

Testimony in Support of HB2292
Ze'ev Wurman, Palo Alto, Calif.
February 23, 2015

Chairman Highland, Members of the Education Committee,

My professional background: I am a former Senior Adviser at the Office of Planning, Evaluation and Policy Development in the U.S. Department of Education. Throughout the development of the Common Core standards in 2009-2010, I analyzed the mathematics drafts for the Pioneer Institute and for the State of California. In the summer of 2010 I served on the California Academic Content Standards Commission that reviewed the adoption of Common Core for California. Prior to that, in the late 1990s, I participated in the development of California mathematics content standards and framework. I served on the mathematics content review panel for the California state test since its inception in 1999 and until 2010. I have published about education and about the Common Core in professional and general press. In my non-educational life I am an executive with Monolithic 3D, a Silicon Valley semiconductor start-up.

In my testimony today I will focus on the following points:

- The mediocrity of the Common Core standards, and the success Kansas had with its own standards.
- The cost of retraining teacher if Kansas pulls out of Common Core.
- The suitability of Kansas' prior standards to measure college-readiness.

1. Quality of the Common Core Mathematics Standards

Kansas pre-Common Core math standards have been rated low by the Fordham Foundation, no doubt because of their atypical organization and because of their lack of prescriptiveness, which leaves large latitude to classroom teachers. Yet despite the low Fordham rating, Kansas has developed a system where your standards seem to work for you: Kansas has been consistently among the top five states on the 4th grade NAEP, and among the top dozen on its 8th grade version. Two years ago, when I testified in this house, your then Deputy Commissioner Brad Neuenswander erroneously argued that Kansas success on NAEP was limited only to your white students. This is incorrect. Kansas has been even more successful with its minority and disadvantaged students, who rank even higher than your white students in national ranking. This is a clear evidence of the effectiveness of your old standards and of the readiness of your teachers to use them.

The weaknesses of Common Core standards have been documented to you before so I will not dwell on them now. You may find more details of those in my 2013 testimony before you, attached here for your reference.

2. Cost of Pulling out of Common Core and Retraining Teachers

Common Core standards are experimental in large parts, and require massive retraining of teachers. It calls for new methods of teaching reading comprehension, new methods of teaching arithmetic in

elementary school, new experimental methods of teaching geometry, and new experimental algebra content, the so-called “functional algebra.” All those pose a massive teacher retraining challenge to every state that uses Common Core. By wisely reverting to your old standards Kansas saves itself from this multi-year experimental hassle, and allows you to consider improvements in your old standards with proper deliberation rather than with Race-to-the-Top-induced haste.

3. College Readiness

It is well known by now that Common Core’s so-called “college-readiness” is good only for non-selective and community colleges. After all even Jason Zimba, one of their lead writers, testified to that.¹ But should you worry whether your own old standards are truly “college-ready” and will they allow you to keep your NCLB Flexibility waiver, I will point out to an obvious truth – Kansas students have been attending your state colleges for years before Common Core. Hence, arguing that those standards are not college-ready is beyond ridiculous. You should have little trouble in getting your colleges to attest to that obvious fact, particularly now that it is your own Kansas University Center for Educational Testing and Evaluation that will write your new tests.

4. In Conclusion

Common Core standards are mediocre, experimental, and not based on any international benchmark. By pulling out of Common Core and temporarily reverting to your own standards you will not only be doing a favor to your students, but also to your teachers. Retaining the NCLB Flexibility waiver should be readily achieved based on your old standards’ actual performance.

Last but not least, Kansas will also retain its autonomy over its own education and promote federalism as intended by our founders, rather than as perverted by some lobbying groups in Washington, DC.

Thank you for your time. I am looking forward to your questions.

¹ Minutes of the Regular Meeting of the Massachusetts Board of Elementary and Secondary Education, March 23, 2010, p.5.
<http://www.doe.mass.edu/boe/minutes/10/0323reg.pdf>

Why Kansas Standards are Better for Kansas Students
Ze'ev Wurman, Palo Alto, Calif.
February 14, 2013

Chairwoman Kelley, Members of the Education Committee,

My professional background: I am a visiting scholar at the Hoover Institution. From 2007 to 2009, I served as a Senior Adviser at the Office of Planning, Evaluation and Policy Development in the U.S. Department of Education. Throughout the development of the Common Core standards in 2009-2010, I analyzed the mathematics drafts for the Pioneer Institute and for the State of California. In the summer of 2010 I served on the California Academic Content Standards Commission that reviewed the adoption of Common Core for California. Prior to that, in the late 1990s, I participated in the development of California mathematics content standards and framework. I served on the mathematics content review panel for the California state test since its inception in 1999 and until recently. I have published professional and opinion articles about education and about the Common Core, among others, in Education Next, Education Week, Sacramento Bee, Boston Globe, San Francisco Chronicle, Austin American-Statesman, and City Journal. In my non-educational life I am an executive with a Silicon Valley semiconductor start-up.

In my testimony today I will focus on the following points:

- The mediocrity of the Common Core standards, and the success Kansas had with its own standards
- The low level of Common Core's definition of college-readiness;
- The argued benefits of common national standards are weak and questionable, while the major increase in cost of assessment, and the loss of state autonomy, of public review, and of educational innovation are real and immediate.

1. Quality of the Common Core Mathematics Standards

Kansas math standards have been rated very low by the Fordham Foundation, no doubt because of their atypical organization and because of their lack of prescriptiveness, which leaves large latitude to classroom teachers. Yet despite the low Fordham rating, Kansas has developed a system where your standards seem to work for you: Kansas has been consistently among the top five states on the 4th grade NAEP, and among the top dozen on its 8th grade version.

The Common Core, on the other hand, proudly announces it will focus on only a few topics in each elementary grade because, it claims, that is what other successful countries are doing. Yet if one looks at Singapore or Korea, prominent members of that successful club, one sees that they are not nearly as narrow or as limiting as the Common Core. It seems that in its haste to be "lean and mean," the Common Core ignored many skills that those countries – and Kansas's own standards – expect of students. For example, the Common Core starts introducing the concept of money only in the second grade, while Singapore and Kansas wisely suggest starting in the first grade. Common Core forgets to teach prime factorization altogether, so it cannot ever teach least common denominators or greatest common factors. It does not teach about the area of a triangle until grade 6 or the sum of angles in a

triangle until grade 8, topics which ought to be taught in grades 5 and 6, respectively. Worse yet, even when it comes to fractions, the topic of which it is most proud, Common Core completely forgets to teach conversion among fractional forms – fractions, percent, and decimals – which has been identified as a key skill by the National Research Council, the National Council of Teachers of Mathematics, and the National Advisory Math Panel.

There is more. Even in its core focus, basic arithmetic, the Common Core opens the way for the pernicious “fuzzy math” to creep back into the curriculum. On the one hand, it expects – even if later than our international competitors – that eventually the standard algorithms for the four basic operations be mastered. On the other hand, many prior years are full with intermediate standards that repeatedly demand students to explain their actions in terms of crude strategies based on various concrete and visual models or invented algorithms applicable only to specific cases. The consequence of this skewed attention is that students will end up confused by the variety of pseudo-algorithms they are forced to study.

Stanford professor James Milgram, a member of the Common Core Validation Committee, captured it well in his testimony before the California Academic Standards Commission, saying, “*Within the document itself, there seems to be a minor war going on and this is not something we should hand over to our teachers.*”¹ Small wonder that a classic fuzzy math text like *TERC Investigations* can claim that “*there is strong alignment between Investigations and the [Common Core] Math Content Standards,*”² or that New York’s Common Core curriculum is promoting the following fuzzy foolishness: “*Working in small groups, the students rotated through the classrooms in the second-grade wing to work at the various stations. Using edible gingerbread men, the second-graders utilized their math skills by tasting the cookies and graphing which portions of the cookies that they took their first bites of.*”³

In the middle school, the Common Core does not expect students to take Algebra 1 in grade 8, despite the fact that a large fraction of students in Kansas and across the nation already take it. All the high achieving countries, like Singapore, Korea, and Japan, expect essentially all their students to take Algebra I in grade 8, or complete Algebra I and Geometry by grade 9. Common Core abandoned this goal that promoted much of our nation’s mathematics improvement over last decade, and offers it only as an afterthought, unsupported by instructional materials or assessment. Yet taking Algebra I in grade 8 is of critical importance for those who want to reach calculus by grade 12 and enroll in competitive colleges.

2. Common Core high school mathematics and its low level of college-readiness definition

Common Core’s high school mathematics are partially experimental and of lower quality than Kansas’s own programs. Its promise of college readiness for all rings hollow and will cause even larger rates of remediation in college.

But you don’t have to believe me: Jason Zimba, one of the main authors of the mathematics standards,

¹ Appendix B in S. Stotsky, Z. Wurman, “Common Core Standards Still Don’t Make the Grade,” July 2010, includes a detailed review of the Common Core standards by Prof. Milgram. His e-mail to the Validation Committee refusing to certify them is attached to this testimony. <http://pioneerinstitute.org/download/common-cores-standards-still-dont-make-the-grade/>

² <http://investigations.terc.edu/CCSS/faqs.cfm>

³ <http://deerpark-northbabylon.patch.com/articles/taking-on-common-core-lessons-through-gingerbread>

testified in front of the Massachusetts Board of Education⁴ that Common Core's "concept of college readiness is minimal and focuses on non-selective colleges." It is hard to see how such a low level of college readiness will benefit Kansas's students.

The Common Core-recommended Algebra 1 course includes only a subset of typical Algebra 1 content. More specifically, it introduces a focus on functional aspects of algebra, while de-emphasizing its computational and technical foundations. Yet algebra is not a goal in itself, but rather a tool to support further mathematics on one hand, and support the learning of sciences on the other. An algebra course such as promoted by the Common Core will only weakly support the study of chemistry or other quantitative sciences.

Common Core replaces the traditional foundations of Euclidean geometry with an experimental approach. This approach has never been successfully used in any sizable system; in fact, it failed even in the school for gifted and talented students in Moscow, where it was originally invented. Yet Common Core effectively imposes this experimental approach on the entire country, without any piloting.

Essentially all four-year state colleges across the country, including Kansas's own universities, require at least the Algebra I/Algebra II and Geometry courses as prerequisites for enrollment. This is a rather minimal expectation for college readiness, as the growing number of students in remedial courses attests. To get a better sense of how marginal this requirement is, one may look to California's assessments for college readiness used by the California State University system conducted in grade 11. Results indicate that among students who just take Algebra 2, only 7% are ready and 22% are conditionally ready (i.e., they need to take another year of math in grade 12). In contrast, among students that take a math course beyond Algebra 2, 22% are ready and 67% are conditionally ready – a huge difference.

Yet the Common Core chose to lower the standards *even more* and eliminate content like geometric and arithmetic sequences, or combinations and permutations, from its own version of *Algebra 2* that it offers as a measure of college readiness.

3. The purported benefits of common national standards

Promoters of the Common Core tout the many advantages these standards are supposed to bring. Key among them are (a) comparability across states, (b) ease for students moving across state lines, (c) economies of scale in development of instructional materials, and (d) economies of scale in developing novel assessment. Further, they also argue that all high achieving countries have national standards.

The last argument is, perhaps, the easiest to dismiss. Most countries in the world have centralized education systems and hence national standards. Yet this is true of both the best performing countries as well as of the worst performing countries, and in itself means nothing. Most countries are not as large or as populous as the United States, and do not have a strong federal system. But those who do have a federal system with a decentralized education, like Canada or Australia, do very well on international assessments.

⁴ Minutes of the Regular Meeting of the Massachusetts Board of Elementary and Secondary Education, March 23, 2010, p.5. <http://www.doe.mass.edu/boe/minutes/10/0323reg.pdf>

Comparability among states can be easily achieved by using a common reference like National Assessment of Educational Progress (NAEP) to compare states. Another way to compare would be to use a computer-adaptive test like Measure of Educational Progress (MAP) from the NorthWest Evaluation Association (NWEA) that is widely used across the country in both public and private schools. The Fordham Institute frequently argues these days for the need of common standards for comparability, yet in 2007 it was the Fordham Institute that easily compared standards in multiple states using precisely such methodology.⁵ An advantage of using the NWEA test is that it can be quickly aligned with each state's standards, and it can provide comparison with private schools to boot. Not least, it will keep the federal government out of your schools.

Cross-state student mobility is another myth used to justify the need for common standards. Yet U.S. Census Bureau data shows that less than three tenths of one percent of students move across state lines every year.⁶ It seems difficult to justify giving up on the state's ability to chart its own destiny for the sake of so few students.

This brings me to the promised economies of scale in procuring textbooks, professional development, and developing assessment. Rather than representing cost savings, they represent Kansas's inability to innovate and chart its own path to educate its own students. Kansas has about half a million students in grades K-12, and it can get a good price on any textbook it chooses. The federally funded shared assessment, however, already promises to be many times more expensive than your existing one. After all, the big money in assessment is not in its development but in its administration, and sharing the test among multiple states offers little help in its cost of administration.

Today, Kansas annually tests about 250,000 students and spends about \$2.5M on that effort, or about \$10/student. The Smarter Balanced estimates its assessment to cost around \$25/student, and their estimate doesn't even include the cost of scoring the performance items. Those are assumed to be scored – for free! – by classroom teachers during their regular professional development. Adding the actual cost of scoring the performance items will at least double the cost of assessment to \$50/student. Moreover, the cost of technology that the Smarter Balanced assessment imposes on schools is conservatively estimated at \$50 per tested student every year. Given these numbers, Kansas should expect its testing budget to skyrocket from \$2.5M today to about \$25M in school-year 2014-15.

In summary, the Common Core standards are mediocre based on any international benchmark. Moreover, their prescriptive nature will require Kansas to revamp much of its teacher training and professional development that have actually worked quite well for you despite your idiosyncratic standards, and take away much of your teacher's autonomy in the classroom. Furthermore, your ongoing assessment costs are bound to increase tenfold. Finally, the Common Core standards tie Kansas hands to remote Washington bureaucrats and take away your ability to care for your own children the way you want, rather than the way those people in Washington want.

Thank you for your time.

⁵ The Proficiency Illusion, Thomas B. Fordham Institute, Washington, DC. October 2007.

⁶ U.S. Census Bureau, American Community Survey, table C07001, 2011.