



Education

NECAP test is a good start for improving math skills

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Let us celebrate little-heralded good news about Rhode Island's math achievement scores.

Yes, I know. When only 27 percent of the high school students reach proficiency in math for the second year in a row, good news seems off topic. But have patience.

Last November, four states and the District of Columbia showed statistically significant increases in both their fourth and their eighth grades on the National Assessment of Education Progress (NAEP). Often referred to as the nation's report card, the NAEP shows academic achievement state-to-state. The test is so rigorous its critics complain that its standards are unreasonably high.

Rhode Island was one of those states that made gains at both levels, which is nice. But even better, three of the four commended states — Vermont, New Hampshire and Rhode Island — are partners in the New England Common Assessment Program, or NECAP.

This is super news because it confirms that the NECAP standards, expectations and tests are so strong that by hewing to them, the state can actually improve NAEP results. In other words, NECAP has us on the right track. NECAP is the only multistate testing project, which Maine will also be joining.

And for the record, the fourth commended state was Nevada. The other 46 states may have made gains in their own assessment programs, but it's hard to know if those improvements are real, since they weren't reflected in the NAEP.

So we know that NECAP gives us good academic-spine high standards, grade-by-grade expectations clearly described, and tests that do a good job of measuring whether or not the kids mastered the expected skills and bodies of knowledge. Big relief.

But that is not to say we don't have problems. In the latest round of NECAP testing, 61 percent of elementary students were proficient in math; 56 percent at middle school, and the high schools repeated last year's upsetting performance.

NECAP is good, but it's only a spine. How do we pack it with strong muscles, a beating heart and healthy

skin?

I asked Mary Ann Snider, the Department of Education's chief of educator excellence and instructional effectiveness, for her thoughts.

She illustrates the problems with math by comparing them with the advances made in reading. "In reading, we have really good tools. We've implemented Response to Intervention (a technique for catching early reading problems and intervening with help as soon as possible). We have lots of good diagnostics DIBBLES, DRA, PALS (tests that determine reading readiness and early skills). These diagnostics help keep kids from falling behind. We work on fluency and phonics. We've offered the teachers lots of professional development. We have all sorts of programs to shore up areas of trouble. So with reading, we have a big toolbox. But math? I don't know of even one good math diagnostic test."

Without such tests, educators don't really know why a kid is having trouble absorbing that math concept. Never mind what to do about it. And, Snider hastens to add, "This is a national problem." For now, schools are flying a little blind.

As long as kids stay on track, learning what they need to know according to the normal NECAP timetable, they're fine. But, Snider says, "if a kid has had a breakdown in understanding, it's harder to rebuild that foundation. And teachers don't have as many tricks to help those who are not getting it."

Not just here, but across the nation we'll be seeing a lot of experimenting with what does and does not work to identify struggling kids early, and then ramp up their poor math skills effectively. Districts are already hard at work trying to tighten up their curricula so that teachers have a menu of lesson plans and methods for teaching math skills.

Snider says, "We know what fluency in reading looks like. Now we need fluency in math. It's not just that by the end of third grade, students should know multiplication tables, but kids need fluency in math thinking as well. One half is the same as .5 which is the same as 50 percent. They need to know the relationship of ratio to proportion to fractions. They need to know the one fundamental and then apply it broadly."

Also consider that from the 8th to the 10th grade, kids don't learn new reading skills. They read to learn about other things, like history and Shakespeare. Students acquire vocabulary, fluency, and as their world grows through literature and nonfiction, so does their comprehension.

But especially in grades 8, 9 and 10, Snider says, "math is about actual skills. Hard content." It's algebra I and II, geometry, calculus, trigonometry, statistics and so forth. "The state colleges are thinking about how to train math specialists. They're developing tools. The state and the districts are working on curriculum mapping, scope and sequences, units of study..."

So we'll get there. We're already figuring out how to get and keep more kids on track to proficiency in the lower grades, and those efforts will show up at the high schools in the foreseeable future.

And we know the NECAP is giving us reliable guidance.

But oh, the amount of work ahead!

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