

# Understanding the Common Core State Standards

**P. David Pearson**

University of California, Berkeley

**Elfrieda H. Hiebert**

TextProject &

University of California, Santa Cruz

**TextProject Article Series**

July 2014

**TextProject, Inc.**

SANTA CRUZ, CALIFORNIA

## Understanding the Common Core State Standards

Standards have become a staple of the American school and curriculum since they first entered the reform scene in the early 1990s. Conceived in the wake of the highly influential National Governors Conference of 1989—endorsed by conservatives, liberals, and radicals alike (albeit for vastly different reasons), and reformulated many times since their inception—schools, teachers, and students find their academic lives shaped by whatever standards hold court in their educational corner of the world. After the completely voluntary effort to produce national standards by the math community, the first major wave of standards was sponsored by federal and quasi-federal agencies, including the Office of Educational Research and Innovation (OERI) and the National Academy of Science, with the goal of encouraging disciplinary professions (e.g., History, English Language Arts, and Science) in the early 1990s to develop a clear statement of what students should know and be able to do at various developmental levels. The idea was that, with broad agreement on these curricular outlines of the typical progression of student performance, assessments and curricular schemes could be developed and implemented that would guarantee that students would meet the benchmark performance standards along the journey to successful achievement and, eventually, participation in the world of work and higher education. Students would go on to college and into the workplace armed with the knowledge, skills, and dispositions needed to be successful in their post-secondary lives. That was the dream, the hope, and the expectation we began with in 1989. And it was still the dream in the late 1990s when the Clinton administration undertook a valiant effort to ensure, via Title I (IASA), that all states had developed content standards and tests to measure their acquisition.

The Common State Core Standards (CCSS; Common Core State Standards Initiative,

2010) represents the latest, and in many ways the most ambitious, version of that same vision of what standards could do for schools, teachers, and students. What is most significant about the CCSS is that unlike the state action in response to IASA or NCLB, the CCSS effort was driven by the states, not a federal agency or even a federally sponsored initiative. Initiated under the auspices of the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO), it is a bold attempt to ensure that at the end of the K-12 curricular journey, students were prepared to enter either college or the workforce and take their place as knowledgeable, contributing members of the American economy, society, and polity. As a state-led initiative, the CCSS are intentionally designed to improve upon the current standards of individual states by creating clear, consistent, and rigorous standards to which all American students will be held, irrespective of the particular location of their residence. In short, opportunity to learn would not be an accident of a student's "zip code".

There are many reasons for developing a common set of standards across American states, but the driving force is the potential for inequity created by the tremendous variability observed from state to state in policies and procedures related to curriculum, instruction, and assessment. Studies have shown considerable variability across states in the content and quality of state standards, state assessments used to measure student achievement, and the criteria used to gauge success on standards (Bandeira de Mello, 2011; Polikoff, Porter, & Smithson, 2011).

The CCSS were established by looking closely at standards and curriculum in sites where achievement is high. The designers of the CCSS looked carefully at standards of other countries (particularly those with high scores on international assessments) to ensure that all American students are prepared to succeed in a global economy and society. They have also been designed to reflect the knowledge and skills required to participate as workers and citizens in a global-

digital world. The standard development process began with those goals required by high school graduates, proficiencies that would guarantee that students possessed College and Career Readiness (CCR). K-12 standards were developed to ensure learning progressions that would lead students to achieve CCR standards at the end of their K-12 school careers.

The title of the standards—*Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects*—highlights the need for developing literacy and language proficiencies in the context of disciplinary knowledge—knowledge that extends to content area courses rather than exclusively English language arts courses. The CCSS aim for an integrated view of the components within the English language arts at K–5—reading, writing, listening, and speaking, although there are separate (but highly similar) standards for literature and informational text. The 6–12 standards are first organized by discipline—ELA and then subject areas to distinguish which standards are the responsibility of the English language arts curriculum (and teachers) and which are to be addressed by subject area curricula and teachers. But within ELA, History or Science and Technology, the expectation is that reading, writing, speaking, and listening will be highly coordinated, if not fully integrated.

It is also worth noting that the CCSS are not intended to define all that can or should be taught; the standards are not intended to be a curriculum, as described within the Standards:

“By emphasizing required achievements, the *Standards* leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics should be addressed.” (CCSS Initiative, 2010, p. 4).

The intention of the Standards is to provide guidance on core content of *any* curriculum, with the explicit expectation that districts, schools, and teachers will add specification and differentiation to their enactment of the core goals. Finally, they do not define the full range of support for

English language learners and students with special needs. In short, the CCSS provide a core set of expectations and intentionally leave much to districts, schools, and teachers to figure out for themselves—to, if you will, put a local signature on their implementation of the core.

### **What's New and Different about the CCSS?**

In this section, we examine four aspects of the standards that set them apart from earlier iterations of state and/or national standards: close and critical reading, integration of language processes and disciplinary content, media/research literacy, and text complexity. We will review these four in the order listed, as a way of acknowledging their progressive dissimilarity from earlier efforts. However poorly they have been implemented, neither close, critical reading nor integrated literacy is a new goal. Both have been around, in one form or another, at least since the days of John Dewey and progressive education and perhaps even earlier, in either Horace Mann's Common School Movement or Francis Parker's Quincy System (Cavanaugh, 1994). Then we move to two around which there has been considerable rhetoric but little action—disciplinary literacy and digital media as a new form of literacy. We end with the aspect that is as old as it is new and as controversial as it is commonplace—text complexity. Text complexity is nothing new to teachers or curriculum designers; they have been dealing with it at least since the advent of the first readability formula (Lively & Pressey, 1923) and perhaps since the first “graded” reading series (McGuffey, 1836). But text complexity is very new to standards documents, and this is the first set of standards that outlines specific expectations for increasing the level of challenge expected by students at each grade level.

We address each of the topics from two lenses: (a) a description of the topic that stays close to the text provided in the CCSS and (b) our “reading” of the implications for implementation inside classrooms and schools, with a special emphasis on implications that

represent new rather than tried and true issues and practices. In the final section of the chapter, we address the dilemmas and conundrums that these standards, despite all of their advantages, bring to literacy education.

### **Close and critical reading**

If there is a “first amongst equals” among the principles of the Common Core, it is surely close reading. Early on, the CCSS (2010) framers declare their commitment to this principle:

*Students who meet the Standards readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. (p. 3).*

**The perspective.** The phrase “close reading” is used in the Standards in much the way it entered the field of literary interpretation during the era of I. A. Richards and New Criticism in the mid 20<sup>th</sup> century (Richards, 1929/2008). In its canonical version, it can entail the explication and implication of every element (section, sentence, clause, phrase, word) in the text (although more often than not, close readers “sample” sections of text for this sort of careful exegesis).

Appreciation of the structure of the text and the craft of the author are not the major outcomes of close reading--knowledge is. Students who read in a way that meets the standards gain strong disciplinary knowledge for their efforts, as they engage with texts in the disciplines of literature, history, science and technical subjects. They know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in

science, textual clues in literature) and ways of formulating arguments to support claims about how the world works. Above all, students value evidence as the basic currency of academic discourse, and they are able to evaluate the claims made by the authors of texts and those that they make themselves in crafting arguments about the ideas they encounter in these texts.

One might anticipate that such a commitment to acquiring knowledge and constructing precise arguments achieves those goals at a cost; and the most likely candidate is an erosion of commitment to multicultural contributions and perspectives in literature, art, history, and science. Not so. The standards express clear commitments to cultural diversity. Early in the document, the standards announce this commitment clearly: “Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds.” (CCSS, 2010, page 4). Commitment to diversity does not imply unexamined acceptance of the ideas in the diverse array of texts students encounter. To the contrary, the same analytic and critical lenses that enable readers to critique and construct arguments are brought to bear on all texts they encounter. They evaluate other points of view critically and constructively.

Close reading is meant to occur both within and across texts, reflecting the general disposition of the standards that students are always trying to connect the ideas they encounter in a given text with other ideas they encounter from a range of sources, including previously read texts, their prior experiences, and other media (e.g., digital content).

***Implications for implementation.*** In our discussion of implications for close reading, one might expect us to focus on the first cluster (standards 1-3) of Key Ideas and Details. After all, isn’t a clear exposition of what the text *says* the natural result of close reading? While this might be true in a very narrow sense of what it means to read closely, this perspective misses the point

of close reading. We read closely to acquire knowledge, but we can't acquire that knowledge except in relation to what we already know; hence the significance of the third cluster of standards--*Integration of Knowledge and Ideas (Standards 7-9)*. We also read closely to critique and evaluate the validity of the claims made by authors or the tools they use to engage and persuade readers; hence critique, the stuff of Standard 7 entails close reading in a very direct way. We are not suggesting that the other two clusters of standards—Key ideas and details (Standards 1-3) and Craft/Structure (Standards 4-6)--are not fundamental to integrating and using knowledge. The integration of knowledge depends on understanding the generation of key ideas and details and, when appropriate, analyses of how aspects of craft and structure influence the presentation and positioning of those key ideas and details. But the ultimate goal of reading is (a) the integration of knowledge and ideas from text, (b) the delineation, evaluation, and critique of arguments and specific claims in a text, and (c) the analysis of ideas encountered across multiple texts and experiences to build knowledge. Put differently, close reading entails all of the standards. We privilege the last cluster because we fear that if we begin our instructional journey with the first cluster, we may become mired there and never get to the knowledge building and integration facets of the reading curriculum that is the core goal of the standards.

In order to keep students' eyes on the prize of gaining knowledge and insight from reading, we would emphasize two particular curricular and pedagogical moves:

- Teachers should give students (better yet help students set) purposes for reading as well as promote connections to previously read texts and experiences. Such scaffolding of content does not require vast amounts of time. A simple reference to memorials or to the loss of life that results from wars may be sufficient to place the *Gettysburg Address* or Winston Churchill's *Blood, Toil, Sweat, and Tears* into perspective for students.

- Students benefit from opportunities to review key ideas and themes from literature and also disciplinary areas. If knowledge is viewed to be cumulative, opportunities to review and revisit are essential. This means helping students extract common themes, topics, insights, and problems from sets of texts. The essential questions are, what's new in the text we just read and how does it jive with what we already know about this issue.

Helping students watch their knowledge grow, change, and deepen is the ultimate goal of close reading. That is a principle not to be forgotten when one encounters a heavy dose of low level literal comprehension questions in a well meaning but misguided teachers manual.

### **Integration of Language Processes and Disciplinary Content**

*The essence of reading is text complexity and the growth of comprehension. For writing, it is text types, responding to reading, and research. For speaking and listening: flexible communication and collaboration, and for language: conventions, effective use, and vocabulary. ...By reading texts in history/social studies, science, and other disciplines, students build foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. (CCSS, pp. 8, 10).*

**The perspective.** Integration is implicated in two assumptions about learning and content that underlie the CCSS/ELA: (a) receptive (reading and listening) and productive (writing and speaking) language processes are integrated in learning and (b) content is viewed as the source and site of language use. That is content acquisition requires, rationalizes, and enhances language use. The integrated view within the language arts and of the language arts with disciplinary knowledge presented by the CCSS contrasts sharply with the heavy emphasis that has been

placed on reading as an encapsulated, independent subject in the years of NCLB.

In previous scholarship, the integration among the language arts and the integration of language processes and disciplinary content have often been treated separately (or not at all). In a summary of the research on integration, Gavelek, Raphael, Biondo, and Wang (2000) identified two perspectives on the integration of language arts: process-driven and text-driven. In former, text selection tends to be incidental and what matters is staying true to the processes and activities; subject matter texts, a single literary text, or a text set related by theme or topic serve equally well in the service of language process development. In the text-driven approach, processes are taken up to the degree that they promote a clear exposition of the ideas and themes in a given text, but content acquisition trumps the practice of any give language process.

Integration of language processes around literature makes good sense, but when disciplinary content is added to the mix, the nature of instruction takes quite a different form. A disciplinary view of literacy recognizes that literacy is an essential part of any disciplinary practice and that different skills, knowledge, and reasoning processes hold sway as one moves from one discipline to the next (Heller & Greenleaf, 2007; Shanahan & Shanahan, 2008).

One of the most obvious ways in which literacy demands differ across disciplines is in the nature of the text (van den Broek, 2010). Texts that students encounter in history are quite different from those than they encounter in chemistry. An obvious difference is in vocabulary, but syntax is also different, as evident in a mathematical equation and an historical document (e.g., Bill of Rights). Disciplines also vary in the uses of language and the relationships between texts and ways of developing knowledge (Moje, 2008). Shanahan and Shanahan (2008) found that the experts in different disciplinary areas approached texts in unique ways. These differences, Shanahan and Shanahan suggested, reflect differences in the values, norms, and methods of

scholarship within disciplines. Historians, for example, read to ascertain the author's perspective since the heavy reliance within historical scholarship on retrospective analyses of source documents can mean selective analysis and biased interpretation.

Examples of how literacy processes can be developed with disciplinary content, even in the early elementary years, are most readily available for science instruction. The work of Cervetti and Barber (2008), Magnusson and Palincsar (2005), and Varelas, Pappas, Barry, and O'Neill (2001) provide clear examples of the attempt to embed literacy practices within a science learning framework with younger learners. In the work of Cervetti and Barber (2008), students read to deepen their knowledge for science inquiry activities. For example, a text might give detailed information of a real-world example of a scientific phenomenon (e.g., an oil spill) or a text might depict and describe different kinds of specimens that might not be available for students to examine firsthand (e.g., a close up of sand particles depicting their size, shape, and color). Discussions and writing/documentation activities are also a prominent part of the science inquiry process in these efforts. In comparison to more "encapsulated" instruction, students from grades two through five have shown consistent advantages in their growth in science content, vocabulary, and writing (Cervetti, Barber, Dorph, Pearson, and Goldschmidt, 2009; Wang & Herman, 2005) but less consistent growth in reading comprehension.

The Reading Apprenticeship program (Greenleaf, Litman, Handon, Rosen, Boscardin, Herman, Scheider, 2011) provides frames for high school teachers to use in integrating disciplinary literacy practices into high school science teaching (they also provide examples in history but science is the most carefully examined discipline). Teachers are guided in engaging in conversations with their students in which they model and discuss how to read science texts, why people read science texts in these ways, and how to unearth, come to terms with, and

summarize the content of the texts. The students use complex science texts as they engage in the intellectual work of science inquiry. High school students in Reading Apprenticeship classrooms have been found to make greater gains on standardized tests in reading and biology than students in control classrooms (Greenleaf et al., 2011).

The conceptual foundation for disciplinary knowledge as a context for supporting language learning is equally as strong within social studies as it is in science, although the real-world implementations in classrooms are much rarer; even rarer is research evaluating the impact of integrating literacy activities directly into social studies content. This discrepancy reflects the disparity in federal funding in social studies versus science; some argue that as a nation we avoid research about social studies content because of fears that it will lead to instruction and inculcation of humanistic values (Evans, 2004).

Several small-scale projects in the elementary school illustrate the manner in which literacy processes can be developed through and used in the service of content in social studies. Williams, Nubla-Kung, Pollini, Stafford, Garcia, and Snyder (2007) describe a project with low-income, second-grade students. In one condition, students received typical social studies content but with a comprehension treatment (instruction in text structure, as well as an emphasis on questioning and graphic organizers). In the two other conditions, students received either content-only program that focused on the social studies content only or no instruction. The students who received the comprehension plus content treatment performed as well on the social studies as those in the content only treatment with the additional benefits of increased performances in reading comprehension.

More projects have been conducted at the high school level such as the instruction of historical reasoning strategies to 11<sup>th</sup> graders by De La Paz and Felton (2010), with the aim of

supporting students' writing of argumentative texts on historical topics. One strategy, for example, was described as "Consider the Author" with questions such as "how does the author's viewpoint have an effect on his argument?" Students who participated in this instruction produced better-elaborated and more persuasive historical arguments than comparison students.

The humanities tell a somewhat different tale, largely through the literature curriculum. The central themes of literature have been identified within philosophy, literary theory, and even psychology but, typically, the themes of core reading programs are scattershot, some dealing with genres (e.g., puzzles and mysteries, fables) but others dealing with potentially powerful themes of literature (e.g., survival, turning points) that often crumble through surface level, almost trivial, treatment in commercial programs. The content of literature is more than a simple topic, however. Literature is the context in which writers and readers explore the human experience (Probst, 1986). Some text may not have the most profound themes—especially the texts of beginning reading. True literature, even in picture books, grapples with the great themes of human experience, for example, the relationship of the individual to family, community, and even morality. Despite its emphasis on disciplinary knowledge, the CCSS has not necessarily done a better job of identifying the content of literature than previous standards documents or, for that matter, literature anthologies available in the marketplace. In emphasizing disciplinary knowledge, however, the CCSS open the way for educators to attend to the critical content that is part of the disciplines, including the humanities.

*Implications for Implementation.* For true integration of disciplinary and language processes to occur, actions need to occur outside the classroom—in state departments, district offices and at departmental and school levels. Granted, there are things that teachers can do on their own and even in local sites, but the critical point here is that collective action is required to

move this agenda forward. Some examples of efforts groups of teachers might undertake:

- Educational units are going to need to achieve clarity on major curricular themes. There is some guidance on how educators can go about identifying these themes (Lipson, Valencia, Wixson, & Peters, 1993; Valencia & Lipson, 1998) and convincing peers to adopt them over more conventional approaches to curriculum..
- In literature (as in other disciplines), teachers need to make selections of texts and tasks with a clear view of the larger themes and understandings of human experience that these texts and tasks could promote. Themes are big ideas or enduring questions that have relevance for the people of a diverse society in many aspects of their lives, both in and out of school. An example of a theme that possesses enough “gravitas” to sustain inquiry over time might be that “Culture and life experience influence how people respond to challenges they face.” This is quite different from a statement such as “Friends must learn to get along.” Getting serious about the knowledge dimensions of literature teaching is essential here; otherwise literary themes may be easily trivialized into fluff that fails to build knowledge and insight.
- Science is a good place to start. Not only because there is more work on the science-literacy integration agenda but also because the emerging national science standards (National Research Council, 2012) take on literacy and language as an essential part of learning science. Learning the oral and written discourses of science is as prominent in these new standards as is the acquisition of content and engagement of inquiry processes.

### **Research and Media**

*Students cite specific evidence when offering an oral or written interpretation of a text.*

*They use relevant evidence when supporting their own points in writing and speaking,*

*making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.* (CCSS Initiative, p. 7)

***The perspective.*** No book, no library, no learning environment in human history has had the capacity to make available to students the volume of information, the variety of forms of information, and the connections within and across information sources that we now have in digital environments (Cavanaugh & Blomeyer, 2007). The digital-global age is making knowledge available in ways not experienced by previous generations. To be ready for college, the workforce, and life in this digital-global world, students need the ability to gather, comprehend, evaluate, synthesize, and report on information and ideas from an extensive volume and range of print and nonprint media. They also need to be able to evaluate, create and contribute to information on topics and, in doing so, use the full range of media. Students' ability to use and contribute to knowledge using a range of media is embedded throughout other standards in the CCSS.

Educators, community members, legislators—all agree with the essential role of students' acquisition of high levels of proficiency in using technologies to gain, organize, critique, and share knowledge. How to reach this goal with large numbers of students in a world where new technologies and access to new stores of knowledge proliferate by the hour is the challenge. The research and media goal of the CCSS is known as informational literacy among the professional group that has traditionally been responsible for archiving and organizing knowledge—librarians (Rader, 2002). From the perspective of informational literacy, a distinction needs to be made between using multiple resources for acquiring knowledge and for organizing and sharing knowledge. A variety of skills and strategies are involved in using resources on the Internet to research a question or to solve a problem. As Labbo and Reinking (1999) have described it,

individuals need to become their own librarians--adept at locating and evaluating sources of information. When the task involves sharing information that has been gained from research, regardless of whether it is first- or second-hand, individuals need to be able to organize their information in ways that communicate to others. To do this requires skill at selecting the appropriate media for communicating and, within any given medium, the appropriate ways to organize information.

A distinction between knowledge acquisition and knowledge communication is not articulated within the CCSS. Nor will educators find a wealth of information on how knowledge acquisition and knowledge communication with digital environments can be developed. In particular, we know of no large-scale projects, over the K-12 span, that illustrate how teachers can guide students in either the gaining knowledge or the organizing/sharing knowledge dimension. Writers from the field of information literacy frequently recommend the use of projects to develop both knowledge acquisition and knowledge communication proficiencies. Project-based learning has a long history (Darling-Hammond, Barron, Pearson, Schoenfeld, Stage, Zimmerman, Cervetti, & Tilson, 2008), dating back at least to Dewey within American education and is most evident in several decades of work in science education, such as the examples described earlier.

For most teachers, project-based learning will be a challenging venture. When it is coupled with the demands for integration of various technologies, its widespread use, at least in the immediate future, is dim. Keeler and Langhorst (2008) have suggested that teachers be supported in ways of moving from simple integration of technology (e.g., using a particular kind of software) to more complex forms (e.g., students' contributions to a book blog) in a series of small steps. But this progression does not address developmental issues. Developmental issues

can be viewed from both the perspective of children of different ages but it can also be viewed in terms of the development of particular proficiencies within students of any age. In terms of the first concern, a critical question is the age at which children should become involved with a variety of technologies and the amount of time that such involvement should take. For example, how much time should kindergartners be spending with digital devices?

With regard to the second face of developmental progression, the manner in which the “critical reading” of resources available on digital devices progresses has yet to be documented. The manner in which graphics, animation, and gaming components influence students’ critical stance, in particular, requires examination.

There is a substantial amount of work left to be done about the acquisition of knowledge and the sharing/organization of knowledge by students that might ultimately guide any large-scale effort to infuse this digital perspective into American classrooms. Even a short tour of websites, however, indicates that there is considerable teacher activity and many powerful reports on how students’ acquisition of knowledge and also their communication of knowledge are enhanced through technology. The movement in this domain is so rapid that documentation and evaluation lag far behind the implementations in real classrooms. The knowledge resources in a variety of media are many. The work to understand how students can be supported in powerfully using the technological resources currently available—both to acquire knowledge and communicate their own knowledge—requires documentation, evaluation, and substantial collaboration among teachers, industry, and researchers.

*Implications for Implementation.* Among ways to support media and research proficiencies are the following:

- Teachers should support students, even in the primary grades, to use a variety of resources to find answers to compelling questions.
- Teachers should support students, beginning in the primary grades, to organize information that has been learned, and to develop means for sharing that information.

### **Text Complexity**

*The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. Standard 10 defines a grade-by-grade “staircase” of increasing text complexity that rises from beginning reading to the college and career readiness level. (CCSS, page 31).*

**The perspective.** The 10<sup>th</sup> and final reading standard of the CCSS calls for students to have the capacity to read, compared to their grade level counterparts from earlier eras, more complex texts for their own grade level. The hope, and expectation, is that by upping the ante at every grade level beginning in grade 2, within 5 or 6 years high school graduates’ will actually be able to read the complex texts of expected of them in college and the workplace. This focus on text complexity derives from concerns that today’s high school graduates are not prepared to read the materials of college or in the workplace (ACT, 2006). The CCSS is the first standards document, either at the state or national level, to include a standard devoted solely to students’ capacity to read increasingly complex text over the grades. In previous standards documents, student reading proficiencies were described in relation to “grade-level text,” but grade-level text was assumed rather than defined.

The CCSS writers provided two sources of guidance for educators (and test makers) to determine the progression in text complexity: (a) a tri-partite model of text complexity and (b) exemplars for steps along the grade-by-grade staircase. The dimensions of the tripartite model

are *qualitative* (i.e., levels of meaning or purpose, structure, language conventionality and clarity, and knowledge demands), *reader and task dimensions* (i.e., elements of instruction that teachers address in assignments, lesson planning, and moment by moment scaffolding); and *quantitative* (e.g., readability formulas that address word familiarity/frequency and syntactic complexity as well as newer measures that report on referential or deep cohesion).

In Appendix A, CCSS writers indicated that further guidance on qualitative dimensions would be forthcoming but, within the standards document, only one quantitative system was presented—the Lexile Framework (Metametrics, 2000). Lexiles for grade-level bands, starting with grades 2-3, were recalibrated to ensure that the final point on the staircase—Grade 11-CCR—would match the Lexiles of college and career texts. The second form of guidance provided by the CCSS is in Appendix B that provides text exemplars that illustrate the nature of complexity and high-quality texts at different grade bands.

The specification of a grade-by-grade staircase with quantitative levels and the provision of exemplar texts for different grade bands are the features that distinguish this standards document from its predecessors. A standard that addresses the complexity of the text makes eminent sense (one can only wonder why this standard has been overlooked in previous documents). But the underlying theory and research on text complexity that would support creation of state and district curricula and programs is in short supply.

Evidence for particular assumptions regarding text complexity within the CCSS is sparse and, in some cases, nonexistent. Two telling examples of assumptions lacking a substantive evidence base—(a) the ramp up trajectory and (b) expectations about struggling readers. There is no basis, at least that we can determine, for beginning the ramp-up process in second grade to ensure that high school students are at CCR levels (Hiebert, 2012); one could make an even more

plausible argument for beginning the ramp-up at, say, grade 6. Regarding the plight of struggling readers, what makes us think that the current population of struggling readers, for whom the goal of grade level texts is elusive, will suddenly master texts that far outstrip their reading level (Hiebert & Van Sluys, in press) just because we have asked them to try harder. We don't see how we can begin to enact higher standards for increased text complexity unless we also up the ante on the availability of strategies for scaffolding students' attempts to cope with texts that far exceed their reading current capacities. And we don't see how that can happen without a dramatic increase in teachers' knowledge about text and pedagogy.

One other concern centers on complete disregard for two key ideas that have been part of the rhetoric of individualized instruction for decades—(a) that there exists an optimal trajectory of difficulty for each child, and (b) that students make the most progress in mastering increasingly difficult text when they are working squarely in their “zone of comfort”—not too easy but not too hard. There is no room for between-student accommodations of this sort when the ramp-up is in play.

Our concerns aside, amidst many unanswered questions, educators in states and districts need to press on to identify texts that align with the standards. In the next section, we identify how educators can respond in responsible ways. We do underscore the need for answers to questions about text complexity from the research community. We have yet to develop the research base that could help teachers and administrators stand up to this challenge.

**Implications for implementation.** We offer guidelines to three groups of educators—leaders at district- and state-levels, leaders at school sites (principals, literacy coaches), and classroom teachers.

*At the state or district level.* In many contexts, teachers do not have the prerogative of choosing the primary texts of instruction. Often, these choices are determined on a district or, in some cases (e.g., CA, TX, FL), by state committees. Decisions at these levels will likely be highly influential in the interpretations of the CCSS text complexity standard. We offer the following suggestions for implementation to those involved in text selection:

- Educators need to make qualitative criteria clear for the selection of texts selected for use in states and/or districts. The four qualitative dimensions (derived from ACT (2006)) identified by the CCSS writers (list the four here as a reminder) have already been presented. One instantiation of this system that is currently popular describes each of these dimensions on a scale of “little” to “much” and an overall score is given to a text, irrespective of differences on the four dimensions (Copeland, Lakin, & Shaw, 2012). Two questions need to be answered here: a) whether these four dimensions capture the critical traits that matter in comprehension and (b) whether different traits would not be expected to have different manifestations or different effects at particular developmental points. That is, a number that summarizes the qualitative features fails to capture the very elements of texts that should be the growing edge for students.

*At the school level.* The CCSS provided exemplars of complex texts at different levels but failed to describe what made these texts complex for students at particular grade bands (they also neglected to ensure that texts fit the Lexile parameters set for grade bands). What the CCSS writers failed to do is what teachers in schools (and in professional development venues) need to do to understand how text features influence their students’ understanding of texts.

- Teachers within and across grade levels need to select texts that are “anchors” for different points for a grade or grade band. In the case of the primary levels where growth

in reading is substantial, benchmark texts should be identified for different periods in the school year (e.g., trimesters or semesters). The texts are not the ones that are taught but, rather, provide a “North Star” for reading instruction and evaluation.

***At the classroom level.*** Even when teachers are required to use the particular texts assigned to them, they can still take actions that can either facilitate or hinder their students’ growth in learning from complex texts. Among those actions:

- Helping students understand the difference in the nature of unique vocabulary in narratives and informational texts. The unique words of narratives are typically synonyms or nuanced meanings for concepts that, at their core, students know (*timid/full of fear*). The unique words of informational texts, by contrast, often represent concepts that students do not know AND are core to understanding the content (e.g., *photosynthesis, convection, nonrenewable resource, inflation rate*). A reader may be able to slide by *timid* but not *photosynthesis*.
- Teachers can and should give students opportunities to pursue topics of personal interest. In international comparisons, American students have adequate reading performances but their interest in reading is among the lowest in the world (Mullis, Martin, Gonzalez, & Kennedy, 2003). Until American students are invited to explore their interests with text, they are unlikely to read extensively unless “they have to.” Even the chance to select from among two or three texts can increase students’ engagement as readers (Guthrie, Wigfield, Humenick, Perencevich, Taboada, & Barbosa, 2006). The real benefit of offering students choice is increased engagement with reading more text for longer periods of time, thus building both knowledge and stamina for reading on their own.

- Teachers need to ensure that their students read sufficient amounts of text (*volume*) and also read increasingly longer selections (*stamina*). The amounts of time devoted to reading in classrooms and the amount of text that students are expected to read and use in tasks appear to be less than optimal in many American classrooms (Brenner, Hiebert, & Tompkins, 2009; Hiebert, Wilson, & Train, 2010). If students are to be prepared for the complex texts and tasks of college and careers, increasing the amount of text that students are given and the size of chunks that draw on this knowledge needs to be a priority of elementary schools. Opportunity, volume, and stamina should be the goals for these personal reading programs.

### **Conundrums, Dilemmas, and Unanswered Questions**

As well-intentioned as standards seem (who can oppose the goal of high achievement on rigorous standards for all students irrespective of demographic circumstances), they have a checkered history in closing the achievement gap between educational haves and have-nots. In this section, we address what might be construed as the potential “dark” side of the CCSS. Unsurprisingly, most of our concerns are future-oriented because they depend largely upon how the standards will be implemented. The validity and efficacy of the CCSS, as with all previous standards efforts, will depend not so much on the goals they promote, but on the degree to which they are implemented in a way that *supports* and *defines* excellence—so that they actually *do* promote more equitable achievement rather than just provide another opportunity for us to demonstrate to ourselves what we have known for all too long: that we, as a profession and a nation, are much better at advancing the achievement of those students least in need of our help (see Lagana-Riodan & Aguilar, 2009 for an account of how the last decade has seen children of the wealthiest Americans make the greatest gains in achievement). In this section, we address

several of these potential unintended consequences, with the goal of maximizing the likelihood that we do not fall victim to them as these promising standards are translated into curriculum, pedagogy, and assessment in schools.

Our experience in working with the standards since their adoption in June of 2010 in a variety of settings has brought several of these troubling possibilities to the surface. We share them here, not so much to discourage educators from adopting and adapting the standards as to ensure that educators use them with a complete awareness of their constraints and affordances.

### **Upping the Ante on Text Complexity**

An explicit goal of the CCSS is to increase the level of challenge of the texts that students read in grades 3-12. The stated purpose of this move is to close, or at least narrow, the gap in text complexity of approximately 200 Lexiles (roughly two grade levels) that exists between the average grade 12 and the average college freshman text. The expectation is that if the profession, can gradually increase text challenge over the grades, in a few years students will leave high school ready to meet the challenge of college freshman level texts. The further hope is that this process will eventually reduce our reliance on remedial courses (about 40% of entering freshman take them) in community colleges and universities.

This is a noble goal, but it is not at all clear how it can be achieved. Just raising the bar on the complexity of texts that students are required to read at any grade level won't make it happen. Right now, educators struggle to help students meet the challenge of the texts that fall short of the mark for college readiness at the high school level. What makes us think that by raising the expectations and exhorting teachers and students to try harder that we will all meet the challenge. It reminds us of the early days of the first standards movement in the early 1990s, when the theory of action was that, by raising the bar, all the players in the system—administrators,

teachers, and students—would be motivated to try harder to meet higher expectations. That is, standards/assessment/accountability would lead to clear expectations and motivation that leads to higher levels of performance. It didn't work! By the mid 1990s, reformers had learned that they had to add professional development and teacher knowledge and practices to their theories of action as mediating variables to help meet the challenge.

Without infusing major changes in professional development for teachers and curriculum designers (so that those who design and deliver challenging texts understand the critical features of texts), increasing text complexity will be little more than a cruel hoax visited upon teachers and students. Increased text challenge will not lead to increased capacity for students to deal with complexity without increased teacher scaffolding and knowledge of the nature of text and language (see Fillmore & Snow, 2000) and how to scaffold conversations around text (see Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009) in order to manage complexity. It's not at all clear to us how anything short of a major investment in the development of teacher knowledge about text at all levels and in all disciplines will allow that to happen.

### **Keeping our Word on Models of Complexity**

The standards document promises to assess text complexity in the three ways described earlier: quantitatively, qualitatively, and by matching reader to text and task. Our fear is that both the *qualitative* and *reader and text* dimensions will either drop out when the standards are implemented at the state level or, equally as problematic, they will be given only token lip service. In short, states and districts will monitor the quantitative indices, leaving the other two categories to “fend for themselves.” Thus, when all is said and done, only the quantitative indices will have any “teeth” and bear any consequences in shaping curricular expectations. If this happens, it will be a great loss to the teaching profession because teachers have much to learn

about the nature of text complexity and ways of responding to it in collaborative examinations of a particular text and how to manage its tough patches when attempting to make it accessible to students under their tutelage.

Some of us, ourselves included, were expecting the CCSS sponsors to create resources, such as a website in which teachers would contribute the plans/accounts of how they had successfully managed to engage their students in reading and responding to particular texts. Imagine what a resource that might be—where any teacher could find 5, 10, 20, 50 or even 100 accounts of how teachers in specific settings with particular groups students had negotiated their way through popularly used texts. The teachers' editions of basals and literature anthologies would pale in comparison to such highly contextualized stories of classroom implementation.

Our skeptical nature compels us to predict that the qualitative and reader-text dimensions will never see the light of day as the standards are implemented. Nothing would please us more than to be chided, a decade from now, for having been so pessimistic in our predictions.

### **We Already Do that!**

In any organization, a major strategy for dealing with the novelty of change is to assimilate it by asserting prior ownership, expressed in the oft-heard response, “That’s nothing new! I’ve been doing that for years!” The implication is that if we are already doing it, then there is no reason to change what we are doing. So business as usual prevails! Reform accommodated! Next?

The degree to which this sort of assimilation of the CCSS is possible depends entirely on the “grain size” at which the match between past and future practice is made. If a state committee lines up the CCSS with their current ELA standards and asks, Where in our current standards do we have language that maps onto the CCSS?, then they will be able to easily dismiss the CCSS

as “same old, same old”. But if they take a more careful and deliberate approach to examining the CCSS ELA, one in which they examine the entire “logic” of the standards, complete with the appendices that define tasks, exemplars, and common texts that might be used, then there will be little overlap between the old and the new. For starters, few, if any state standards we know of ground the standards within genre and disciplinary contexts in the same way and at the same level of detail of the CCSS. For another, few state standards documents invite an integrated view of the English Language Arts AND support an analysis of the synergies between ELA and disciplinary learning in the way that the CCSS do. In short, only a shallow reading and mapping will support pigeonholing the CCSS as nothing new; dipping even slightly below the surface of both existing and new standards demands a call to action for a new way of thinking about the relationship between ELA and disciplinary learning.

### **Bait and Switch**

We chose this highly pejorative metaphor of bait and switch intentionally as the title for this section, not because we believe that the designers of the standards and its implementation documents had any malevolent intentions in mind when they shaped this effort, but because that’s what things look like from the perspective of the consumers of the standards—the educators at the local level who will have to live with the consequences of their implementation. If we had only had to deal with the standards, this might never have become a concern. However the publication of a recent document on the core standards website, labeled “publishers guidelines” (Coleman & Pimentel, 2011) alarms us greatly and leads us to wonder whether the letter and spirit of the standards document has been sacrificed at the altar of shaping published programs and materials. We’ll unpack passages from the publishers guidelines document and compare them to statements from the original standards documents to allow readers to decide for

themselves whether the bait and switch label is appropriate.

**Language from the standards.** Earlier, we suggested that the standards are noteworthy (and a refreshing change from the “mandate” frenzy of NCLB) for the degrees of freedom that they cede to the local level, even classroom teachers, with our citation from the introduction (p. 2) that the Standards “leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics should be addressed.”

This statements sounds similar to the logic of standards in the first wave (early 1990s): Standards specify the goals of instruction, leaving the means of achieving them to teachers, schools, and districts. For the first several years of the standards movement, this logic prevailed. Then, NCLB came along and mandated schools to use curricula that were based on “scientifically-based reading research”, which was interpreted to be whatever was in the National Reading Panel (NICHD, 2000) report. Once this was done, both the ends (the standards) and the means (the set of curriculum programs that met the SBRR standard) of reading curriculum were set, leaving no room for teacher prerogative or local signature. Could something like this happen with the CCSS?

We provide a sequence of verbatim passages from the Publisher’s Guidelines (Coleman & Pimentel, 2011) to illustrate how they undermine the promise of teacher choice promised in the standards themselves:

***Regarding the nature of texts:*** “A significant percentage of tasks and questions are text dependent...Rigorous text-dependent questions require students to demonstrate that they not only can follow the details of what is explicitly stated but also are able to make valid claims that square with all the evidence in the text. Text-dependent questions do not require information or evidence from outside the text or texts; they establish what follows

and what does not follow from the text itself.” (page 6)

***Regarding questions and tasks:*** “The Common Core State Standards call for students to demonstrate a careful understanding of what they read before engaging their opinions, appraisals, or interpretations. Aligned materials should therefore require students to demonstrate that they have followed the details and logic of an author’s argument before they are asked to evaluate the thesis or compare the thesis to others.” (page 9)

***Staying close to the text.*** “Materials make the text the focus of instruction by avoiding features that distract from the text. Teachers’ guides or students’ editions of curriculum materials should highlight the reading selections...Given the focus of the Common Core State Standards, publishers should be extremely sparing in offering activities that are not text based.” (page 10)

These directives to publishers directly contradict the commitment to teacher prerogative promised in the standards (setting aside for another essay the fact that they reveal a professionally suspect and long-abandoned text-centric perspective on the topic of close reading). The biblical reference, “What the right hand giveth, the left hand taketh away”, seems apt here. Promise teachers some professional choice in the standards and then direct publishers to write teacher guides with scripts that remove all the choice! Bait and switch? You decide.

### **Assessment**

It comes as a surprise to absolutely no one who has lived through the last 20 years of educational reform that the assessments developed to measure progress in meeting curriculum standards matter more than the standards themselves (National Research Council, 1999; Pearson, 2007; Shepard, Hannaway, & Baker, 2009). The very logic of accountability systems demands that assessments play this lynchpin role. And the tighter we make the link between standards and

assessment—and the finer the grain size at which we measure progress (e.g., a subtest for every letter sound rather than a subtest for letter sounds as a group), the greater the likelihood that assessments will drive instructional activities in the classroom (Paris, 2005; Pearson, 2007). If this practice is followed to its logical conclusion, then the assessment system becomes the default curriculum, shaping virtually all aspects of instruction as schools “teach to the test” through test preparation activities that can last for weeks, even months, in anticipation of the state standards test.

This puts a great burden on the tests we use to monitor progress—for individual students, teachers, and schools. What if the tests are not up to the task? What if they don’t really measure the knowledge or the process they are designed to measure? Then students will have practiced, and teachers will have taught, material or skills that don’t actually lead to increases in what is supposed to be measured. Haladyna, Nolen, and Hass (1991) have aptly labeled this shortcoming as *test score pollution*, which refers to an increase or decrease in a score on a test without an accompanying increase or decrease in the construct being measured. In short, students might get better (or worse) reading test scores without being able to read any better (or worse) than before.

Pollution is a concern for all assessments. Complex performance assessments and even portfolio systems can fall victim to the malady just as easily as multiple-choice standardized tests. When the stakes attached to an assessment are high, the temptation to seek higher scores without greater learning is always there, and it must be monitored with vigilance. Surely we want students to achieve higher scores on assessments, but because they learned more about the content or practice assessed not because they practiced the test format and content more assiduously and more often. In the early 1990s, when the first standards movement was born, there was a widespread call for complex performance tasks to replace what most scholars

regarded as the more easily corruptible standardized tests. To paraphrase what Resnick and Resnick (1992) and Wiggins (1999) have said: if schools are going to teach to the test, then let's have tests worth teaching to. A noble goal that is still quite elusive in our educational system. Why? We believe that it is the stakes that are attached to a test, not its content or format, that propels the counter-productive teaching to the test syndrome that we all complain about but continue to enact on an annual basis in our schools.

As Pearson (2007) has pointed out, this situation makes a mockery of the age-old tradition of transfer as the gold standard for assessing learning. If what is “on the test” is highly consequential, what well-meaning teacher would encourage students to eschew what is right in front of them and instead study and apply what they are learning to novel (and risky, in terms of test scores) tasks and formats. Practicing what is on the test is an age-old tradition, spawning the phrase, the tradition of past exams, as a way of characterizing what students did (and do) to get ready for tests of consequence for either themselves or their schools. Doesn't seem to matter whether it is a low-level high school exit exam or an advanced placement exam (or a bar exam for that matter), teaching to the test is a pervasive practice—one that discourages extending one's knowledge or skill far beyond the boundaries of the anticipated test.

Stakes aside, we believe that more complex assessment tasks—tasks that require the orchestration of many skills, strategies, and concepts—stand a much better chance of promoting productive, engaging pedagogy than do multiple-choice assessments of componential skills, particularly in reading and writing assessments. And so, apparently, do the developers in the two large consortia that have been funded to build world-class assessments of the Common Core standards. Both Performance Assessment for Readiness for College and Careers (PARRC; 2011) and Smarter Balanced Assessment Consortium (SBAC; 2012) are developing hybrid assessments

that balance the use of multiple-choice tests to maximize coverage of lower-level skills and concepts with extended constructed response (short essays of 100-300 words) and genuine performance tasks (activities that might take 2 or 3 hours to complete over more than one day) to measure deeper learning or transfer of skills and knowledge to new scenarios.

It remains to be seen whether these consortia will be successful in building exams that rely on complex performance tasks for task completion and employ human judgment in scoring. The major question is whether these assessments will pass the tests of feasibility, affordability, and psychometric rigor when they are put to use in wide-scale assessment systems across the entire grade span. Both of us recall the burst of enthusiasm that accompanied the performance assessment efforts of the early 1990s (Pearson, Spalding, & Myers, 1998; Valencia, Hiebert, & Afflerbach, 1994), as well as the bitter disappointment that ensued when these assessments did not stand up to the financial (who can afford to score them?), political (don't be evaluating my kid's values and thoughts—just whether he has mastered the facts of the curriculum), and psychometric (the assessments cannot demonstrate inter-task generalizability—the scores of individuals might well be an accident of the particular task they were asked to complete). And it wasn't that there were not success stories. There were. For example, the assessments in states like Maryland, Kentucky, Vermont, and Washington survived for years with some combination of performance tasks and portfolios. But eventually, by the time NCLB was in place, all but a few pockets of these traditions had been replaced with conventional multiple-choice assessments. As we look toward the future, one wonders: In schools where financial resources are scarce, where political will is weak, and where stakes for individuals are high, can this new batch of constructed response and performance tasks meet the daunting challenge that lies ahead of them?

In one sense, there is no choice. The challenge must be met—primarily because mastery of the CCSS for the English Language Arts cannot be measured easily (if at all) with simple, skill-by-skill, multiple-choice tests. Perhaps some of the standards in Cluster One, Key Ideas and Details, could be measured with simpler tests. Maybe even some of the structural aspects of text invited by Cluster Two—Author’s Craft and Structure. But few if any of the standards in Cluster Three—Integration and Interpretation—lend themselves to anything less than constructed responses and, even more appropriately, performance examinations. So the challenge is there. The assessment players in PARCC and SBAC seem to be prepared to try to develop these sorts of measures and make them work, even as a part of large-scale assessment. It remains to be seen whether we, as a profession, will succeed in meeting a challenge that our predecessors have consistently failed to meet.

### **Coda**

A quick reminder of what we have tried to say in this opening chapter and a quick peek at what the remainder of this volume has to offer you as a reader. By way of summary, our goal has been modest—to remind you of what the standards are really about, to emphasize what’s new and different about them (and what that means about trying to implement them, and to heighten your awareness of some of the vexing issues that will have to be settled as we move toward implementation (or decide what’s worth implementing and what isn’t).

In truth, our modest introduction is little more than a prelude to the remainder of this volume. In the chapters that follow, you will re-encounter the themes and issues for which we have but scratched the surface plus many more that space did not permit us to touch upon. When you encounter these issues in greater depth, you’ll develop a clearer sense of how to manage your local efforts to implement, accept, and/or reject the CCSS—what to emphasize, what to

downplay, what to tackle first, what later, what never. We wish you luck in the process and on the journey. It certainly won't be boring. And with a little luck it will be both interesting and worthwhile.

## References

- ACT (2006). *Reading between the lines: What the ACT reveals about college readiness in reading*. Iowa City, IA: Author.
- Bandeira de Mello, V. (2011). *Mapping State Proficiency Standards Onto the NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005–2009* (NCES 2011-458). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, DC: Government Printing Office.
- Brenner, D., Hiebert, E.H., & Tompkins, R., (2009). How much and what are third graders reading? In E.H. Hiebert (Ed.), *Reading more, reading better* (pp. 118-140). New York, NY: Guilford.
- Cavanaugh, C., & Blomeyer, R. (Eds.) (2007). *What works in K-12 online learning*. Washington, DC: International Society for Technology in Education.
- Cavanaugh, M. P. (1994). *A history of holistic literacy: Five major educators*. Westport, CN: Praeger.
- Cervetti, G. N., & Barber, J. (2008). Text in hands-on science. In E. H. Hiebert & M. Sailors (Eds.), *Finding the right texts: What works for beginning and struggling readers* (pp. 89-108). New York, NY: Guilford.
- Cervetti, G. N., Barber, J., Dorph, R. Pearson, P. D. & Goldschmidt, P. G. (2009, April). *Integrating science and literacy: A value proposition?* Symposium paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Coleman, D., & Pimentel, S. (2011). *Publishers' criteria for the Common Core State Standards in English Language Arts and Literacy, Grades 3-12*. Washington, DC: CCSSO & NASBE.

Common Core State Standards Initiative. (2010). *Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects*.

Washington, DC: CCSSO & National Governors Association.

Copeland, M., Lakin, J., & Shaw, K. (January 26, 2012). *Text complexity and the Kansas Common Core Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects*.

[http://www.ccsso.org/Resources/Digital\\_Resources/The\\_Common\\_Core\\_State\\_Standards\\_Supporting\\_Districts\\_and\\_Teachers\\_with\\_Text\\_Complexity.html](http://www.ccsso.org/Resources/Digital_Resources/The_Common_Core_State_Standards_Supporting_Districts_and_Teachers_with_Text_Complexity.html)

Darling-Hammond, L., Barron, B., Pearson, P.D. & Schoenfeld, A.S., Stage, E., Zimmerman, T.D., Cervetti, G.N., & Tilson, J.L. (2008). *Powerful learning: What we know about teaching for understanding*. San Francisco, CA: Jossey-Bass.

De La Paz, S., & Felton, M. K. (2010). Reading and writing from multiple source documents in history: Effects of strategy instruction with low to average high school writers. *Contemporary Educational Psychology*, 35, 174-192.

Evans, R. W. (2004). *The social studies wars: What should we teach the children?* New York, NY: Teachers College Press.

Fillmore, L. W., & Snow, C. E. (2000). *What teachers need to know about language*. Washington, DC: Center for Applied Linguistics.

Gavelek, J.R., Raphael, T.E., Biondo, S.M., & Wang, D. (2000). Integrated literacy instruction. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of Reading Research: Volume III*. Mahwah, NJ: Lawrence Erlbaum Associates.

Greenleaf, C. L., Litman, C., Handon, T. L., Rosen, R., Boscardin, C. K., Herman, J., Schneider, S. A., with Madden, S. & Jones, B. (2011). Integrating literacy and science in biology:

- Teaching and learning impacts of Reading Apprenticeship professional development. *American Educational Research Journal*, 48, 647-717.
- Guthrie, J. T., Wigfield, A., Humenick, N. M., Perencevich, K. C., Taboada, A., & Barbosa, P. (2006). Influences of stimulating tasks on reading motivation and comprehension. *Journal of Educational Research*, 99, 232–245.
- Haladyna, T. M., Nolen, S. B., & Haas, N. S. (1991). Raising standardized achievement test scores and the origins of test score pollution. *Educational Researcher*, 20(5), 2-7.
- Heller, R., & Greenleaf, C. L. (2007). *Literacy instruction in the content areas: Getting to the core of middle and high school improvement*. Washington, DC: Alliance for Excellent Education.
- Hiebert, E. H. (2012). The common core’s staircase of text complexity: Getting the size of the first step right. *Reading Today*, 29(3), p26-27.
- Hiebert, E. H., & Van Sluys, K. (in press). Standard 10 of the Common Core State Standards: Examining three assumptions about text complexity. In K. Goodman & R. C. Calfee (Eds.), *Using knowledge from the past to create the future: Perspectives from the Reading Hall of Fame*.
- Hiebert, E.H., Wilson, K.M. & Trainin, G. (2010). Are Students Really Reading in Independent Reading Contexts? An Examination of Comprehension-based Silent Reading Rate. In E.H. Hiebert & D. Ray Reutzel (Eds.), *Revisiting Silent Reading: New Directions for Teachers and Researchers* (pp 151-167). Newark, DE. IRA.
- Keeler, C. G., & Langhorst, E. (2008). From PowerPoint to podcasts: Integrating technology into the social studies. *Social Studies Research and Practice*, 3(1), 164-175.

- Labbo, L. D., & Reinking, D. (1999). Negotiating the multiple realities of technology in literacy research and instruction. *Reading Research Quarterly*, 34, 478-492.
- Lagana-Riordan, C., & Aguilar, J. (2009). What's missing from no child left behind? *Children & Schools*, 31(3), 135-142.
- Lipson, M.Y., Valencia, S.W., Wixson, K. K., & Peters, C. W. (1993). Integration and thematic teaching: Integration to improve teaching and learning. *Language Arts*, 70, 252-262.
- Lively, B. A., & Pressey, S. L. (1923). A method for measuring the vocabulary burden of textbooks. *Educational Administration and Supervision*, 9, 389-398.
- Magnusson, S.J., and A.S. Palinscar. 2005. Teaching to promote the development of scientific knowledge and reasoning about light at the elementary school level. In *How students learn: Science in the classroom*, eds. M.S. Donovan and J.D. Bransford, 421–474. Washington, DC: National Academies Press.
- McGuffey, W.H. (1836). McGuffey's First Eclectic Reader. Cincinnati, OH: Truman & Smith. Retrieved on March 14, 2011 at <http://www.gutenberg.org/files/14640/14640-pdf.pdf>
- MetaMetrics. (2000). *The Lexile framework for reading*. Durham, NC: Author. [Online]. Available: [http://lexile.com/about/\\_meta/press/21098b.htm](http://lexile.com/about/_meta/press/21098b.htm)
- Moje, E. B. (2008). Foregrounding the disciplines in secondary literacy teaching and learning: A call for change. *Journal of Adolescent & Adult Literacy*, 52(2), 96-107.
- Murphy, P. K., Wilkinson, I. A. G., Soter, A. O., Hennessey, M. N. & Alexander, J. F. (2009). Examining the effects of classroom discussion on students' high-level comprehension of text: A meta-analysis. *Journal of Educational Psychology*, 101, 740-764.

- Mullis, I. V. S., Martin, M. O., Gonzalez, E. J., & Kennedy, A. M. (2003). *PIRLS 2001 international report: IEA's study of reading literacy achievement in primary school in 35 countries*. Chestnut Hill, MA: International Study Center, Boston College.
- National Institute of Child Health and Human Development (NICHD) (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- National Research Council (1999). *Testing, Teaching, and Learning: A Guide for States and School Districts*. Washington, DC: The National Academies Press.
- National Research Council (2012). *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. Washington, DC: National Academies Press.
- Paris, S.G. (2005). Reinterpreting the development of reading skills. *Reading Research Quarterly*, 40(2),184-202.
- Partnership for Assessment of Readiness for College and Careers (November 2011). PARCC model content frameworks: English language arts/literacy (Grades 3-11. Retrieved on March 18, 2012 from [http://www.parcconline.org/sites/parcc/files/PARCC%20MCF%20for%20ELA%20Literacy\\_Fall%202011%20Release%20%28rev%29.pdf](http://www.parcconline.org/sites/parcc/files/PARCC%20MCF%20for%20ELA%20Literacy_Fall%202011%20Release%20%28rev%29.pdf)
- Pearson, P. D. (2007). An endangered species act for literacy education. *Journal of Literacy Research*, 39(2), 145-162.
- Pearson, P.D., Spalding, E., & Myers, M. (1998). Literacy assessment in the New Standards Project. In M. Coles & R. Jenkins (Eds.), *Assessing reading 2: Changing practice in classrooms* (pp. 54-97). London: Routledge.

- Polikoff, M. S., Porter, A. C., Smithson, J. (2011). How well aligned are state assessments of student achievement with state content standards? *American Educational Research Journal*, 48(4), 965-955.
- Probst, R. E. (1986). Three relationships in the teaching of literature. *The English Journal*, 75(1), 60-68.
- Rader, H. B. (2002). Information Literacy 1973-2002: A Selected Literature Review. *Library Trends*, 242-59.
- Resnick, L.B.. & Resnick, D, (1992). Assessing the thinking curriculum: New tools for educational reform. In B. Gifford & M.C. O'Connor (Eds.). *Cognitive approaches to assessment*. Boston: Kluwer-Nijhoff.
- Richards, I. A. (1929/2008). *Practical Criticism: A Study Of Literary Judgment*. Warrington, UK: Myers Press.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78, 40-59.
- Shepard, L., Hannaway, J., & Baker, E. (2009). Standards, assessment and accountability. Washington, DC: National Academy of Education.
- Smarter Balance Assessment Consortium (January 6, 2012). *Content specifications with content mapping for the summative assessment of the Common Core State Standards for English Language Arts & Literacy in History/Social Studies, and Technical Subjects*. Retrieved on March 18, 2012 from [http://www.smarterbalanced.org/wordpress/wp-content/uploads/2011/12/ELA-Literacy-Content-Specifications\\_010612.pdf](http://www.smarterbalanced.org/wordpress/wp-content/uploads/2011/12/ELA-Literacy-Content-Specifications_010612.pdf)
- Valencia, S. W., Hiebert, E. H., & Afflerbach, P. (Eds.) (1994). *Authentic reading assessment: Practices and possibilities* (pp. 218-227). Newark DE: International

Reading Association.

- Valencia, S.W., & Lipson, M.Y. (1998). Thematic instruction: A quest for challenging ideas and meaningful learning. In T.E. Raphael and K.H. Au (Eds.), *Literature-based instruction: Reshaping the curriculum* (pp. 95-123). Norwood, MA: Christopher Gordon.
- van den Broek, P. (2010). Using texts in science education: Cognitive processes and knowledge representation. *Science*, 328, 453-456.
- Varelas, M., Pappas, C., Barry, A., & O'Neill, A. (2001). Examining language to capture scientific understandings: The case of the water cycle. *Science and children*, 38(7), 26-29.
- Wang, J., & Herman, J. (2005). *Evaluation of Seeds of Science/Roots of Reading Project: Shoreline Science and Terrarium Investigations*. Los Angeles, CA: CRESST, UCLA.
- Wiggins, G.P. (1999). *Assessing student performance: Exploring the purpose and limits of testing*. San Francisco, CA: Jossey-Bass.
- Williams, J. P., Nubla-Kung, A. M., Pollini, S., Stafford, K. B., Garcia, A., & Snyder, A. E. (2007). Teaching cause-effect text structure through social studies content to at-risk second graders. *Journal of Learning Disabilities*, 40(2), 111-120.