# CHAPTER 6

# Implementing Standards and Testing

# Williamson M. Evers

The 1983 *A Nation at Risk* report on K–12 education was a wake-up call that spoke in distressing tones about America's "once unchallenged preeminence" being "overtaken by competitors throughout the world." It used eloquent but stern and sobering language about a "rising tide of mediocrity" and the need for solid curricula and higher academic standards.<sup>1</sup> *A Nation at Risk* called for action by schools, local districts, and states and proposed a system of state and local standardized tests.

In the wake of *A Nation at Risk*, reformers sought to improve schools—as they had in the past—by varying and increasing inputs. Spending was increased, textbooks and other teaching materials revised, the number of academic class-offerings expanded, and graduation requirements tightened. But by the end of the 1980s, tinkering with inputs was still producing lackluster school

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performance. At that point many school reformers concluded that wholesale systemic reform was necessary.

Some of them turned to vouchers, with the belief that replacing the existing public-school monopoly with a system of competing schools would be more effective. Others turned to accountability, which would require testing to measure student mastery of explicit curriculum standards—something state governments had never done.

Standards and accountability is an approach to school reform that uses tests to monitor results. Curriculum-content standards lay out what students are expected to know, the students are tested on the material, and then an accountability system holds the various participants in the educational system responsible for students' performance.

Curriculum-content standards set forth academic content to be learned. Performance standards delineate expected levels of achievement on tests. The advocates of standards—local, state, or national—do not anticipate that the existence of content standards in and of themselves will result in higher student achievement. But they set a goal for teaching and learning, form a basis for the tests, and, in the words of historian Diane Ravitch, aim to "create a common curriculum."<sup>2</sup>

# Systemic Reform

During the administrations of George H. W. Bush and Bill Clinton, there were several serious efforts to put into place national curriculum-content standards, national tests, or both. None of these attempts succeeded. But at the same time, a new scheme was suggested for how to construct a reform that was based on standards and accountability. "Systemic reform" was proposed in a paper by Jennifer O'Day of the American Institutes for Research and Clinton education official Marshall Smith. O'Day and Smith contended that the constitutional responsibility of the states for public education caused a "fragmentation" of the "current policy system." This fragmentation they saw as a major obstacle to reform. (In other words, they objected to America's federal system.)

Their proposal cited the George H. W. Bush-era national standards, called for a "common content core" (with some local variations), and urged states nationwide to have aligned curriculum-content standards, tests, curriculum materials, teacher training, and in-service professional development.<sup>3</sup> Smith had served as chief of staff to the first US secretary of education, Shirley Hufstedler, in the Carter administration, was deputy secretary of education during the Clinton years, and was later a high official and adviser in the US Department of Education during the Obama administration.<sup>4</sup>

Systemic reform was, as historian Maris Vinovskis pointed out, a theory that hadn't been proven, and in addition was "difficult to implement practically."<sup>5</sup> As they have with many other K–12 educational reform efforts pushed by the federal government, progressive educators piggybacked their own agenda on the back of systemic reform.<sup>6</sup> The best illustration of this piggybacking is what happened in the Systemic Initiative of the National Science Foundation (NSF) during the 1990s.<sup>7</sup>

#### NSF's Systemic Initiative & Curriculum

Biologist Michael McKeown and his colleagues looked at the creation of the NSF's systemic initiatives and how they operated in Los Angeles and Texas. The initiatives required teaching practices (cooperative learning, discovery learning) that are not supported by a consensus of research psychologists.<sup>8</sup> McKeown and his colleagues found that the NSF initiatives tended to reduce academic standards for instruction in math and "weaken" the educational basis on which American science necessarily rests.<sup>9</sup> The math standards promoted by the NSF initiative for Los Angeles were "comical" in their shortcomings.<sup>10</sup>

Biologist Stan Metzenberg, in testimony before a subcommittee of the House of Representatives, said that the NSF Systemic Initiative in Los Angeles had learning expectations that were "shockingly low" for high school students. The Systemic Initiative programs nationwide were, Metzenberg said, based on sets of national science standards that were riddled with errors and relied on "post-modernist" research, in which "what is generally called a scientific fact" is instead "taken to be merely a belief system."<sup>11</sup> These sets of national science standards that the NSF endorsed and used for its Systemic Initiative programs were not adequate, Metzenberg said, to prepare students who might want to major in scientific fields in college.<sup>12</sup>

McKeown and his colleagues listed the NSF-approved textbooks for initiatives in Los Angeles and New York City. Almost all, they said, adhered to "an extreme version of discovery learning," "a constructivist philosophy," and "a radical interpretation" of the National Council of Teachers of Mathematics national math standards. These included "constant availability of calculators," beginning in kindergarten, "extreme de-emphasis" of pencil-andpaper calculation, and "de-emphasis" of "analytical and deductive methods."<sup>13</sup>

One of these textbook series is described as failing to include key content areas, poorly designed for learning to mastery, filled with contrived problems, and not likely to prepare students for math-based science courses or college mathematics.<sup>14</sup>

#### Standards and Accountability in the States

During the Clinton administration, systemic reform was tried at the state level as well as the national level. Different states did things differently (as one might expect in a federal system) when it came to systemic-reform's component parts: content standards, tests, curriculum materials, teacher training, and professional development. Here are a few examples, selected to show the range of what was done:

*Kentucky*. Education policy analyst Chester Finn described Kentucky's systemic reform as based on a "cumbersome and hypercentralized" plan. He said that by adopting the systemic approach, Kentucky was sticking to the education establishment's party line. After considering the data on Kentucky, Finn came out against the systemic approach. He called it uniform and tightly controlled from above. He pointed out the lack of evidence that the systemic approach produces superior results.<sup>15</sup>

Finn called proponents of systemic reform "Hamiltonians," who believe that powerful, centralized control of education is necessary. Systemic reform, Finn said, is a fancy phrase that means "keeping power where it's always been" and managing schools in a rigid, formulaic manner.<sup>16</sup> Indeed, the NSF itself acknowledged that systemic reform requires districts and schools to abandon their traditional role in regulation of local schools' practices and take on a new role as "technical assisters."<sup>17</sup>

Kentucky followed its historic preference for this sort of centralized education policy by being the first state to adopt (sight unseen) the Common Core national curriculum-content standards.

*Massachusetts*. In 1993 (long before No Child Left Behind), the state dramatically increased funding of K–12 public education in return for a package of reforms. These included high curriculum-content standards and tough achievement tests for students, tough subject-matter tests for teachers, accountability for teacher-training schools, and a strong system of accountability. Massachusetts had high academic standards, accountability, and enhanced school choice. From that time until policy was reversed during the Deval Patrick administration, Massachusetts put in place a set of reforms that have, without doubt, been the most successful of any state's.

With its new curriculum, better teacher quality, demanding tests, and thorough accountability, Massachusetts's National Assessment of Educational Progress (NAEP) scores went up dramatically. By 2007, the average fourth grader had higher achievement scores on the state math test than the average sixth grader had in 1996.<sup>18</sup> Massachusetts' performance had been mediocre in the past. But by 2005, students there scored highest in the nation in all four major NAEP categories (fourth- and eighth-grade reading and math). The students in the state repeated this acrossthe-board success in 2007, 2009, and 2011. While American students in general have middling scores, the Massachusetts students scored close to students in Japan, Korea, and Singapore in the 2008 Trends in International Mathematics and Science Study (TIMSS). Eighth graders in Massachusetts were tied for highest in the world in science.<sup>19</sup>

Texas. Texas rates its schools according to how well each school's students do on its statewide test. The school's students must perform well overall, and students from minority groups must also do well. The Texas system's greatest strength has been its focus since the early 1990s on accountability. Texas leaders took a long-run view of school improvement. Expectations about performance were raised step by step over the years. Thus, Texas's statewide test has not been among the most difficult, but the test has been revised over the years to make it more challenging. Evidence suggests that Texas has been able to use its accountability system to boost its students' achievement, including the achievement of its students from minority groups. Texas Governor George W. Bush proposed during his 2000 presidential campaign that he would apply the experience of Texas at the national level. This proposal became No Child Left Behind (NCLB), President Bush's signature education reform.

*California*. Since the late 1990s (before No Child Left Behind), California has had strong content standards, strong tests (but tooeasy grading), and the usual weaknesses in teacher quality (including weak teacher training, in-service professional development, and teacher evaluations). The state also has had the usual problems in firing low-performing teachers. Despite the fact that California adopted challenging curriculumcontent standards in the late 1990s, the national systemic reform project tried to destroy them. Indeed the NSF threatened to cut off \$50 million in funding for K–12 education in California if its preferences on curriculum-content standards were not followed.<sup>20</sup> In this example, a national effort at standards and accountability endeavored to supersede and water down a better state-level effort.

Under the California curriculum-content standards passed in the late 1990s, all demographic segments of the student population made academic improvements. Meanwhile, a large influx of immigrants led the less-educated Latino segment to rise both in absolute numbers and as a proportion of the student population. Hence, during the years from the Clinton administration to the Obama administration, overall student performance in California has been comparatively low.<sup>21</sup>

# George W. Bush Administration

By the early 1990s, many states had started taking steps to put statewide educational standards and testing into place. But they were by no means found in every state.

While running for president in the late 1990s, George W. Bush sought to change federal policy to a focus on holding schools accountable for student performance. He said educational success should not be measured by dollars spent, but by results achieved.<sup>22</sup> He pointed to his education record as governor of Texas and to Texas's strong accountability system. Bush proclaimed that he was against "federalizing education," and both he and the Republican Party's national platform opposed national tests.

The George W. Bush–era reauthorization of the Elementary and Secondary Education Act was called No Child Left Behind.<sup>23</sup> Among other things, it called (as a condition of receiving federal money) for states to test all students in reading and mathematics every year from grades three through eight. States were expected to create their own curriculum-content standards and tests. Each state had to have a state-created way to show that every district and school was making adequate yearly progress toward getting all students at least to grade level. NCLB required more detailed disaggregation of data by student groups, publication of that disaggregated data, and use of the data in state accountability systems. It specified sanctions for failure to make adequate progress.

Under NCLB, all states were required to participate in the National Assessment of Educational Progress (NAEP). State results on this rough yardstick, it was thought, might shame state officials who had made their curriculum-content standards, tests, and performance levels too easy.

So long as there is federal education aid, the federal government has a responsibility to see that the money is spent according to the conditions set by Congress. Thus, NCLB was a kind of performance audit of the money the federal government was spending to improve schools.<sup>24</sup>

As political scientist Patrick McGuinn put it, George W. Bush wanted to make certain that the liberal education establishment was held accountable for results of school programs that claimed to expand opportunities for disadvantaged children.<sup>25</sup>

The NCLB regime resulted in steady but modest improvement in student achievement.<sup>26</sup> But the law had its critics, who over time succeeded in swaying public opinion. The name of the law became toxic, but its accountability components, despite all the controversy, have remained popular.

Among NCLB's most important critics were (1) proponents of progressive education, (2) defenders of teacher autonomy, (3) defenders of local control, and (4) those who felt NCLB didn't go far enough and wanted a uniform national (but not necessarily federal) system of standards and accountability.

Even among those who originally favored NCLB, there were liberals who rapidly became disaffected with it because they believed underfunding prevented the law from succeeding. Some progressive education proponents favored teacher autonomy. But many others wanted to have project-based items on national tests because such items would encourage teachers to use discovery-learning teaching techniques in the classroom.<sup>27</sup>

Defenders of teacher autonomy wanted public schools to trust teachers' professional skills. If given the resources, defenders of autonomy said, teachers would do the job. They did not approve of looking over teachers' shoulders via tests and accountability systems. Checking up in this fashion was an insult to teacher professionalism and would interfere with teachers doing their job. Failure to trust teachers, they said, would drive the best ones out of the profession.

Many defenders of local control thought No Child Left Behind constituted federal overreach that inhibited school districts' potential. Ideally, each local school district would offer what is most wanted by those who live there. If the district did not, as economist Eugenia Toma put it, voters would "collectively vote out the school committee" or individual families would move into other districts.<sup>28</sup>

Lastly, proponents of national standards saw variation among the states when it came to curriculum-content standards, tests, and performance standards.<sup>29</sup> They saw such variation as chaos. They feared that individual state decision-making would lead inexorably to a "race to the bottom" in what states expected of students. They wanted uniformity and homogeneity.

Proponents of national standards argued that it would be valuable to be able to compare a student in Portland, Maine, to one in Portland, Oregon. They saw economies of scale in a national market for teaching materials and liked the idea of making it easier for schoolchildren to move seamlessly from state to state.

Of the many liberals who believed that NCLB was underfunded, some in the policy elite during the George W. Bush and Obama administrations thought that, once established, national standards would constitute a predicate for "adequate"—that is, vastly increased—federal funding.<sup>30</sup> To understand how the Common Core national standards and accompanying tests came to be, one first has to look at the organized drive for the standards and then at the process of creating them.

The Common Core national standards began in 2006, not with the deliberations of state legislatures, but in a series of private meetings of long-time national standards advocates—some of whose advocacy dated back to the George H. W. Bush and Clinton eras.<sup>31</sup>

In 2007, the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) Center for Best Practices joined the national standards effort.

One reason why some governors joined in was to suppress competition from other states. For example, Georgia (which had its own content standards and its own test) was performing poorly compared to, for example, Massachusetts (which had its own different, higher standards and test).<sup>32</sup> Georgia officials might well have believed that it would be to their state's advantage to use a federally supported cartel of states to suppress Massachusetts's standards and test and substitute national standards and tests that would apply to states across the country.

Indeed, states like Georgia already had an objective measure for interstate comparison in NAEP and could have used that as a yardstick. They could have each used their own state-level standards and tests together with other school-reform programs to compete on NAEP (or other measures) in accordance with America's system of competitive federalism. Instead, forty-five states and the District of Columbia turned to a federally supported cartel that, critics of Common Core claim, suppresses competition and has replaced exemplars of excellence with uniform mediocrity.

Nationalizing standards and tests would, according to this analysis, eliminate them as differentiated school-reform instruments that could be used by states in competition over educational attainment among the states. Sonny Perdue, then governor of Georgia, did not like it when the low-performing students of his state were compared with students in other states that had different standards from Georgia's. He became the lead governor in bringing the NGA into the national standards effort.<sup>33</sup> (In 2013, the NGA acted in similar fashion to create a cartel of states in order to suppress competitive federalism and make online retailers collect taxes from out-of-state customers.<sup>34</sup>)

The advocacy and lobbying arms of the state schools chiefs and the governors were vital to the strategy of national-standards proponents. Their efforts were already underway before any trade associations representing the interests of state officials were on board. But now the proponents could describe their initiative as "state-led."<sup>35</sup>

Back in January 1995, during the reaction against the national history standards, two governors who supported national standards ruled out federal creation in the future. Gov. Roy Romer of Colorado advocated using a privately financed and operated group to create future national standards. Gov. James B. Hunt Jr. of North Carolina called for moving the creation of national standards away from the federal government. The conclusion these governors reached in 1995 became the strategy of national-standards proponents, including Romer and Hunt, in 2006 and 2007, as groundwork was laid for the Common Core national standards.<sup>36</sup>

The nonprofit advocacy and consulting firm Achieve Inc. played a central role in the run-up to, and creation of, the standards. Achieve was founded in 1996 by the National Governors Association<sup>37</sup> and some corporate leaders to work with state school superintendents on curriculum-content standards, graduation requirements, tests, and accountability systems.<sup>38</sup>

The governors' trade association wanted to ensure that states could have high-quality standards of their own. At the time, Achieve did not support national standards. Indeed, when the NGA created Achieve, the NGA specified that Achieve would not certify or approve any standards. In particular, it would "not endorse, develop, or financially support the development of national education standards."<sup>39</sup>

After more than a decade of sticking to its original assignment of working only on state standards and testing, Achieve's activities shifted to efforts that were precursors of national standards.

In Achieve's 2008 report, *Benchmarking for Success* (cosponsored by the National Governors Association and the Council of Chief State School Officers), Achieve called for states to follow the path taken by Germany, where the federal government had recently supported a thorough centralization of curriculumcontent standards and testing.<sup>40</sup> The report called for the US federal government to play an "enabling role" in having the states adopt "a common core" of K–12 standards in math and English.<sup>41</sup> By mid-2008, Achieve began to devote its energies to the creation of national curriculum-content standards and tests.

Achieve had been leading a network of states which had some of their content-standards in common. But now it rolled its efforts in this area into the Common Core initiative and provided assistance to the Common Core writing team. Although there was no direct federal involvement in the writing process itself, the standards were endorsed by the federal government and became the basis of federally funded and sponsored tests.

The George W. Bush administration encouraged states to put in place state-level standards, testing, and accountability. It extended NAEP to all states to allow for comparisons, but did not pursue national standards and tests. That policy was about to change.

#### **Barack Obama Administration**

Barack Obama did not promise national standards when he campaigned for president. But when results of the 2009 Programme for International Student Assessment (PISA) test were released, they showed that the United States was mediocre in mathematics, while students in Shanghai performed dramatically better. Both President Obama and education policy analyst Chester Finn said that these results were as important and stunning as the launching of Sputnik.<sup>42</sup>

The Obama administration had begun to espouse the national standards initiative, in long-time education journalist Robert Rothman's words, "soon after taking office." Education Secretary Arne Duncan and his senior counselor Marshall Smith had been advocates of national standards before they were appointed by President Obama.<sup>43</sup>

The Obama administration soon developed an ambitious program of federally guided K–12 education reform consisting of national curriculum-content standards and national tests based on these curriculum standards.

#### Thwarting an Inexorable Race to the Bottom?

Central to the Obama administration's thinking (and rhetoric) on education reform was the idea that state performance standards were already on a downward slide and that, without federal intervention, they would inexorably continue on a "race to the bottom."<sup>44</sup> The name given to the administration's signature school reform effort, the Race to the Top program (RttT), reflects this belief. The idea is that to prevent states from following their supposed natural dynamic of a race to the bottom,<sup>45</sup> the federal government needs to step in and lead a race to the top.

Critics disagree,<sup>46</sup> arguing that state education policymakers need to take into account not only the challenge teachers and school administrators face from rigorous content and performance standards, but also the damage that low standards would bring to the state's reputation for having a trained workforce and the damage to the policymakers' own reputations.

In 2007, the Thomas B. Fordham Institute looked empirically at state performance standards over time in a study called *The* 

*Proficiency Illusion*. The study showed that while states had a variety of performance standards (as would be expected in a federal system), the race to the bottom was not happening.<sup>47</sup>

#### Race to the Top

To finance Race to the Top, the US Department of Education took discretionary stimulus money that could be used as conditional grants, and then turned a portion of that money into a competitive grant program. It used the grants to encourage states to adopt the national standards. Policy analyst Michael Petrilli aptly called inducements to adopt the standards "the carrot that feels like a stick."<sup>48</sup> The department also paid for national consortia to develop national tests aligned with the national curriculum-content standards.

# **NCLB Waivers**

The administration created another inducement in the form of No Child Left Behind waivers. In return for adopting the national standards or a federally approved alternative, states could escape NCLB sanctions for not making timely gains in student achievement.<sup>49</sup> Critics said that Secretary Duncan was going beyond what the law allows by substituting the Obama administration's favored education reforms (including national curriculum-content standards and tests) for NCLB's accountability measures. Critics also pointed out that the new accountability systems under the waivers may hide deficiencies in the performance of children in previously closely watched sub-groups and may weaken incentives to improve performance of those children.<sup>50</sup>

In addition, some of the substantive policy changes the Obama administration wants to put in place—through RttT and the conditional waivers—are in the area of a national curriculum.<sup>51</sup> Yet three federal statutes prohibit the Education Department from making policy on curriculum.<sup>52</sup>

#### **Quality of the Common Core National Standards**

The new national academic-content standards for English and math are no better than the standards in place in one quarter of the states and weaker than those in a half-dozen states.<sup>53</sup> Though they are certainly a step up for many states, there was no effort to accommodate states that prior to 2010 had standards that were better than Common Core.<sup>54</sup>

#### Adoption of the Common Core

The Obama administration used the fine print in its Race to the Top scoring rubric to ensure that there would be only one set of national standards. States would be in a better competitive position if they adopted a "common set of K–12 standards" that had been adopted by "a majority of the states."<sup>55</sup> By definition, if a majority of states is needed, there can be only one set that is adopted. Any set adopted by a minority would put a state that adopted it at a distinct disadvantage. Hence, there came to be only one set of national standards.

After the Common Core State Standards Initiative (CCSSI) issued its standards in June 2010, the Department of Education insisted that states that wanted to compete effectively for Race to the Top grants had to adopt national standards by August. The standards were written in a hurry to meet federal deadlines and were never piloted in a state or locality. Kentucky (where Gene Wilhoit, at the time the executive director of the Common Coresponsoring Council of Chief State School Officers, had recently been state commissioner of education) adopted the new national standards sight unseen in February 2010, months ahead of their publication.<sup>56</sup>

Thus, during 2010 and 2011, forty-five states plus the District of Columbia adopted the Common Core national curriculumcontent standards.<sup>57</sup> The federal government is paying for the creation of national assessments and encouraging states to use them to fulfill NCLB requirements for testing and accountability. The federal government also set criteria for the design of the assessments and has established a federal technical review board to oversee the design.<sup>58</sup>

# National Tests

In September 2010, the Department of Education awarded \$330 million for the creation of national tests. Both the testing consortia that received federal grants included commitments in their proposals that they would develop national curriculum materials. Key writers of the national standards were subsequently retained to develop the national tests.<sup>59</sup>

Progressive educators, particularly advocates of "authentic assessment" and "performance-based assessment," had been hoping to use national tests to influence the curriculum.<sup>60</sup> They envisioned project-based tests that use "open-ended performances in which students develop solutions, write explanations, or evaluate potential strategies."<sup>61</sup>

At least a portion of the test problems will be project-based, designed to evaluate such skills as "complex problem-solving" and communication.<sup>62</sup> Such testing is intended to encourage the use of discovery-learning techniques in the classroom.

Stanford Education Professor Linda Darling-Hammond, a longtime proponent of progressive teaching methods, was a prominent spokeswoman for the Obama campaign in 2008. She is widely credited with being the intellectual leader of the Smarter Balanced Assessment Consortium, which was awarded one of the two contracts to create national tests.

Darling-Hammond praises "good language" in the Common Core national curriculum-content standards about critical thinking skills and problem-solving. In a 2011 interview by Lynnette Guastaferro of *Teaching Matters*, Darling-Hammond says that whether the national standards are put into effect in a way that is "much more focused on higher-order learning skills" (that is, progressive education classrooms for all) depends on "building curriculum materials," "transforming" testing, and changing in-service teacher training.

Darling-Hammond says it is "especially important," if you want to remake American public education, to "rethink" testing. Other countries, she says, do not make extensive use of multiple-choice questions. Instead, they test primarily in "open-ended formats" with "performances" and "projects" as part of the examination system. Her assessment consortium will "move the needle" in the direction of what she considers "more thoughtful" tests.<sup>63</sup>

Common Core-aligned textbooks and teacher professional development do, as of this writing, seem to be fulfilling Darling-Hammond's vision of a nationwide turn toward inquiry-based learning.

Critics of the national tests maintain that what is tested is what is taught and that the combination of national tests, national standards, RttT grants, and NCLB waivers puts America on the road to a national curriculum. Most national standards and testing proponents counter that states and districts may still select their own teaching materials and devise their own lesson plans.

# State of the Current Research

States that were early adopters of standards and accountability after the passage of No Child Left Behind saw achievement gains.<sup>64</sup> During the George W. Bush administration, there were modest but steady gains induced by standards and accountability. There was no race to the bottom in performance standards.

It is not yet possible to measure the new generation of national standards and tests. But we can (1) look around the world to countries that do and do not have national standards, (2) look at whether standards that are already in place have reduced whatever variation can be reduced, (3) ask whether Common Core has the look and feel of standards in high-performing countries, and

(4) compare Common Core to Bush-era state standards and those of high-performing countries.

Looking at other countries, there is no reason to believe that a national curriculum leads to better results. For example, some countries that are culturally similar to the United States and set their curriculum at the provincial level—such as Australia and Canada—do better academically than the United States. Other countries with cultures similar to the United States that set their curriculum at the national level—such as Denmark and France do not do particularly well.<sup>65</sup>

Brookings Institution education researcher Tom Loveless has looked at whether the Common Core will boost student achievement. He concludes in the 2012 Brown Center Report on American Education that there will be "little or no impact" on how much children learn.

Loveless uses California as an example. He points out that California has had:

- State curriculum frameworks since at least 1962
- Statewide testing with scores for every school published publicly since 1971 (except for a brief timeout in the early 1990s)
- State K-8 textbook adoption since the nineteenth century
- A court-ordered equalized spending system since the late 1970s<sup>66</sup>

Loveless notes that any effects such standards-based policies might have on decreasing variation in achievement within California have already happened.<sup>67</sup>

Loveless adds that every state has tremendous within-state variation in performance. "Every state," Loveless says, "including Massachusetts and Mississippi," has a high-performing mini-Massachusetts and a low-performing mini-Mississippi range of learning within its borders. "That variation," he says, "will go untouched" by the Common Core.<sup>68</sup> William Schmidt, a mathematics-education researcher at Michigan State University who looked at the Common Core math standards and math standards in high-performing countries, reported great similarity in the number of standards and in their form.<sup>69</sup> One of his critics, former US Department of Education official Ze'ev Wurman, said the Common Core math standards list more topics than do the standards in the high-performing countries. Wurman also said Common Core follows a different sequence than that in high-performing countries.<sup>70</sup>

The Thomas B. Fordham Institute reviewed the Common Core math standards and judged them clearer and more challenging than most (but not all) the state standards they replaced. At the same time, it found that the Common Core math standards are less rigorous than the best state math standards (those in California, the District of Columbia, Florida, Indiana, and Washington).

Although writers of the Common Core math standards looked at standards in the highest-performing countries, they did not match what is expected in those countries. R. James Milgram, a retired Stanford mathematics professor, described Common Core math (by the end of seventh grade) as "roughly two years behind" high-achieving countries.<sup>71</sup> Milgram is echoed by Jonathan Goodman, a mathematics professor at the Courant Institute at New York University.<sup>72</sup>

At the 2010 annual conference of mathematics societies, University of Arizona Professor William McCallum, one of the three principal writers of the Common Core mathematics standards, said they are not particularly high, "certainly not in comparison [with] other nations, including East Asia, where math education excels."<sup>73</sup>

On the other hand, Edward Frenkel and Hung-Hsi Wu, of the Department of Mathematics at the University of California, Berkeley, point out that the Common Core has good ideas on how to teach fractions and assert the "race to the bottom" thesis. They say the only way to combat America's "current lock-step march to the bottom" of international achievement in math and science is to put national standards in place.<sup>74</sup>

Regardless of whether Common Core improves student achievement, it will change the face of American education and substantially shift the locus of control from the states and localities to Washington, DC.<sup>75</sup>

#### Avenues for Future Research

There are avenues for future research at both the macro and micro levels of education policy. Some of the possible research at micro levels is particularly important because it is at the micro level that teachers and administrators put education policy into practice.

Because of the NCLB waivers, there is a myriad of new research challenges in the field of accountability. At the macro level: What kind of results will the new practice of setting different annual expected gains for different student groups yield? What will be the effect on the success of groups that in the past have been lowperforming? Will the NCLB spotlight that used to shine on such groups of students be turned off? At the micro level, will the complex new accountability systems created by waiver states be transparent enough and understandable enough for teachers, parents, principals, and journalists? Will these systems, as the Center on Education Policy wondered in 2012, "create an environment for subterfuge and make it easier for states to mask poor academic performance"?<sup>76</sup>

The Common Core national standards are, as of this writing, being put into effect across the United States. The national tests produced by the consortia have not been administered, although items have been field-tested.

Many Common Core topics are worthy of research. At the micro level, case studies can look at how schools handle the requirement that students read more informational texts. How will science, history, and social science classes deliver on this requirement of the national English standards? How well will English teachers deliver on it as well? How well will comprehension of informational texts be tested?

At the micro level, how well will students learn similar and congruent triangles in classes that follow the Common Core prescription of using the idea of rigid motion (an approach that is experimental for K–12 education) to teach this topic? How will the Common Core affect textbooks and other teaching materials? How will it affect classroom teaching techniques?

Researchers can perform content analysis of the new national tests and other tests (SAT, ACT, Advanced Placement, and others) said to be aligned with the Common Core. For example, a recent Common Core–aligned English test has been scrutinized in North Carolina.<sup>77</sup> Researchers are just beginning to look at recently published results for Common Core–aligned tests in New York and Kentucky. Comparative content analysis of tests in Common Core and non-Common Core states can be carried out.

Another research topic is macro-level comparative analysis of student achievement in Common Core and non-Common Core states. Although imperfect, the National Assessment of Educational Progress and the testing system of the Northwest Evaluation Association are probably the best available yardsticks. Given the coverage of social-science topics in the Common Core national English standards, it is unfortunate that the NAEP governing board has recently removed some of these important yardsticks: its fourth-grade and eighth-grade tests for civics, history, and geography, as well as its high school transcript study that could have provided early indications of Common Core's impacts.<sup>78</sup>

There can be studies of the effect of Common Core on Catholic and other private schools. In particular, will national uniformity of curriculum under Common Core crowd out uniquely Catholic characteristics? The effect on charter schools should also be evaluated.<sup>79</sup> In particular, will progressive education aspects of the national standards and tests harm "no excuses" charters (which stress mastery of content by students from weak educational backgrounds)?<sup>80</sup>

Before-and-after studies of performance can be conducted in Common Core states, including those with previous comparatively high performance (like Massachusetts) and those in the mediumor low-performing range.

The transition from testing state standards to testing national standards may be abrupt in most states. For evaluation purposes, it would be better to have students take both tests for a while, but this is unlikely because of the expense and time required.

In sum, the arrival of the Common Core is one of the biggest changes in the history of American education. It will generate a considerable number of topics for research and analysis.

#### Notes

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- 4. Melinda Malico, "Marshall (Mike) S. Smith Retires (Again) from ED," *Homeroom* (blog), US Department of Education,

May 26, 2010, http://www.ed.gov/blog/2010/05/marshall -mike-s-smith-ph-d-retires-again-from-ed.

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- 7. On the historical background of the NSF systemic initiatives, see Michael McKeown, David Klein, and Chris Patterson, "The National Science Foundation Systemic Initiatives: How a Small Amount of Federal Money Promotes Ill-Designed Mathematics and Science Programs in K–12 and Undermines Local Control of Education," in *What's at Stake in the K–12 Standards Wars: A Primer for Educational Policy Makers*, ed. Sandra Stotsky (New York: Peter Lang, 2000), 316.
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- 9. Ibid., 313, 281, 307n.14.
- 10. Ibid., 333-35.
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- 12. Follow-Up Questions for Dr. Stan Metzenberg, http://web .archive.org/web/20120206165942/http://mathematicallycorrect .com/moremetz.htm.
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www.achieve.org/files/About%20AchieveADP-Apr2012.pdf. See also Barbara O. Pilling, "A Critical Analysis of the Modern Standards Movement: A Historical Portrayal Through Archival Review, Written Documents, and Oral Testimony from 1983 to 1995" (doctoral dissertation, Virginia Polytechnic Institute and State University, April 1999), 70, http://scholar.lib.vt.edu/theses /available/etd-041899-145816/unrestricted/PartI.pdf; and Vinovskis, *From* A Nation at Risk, 133–34.

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