

**EDUCATION WEEK**

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**COMMENTARY****Rigor on Trial**

By Tony Wagner

**Rigor**, it seems, is the new reform de jour. As a nation, we appear to have come to a consensus that all children deserve a “challenging and rigorous” education. The problem is, we have no common agreement about what constitutes “rigor.” Is it rigorous to require all students to take a college-prep curriculum, including advanced math? Are high school Advanced Placement courses the new standard for rigor, as many are now suggesting?

**How do we create a reform strategy that relies less on mindless, mandated compliance and computer-scored, test-based accountability and more on the development of collaborative problem-solving and reasoning skills?**

I had an opportunity last year to explore these and related questions in depth with a remarkable group of educators. As a follow-up to my Commentary “Secondary School Change,” in which I introduced the idea of the new “three R’s” of rigor, relevance, and respectful relationships (“[Secondary School Change](#),” Nov. 27, 2002.), a group of principals in Kona, Hawaii, challenged me to help them think about what those three R’s actually look like in the classroom. They wanted to create a rubric for assessing rigor at all grade levels.

We began our discussions with a half-day retreat, at which we explored basic questions about rigor. What are teachers doing in a rigorous classroom? What are students doing? What does rigorous student work look like at different grade levels? The more we discussed these questions, the more we realized how difficult our task was. Rigor in the classroom, we began to see, was invariably tied to the larger questions of what society will demand of students when they graduate, what it means to be an educated adult, and how the skills needed for work, citizenship, and continuous learning have changed fundamentally in the last quarter-century.

— Peter Lui

By the end of the first afternoon, we’d constructed a basic rubric we thought was ready for testing. For the next few days, we conducted “learning walks” in each of the six principals’ schools, K-12. At the end of each of these two-hour visits, we dissected every class we’d observed in terms of whether we thought the class was high-, medium-, or low-rigor and why. Discussions were frustrating, at first, because there was no agreement among group members about the levels of rigor they’d seen. This led us to revise our classroom-observation tool following each school visit.

After a remarkable two days of work together, the group had calibrated its classroom assessments to the point where there was frequent agreement about the level of rigor in the classes we observed, as well as about what each principal might say to the teacher to create a more challenging class. Along the way, we had substantially modified our rigor rubric, as well. We began to realize that rigor has less to do with how demanding the material the teacher *covers* is than with what *competencies* students have mastered as a result of a lesson. We were able to agree on this because, in our journey, we had gone from creating a series of *teacher-centered* observations to reaching consensus on a set of questions we would ask *students*. Students chosen at random were questioned to determine not only the level of rigor in the class, but also the extent to which there was evidence of the other two R's of relevance and respectful relationships, essential elements in motivating students to want to achieve rigor. The seven questions that emerged from this work are the following:

1. What is the purpose of this lesson?
2. Why is this important to learn?
3. In what ways am I challenged to think in this lesson?
4. How will I apply, assess, or communicate what I've learned?
5. How will I know how good my work is and how I can improve it?
6. Do I feel respected by other students in this class?
7. Do I feel respected by the teacher in this class?

Discussing these questions with students led us to see all of the courses we'd observed in a new light, especially the Advanced Placement classes. In virtually all the AP classes we visited, teachers were covering more academic content at a faster pace. But the primary competency students were being asked to master was the ability to memorize copious amounts of information for the test. Teachers' questions to students tended to be almost entirely related to factual recall. In our opinion, not a single one of the AP classes we saw was sufficiently rigorous to prepare students for work, citizenship, and continuous learning in today's world. In fact, in several of the non-AP classes we observed, there was a stronger purpose to the lesson, more thinking being done by students, and assessments that required more analysis.

We concluded our three days with a discussion of what our new understanding of rigor meant for superintendents, principals, and their work together. For rigorous teaching to become more than a random act of excellence, these leaders began to realize, their work had to change, both at the building level and as a group concerned with students' experiences, from kindergarten through grade 12. Meetings at every level had to consist of more than just housekeeping matters. For a principal or superintendent, meetings are the classroom. They must be models of rigor. So the members of our group committed themselves to replicating these discussions of what constitutes rigor with their own faculty members—and devising new ways of working together.

Instead of meeting only occasionally for a quick catch-up over breakfast, for example, one superintendent and his principals now meet for a half-day a month in one of their colleagues'

schools. There they conduct learning walks and present and discuss case studies related to strengthening rigorous instruction in their schools. They are becoming what we at Harvard's Change Leadership Group call a "leadership practice community," a community of practice whose goal is to help its members become better leaders of change.

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While inspired by my time with these leaders, the experience also leaves me with thought-provoking questions about rigor. The principals later reflected, for example, that the power of the experience came from having to think through, for themselves, what rigor is, rather than having someone give them the answer. That insight leads me to wonder what might happen if our seven questions were applied not only to every class, but also to every adult meeting or professional-development program. Could the questions be used as a set of standards for planning and assessing both adult and student learning across a district? Would this lead to more-rigorous meetings? And if educators were routinely asked in their work to *really* think—to analyze data, assess research, and solve problems together—would students then be more likely to learn these same competencies?

If such a connection exists—and I think it does—then how do we create an education reform strategy that relies less on mindless, mandated compliance and computer-scored, test-based accountability and more on the development of educators' collaborative problem-solving and reasoning skills?

The low levels of rigor we observed in Advanced Placement classes raise additional questions. The main trouble with these courses was not poor teaching, but the tests for which students were being prepped. Developing more-skillful teaching and instructional leadership by focusing on the seven questions is important work, but it will not solve the problem of bad tests that require more memorization than thinking. What happens to our students and to our society if AP tests and the traditional college-prep curriculum are enthroned as the new standard for rigor?

There is no question that all students must now graduate from high school college-ready, as the skills for work, college, and active and informed citizenship have converged. But I am deeply troubled by how we currently define and assess college-readiness—not only what is tested, but also what courses students must take to be college-eligible. I am also alarmed by the lack of alignment between what is required to get into college vs. what's needed to *stay* in college and succeed as an adult. Consider one example: We know that advanced-math requirements are one of the most significant contributors to increasing numbers of high school students' dropping out; why, then, should all students have to take these courses for admission to a four-year college, instead of classes that teach more widely used math skills, like statistics and probability? Math teachers say that research shows that students who take advanced math are more likely to succeed in college, but the research suggests only an association, not cause and effect. We could require all students to take any difficult subject—say, four years of Greek—and probably get the same research result.

We must also ask what competencies essential for adult success are *not* being taught because there is currently no college-entrance requirement or national test for them. Imagine, for a moment, that you were accused of a serious crime you did not commit and were on trial for your life. How confident would you be of getting a fair trial if the members of your jury had merely met the intellectual standards of our college-prep courses as they exist today? Certainly they

would know how to memorize information and perform on multiple-choice and short-answer tests. But would your jurors know how to analyze an argument, weigh evidence, recognize bias (their own and others'), distinguish fact from opinion, and be able to balance the sometimes competing principles of justice and mercy? Could they listen with both a critical mind and a compassionate heart and communicate clearly what they understand? Would they know how to work with others to seek the truth?

What would it mean to graduate all of our high school students both college-ready and "jury-ready"? Might these turn out to be one and the same goal? Increasingly in our schools, what gets taught is only what gets tested. Shouldn't we, then, start designing rigorous tests for citizenship as well as for college? Many politicians will ask again, as they did in the 1990s, whether we can afford to develop these more expensive, qualitative assessments. But perhaps the real question is, can we afford not to?

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#### FROM THE ARCHIVES

"College Readiness," September 28, 2005.  
"To Maintain Rigor, College Board to Audit All AP Courses," July 27, 2005.  
"Summit Fuels Push to Improve High Schools," March 9, 2005.  
"States Take Steps to Put More Rigor Into High Schools," March 2, 2005.  
"Report: High Schools Must Demand More," January 5, 2005.  
"Students Ill-Prepared for College, ACT Warns," October 20, 2004.  
"Rigor Disputed In Standards For Teachers," January 14, 2004.  
"More Take College-Entrance Exams; Academic Readiness Is Questioned," September 3, 2003.  
"Secondary School Change," November 27, 2002.  
"Middle School Educators Debate Meaning of 'Rigor'," November 14, 2001.  
For background, previous stories, and Web links, read [High School Reform](#) and [Leadership](#).

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