the learning targets or describe what attainment of a target looks like (Arter & Busick, 2001; Clarke, 2001).

Where Am I Now?

Students can practice comparing their work to models of high-quality work and trying to identify the differences. They can use teacher feedback from formative assessments to gather

Teachers share learning intentions with students when they separate what they want students to do—the instructions for completing the task—from what they want students to learn.

evidence of what they know and can do relative to the defined learning target. They can use teacher questions designed to prompt students to reflect on what they have learned individually relative to the intended learning. All of these strategies help students ascertain—and, even more important, learn *how* to ascertain—where they are and where they need to be, an awareness that is central to their ultimate success.

How Do I Close the Gap?

Assessment for learning helps students know what to do to move from their current position to the final learning goal. To meet learning goals, students must participate fully in creating the goals, analyzing assessment data, and developing a plan of action to achieve the next goal (Clarke, 2001).

Students should learn question-and-answer strategies that they can use to

close the gap: What do I need to change in my work to improve its quality? What specific help do I need to make these changes? From whom can I get help? What resources do I need?

Sadler (1989) notes that a steady flow of descriptive feedback to students encourages continual self-assessment around what constitutes quality.

Keeping students connected to a vision of quality as the unit of study progresses helps them close the gap by formulating their next steps in learning.

All Students Learning Well

The habits and skills of self-assessment are within the grasp and capabilities of almost every student. Students take greater responsibility for their own learning when they regularly assess themselves (Shepard, 2001). In the hands of trained teachers, assessment for learning breeds confidence in

feedback to students descriptive and informative, and increase the involvement of students in the entire assessment process. In this way, classroom assessment for learning becomes a school improvement tool that helps create responsible, engaged, and self-directed learners. ■

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