The Battle Over Common Core Math Standards: Will A Larger Federal Role Help or Hinder Curriculum Improvement?

Standards raise the bar in many, but not all, states, and still do not reach the highest international level

CAMBRIDGE, MA – More than 40 states have now agreed to adopt the Common Core standards in English Language Arts and math. In a forum released today on the website, www.educationnext.org, former U.S. Department of Education official Ze’ev Wurman and Johns Hopkins University professor of mathematics W. Stephen Wilson offer differing opinions about the standards. Wurman and Wilson address key issues raised – including 1) how much the standards will improve on those currently in place in various states, 2) whether they will resolve deep disagreements over what skills constitute sound math education, and 3) whether they might have the unintended consequence of removing incentives for further improvement.

Both Wurman and Wilson acknowledge the urgent need for improvement in math curricula if the U.S. is to become more competitive internationally. Wilson notes the dramatic withdrawal from arithmetic in the elementary grades that has occurred over the past two to three decades, reflecting the mistaken but increasingly popular view that learning whole number operations (such as the multiplication tables) to the point of instant recall is bad for a student, not necessary to higher math, and impedes students’ ability to understand mathematical principles.

While arithmetic is “the foundation,” Wilson states, and “has to be done right,” at present “fewer than 15 states are explicit about the need for students to know the single-digit number facts...to the point of instant recall.” Only seven states expect students to know explicitly the standard algorithm for whole number multiplication, and “often states expect students to develop their own strategies or a variety of strategies for dealing with fractions.”

Both experts recognize that there are clearer and more rigorous sets of standards than Common Core in place in several states, among them California, Florida, Indiana, Minnesota, and Washington. Nonetheless, Wilson views Common Core math as a vast improvement over existing standards in more than 30 states, doing “a pretty good job with arithmetic,” and ranking in terms of quality in the top 20 percent of current state standards.

Wurman finds many gaps in the Common Core standards and sequencing problems that will impede college readiness. The standards do not expect Algebra I to be taught in grade 8, “reversing the most significant
change in mathematics education in America in the last decade,” and contrary to the practice of the highest-achieving nations.

The authors address whether the new system of federal involvement that Common Core establishes is the most effective route to world-class math education. Wurman notes that Common Core might have the unintended effect of removing incentives for states to continually improve. Within the existing American system where each state sets its own standards, states that aspire to raise the bar are likely to do so, accounting for the level of excellence that some have reached. Common Core will, he fears, make math standards an apparently settled matter, leading to a drift toward easier standards over time.

The Common Core math standards might also lose strength in their implementation through the sheer force of popular pedagogical trends. In other countries, notes Wilson, the statement, “learn to multiply whole numbers,” has an agreed-upon meaning and it is understood that students should learn the standard algorithm. In the U.S., “some people will declare wriggle room and try to avoid the standard algorithm.” He states, “Without a unified, concerted effort to teach real mathematics, there isn’t much chance of catching up” to the highest-achieving countries, even if states say they’ll adopt Common Core.

Wurman observes that the Common Core math standards are grade-by-grade specific and hence more detailed than the National Council of Teachers of Mathematics (NCTM) 2000 standards, which replaced the organization’s “unfocused and mostly math-less” 1989 standards, but without significantly strengthening them. However, he notes that the Common Core standards do resemble those of NCTM “in setting their sights lower than our international competitors.”

About the Authors
Ze’ev Wurman was a U.S. Department of Education official under George W. Bush, is currently an executive with MonolithIC 3D Inc., and is coauthor with Sandra Stotsky of “Common Core’s Standards Still Don’t Make the Grade” (Pioneer Institute, 2010). W. Stephen Wilson is professor of mathematics at Johns Hopkins University, served on the National Governors Association-Council of Chief State School Officers “feedback group” for the Common Core standards, and was mathematics author of Stars by which to Navigate? Scanning National and International Education Standards in 2009: An Interim Report on Common Core, NAEP, TIMSS, and PISA. The authors are available for interviews.

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