

# How and Why Standards Can Improve Student Achievement

## *A Conversation with Robert J. Marzano*

Marge Scherer

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As Senior Fellow at the Mid-continent Research for Education and Learning (McREL) Institute in Aurora, Colorado, for the past 20 years, Robert J. Marzano has been responsible for translating research and theory into classroom practice. His most recent book for ASCD is the best-selling *Classroom Instruction That Works*, which he coauthored with Debra J. Pickering and Jane E. Pollock.

Recent efforts that address standards include coauthoring *A Comprehensive Guide to Designing Standards-Based Districts, Schools, and Classrooms* (Alexandria, VA: ASCD and Aurora, CO: McREL, 1996) and authoring *Transforming Classroom Grading* (Alexandria, VA: ASCD, 2000). He is currently researching student-level variables related to academic achievement. In this interview, Marzano talks to *Educational Leadership* readers about the potential of standards-based education. He gives a progress report on the standards movement: the potential for reform, the challenges to overcome, and the direction to move in the future.

*What is the most compelling argument in favor of standards?*

Standards hold the greatest hope for significantly improving student achievement. Every other policy mandate we've tried hasn't done so. For example, right after *A Nation at*

*Risk* (Washington, DC: U.S. Department of Education, 1983) was published, we tried to increase academic achievement by making graduation requirements more rigorous. That was the first wave of reform, but it didn't have much of an effect.

The creation of standards documents by national subject matter organizations, such as the National Council of Teachers of Mathematics, set the stage for implementing standards. But we have yet to systematically enforce or implement standards.

*Has the standards movement thus far had more positive or more negative effects on teachers and students?*

I'd have to say it has had more positive effects. Even though the process of identifying standards has been clumsy, it has started a conversation across the United States about what students should know in different subject areas. Perhaps that's all it has done. But that's a huge step forward. The debate about whether or not academic achievement is important is over. Ten years ago, you wouldn't have had agreement that academic achievement was the central focus of public education. Today the standards movement has made this a foregone conclusion.

*What conditions are necessary to implement standards effectively?*

Cut the number of standards and the content within standards dramatically. If you look at all the national and state documents that McREL has organized on its Web site ([www.mcrel.org](http://www.mcrel.org)), you'll find approximately 130 across some 14 different subject areas. The knowledge and skills that these documents describe represent about 3,500 benchmarks. To cover all this content, you would have to

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change schooling from K–12 to K–22. Even if you look at a specific state document and start calculating how much time it would take to cover all the content it contains, there’s just not enough time to do it. So step one toward implementing standards is to cut the amount of content addressed within standards. By my reckoning, we would have to cut content by about two-thirds. The sheer number of standards is the biggest impediment to implementing standards.

*Knowledge keeps expanding. Isn’t it an impossible task to cut the standards by two-thirds?*

It is a hard task, but not impossible. So far the people we’ve asked to articulate standards have been subject matter specialists. If I teach music and my life is devoted to that, of course I’m going to believe that all of what’s identified in the national documents is important. Subject matter experts were certainly the ones to answer the question, What’s important in your content area? To answer the question, What’s absolutely essential? you have to broaden that population dramatically to include all constituents—those with and without college degrees.

*In addition to trimming the standards, what else do we need to do to make standards-based education effective?*

We need a monitoring system that allows us to track student progress on specific standards. State tests aren’t effective feedback mechanisms. Those tests are given once a year. Schools and teachers don’t get the results back for months. Effective feedback has to be timely; schools need to examine multiple data waves throughout the year, at least one data wave every grading period.

The only way to create an effective monitoring system is to change our grading practices to standards-based grading. We have the vehicle—grades. But the way we use our grading systems now tells us nothing about whether students have met standards. It will require major changes in thinking and record keeping to do this. But the good news is that people are starting to make those changes.

*Talk more about what it means to use standards-based grading.*

Grades—whether letter grades or percentage grades or a combination of both—don’t tell us much unless we know the criteria on which they are based. Was the grade based on knowledge plus effort and behavior, and how was each factor weighted? In standards-based grading, you might still have, but not necessarily need, an overall score or letter grade. What you would have are rubric scores or percentage scores on specific standards that were covered in that course.

Over time you could plot the progress of students on specific standards. If all the math teachers scored students on the math standards, over the years you could see the

pattern of scores for a student on a given standard. Those patterns are more reliable and valid than a single score on a test given at the end of the year.

*As much as parents and the public have come to rely on national test results, will they ever have as much confidence in multiple teacher-made or school-made tests?*

That’s been a topic of study for me for the past five years. I kept track of appropriately and scored appropriately, classroom assessments can be very reliable. Five years from now, there will be enough research to ensure that standards-based classroom tests can be at least as precise as external tests. The two kinds of feedback—external assessments and internal classroom assessments—will balance each other and will lessen the need for a single high-stakes test. Using external and internal assessments will also decrease the chances of making incorrect decisions about students’ achievement.

*Some surveys suggest that the general public supports standards. Are teachers adapting to the new demands for accountability?*

This is going to sound negative, but I don’t think that teachers across the United States are implementing standards. Surveys about standards implementation usually boil down to asking teachers to verify whether or not they cover content that is specified in the state documents.

Districts often use a checklist—a surface-level approach to determining whether standards are implemented. They assume that the standards that teachers have checked off have been covered, but that might not be the case. A teacher might misinterpret the content stated in a standard or misjudge the depth to which the content must be covered for students to master it.

Some teachers don’t take seriously the task of covering all the content. To get their students to do well on the state test, they teach to the test’s topics. No matter how good the state tests are, they can never cover all the content in the standards, not even the essential content.

*Should classroom teachers be responsible for selecting content?*

Classroom teachers can’t do it by themselves. Right now, the district or the school says, “Okay, teachers, here are the standards; you figure them out.” And it’s an impossible task. Someone at the district or school level has to cut the content down: get lean and mean and identify the bare-bones, essential content. Administrators have to set up a record-keeping and monitoring system that’s easy for teachers to use. Only then can they expect teachers to implement standards. If teachers are given the tools and resources to complete the task, they will do a fine job of implementing standards.

*Have states made any progress in helping teachers coordinate priorities in curriculum choices?*

There's a funny dynamic that occurs. The schools and teachers are looking to the state departments of education for guidance about which content is important and essential. But the state departments, in an effort not to be too directive, are reluctant to provide guidance. They want to be flexible, but in fact they aren't giving the guidance that the schools and districts so desperately need. It's a very labor-intensive process to identify what's important and what's not.

Coordinating standards with curriculum is an easy task for teachers if they know what's essential and what's not. They are quite capable of making decisions about which parts of the textbook to use, which parts to supplement, which resources and instructional strategies to use.

*You mentioned that some teachers misinterpret the standards. Are we making progress in drafting clearly stated, rigorous standards?*

From my perspective, not enough. Even though state standards have become more specific, many statements at the benchmark level are still packed with too much content and too many activities. A single sentence within a benchmark might address two or three processes and several major generalizations. And as you read through the different benchmarks, you see incredible redundancies. And you can't easily translate the statements into learning goals. Part of the process of making standards lean and mean is not just cutting their numbers, but also making them specific and non-redundant. And no one at the state or national level is doing that.

*Would you single out one place where it's being done well?*  
No, but a number of states are trying.

*Should we be working toward national content standards? For example, the southern states are identifying regional standards in algebra. Is this a positive development?*

In general, yes, but let's qualify what we mean by national standards. If having national standards means having explicit goals—targets of knowledge and skill—yes, absolutely, we should have national standards, at least for certain subject areas. Algebra should address the same content, no matter whether it's taught in southern California or Maine. That's not necessarily the case with social studies, though, which is more values-driven.

But we must make the distinction between identifying the knowledge and skills that a student needs to know to be considered knowledgeable in a certain subject area and mandating the level of knowledge and skills that all students must achieve. These are two separate issues. On one side, you do education a great service by identifying the

knowledge and skills that represent mastering a subject. But decisions about what students are held accountable for should be made at the local level.

*A criticism of the standards movement is that having standards narrows the curriculum. Don't students get fewer choices in what they study if they have a standards-based education?*

Remember, if you cut the standards down by two-thirds, you've made it possible for teachers to cover the essential knowledge in the time allotted. But you also have left a lot of room for teachers to supplement that content.

If I'm teaching a 7th grade math course and covering the mandated standards will take up one-third or even one-half of my instructional time, I still have the other half of the time to address content of my choosing. We should ensure that within a given school or state, all students are exposed to the same content. But we also must give teachers enough freedom to supplement this content and take advantage of serendipitous learning opportunities.

*Will the new mandate to test students every year inspire a more thoughtful approach to standards and assessment or will it create more chaos?*

The mandate for testing is a function of the need for more frequent feedback. Getting feedback on student progress as often as possible, at least once a year, is absolutely essential to the teaching and learning process. Using an external test, however, comes with built-in problems. The tests are narrow, and they narrow the curriculum if they are our only form of feedback. Results from external tests are gathered at one point in time, and data gathered at one point in time never truly indicate how students are doing. The place to go for the best feedback is the classroom. If we could make classroom assessment and classroom reporting a better feedback mechanism, we wouldn't have to rely on external tests. We'd have valid assessment information built into our system.

*Some teachers feel that the emphasis on high-stakes testing stops them from being creative and from using good teaching strategies. What would you say to a teacher who expressed that point of view?*

High-stakes testing does put negative pressure on teachers. If students don't do well on the test, the students can suffer severe consequences. Some may not receive a diploma or may only receive a certificate of attendance.

But I don't see how standards-based education hurts instructional creativity. Policymakers are not telling teachers how to teach; they're just saying that we must produce results relative to specific content. Using standards-based report cards would alleviate the pressure of the high-stakes tests because decisions could be made about students on the basis of patterns of scores obtained over time.

Even if teachers were given a more manageable number of standards to address and had a good record-keeping system that didn't increase their clerical work, they would still need a repertoire of instructional strategies to increase student learning.

In research we recently completed, we identified classroom practices that generally increase achievement: identifying similarities and differences; summarizing and note taking; receiving reinforcement for effort and recognition for achievement; doing homework and practicing; using nonlinguistic representations; learning cooperatively; setting objectives and receiving feedback; generating and testing hypotheses; and using cues, questions, and advance organizers. Regardless of whether or not you teach to standards, these classroom practices work well.

*Where will the standards movement be in the next five years? Are standards here to stay?*

In the next five years, we'll identify what's essential knowledge and what's not, and we will get very specific in terms

of developmental expectations at different levels. And we'll develop a record-keeping system to help teachers provide valid classroom assessments. Researchers will do the technical work to show that classroom assessments can validly and reliably be used to judge students' performance on specific standards.

The biggest indicators that standards are here to stay are the public's demand for accountability and the dramatic increase in the public's access to information about students. With the national and state data available on the Internet, you can find out how students in specific schools are performing. Whether standards endure or not, what will remain is the demand for accountability. That means that we're going to have to be specific about what students know and are able to do. Whether we focus on standards or not, we're entering an era of accountability that has been created by technology and the information explosion.