

Why Race to the Middle?

First-Class State Standards Are Better than Third-Class National Standards

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■ **Why Race to the Middle?**

Executive Summary

The case for national standards rests on more than the need to equalize academic expectations for all students by remedying the uneven and often deplorable quality of most state standards and tests. The case also rests on the urgent need to increase academic achievement for all students. In mathematics and science in particular, we require much higher levels of achievement than our students now demonstrate for this country to remain competitive in the global economy. These goals are not compatible at the secondary school level, and the tensions they create are not easily resolved. For example, although the National Mathematics Advisory Panel recommended 27 major topics for school algebra, it is unreasonable to make them a high school graduation requirement.

In 2009, with the encouragement of the U.S. Department of Education (USED), the National Governors Association and the Council of Chief State School Officers formed a consortium (CCSSI) to develop a set of K-12 mathematics and English standards for voluntary adoption by all the states. In turn, USED required states to commit to adopting these yet-to-be-developed standards and the assessments based on them as a criterion in judging their application for Race to the Top (RttT) funds.

This White Paper presents an analysis of the September 2009 draft of CCSSI's College- and Career- Readiness Standards as well as the January 13 draft of its grade-level standards for K-12, which CCSSI sent to the states for inclusion in their RttT applications. Based on an analysis of those two documents and the process used to create them, this White Paper concludes that CCSSI's initiative has so far failed to resolve the inherent tensions between these two goals and to produce standards that promise to improve both the education of all American students and America's competitive position in the global economy.

CCSSI's draft College- and Career-Readiness Standards are set at a level that is far below the admission requirements of almost all state colleges and universities in this country. **Put simply, Common Core College Readiness will not get you into college.** CCSSI's second failure, so far, is producing grade-level K-12 standards that are not coherent and are one to two years behind those of high achieving countries. Moreover, the time-line and the procedures CCSSI has established for completing these drafts are not conducive to overcoming these two deficiencies or to allow extensive public discussion of their far-reaching policy implications.

Consequently, our recommendations address four distinct areas:

- How CCSSI's procedures can be improved in order to salvage the idea of national standards;
- Why states in immediate need of stronger standards might commit, at least temporarily, to using the American Diploma Project's 2009 standards, a commitment which 35 states comprising over 85% of the nation's student population had voluntarily made before CCSSI was formed;
- Why USED should eliminate from its scoring criteria for RttT applications any criteria requiring states to commit to the adoption of common standards and assessments (and the awarding of points for doing so). The coupling of RttT funds with such commitments is premature until full public discussion has taken place with respect to the policy implications for K-12 and higher education in this country of any proposed set of national standards; and
- Suggestions for how America should go about developing national standards in other K-12 subjects.

In short, the rush to move from 50 state standards to a single set of standards for 50 states in less than one year, as well as the lack of transparency in CCSSI's procedures, have excluded the kind and extent of public discussion merited by the huge policy implications of such a move. We urge the U.S. Congress, the U.S. Department of Education, and local and state school boards to insist on the development of first-class national standards in mathematics and ELA, and in a properly deliberative manner.

Preface

Both authors recognize that 50 distinct and uneven sets of state standards in every subject have not worked well for America; more uniformity in academic expectations across the nation is needed. At the same time they also worry that the best answer may not lie in replacing 50 sets of state standards in mathematics or the English language arts with a single set of questionable and contentious common standards. Perhaps this country needs to draw on the strengths of open competition and allow the states to choose from three to five sets of standards, each developed by a different organization. We believe we have a responsibility to present an analysis of the Common Core State Standards Initiative to date before the states inadvertently adopt educational standards and policies that might damage the entire fabric of public education in this country. The first author speaks as an educational policy and content expert, as well as a concerned citizen. The second author speaks as a member of the Massachusetts Board of Elementary and Secondary Education whose responsibility is to ensure that the Bay State's future academic standards are as good as if not better than those it now has in mathematics and the English language arts.

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Purpose

The case for national standards rests on more than the need to equalize academic expectations for all students by remedying the uneven and often deplorable quality of most state standards and tests. The case also rests on the urgent need to increase academic achievement for all students. In mathematics and science in particular, this country requires much higher levels of achievement than its students now demonstrate. These goals are not compatible at the secondary school level, and the tensions they create are not easily resolved. For example, the report of the National Mathematics Advisory Panel, issued in March 2008, provided a list of the 27 major topics of school algebra that need to be present in a high school mathematics curriculum. Yet, no one would propose that all high school students master these 27 topics to earn a high school diploma, even though such study is required for admission to most two- or four-year post-secondary institutions in our country. Yes, all students should be encouraged to aim for mastery of these topics, but all should not be required to master them for a high school diploma.

At the same time, we know that some sets of state standards in mathematics and English language arts/reading (henceforth referred to as ELA) are academically sound. Mathematicians and teachers highly regard the mathematics standards in California, Indiana, and Massachusetts, while experts in the English language arts highly regard their English language arts standards. The Bay State's standards are viewed as a major factor accounting for the state's lead on recent NAEP tests in reading and mathematics.¹ Because models for strong standards in these two subject areas exist in this country, as well as elsewhere, it is reasonable to expect our national standards to show extensive evidence of drawing on them.

The purpose of this White Paper is to indicate how the two non-governmental organizations entrusted with the development of national standards for this country – the National

Governors Association and the Council of Chief State School Officers – are failing to carry out this enormous responsibility and what should be done to address their failures in process as well as in product to date. So far they have been unable to address satisfactorily the dilemmas posed by the high school mathematics curriculum or to draw adequately on sound models for their proposed mathematics and ELA standards. The case made by this White Paper rests chiefly on an analysis of the September 2009 draft of their proposed College- and Career-Readiness Standards, and the January 13 drafts of their proposed grade-level standards in mathematics and ELA, which these two organizations urged states to insert in their Race to the Top applications due January 19, 2010. This Paper concludes by suggesting how states needing Race to the Top funds, as well as stronger standards and better tests, might proceed, as well as how we might proceed as a nation in developing national science and history standards.

Background

The goal of common intellectual objectives for the school curriculum in this country is not new. One can go as far back as the 1890s to find the seeds of high academic aspirations for all high school students in the recommendations of the Committee of Ten, a group of prestigious college and high school level educators led by the then president of Harvard University. Because education is by law a state function in the United States, the adoption of their recommendations was completely voluntary. Nevertheless, their recommendations were adopted in large part because the Committee of Ten had considerable academic credibility.

We need to wait until almost a century later to find serious conversations about national standards for our public schools, as well as intensive efforts to equalize curricular expectations in this country, this time for the benefit of low-

achieving students at all grade levels. At a 1989 meeting of the National Governors Association, chaired by then Governor Bill Clinton, Albert Shanker, president of the American Federation of Teachers, made the case for national standards in all subjects. That same year, the National Council of Teachers of Mathematics (NCTM) became the first professional education organization to set forth what it saw as K-12 mathematics standards. NCTM's standards immediately influenced the development of state standards, mathematics textbooks, and teacher training in mathematics in the 1990s.

However, confidence in professional education organizations to create authentic academic standards for K-12 sharply declined in the mid-1990s. In 1994, the U.S. Education Department (USED) ceased funding the joint effort by the National Council of Teachers of English (NCTE) and the International Reading Association (IRA) to develop national reading and English language arts standards after its review of their interim draft revealed nothing it would call standards. The national storm created by the contents of the proposed National History Standards, and the U.S. Senate's 99 to 1 denunciation of them in 1995, killed any hope of using standards developed by professional education organizations for state or federal legislation designed to increase student achievement in K-12, at least for the moment. Attention turned to the states themselves – to develop their own standards and assessments.

In his 1997 State of the Union Address, President Clinton tried to introduce common standards through a testing backdoor. Questions were quickly raised, however, not only about the composition and ideological bias of the advisory groups for the National Voluntary Tests in reading and mathematics proposed for grade 4 and grade 8, but also about the initial drafts of some of the testing materials. In 1998, a Congress deeply concerned about federal control of the school curriculum killed the effort before it had taken off, even though authority over the tests' creation had already been taken from USED in late 1997

and given to the National Assessment Governing Board, the agency under Congressional control in charge of the National Assessments of Educational Progress (NAEP).

Unfortunately, those writing the No Child Left Behind (NCLB) legislation seemed to have learned the wrong lessons from previous attempts to legislate equal academic expectations for all children. While they held all states and school districts equally accountable for increasing K-12 academic achievement, they left it to the states to use or develop their own standards and tests, and to define proficiency based on those tests as they saw fit. Nevertheless, to its credit, NCLB did require all states to participate in NAEP testing every two years. An independent yardstick was finally available.

The disparity among states' expectations for their students quickly became apparent. When compared with the percentages in performance categories on state tests, NAEP results revealed the enormous range of expectations across states.² Not only did the tests themselves range widely in academic demand, but their cut-scores (scores established to determine levels of performance) had become a political football. The meaning of proficiency varied too much across states to provide an accurate understanding of student achievement nationwide.³

Two developments pointed the way to different approaches: common assessments on a regional level and the development of national standards by a private organization not beholden to professional education organizations. Pushed by the cost and effort to develop better state tests, New Hampshire, Rhode Island, and Vermont came together in 2004 to establish the New England Common Assessment Program (NECAP), showing the value of common tests.⁴ More important, Achieve, an organization originally subsidized by the National Governors Association, launched its American Diploma Project (ADP) to promote academically strong state standards and to provide a set of national

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standards based on the strengths it found in the best state standards. By 2009, 35 states, with more than 85% of the nation's students, had joined ADP and committed themselves to aim for ADP's high school exit standards when revising their mathematics and English language arts and to consider adopting ADP's grade-level standards throughout their K-12 system. Achieve also developed an end-of-course Algebra II test, and over 13 states participated in piloting it in 2009 according to Achieve's 2009 annual report.

The 2008 elections enabled a new president and a new Congress to capitalize on these two developments. In one of its first acts in 2009, the new Congress approved the American Recovery and Reinvestment Act, also known as the "Stimulus," providing almost \$800 billion to various government agencies. Over \$100 billion of it went to USED, in addition to its regular budget. The new leadership in USED, familiar with the concept of focused leveraging, decided to use the new funds for competitive grants that could stimulate rapid reforms in public education

Further adoption of Achieve's standards in mathematics and English language arts was an immediate casualty of the Race to the Top (RttT), as this new USED initiative was dubbed. Perhaps USED did not want to wait for each state to go through the slow process of voluntarily aligning itself with Achieve's standards. Or perhaps it did not want Achieve's standards. We don't know. In any event, USED chose to order up another set of mathematics and English language arts standards and award points to states that would commit themselves "voluntarily," in their RttT applications, to adopting these yet-to-be finalized standards sight unseen. Moreover, states would have to commit to adopting not only these standards (word for word) but also common assessments to be based on them--an inducement that few cash-starved states would be likely to ignore because of the increasing costs of statewide testing and remediation for NCLB.

Because USED cannot by law develop or prescribe a national curriculum, the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) agreed to serve as the agency for developing the national standards desired by USED. Calling their project the Common Core State Standards Initiative (CCSSI), NGA and CCSSO, with the help of a grant from the Gates Foundation, chose to hire Achieve, ACT, and the College Board (CB) to develop common standards in mathematics and English language arts. Achieve's participation was critical because it was the only national organization that had developed a highly regarded set of standards in mathematics and English language arts. (ACT and CB have extensive experience in developing tests, not standards.) Achieve set aside its high school exit standards, its grade-level benchmarks, and its Algebra II testing effort to participate in CCSSI, and USED set aside \$350 million for a competition to create tests assessing students on the standards to be developed by CCSSI.

The Flawed Process for Developing National Standards

When CCSSI was launched in early 2009, there were no established procedures available for developing grade-level standards at the national level. Decisions had to be made about the qualifications for membership on the standards-writing committees CCSSI would set into motion. Decisions also had to be made about how it would justify the specific standards its committees created. The most important decision was the precise goal of these standards. No rationale for the decisions it made in all three areas has ever been provided to the public. Nor have mainstream reporters or other commentators sought to understand why it selected certain people and not others for its committees and, most important, why it decided to make high school exit standards equal to college admission requirements.⁵

Questionable Goals

From the outset (for reasons that are unclear to us), it was accepted as a premise that CCSSI would develop not only grade-level standards but also standards designed to ensure that students completing high school would be “college- and career-ready.” Strangely, there were no public discussions of exactly what that meant in a country where a high school diploma had never in itself signified readiness for authentic college-level work (and was never intended to), and where a wide range of post-secondary institutions use a variety of criteria for admission and for awarding credit in freshman mathematics and English or reading courses. Moreover, the question whether college readiness and career readiness can indeed be one and the same was never settled. Achieve believes it can, yet knowledgeable voices like Michael Kirst, a Stanford education professor and past member of the California Board of Education, and Paul Barton, former director of the Policy Information Center at Educational Testing Service, disagree.⁶ CCSSI failed to address these issues openly at the start and has yet to extricate itself from these two quagmires.

Composition of the Standards Development Work Group

For many months, no membership lists for the standards development committees were available, even though work was proceeding all spring on the development of “college- and career-readiness standards” – high school exit standards that were to serve as the target of the grade-by-grade standards to be developed later. These standards were described as defining “the knowledge and skills students should have to be ready to succeed in entry-level, credit-bearing, academic college courses and in workforce training programs.” Eventually responding to the many charges of a lack of transparency, from professional organizations like NCTM⁷ to parent groups,⁸ the names of the 24 members

of the “Standards Development Work Group” were revealed in a July 1 news release.⁹ The vast majority, it appeared, work for testing companies. This Work Group did include two mathematics professors, but no high school mathematics or English teachers, and no English professors. The list for a “Feedback Group” contained an even larger number of names, including those of several mathematicians, one middle school mathematics teacher, one high school English teacher, and one English professor. But it was made very clear that the Feedback Group would play an advisory, not a decision-making, role: “Final decisions regarding the common core standards document will be made by the Standards Development Work Group,” its July 1 news release stated. No rationale for the composition of the Work Group has ever been given.

Composition of the Validation Committee¹⁰

Another seemingly important committee was set up with great fanfare: a Validation Committee. The names of the 25 members of this group were announced on September 24, when the first official draft of the College- and Career-Readiness Standards was released.¹¹ In this list were no high school English or mathematics teachers, no English or humanities professors, one mathematics professor from this country, and the person in charge of benchmarks for the Programme for International Student Assessment (PISA), which creates tests unrelated to school curricula. No rationale was given for the composition of the Validation Committee. It was described as a group of national and international experts who would, among other things, ensure that CCSSI’s standards were internationally benchmarked and supported by a body of research evidence.

“This committee will immediately be tasked with reviewing and verifying the standards development process and the resulting evidence-based college- and career-readiness

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standards. The standards are intended to be research and evidence-based, aligned with college and workforce training program expectations, reflective of rigorous content and skills, and internationally benchmarked.”

In an online FAQ posted in early December, the Parent Teacher Association (PTA), an Endorsing Partner of the CCSSI,¹² expressed a somewhat different view of the role of this committee--a role more like that of a rubber stamp. “Both sets of standards will be approved simultaneously in February 2010 by members of the validation committee.”¹³ The FAQ explained that the “Bill & Melinda Gates Foundation has granted PTA \$1 million to support PTA’s common core standards advocacy strategy, specifically the first year of parent education, training and awareness-building activities.”

Composition of the Draft-Writing Committees

It is difficult to pin down exactly who is in charge of writing the standards in each subject area, or at least responsible for what gets written. A press release dated November 10 listed an extremely large number of names for the two subject-specific work teams, standards development teams, and feedback groups for the grade-level standards.¹⁴ Its composition changed somewhat over time, as indicated by the current list.¹⁵ Although the lists do not state specifically who is responsible for drafting the standards, they indicate who the “leads” are for each work team and it is reasonable to assume that the two teams that visited the Massachusetts Department of Education in October to discuss Massachusetts’s ELA and mathematics standards are responsible for drafting CCSSI’s grade-level standards.¹⁶ Not one of the three ELA team members majored in English or has ever taught secondary English so far as can be determined. Although the ELA lead has had much experience developing state ELA standards, the lead for mathematics, a

mathematics professor, has no experience in developing K-12 mathematics standards. Nor does his colleague accompanying him on this visit. Why the chief executive officers of a non-profit advocacy group¹⁷ were placed on these draft-writing teams remains a mystery since neither has had any experience in teaching K-12 or in drafting K-12 standards in any subject. CCSSI has never given any rationale for the composition of the draft-writing committees it created.

The Flawed College- And Career-Readiness Standards: September Draft

One of the first public critiques of the College- and Career- Readiness Standards (CCRS) to appear, on October 8, was quite positive.¹⁸ Nevertheless, although both the mathematics and ELA standards were given a grade of B by the Thomas B. Fordham Institute reviewers, their voluminous critical comments pointed to a host of problems.

In Mathematics: Many deep concerns about the mathematics standards were articulated in R. James Milgram’s critique, requested by California’s Secretary of Education in October 2009,¹⁹ in the press and on the web,²⁰ and in a short critique by the United States Coalition for World Class Math.²¹ Their criticisms focused on how the standards were organized, the low expectations for the meaning of college readiness, the misreading of the research that was used to support the low expectations, and the exemplars given for the standards.

As noted in the critical comments, the standards writers chose to use a never-before-used scheme for organizing and classifying the mathematics standards. Gone were the four to six familiar content strands used in most state mathematics standards documents and in NCTM’s 2000 revision of its 1989 curriculum and evaluation standards. Instead the standards writers

offered 10 new “standards,” claiming that these represented “powerful organizing principles in mathematics.” “Number” was now a “standard.” So, too, were Probability and Statistics. The standards writers did not perceive Geometry as a useful “organizing principle,” even after 2,500 years of use in mathematics, and they split its content into two standards called “Shape” and “Coordinates.” Similarly, they deemed Algebra as an outdated “organizing principle” and in its place offered a slew of new “standards”: Expressions, Equations, Functions, and Modeling. If the writing team sought to make comparison with existing high school standards difficult, the organizational change achieved that goal. Indeed, only parents, school administrators, teachers and content experts who were mathematics, science, or engineering majors could have compared CCSSI’s proposed college- and career-readiness standards with existing state standards at the high school level.

This new organization hid major weaknesses: missing or partially missing mathematics topics and lowered academic expectations for what college readiness meant. As Milgram, a mathematics professor at Stanford University, noted in his October critique:

“...with one exception, the Algebra I standards are represented. But 13 of the 22 California Geometry Standards are either completely absent or only partially present in the Common Core Standards document. And the situation is even worse in Algebra II, where six of the 25 California standards are only partially present and 12 are entirely absent.”

The missing topics address geometry of circles and chords, combination and permutation, complex numbers, and logarithms, among others.

It is important to note that most four-year state colleges and universities in this country require applicants to show success in high school Algebra I, Algebra II, and Geometry for admission.²² Although attainment of its proposed standards

would not qualify high school graduates for admission to most two- or four-year colleges in this country or to credit-bearing freshman mathematics courses in them, CCSSI claimed that they represented college readiness in this country and were internationally benchmarked to boot.

As Milgram further noted, the CCRS writers justified their reduction of high school content with an incorrect reading of the by now well-known comment that this country’s curriculum is “a mile wide and an inch deep” in comparison with the curricula of high performing countries. William Schmidt, who made this observation in an analysis of the results of the 1995 Trends in International Mathematics and Science Study (TIMSS), directed it at American elementary and middle school mathematics programs, not high school mathematics programs,²³ and the Figures in his published research make unquestionably clear the target of his observations. American high school mathematics programs, and particularly the college mathematics tracks, have in fact been quite focused.²⁴

Finally, critics found many problems in the exemplars provided by the standards writers to illustrate the content, rigor, and clarity of their standards. Although they claimed their standards were measurable,²⁵ many were ill posed and confusing, had questionable reliability for assessment, and focused on low level mathematics.²⁶ Echoes of these critical comments can be heard in the terse and opaque language of CCSSI’s November summary of the public feedback on these standards:

“Respondents felt that the example problems are central to conveying the intentions of the standards. There were many comments on the example problems, including 1) comments related to the level of rigor the problems represent, 2) suggestions for improving the existing problems, and 3) a call to increase the pool of problems available. There is confusion around the purpose the example

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problems should serve. Most people see them as illustrative, but more than a few respondents questioned a problem's suitability for a high-stakes assessment environment."

In English Language Arts: The first critique of the CCRS for ELA appeared in a short review by Sandra Stotsky on the *New York Times* Online Forum on September 22.²⁷ Her comments zeroed in on the irrelevance of many CCRS standards to the English language arts, their poor or confusing language, exemplars betraying a profound misunderstanding of what English teachers are able and expected to teach, the lack of research evidence to support these standards, and their very nature.

As her review noted, the CCRS outline a vision of a high school English class that does not and could not exist. For example, a standard in the September draft expected English teachers to ensure that students can "Demonstrate facility with the specific reading demands of texts drawn from different disciplines, including history, literature, science, and mathematics." As the draft explained, "Because the overwhelming majority of college and workplace reading is non-fiction, students need to hone their ability to acquire knowledge from informational texts... [and]...demonstrate facility with the features of texts particular to a variety of disciplines, such as history, science, and mathematics." To make absolutely clear what was intended, the exemplars for English teachers included excerpts from a college biology textbook, a technical memo on medical coverage, and a technical page on economic issues integrating graphics.

Apparently the standards development work group appointed by NGA and CCSSO did not realize that English teachers are, by virtue of their undergraduate major and professional training, not expected to teach students to read and understand technical material in other disciplines. Moreover, despite the claim that its CCRS were based on research evidence, the standards development work group had

managed to overlook a comprehensive review of the research on adolescent literacy in 2008 by the Institute of Education Sciences showing no evidence for the assumption that English teachers can effectively teach reading strategies appropriate to other disciplines and improve their students' knowledge in these other disciplines. On the other hand, if the work group's intention was to promote the teaching of relevant reading and writing skills by content area teachers in their classes, then the standards and the exemplars should not have been placed among the standards for secondary English teachers.

CCSSI provided a mountain of "evidence" for these CCRS. But, most of the references it offered were not examples of evidence at all. A NCTE critique sent in July, in response to a leaked draft of what CCSSI later issued in September, was the first to belie CCSSI's claim. NCTE's critique noted:

...the document presently contains a claim that these standards are evidence-based, but we note that none of the evidence has been drawn from peer-reviewed research journals or similar sources. Rather, the evidence offered at present consists of surveys conducted by the testing companies that stand most immediately to gain from the testing of these standards. This seems to represent a conflict of interest in the development of the standards.

Nor did CCSSI provide straight evidence for the claim that the CCRS were internationally benchmarked. International benchmarking does not mean showing that individual standards in the CCRS look similar to individual statements in other countries' standards or assessments, as CCSSI did. International benchmarking means showing that the entire set of standards in a subject is similar to the entire set in a high-achieving country. Benchmarks also include the required readings in high-achieving countries' standards and assessments for their own language and literature, which are usually considerable for those

whom it will deem college-ready. International benchmarks can also refer to the standards for a country's matriculation examinations for entrance and placement in its higher education institutions.

The most serious problem with the CCSR noted in the *New York Times* online review was that they were, in fact, not standards. They were, instead, merely content-free generic skills--skills that could emerge only from exposure to a substantive, or content-rich, curriculum shaped by authentic standards. It is not clear why CCSSI decided that this country's secondary English curriculum should be shaped by assessment experts, not high school and college English teachers. Or why exit standards in ELA and the tests to be based on them would not require American students to demonstrate familiarity with the major authors, works, and movements in American and British literary history so that they could begin to understand the English used by educated Americans and read this country's seminal political documents, most of which are required reading in state law or education policy and were written several centuries ago.

Comments on the College- and Career-Readiness Standards and Responses to Them Not Provided

CCSSI received more than 1,000 comments – many of them voluminous – after releasing the draft of its CCRS in September. How the Standards Development Work Group or the two Draft-Writing Committees set in motion during the summer responded to these comments, we do not know. The process that these committees were using to digest and respond to this feedback remains as unspecified as who was making the decisions on what would be in the grade-level standards.

In November, CCSSI finally offered a six-page summary of the comments that it had received in response to the September draft.²⁸ The summary had an upbeat tone – comments like “[the standards] unleashed uncontrolled enthusiasm” and “thank you, thank, you, thank you” were sprinkled around. There were hints of problems; the summary briefly mentioned concerns about the opacity of the process and the organization, content, and specificity of the standards. However, the summary gave no indication of how CCSSI had addressed these concerns, if it all.

As concerns began to arise about possible conflicts of interest,²⁹ CCSSI made public the names of all the groups or individuals officially providing “assistance” or feedback to the draft-writing committees.

Later in November, more members were publicly added to the feedback or work groups advising the draft-writing committees, but without any rationale given for their selection or any hint of what was in the grade-level drafts the draft-writing committees had been working on since the summer.³⁰

No Grade-Level Drafts Yet for the Public to See Except by Happenstance

By the end of December 2009, it was clear that CCSSI was behind on its schedule. Yet states had been relentlessly pressured by the RttT competition deadline to include in their applications, due January 19 at USED, an outline of a state-level process for approving two sets of grade-level standards no one had yet seen in even rough draft form. Once approved by a state's board of education, these yet-to-be-finished-and-seen standards would replace the states' current standards in those subjects. Possibly to reassure the dozens of states planning to submit an application by January 19 that finished sets of grade-level standards were really

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Figure 1: A Comparison of the Grade Level Placement of the Major Mathematics Topics in the Grades 1-8 Curricular Profile of the A+ Countries with their Grade Level Placement in the California, Massachusetts, and January 13 Common Core Mathematics Standards

Topic	1995 TIMSS A+ Countries								California								Massachusetts								January 13 Common Core										
	Grade	1	2	3	4	5	6	7	8	K	1	2	3	4	5	6	7	8	K	1	2	3	4	5	6	7	8	K	1	2	3	4	5	6	7
Whole Number Meaning		●	●	●	○	○				●	●	●	●	●	○				●	-	●	●	●	○	○			●	●	●	○				
Whole Number Operations		●	●	●	●	○				●	●	●	●	●	○				●	●	●	●	●	○				●	●	●	●	○			
Measurement Units		○	●	●	●	●	●	○		○	○	●	●	○	●	●			○	-	○	○	○	○	○	○			●	●	●	○	●		
Common Fractions				○	●	●	○				○	○	○	●	●				-		○	○	●	●	○			○	○	○	○	○			
Equations & Formulas			○	○	○	○	●	●			○	○	○	●	●	●	●	●		-	○	●	●	○	○	○	○	○	○	○	○	○	○	○	
Data Representation & Analysis				○	○	○	○			○	○	○	○	○	○	○	○	○		○	-	○	○	○	○	○	○	○	○	○	○	○	○	○	
2-D Geometry: Basics				○	○	○	○	●	●		○	○	○	○	○	○	○	○		○	-	○	○	○	○	○	○	○	○	○	○	○	○	○	
Polygons & Circles				○	○	○	○	●	●				○	○	○	○	○	○		-		○	○	○	○	○	○	○	○	○	○	○	○	○	
Perimeter, Area & Volume				○	○	○	○	○				●	○	○	○	○	○			-		○	○	○	○	○	○		○	○	○	○	○	○	
Rounding & Significant Figures				○	○							○	○	○	○	○	○			-		○	○	○	○	○			○	○					
Estimating Computations				○	○	○				○	○			○	○					-				○	○	○				○					
Properties of Whole Number Operations				○	○						○	○	○							-			○					○	○	○	○	○	○	○	
Estimating Quantity & Size				○	○							●								-	○		○		○				○						
Decimal Fractions				○	○	○					○	○	○	○	○	○					-		○	○	○	○			○						
Relationship of Common & Decimal Fractions				○	○	○						○	○	○	○	○					-		○	○	○	○				○	○	○	○	○	
Properties of Common & Decimal Fractions				○	○							○	○	○	○	○					-		○	○	○	○				○	○	○	○	○	
Percentages				○	○							●	●	●							-			○	○	○	○				○	○	○	○	
Proportionality Concepts				○	○	○	○					○	○	○	○	○					-		○	○	○	○	○			○	○	○	○	○	
Proportionality Problems				○	○	○	○	○	○			○	○	○	○	○	○				-		○	○	○	○	○			○	○	○	○	○	
2-D Coordinate Geometry				○	○	○	○					○	○	○	○	○					-		○	○	○	○	○			○	○	○	○	○	
Geometry: Transformations					○	○	○									○					-			○	○	○	○							○	
Negative Numbers, Integers & Their Properties					○	○							○	○	○	○					-			○	○	○					○	○	○	○	
Number Theory						○	○									○	○				-			○	○	○					○	○	○	○	
Exponents, Roots & Radicals						○	○									○	○				-			○	○	○					○	○	○	○	
Exponents & Orders of Magnitude						○	○									○	○				-			○	○	○					○	○	○	○	
Measurement Estimation & Errors						○															-														
Constructions w/ Straightedge & Compass							○	○					○	○	○	○					-													○	
3-D Geometry						○									○	○					-			○	○	○								○	
Congruence & Similarity							○	○								○	○				-			○	○	○								○	
Rational Numbers & Their Properties							○									○	○				-			○	○	○								○	
Patterns, Relations & Functions							○									○	○				-			○	○	○								○	
Slope & Trigonometry							○									○	○				-			○	○	○								○	

● In all A+ countries, or in state and Common Core focal standards
 ○ In 67% of A+ countries, or in state and Common Core non-focal standards

○ In 83% of the A+ countries
 After W. Schmidt et al., *Curriculum Coherence*, J. Curriculum Studies v37n5 (2005), Fig. 1

on their way, CCSSI sent draft copies of the K-12 mathematics and English Language Arts standards, dated January 13, to state departments of education, suggesting that they include these drafts (watermarked “confidential”) in their RttT applications. In most cases, the states had been encouraged to do so with the help of a Gates Foundation-chosen consultant team funded by Gates at \$250,000 per state.

Some states chose to include the September draft of the College- and Career-Readiness Standards in their RttT applications, possibly because it was already a public document. Some other states (e.g., Florida and Massachusetts) included these drafts marked “confidential” in their applications, thus rendering them public documents, especially after posting the entire application on their website. These drafts, at the time only a few weeks away from being the public drafts that CCSSI had indicated it would release in early

February for national public comment, serve as the basis for the following critiques.

The Flawed K-12 Grade-Level Drafts: January 13 Drafts

A. The January 13 Draft of CCSSI’s Mathematics Grade-Level Standards

There are at least five serious problems in the January 13 draft of CCSSI’s grade-level mathematics standards (henceforth called the Math Draft). Three can be seen in Figure 1. Figure 1 shows a comparison of the grade level placement of the major topics taught in grades 1 to 8 in the mathematics curriculum of the A+ countries, as determined by William Schmidt and his team in an analysis of the results of the 1995 Trends in International Mathematics and Science Study

(TIMSS),³¹ alongside their grade level placement in California's and Massachusetts's mathematics standards as well as in the Math Draft.³²

First, the Math Draft teaches fewer topics in elementary grades than even the highest-achieving countries on the 1995 TIMSS, the A+ countries.³³ The A+ countries teach 16 to 22 major topics from grade four to grade eight,³⁴ while the Math Draft proposes to teach only 7 to 15 topics in these grades. Both California and Massachusetts teach 16 to 21 topics over these grade levels, similar to the number taught in the A+ countries.

What may account for this reduced number of topics?³⁵ As Figure 1 shows, the Math Draft leaves holes in mathematics content progressions across grades and thus expects less to be taught. Key voids are the virtual absence of geometry, equations, and formulas in grades 4-5. The reason for these holes may lie in the draft-writers' zeal to limit the number of grades in which teachers cover the topics that are there—another possibly misunderstood lesson from TIMSS. Instead of teaching a topic to mastery and moving on to more advanced topics that require understanding and use of the topic, as in the A+ countries, the draft-writers stop teaching topics before students have acquired mastery of them but return to them for mastery after a hiatus of several grades. (See the sidebar.) We are skeptical that such an untried curricular approach will result in enhanced learning.

Moreover, while Whole Number Operations spans the same six years in all curricula, students in California, Massachusetts, and the A+ countries essentially finish learning addition and subtraction with numbers of any size by grade 3, multiplication by grade 4, and division by grade 5. They do so by learning the standard algorithms for these operations that allow manipulation of numbers of any size. In contrast, in the Draft, students do not learn addition and subtraction beyond 3-digit numbers in grade 2, multiplication of 2-digit numbers by 2-digit numbers in grade 4,

Example of a Hole in a Mathematics Content Progression

Standards in the Math Draft and in California and Massachusetts expect grade 3 students to understand equations such as $24 \div 6 = 4$ and their meaning – the sense that a group of 24 objects can be split into 6 groups of 4 each, or that 4 groups result when we split 24 objects into groups of 6 objects each. However, standards in grades 4 and 5 in California and Massachusetts ensure that students continue developing fluency in manipulating simple equations and in plotting points and lines on the coordinate plane in order to prepare them for a more formal handling of expressions in grade 6. In contrast, the Math Draft has no standards in grades 4 and 5 on plotting points and lines on the coordinate plane or on manipulating expressions. But in grade 6, the Math Draft expects students to solve problems such as solving for X in an expression like $X + 7\frac{1}{2} = 8\frac{3}{4}$. It is unreasonable to expect students to reach this level of understanding without work on expressions and equations in grades 4 and 5.

and division by 2-digit numbers in grade 5. They are not expected to memorize addition facts to 20 or multiplication tables to 100 to support the use of the standard algorithms. And, indeed, students are not expected to master the standard algorithms for the four arithmetic operations, contrary to the recommendation of the National Advisory Mathematics Panel.

Second, the sequence of standards in the Draft reverses the usual order for teaching some content. In the elementary grades, children are typically expected to become comfortable with operations on whole numbers before launching into operations on fractions. Similarly, children learn first about multiplication (via chunking and arraying) before they approach division. The Math Draft flips this order on its head and proposes teaching division starting in Kindergarten, while the word multiplication shows up for the first time only in the second grade. Similarly, the Math Draft teaches operations on fractions in third and fourth grades before it expects children to master operations on whole numbers. Ginsburg and

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Algebra I Enrollment and Success by Grade 8 in California from 2002-2009

It is common knowledge that California, despite its widely praised academic standards for K-12, does not lead the nation in mathematics achievement. What is not commonly known is California's extraordinary success in teaching Algebra I to grade 8 students.

In 1999, the first time the state gave an Algebra I assessment based on its 1997 academic standards, 16% of grade 8 students had taken Algebra I. By 2002, the first time the scores were calibrated to allow future comparison, 29% of grade 8 students had taken Algebra I, with 39% scoring proficient and advanced. By 2009, 60% had, with 48% scoring proficient and advanced. In other words, not only did California succeed in almost quadrupling the percentage of Algebra I takers, it also kept increasing the passing rate. Moreover, while English Language Learners (ELL students) were only 7% of grade 8 Algebra I takers in 1999, they were 12% of grade 8 Algebra I takers in 2009.

In summary, in 2002 only 52,000 California students successfully completed Algebra 1 by grade 8. In 2009 over 139,000 students did so, almost 90,000 additional students.

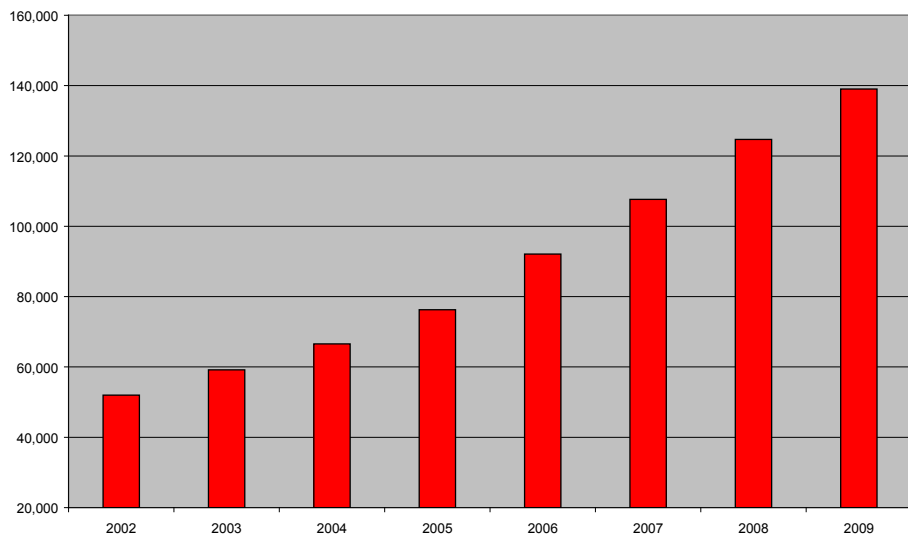
Leinwand studied progressions in three of the A+ countries, and their report shows that none of them uses this approach.³⁶ The Math Draft thus makes for an uneven sequence in difficulty through the grades, offering an unusually demanding program in the primary grades but noticeably slackening off in the higher elementary and middle grades, as Figure 1 shows.

Third, the Math Draft jeopardizes the teaching of Algebra 1 in grade 8. American mathematics curricula expect most students to complete Algebra 1 in grades 8 or 9, as other high-achieving countries do.³⁷ Nationwide, about 42% of our grade 8 students in 2005 took Algebra 1 or higher, almost tripling the 16% that took it in 1990.³⁸ (See the sidebar for the increases in grade 8 Algebra I enrollment in California in the past decade, and Table 1 for the increases in the numbers of students achieving proficient and above from 2002 to 2009.) Ignoring this expectation and trend, the Math Draft removes most algebra topics from grade 8, replacing them with portions of high-school geometry content and a few probability and statistics standards. Moreover, as Figure 1 shows, the Math Draft's

grade 7 content is insufficient for pre-algebra preparation: by the end of grade 7, students have little or no exposure to coordinate planes, the law of exponents, roots, irrational numbers, or any functions except simple linear ones. Consequently, students will not be able to complete Algebra 1 and proof-based geometry courses by grade 9, as is expected of students heading for STEM disciplines and selective colleges.

Fourth, the Math Draft provides no recognizable high school mathematics courses. Instead, the draft provides long unordered lists of content under its invented headings. Until this content is partitioned into courses, it is not possible to determine whether the content is

Table 1: Number of California Students Scoring Proficient and Above in Algebra I by Grade 8, 2002-2009



Note: Cohort size changed only by about 5% between 2002 and 2008 school years.

Source: STAR assessment <http://star.cde.ca.gov>

adequate or when and in what order the courses should be taken. It is our understanding that work is taking place to partition that content into both traditional single-subject courses and a grade-by-grade sequence of integrated mathematics courses, presumably with identical overall content by the end of the sequence to the content in the traditional single-subject courses. Certainly, the single-subject course sequence needs to be offered. The National Mathematics Advisory Panel found no research evidence showing that integrated mathematics coursework as implemented in this country produces better results than the traditional single-subject course sequence does.

Fifth, the language in the Math Draft is frequently problematic. The Math Draft puts much stress on precision of language, teaches fundamental mathematical ideas in very early grades, and appears to aim at the understanding of mathematical concepts. Nevertheless, the

Math Draft's often inaccessible language is frequently sloppy or incorrect. The large number of language problems—often a dozen or more per page—raises questions about the reviewing and editing procedures being used by the draft-writers (see Figure 2 for examples).

B. The January 13 Draft of CCSSI's English Language Arts Grade-Level Standards³⁹

The January 13 draft of CCSSI's English Language Arts grade-level standards reveals conceptual as well as language and writing problems. The nature and depth of the problems in the ELA Draft raise questions about the qualifications of the draft-writers for writing literature, vocabulary, and grammar standards in particular. As an editorial in the *Boston Herald* on January 31 noted, the standards are "incoherent and unusable by real teachers."⁴⁰

Figure 2: Examples of Language Problems

Kindergarten:

- *Glossary: Teen number. A whole number that is greater than or equal to 11 and less than or equal to 19 (p.7).*
- *A teen number is a ten and some ones. The number 10 can be thought of as a ten and no ones.*
- *Any teen number is larger than any single digit number.*

Comment: Based on this language, ten is a teen number, and ten is not a teen number. One can perhaps say that ten is a confused number, perhaps as confused as the draft-writers seem to be.

Grade 4: *A one-degree angle turns through 1/360 of a circle, where the circle is centered at the origin of the rays; the measure of an angle is the number of one-degree angle turned with no gaps or overlaps (p.21).*

Comment: This language is cumbersome and inaccessible. Worse, it is incorrect because it doesn't allow for fractional angles like 22.5°.

Grade 5: *The ratio of a length, area or amount to another length, area or amount is the same regardless of the size of the unit used for measurement (p.24).*

Comment: This language is unclear and actually incorrect. What it tries to say is probably: *The ratio of two given measures is fixed and independent of units, as long as both measures are expressed in the same units.*

Grade 8: *A function is a rule, often defined by an expression that states a relationship between the values of two variable quantities (p.33).*

Comment: This is an incorrect definition of a function.

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First, there is an absence of vertical progressions for conceptually related groups of standards through the grades. In other words, conceptually related groups of standards do not show much if any increase in difficulty from grade to grade. This means, in effect, that teachers may easily fail to advance students' intellectual growth along this dimension of learning. The following subset of "Core Standards" for a section called "Integrating information and evaluating evidence" shows little change through the grades (or relevance to the way in which they are classified).

Integrating information and evaluating evidence, grades 4-5

Core Standards — Students can and do:

- Explain and use information presented graphically or visually in print, videos, or electronic texts.
- Outline the information or evidence used to support an explanation or argument, determining which points support which key statements.
- Determine the point of view or purpose that guides how events or ideas are described.

Integrating information and evaluating evidence, grades 6-8

Core Standards — Students can and do:

- Interpret information presented graphically or visually in print, videos, or electronic texts and explain how this information clarifies and contributes to the text.
- Analyze the structure and content of an argument, including its main claims or conclusions, supporting premises, and evidence.
- Determine the point of view or purpose represented in the text, assessing how it shapes the content.

Integrating information and evaluating evidence, grades 9-10

Core Standards — Students can and do:

- Interpret information presented graphically or visually in print, videos, or electronic texts and explain how this information clarifies and contributes to the text.
- Analyze the structure and content of an argument, including its main claims or conclusions, supporting premises, and evidence.
- Determine the point of view or purpose represented in the text, assessing how it shapes the content, style, and tone.

Second, large numbers of standards are developmentally inappropriate, incorrectly classified, undoable, poorly written if not unintelligible, and/or not standards.

1. Examples of poorly written or unintelligible Reading and Literature standards:

- * **Grades 4-5:** "Identify how narratives and plays are structured to describe the progress of characters through a series of events and challenges." (Not easily interpretable at any grade level)
- * **Grades 4-5:** "Gather information from experience, as well as print and digital resources." (Not a standard; one cannot gather information from experience)
- * **Grades 6-8:** "Determine how key ideas or concepts build on one another to reveal an overarching theme or idea." (Unintelligible, not a developmentally appropriate standard)
- * **Grades 6-8 Core Standard:** "Explain in detail how events, ideas, and characters unfold in the text and interact with one another." (Unintelligible, not a standard)
- * **Grades 6-8:** "Recognize how the setting unfolds over the course of the text and

describe its significance to the work.” (Poorly written; a setting doesn’t unfold.)

* **Grades 6-8:** “Summarize a text without expressing a personal opinion by drawing on the author’s specific description of events or information.” (Incorrect: summaries are not supposed to include specific details.)

* **Grades 9-10:** “Summarize the development of a theme and describe how that theme resonates throughout the text.” (Uninterpretable)

* **Grades 9-10:** “Weave together the details of texts to form a comprehensive understanding of its characters, including their overlapping or competing motivations.” (Uninterpretable)

* **Grades 9-10:** “Analyze how different authors organize and categorize similar information and describe the impact of those different approaches.” (Impact on what? Poorly written.)

* **Grades 9-10:** “Evaluate how playwrights use soliloquies to portray the internal thinking and feeling of characters.” (Undoable by high school students)

* **Grades 9-10 Core Standard:** “Analyze the point of view or purpose represented in the text, assessing how it shapes the content, style, and tone.” (Poorly written)

2. Examples of unintelligible Vocabulary standards:

* **Grade 3:** “Distinguish among related words that describe states of mind, degrees of certainty, or other abstract concepts (e.g., knew, believed, suspected, heard, wondered).” (Developmentally inappropriate)

* **At many grade levels,** students are to “use phonics and word analysis to identify visually new words when reading” in order to determine the meaning of an unknown word. (Unintelligible)

* **Grades 9-10:** “interpret the connotative meaning of closely related words and phrases as they are used in the text (e.g., angry versus irate).” (Undoable as written)

3. Examples of undoable or misclassified standards for Conventions:

* **Grade 3:** “Generate complete sentences, avoiding fragments, comma splices, and run-ons.” (Developmentally inappropriate)

* **At many grade levels:** “Maintain the focus of a paragraph on a topic through structural elements such as main ideas, supporting sentences, and transitions.” (Not a convention)

Third, the ELA Draft writers have taken many well-written standards from the 2001 Massachusetts English Language Arts Curriculum Framework but, more often than not, rendered them into gibberish in an apparent attempt to paraphrase them, instead of just copying them as they were.

As one example, the following standard appears in grades 3-4 in the 2001 Massachusetts English Language Arts Curriculum Framework (henceforth referred to as MA ELA CF): “Identify similarities and differences between the characters or events in a literary work and the actual experiences in an author’s life.” The ELA Draft seems to have translated this standard into one that is poorly written and developmentally inappropriate: “Compare accounts of historical events and figures or natural phenomena with their depiction in a fictional work.” How and why should children compare an account of a natural phenomenon with its depiction in a fictional work?

As another example, the following standard appears in grades 3-4 in the MA ELA CF: “Acquire knowledge of culturally significant characters and events in Greek, Roman and Norse mythology and other traditional literature.” The ELA Draft writers have rendered

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this for grades 4-5 as: “identify the meaning of figurative phrases and culturally significant characters found in mythology that are integral to understanding other works of literature and texts (e.g., *Herculean*, *Pandora’s box*).” The standard is confusedly written and provides a vocabulary example (Herculean) most unlikely to appear at these grade levels.

It is not clear why the ELA Draft writers didn’t simply copy well-written ELA standards that appear in our best state ELA standards documents. State standards are all in the public domain. No copyright permission is needed to use them, and those of California, Indiana, and Massachusetts provide many well-written standard that have stood the test of time. The inability of the ELA Draft writers to paraphrase well-written standards correctly and to render them into acceptable English prose is baffling.

Fourth, the ELA Draft provides a huge haphazard list of exemplar titles at each set of grade spans (K-3, 4-5, 6-8, and 9-12), classified into traditional genres but with no rationale given for their choice—or links to specific standards. Worse yet, it expects high school English teachers to use a yet-to-be developed “complexity” formula to help them to determine whether, e.g., *Crime and Punishment* or *Native Son* is suitably complex enough to teach to grade 11 or 12 students. The assumption seems to be that high school English teachers are incapable of judging the complexity of a text they might assign without the help of a formula.

Fifth, what the ELA Draft calls Core Standards are not standards at all. The ELA Draft insists on smothering grade-level standards at all grade levels with slight variations of the September “College- and Career-Readiness Standards” called Core Standards in this draft. Most of the Core reading and literature standards in the ELA Draft, however, are not standards; they are little more than expressions of skills or strategies used by teachers throughout the grades in this country.

The ELA Draft’s Core Standards are not internationally benchmarked and, without required literary and non-literary readings, are in no way equivalent in academic demand to the expectations embedded in other countries’ upper secondary school syllabi, high school exit assessments, and university matriculation exams. Appendix A shows what is expected generally in Finland’s upper secondary schools – a far cry from what is implied by the Core Standards (or College- and Career-Readiness Standards) in the ELA Draft for grades 9-12.

Summary and Conclusions

The central problem with CCSSI’s draft of grade-level standards in the English language arts and its proposed college- and career-readiness standards in ELA is a conceptual one. CCSSI doesn’t seem to understand what standards are and what they are for. K-12 standards are academic statements intended to frame the content of a curriculum, a function which is clearer in mathematics than in ELA. CCSSI’s core or college-readiness standards are not standards but generic skills.

Where did CCSSI’s conception of standards probably come from? The dominance of generic skills in framing the grade-level ELA standards and, worse yet, in serving as their ultimate academic goal in grade 12 seems to reflect the academically toxic influence of assessment experts and reading researchers, two groups whose background or training is usually not grounded in the literary, rhetorical, and linguistic scholarship that to this day shapes the academic training of English teachers and has always informed the content of the English language arts curriculum.⁴¹ The expertise of reading researchers lies chiefly in the area of reading instruction. By allowing non-discipline-based experts in reading and assessment to frame the K-12 ELA curriculum with content-free generic skills, not content-rich and content-specific

standards, CCSSI (unintentionally?) facilitated the development of documents that would put the nails into the coffin of what little is left of the literary heritage of English-speaking people as well as a coherent sequence for it in the K-12 ELA curriculum. (The focus on pedagogy, not content, in our education schools for the past 40 years has caused much of the damage so far.) It is not surprising that one of the best-known voices in the teaching of literature in the middle school has written a call-to-arms, urging NCTE members to lobby legislators and other policymakers on why literary study is still needed in the 21st century and to put literary study at the heart of “standards for the teaching of reading.”⁴²

National English language arts standards must be rooted in recognized literary, linguistic, and rhetorical scholarship and be compatible with the grade-by-grade progression of standards in the best sets of English language arts standards in this country. A document purporting to present a set of English language arts standards must do much more than claim it is based on research that supports its details on reading instruction. It also must indicate the linguistic, rhetorical, and literary scholarship that justifies its organization, its literature strands, and its composition strands. For example, the page on “Definitions of Key Writing Types,” close to the end of this Draft, has not one quotation or scholarly reference to support what this draft claims are the three “key writing types.” What body of scholarship in rhetoric suggests that Narrative, Informative/ Explanatory, and Argument are the three key writing types?

All English teachers care about the standards or benchmarks on which their state tests have been based. They are not apt to respect or teach to a document that shows no cognizance of the literary, rhetorical, and linguistic scholarship they studied as English majors, or offers as standards statements that read like caricatures of the English language. They are also not apt to pay attention to laundry lists of titles offered as exemplars of the literary quality and complexity they should

aim for. And they are clearly apt to find insulting the idea that they should use a formula to help them determine the “complexity” of the literary works they assign their students in the secondary grades. At the very least, the ELA Draft should provide a sensible and succinct outline of the major authors, works, and literary periods whose study develops the literary and non-literary knowledge that students in an English-speaking country should have acquired by the time they graduate from high school.

CCSSI’s proposed mathematics standards pose another set of problems. The Math Draft places mathematics content at grade levels and in sequences that cannot be found in the curriculum of any high achieving country. Its proposed content for middle-school mathematics and for Algebra I in grade 8--the major goal of middle-school mathematics--shows complete indifference to national goals in STEM. And the language in which it is written is too imprecise, incorrect, or inaccessible to be professionally acceptable.

Perhaps most damaging is the confusion the standards cause about the purpose of high school and the meaning of college-readiness. On one hand, the Math Draft says that students reaching the readiness level described in the College- and Career- Readiness Standards “*will be prepared for non-remedial college mathematics courses.*” Yet implicitly acknowledging that its standards are in reality insufficient for admission to most two- and four-year colleges across the land, the Math Draft also says “*Recognizing that most students and parents have higher aspirations, and that ready for college is not the same as ready for mathematics-intensive majors and careers, we have included in this document standards going beyond the readiness level.*” This is even more misleading: “most students” do not prepare for STEM disciplines. And why would most students go beyond “college readiness” if passing a common assessment in grade 10 means they are “college ready”? CCSSI’s proposed mathematics standards may actually encourage students to leave high school after grade 10 if they are told

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they are college-ready after passing a test of little more than Algebra I (with a yet-to-be-determined cut score).

Recommendations

We aim our recommendations at four suggested lines of action. (1) How CCSSI drafts should be further developed and finished; (2) What should be done if final drafts of its ELA and mathematics standards are not acceptable as national standards; (3) What USED should do in its review of the RtT applications; and (4) How this country should proceed in the development of national standards for science and history.

(1) CCSSI must provide complete transparency in the procedures it uses for further revisions of its current drafts. It must also make significant changes in the composition of the teams in charge of writing them.

- * At present, what CCSSI calls standards in both mathematics and ELA are not standards, and drastic changes need to be made in their organization. Future drafts need to go through multiple iterations over the next several months, with public drafts made available so that progress can be discerned.
- * CCSSI needs to appoint people with relevant academic credentials as well as experience in writing mathematics or English language arts standards as the major draft writers. It must also let the public know who is in charge and why they were selected. Both of the current groups of draft-writers failed to use an accepted and meaningful definition for a standard. This needs to be hammered out, and the two documents aligned with each other on what is considered a standard.
- * Nothing more than grade-level standards for K-12 should be provided (i.e., no suggestions about pedagogy or complexity formulas for English teachers to use).

* Final approval of what constitutes high school exit standards in mathematics and ELA should be made by extensive public discussions in each state by public high school and college level mathematics and English teachers, school boards, and parents. Feedback should also be solicited from other individuals and organizations.

* Final approval of what constitutes admission standards for public colleges and universities should be made by faculty in our public colleges and universities, and decisions about what constitutes the content of credit-bearing coursework for freshmen should be made both by those who teach freshman English/humanities and mathematics courses at selective public institutions of higher education, and by those who teach freshman humanities and mathematics courses at less selective or open admissions institutions.

* Final approval of what constitutes admission standards for various post-secondary technical or career-oriented training programs should be made by faculty in these programs.

(2) In the meantime, states without an academically acceptable set of mathematics or ELA standards could indicate for RtT purposes that they are considering adopting Achieve's ADP high school exit standards and its backmapped standards for K-12. These states can also sign on to piloting its Algebra II test. These moves would satisfy the criteria for judging RtT applications. The rules require a consortium that includes more than 50% of the states, and at present over 35 states belong to Achieve's consortium. If CCSSI can produce academically acceptable sets of draft standards in six months, states could alter their choice if they wished.

(3) USED needs to step back from imposing, directly or indirectly, any set of standards on this country until there is widespread agreement by key stakeholders (listed in the first recommendation) on their purpose and content.

There is an explicit prohibition on USED imposing or promoting any one curriculum, and this is what USED is doing indirectly by allocating points for the RttT applications if a state indicates it is committing itself to a consortium for the adoption of common standards and tests based on them, and by allowing CCSSI to peddle its wares to the states, so to speak, for inclusion in the January 19 application.

USED should remove the requirement for an immediate adoption of consortium-based standards from its RttT evaluation criteria. The time constraints of RttT are unreasonable, and CCSSI has not yet been able to do the quality work needed for a first set of national standards, jeopardizing the entire movement towards national standards. Congress may need to weigh in and advise USED to decouple its interests in common standards and assessments from its ratings of the RttT applications.

(4) This country needs a new way to develop national standards in science and history. We desperately need competition so that states can compare two or more competing sets of standards and pick the one they prefer. There are two ways in which competition could take place.

* USED could sponsor three to five competitive grants of \$2-3 million each for interested organizations to develop a set of science and history standards within the next two to three years. Any development process must allocate sufficient time for diligent development and evaluation of the standards before states select the standards to adopt. Criteria for awarding these grants and for judging national science and history standards could be determined by a bi-partisan committee in Congress. Needless to say, the names of authors of each set of standards should be made public, and reviews by the relevant discipline-based organizations, as well as by others, should be made available to the public.

* The standards could be voted on in each state by a state referendum and the winning

set of standards piloted for several years (all curricula are political) with evaluation measures of at least their teachability and teacher training costs. Nothing should take place with respect to student assessments or changes in textbooks, and teacher preparation programs until after the trial period. Teachers and parents should be asked in every community to inform their local school boards and state boards of education about the problems they found in these standards, where additions are needed, and where deletions or other changes need to be made.

To put it succinctly, the rush to move from 50 state standards to a single set of standards for 50 states in less than one year, and the lack of transparency in CCSSI's procedure, have excluded (perhaps deliberately?) the kind and extent of public discussion merited by the huge policy implications of such a move. We urge the U.S. Congress, the U.S. Department of Education, and local and state school boards to insist on the development of first-class national standards in mathematics and ELA, and in a properly deliberative manner. Certainly, local and state boards of education need to examine carefully two sets of standards called "College- and Career-Readiness Standards" that would seem to allow assessments enabling low-achieving students to bypass current high school graduation requirements and to enroll in credit-bearing post-secondary courses similar in content and difficulty to those already offered in high school. These boards should consider whether this is helpful for these students and what such standards and assessments might mean for these post-secondary institutions and all the rest of our students.

■ **Why Race to the Middle?**

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About Pioneer:

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to change the intellectual climate in the Commonwealth by supporting scholarship that challenges the "conventional wisdom" on Massachusetts public policy issues.

Recent Pioneer Publications

Failure to Thrive: Job Creation and Loss in Massachusetts: 1990-2007, White Paper, January 2010

An Interim Report Card on Massachusetts Health Care Reform, White Paper, January 2010

Debunking the Myths About Charter Public Schools, Policy Brief, January 2010

Drawing Lessons: Different Results from State Health Insurance Exchanges, Policy Brief, December 2009

Closing Springfield's Achievement Gap: Innovative Ways to Use MCAS Data to Drive School Reform, Policy Brief, October 2009

School-Based Management: A Practical Path to School District Reform, Policy Brief, September 2009

Driving the New Urban Agenda: Desired Outcomes for the Middle Cities Initiative, July 2009

Endnotes

1. Secretary of Education Arne Duncan is quoted as saying: “Massachusetts began by leading the nation on high standards and is now pushing the envelope in other critical areas of education reform.” And “Turning around low performing schools is one of the toughest challenges out there and I applaud Massachusetts for having the courage to take it on. I look forward to watching state leaders, unions, teachers and parents work together to get this done.” http://www.mass.gov/?pageID=eoepressrelease&L=1&L0=Home&sid=Eeoe&b=pressrelease&f=readiness_charter_legislation_release&csid=Eeoe. Also see: S. Paul Reville, “High Standards + High Stakes = High Achievement in Massachusetts.” *Phi Delta Kappan*, Vol. 85, 2004.

2. E.g., in *Mapping State Proficiency Standards onto NAEP Scales: 2005-2007*, 2007, the National Center for Education Statistics takes a comprehensive look at this issue.

3. Two monographs issued by the Thomas B. Fordham Institute, *The Proficiency Illusion* (2007) and *The Accountability Illusion* (2009), were among the many studies or analyses making this issue clear.

4. Maine joined NECAP in 2009.

5. It may have been a requirement for the grant the Gates Foundation gave CCSSI. The goal of the Foundation’s 2009 Post-Secondary Initiative is to enable high school students with minimal mathematics and reading skills to bypass remedial courses and enroll directly in entry-level credit-bearing mathematics and reading courses at the post-secondary level. It seeks to do so by altering current institutional requirements and existing coursework.

6. See <http://collegepuzzle.stanford.edu/?p=466> and http://www.edweek.org/media/comments_regarding_draft_common_standards_edit2.pdf

7. “NCTM Releases Guiding Principles for Math Curriculum,” June 2, 2008 at <http://www.nctm.org/news/content.aspx?id=23276>

8. “‘Common Core’ Initiative: Who’ll Make Decisions?” *Education Week*, July 15, 2009, and “Subject Groups Seeking Voice on Standards,” *Education Week*, June 17, 2009.

9. “Expert Panels Named in Common-Standards Push,” *Education Week*, July 1, 2009. For the initial list of standard writers, see <http://www.edweek.org/ew/articles/2009/07/01/36standards-side.h28.html>

10. The second author of this White Paper was selected to serve on the Validation Committee. That is why this Paper uses only information that is available to the public, not information available only to members of this committee.

11. “New Standards Draft Offers More Details,” *Education Week*, Sep. 25, 2009. http://www.edweek.org/ew/articles/2009/09/30/05standards_ep.h29.html

12. CCSSI has many “Endorsing Partners,” mostly professional education groups. So far, there seem to be no discipline-based organization in mathematics, English, linguistics, or rhetoric among them.

13. “Common Core State Standards Initiative FAQs”, National PTA, Fall ‘09 at http://www.pta.org/CCSSI_FAQ.doc

14. <http://www.nga.org/portal/site/nga/menuitem.be806d93bb5ee77eee28aca9501010a0/?vgnnextoid=709db26363bd4210VgnVCM1000005e00100aRCRD>

15. <http://www.corestandards.org/Files/K-12DevelopmentTeam.pdf>

16. The lead for the ELA work team is Susan Pimentel from Achieve and the lead for the mathematics work team is William McCallum from the University of Arizona. The team visiting the Massachusetts Department of

■ Why Race to the Middle?

Education in October to discuss the Bay State's own ELA and mathematics standards consisted of Susan Pimentel, David Coleman (Student Achievement Partners) < <http://www.publicagenda.org/staff/coleman> >, and Jim Patterson (ACT) for ELA, and William McCallum and Jason Zimba (Bennington College and Student Achievement Partners) for mathematics. Phil Daro (America's Choice) did not visit Massachusetts in October but is mentioned in other CCSSI documents as one of the three key mathematics draft-writers even though he majored in English <<http://www.nottingham.ac.uk/~ttzedweb/MARS/personnel/pd.html>> .

17. Student Achievement Partners.

18. http://edexcellence.net/index.cfm/news_stars-by-which-to-navigate-scanning-national-and-international-standards-in-2009. Core Knowledge's initial blog post was semi-positive: <http://blog.coreknowledge.org/2009/09/21/common-core-standards/>. So, too, was the first reported response from the United States Coalition for World Class Math http://blogs.edweek.org/edweek/curriculum/2009/10/parents_group_s.html

19. R. James Milgram, "Missing Standards in Core Standards When Compared with California Standards," undated.

20. <http://jaypgreene.com/2009/12/11/alternative-needed-to-common-core-an-additional-consortium-for-%E2%80%8Ecommon-standards/> and "Common Core standards undermine California's gains," *San Francisco Chronicle*, December 22, 2009, available at http://articles.sfgate.com/2009-12-22/opinion/17353504_1_math-standards-remedial-classes-years-of-high-school-math

21. <http://usworldclassmath.webs.com/>

22. According to the admission web sites for state universities in the top 20 states by population (CA, TX, NY, FL, IL, PA, OH, MI, GA, NC, NJ,

VA, WA, AZ, MA, IN, TN, MO, MD, and WI). We could find only one state (MD) that does not require having passed Algebra I, Algebra II, and Geometry as a college admission requirement.

23. E.g., W. Schmidt, R. Houang, and L. Cogan, "A Coherent Curriculum, The Case of Mathematics," *American Educator*, Summer 2002 (http://archive.aft.org/pubs-reports/american_educator/summer2002/curriculum.pdf)

24. <http://www.mathematicallycorrect.com/interp.htm>

25. College- and Career-Readiness Standards for Mathematics, September 21, 2009 draft, p. 3.

26. In one review, 66 of the 105 published exemplars (63%) were judged to be flawed. "Common Core standards undermine California's gains," *San Francisco Chronicle*, December 22, 2009. Available at http://articles.sfgate.com/2009-12-22/opinion/17353504_1_math-standards-remedial-classes-years-of-high-school-math

27. <http://roomfordebate.blogs.nytimes.com/2009/09/22/national-academic-standards-the-first-test/#sandra>

28. "Summary of Public Feedback" <http://www.corestandards.org/Files/CorePublicFeedback.pdf>

29. "Conflict of Interest Arises as Concern in Standards Push," *Education Week*, November 4, 2009.

30. "Work Groups Picked for K-12 Standards," *Education Week*, November 18, 2009.

31. W. Schmidt, R. Houang, and L. Cagan., "A Coherent Curriculum," *American Educator*, Summer 2002.

32. Because California indicates the topics or standards considered focal at a grade level with a green oval, its profile reflects those emphases. Massachusetts does not indicate focal topics or standards, but the percentage of test items for a

standard in its state mathematics tests (MCAS) from 2005 on indicates what Massachusetts considers its focal topics or standards. For the Math Draft, we based our judgment chiefly on the depth and specificity of the standards in each area at the given grade level. We used the same approach for Massachusetts's standards in grades K and 2, for which there are no state tests. Massachusetts has no explicit standards for grade 1.

33. The 1995 TIMSS top-achieving, or A+, countries are Singapore, Korea, Japan, Hong Kong, Flemish Belgium, and the Czech Republic. "A Coherent Curriculum."

34. Figure 1 shows only the topics common to the majority of the A+ countries. At every grade, each country includes a few more topics. "A Coherent Curriculum."

35. It is important to distinguish between *topics* and *standards*. Schmidt's critique was directed at the number of *topics* and that is what is being discussed here. A single topic may give rise to any number of *standards*, depending on the degree of specificity the standards writers have chosen.

36. A. Ginsburg and S. Leinwand, "Informing Grades 1-6 Mathematics Standards," American Institutes for Research, 2009.

37. See, for example the recent Analysis of Mathematics and Science Standards from the Asia-Pacific Economic Cooperation, done by Achieve for APEC (http://publications.apec.org/publication-detail.php?pub_id=163). This is true even in countries that teach a combination of algebra and geometry in grades 7-9, as in Japan (Kunihiko Kodaira, ed., *Japanese Grades 7-9 Mathematics*, UCSMP 1992). There, by grade 9 the full content of both typical Algebra 1 and Geometry courses is completed, an impossibility with the January 13 Common Core standards.

38. Jay Mathews, "Adding Eighth-Graders to the Equation," *Washington Post*, March 12, 2007. Tom Loveless uses 38% in 2007 for the national figure ("The Misplaced Math Student,"

Brookings Institution, 2008). Both percentages are much higher than the 2010 Quality Counts mathematics progress index, which misleadingly reports the "[p]ercent of 8th graders in schools where algebra by 8th grade is the norm."

39. See the Minutes of the January 25 Special Meeting of the Massachusetts Board of Elementary and Secondary Education for the original version of this critique, provided for Board discussion by Board member Sandra Stotsky.

40. http://www.bostonherald.com/news/opinion/editorials/view/20100131educations_core/

41. The influence of reading researchers and assessment experts can be seen in the model CCSSI apparently drew on for its approach to the "Reading" strand in the ELA drafts--the NAEP Reading Assessment Standards for 2009. This document tries to make clear that NAEP "assesses reading skills that students use in all subject areas and in their out-of school and recreational reading" and that the teaching of all these skills is therefore not necessarily the responsibility of ELA teachers. Thus NAEP set the percentage distribution of Informational vis-a-vis Literary passages at 50% for grade 4, 55% for grade 8, and 70% for grade 12 (Exhibit 1, p. 11). But, as was argued repeatedly and unsuccessfully by English language arts teachers and experts at committee meetings determining these percentages (the second author of this White Paper was a member of this committee), they are not appropriate for the secondary school English curriculum and the only teachers likely to be held responsible for results on NAEP reading tests at the secondary level are English teachers. The bitter fruits of this lost battle can be seen in the references to reading research that dominate this NAEP document and the types of texts and reading skills emphasized in CCSSI's ELA Draft.

42. Nancie Atwell, "The Case for Literature," Commentary in *Education Week*, February 10, 2010, Vol. 29, Issue 21, p. 32. http://www.edweek.org/ew/articles/2010/02/10/21atwell_ep.h29.html

Appendix A: From Finland

2.2 BASIC VALUES

...The basic values of upper secondary school instruction are built on Finnish cultural history, which is part of Nordic and European cultural heritage. At upper secondary school, students should learn how to treasure, assess and renew their cultural heritage.

...The aim of instruction in literature at upper secondary school is that students will understand literature and analyse and interpret texts from different points of view.

...consolidate their knowledge of literature, thus developing their thinking, expanding their all-round learning in literature, their imagination and artistic insight and vision and constructing their world view.

3. Devices and interpretation of literature (ÄI3)

Students will gain a deeper understanding of literature, the artistic role of language and its cultural significance.

OBJECTIVES

The objectives of the course are for students to:

- learn to understand the figurative nature and interpretive diversity of language;
- consolidate their knowledge of literary genres and their distinctive characteristics;
- develop in the analysis of fictional texts, using different approaches to reading and interpretation and the necessary concepts of literature studies;
- learn to justify their interpretation of texts both orally and in writing; and
- gain practice in using the linguistic devices studied on the course appropriately in their own expression.

CORE CONTENTS

- analysis and interpretation of literature by making use of concepts and approaches that are justified in terms of interpretation;
- prose as a literary genre: devices of narrative techniques, such as narrator, point of view, subject, person, time period, milieu, theme, motif;
- lyric poetry as a literary genre: concepts such as a poem's speaker, verse, stanza, rhythm, metre, repetition, imagery;
- drama as a literary genre;
- analysis of short stories, poems and drama; and
- use of literary devices in one's own texts.

4. Nordic texts (MO4)

The course will deal with the history of Nordic languages and Nordic literature, Nordic texts, texts written in Nordic languages and Nordic culture. Instruction in literature will focus on dramatic literature.

OBJECTIVES

The objectives of the course are for students to:

- recognise different Nordic languages in both spoken and written forms;
- possess basic strategies to make oneself understood in the Nordic countries;
- be capable of reading and thematisation of media texts written in Nordic languages, mainly Danish and Norwegian;
- command the key terminology of dramatic literature;
- learn to discuss dramatic literature both through written texts and on the basis of performances; and
- be familiar with the principles of recitation.

CORE CONTENTS

- the common background of Nordic languages;
- similarities and differences between Nordic languages;
- discourse strategies to facilitate Nordic interaction;
- production of one's own texts concerning the Nordic countries on the basis of themes dealt with on the course;
- literary works produced in the Nordic countries;
- analysis of plays and theatre visits; and
- reading, dramatisation and analysis of texts.

Source: http://www.oph.fi/english/education/general_upper_secondary_education/curriculum

