Implementing the Common Core State Standards

The Role of the Secondary School Leader

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Leading Learning Communities
Introduction

As shown by MetLife’s 2010 Survey of the American Teacher, America’s educators strongly believe that all students should graduate from high school ready for college and a career (85 percent). Additionally, according to MetLife’s 2009 survey, 86 percent of teachers believe that setting high expectations for students will improve student achievement to that end.

The new Common Core State Standards (CCSS) are strongly aligned with those sentiments. Based on evidence of the skills and knowledge needed for college and career readiness, the CCSS expect students to engage deeply in a wide variety of informational and literary texts in ELA/Literacy and to be able to both know and do mathematics by solving a range of problems and engaging in key practices.

Since 2010, 46 states and the District of Columbia, or 85 percent of the nation’s public school students, have adopted the CCSS which effectively reset expectations for all students to a higher level – college and career readiness. The CCSS provide an opportunity to realize systemic change and ensure that American students are held to the same high expectations in mathematics and literacy as their global peers — regardless of state or zip code.

The success of such change requires the thoughtful attention of school leaders. As such, this Action Brief for secondary leaders is offered as a starting point, designed to increase awareness of the standards, create a sense of urgency around their implementation, and provide these stakeholders — who are faced with dramatically increased expectations in the context of fewer resources — with a deeper understanding of the standards and their role in implementing the standards.

Many additional resources are coming online, many of which are captured in Appendix B of this document. This Action Brief will provide no-cost takeaways, talking points and action steps that school leaders and counselors can begin to put into practice in their schools today.

A Primer on the Common Core State Standards

Both the mathematics and English language arts/literacy (ELA/literacy) standards demonstrate logical progressions through the grades so that teachers will understand how standards being taught on a particular day relate to the standards in other grades. In fact, teachers will be able to understand how their daily instructional plans help foster college and career readiness, provided the CCSS are well implemented.


With the CCSS, for the first time, teachers can clearly understand how the CCSS addressed in each day’s lesson connect to learning expectations in other grades. While college and career readiness may seem like a distant objective in the middle grades, the CCSS make it clear that every grade is critical to the future of each student. Now, teachers from kindergarten through twelfth grade are linked together in a continuous process of preparation for college and careers.

Therefore, implementation of the CCSS requires school leaders to think across grades, to consider not only learning at a specific grade level, but the progression of mathematical and literacy skills across grades. For the individual student, teachers and leaders will be guided by a picture of each student’s skill progression; moreover, to prepare students to be college- and career-ready, teachers and leaders must consider plans for learning across grades for individual students. Vertically aligned standards encourage school leaders to engage in more frequent conversations with their colleagues and promote vertical articulation among their PK–12 peers.

School leaders set a critical foundation for learning and success for all students. Principals are called upon to lead their teacher leaders through a process of examining their curricula and instruction and making adjustments so that students achieve at higher levels and are better prepared for subsequent grades.

The Case for Urgency

For most building leaders and counselors, the CCSS lay out a new set of expectations that are more cognitively demanding. The adoption of these standards means that all, not just some students should be on the pathway to college and career readiness. Such a pathway has never been more critical to students for their personal success, their economic success, and their success as citizens in a representative democracy.

Colleges, universities and employers want students to:

- Conduct research and apply that research to solve problems or address a particular issue;
- Identify areas for research, narrow those topics and adjust research methodology as necessary, and evaluate and synthesize primary and secondary resources as they develop and defend their own conclusions;
- Apply skills and knowledge across the content areas to solve real-world problems; and
- Model real-world situations and persevere in solving complex and novel problems.

Being ready for college means that a high school graduate has the English and mathematics knowledge and skills necessary to qualify for and succeed in entry-level, credit-bearing college courses without the need for remedial coursework. Being college ready means being prepared for any postsecondary education or training experience, including study at two- and four-year institutions leading to a postsecondary credential (i.e., a certificate, license, associate degree or bachelor’s degree).

As principals, counselors and business leaders know too well, the reality is that an 18-year-old who does not have the skills for college or career is effectively sentenced to a lifetime of

“\nIn the past, workers with average skills, doing an average job, could earn an average lifestyle. But, today, average is officially over.” — Thomas Friedman

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3 See Appendix A for more on college and career readiness.
marginal employment and second-class citizenship. School leaders and counselors have embraced the idea that all students should pursue postsecondary education and/or training and be college and career ready.

School leaders have learned a hard truth — college eligible does not mean college ready. U.S. college completion rates have not improved in three decades and currently hover around 50 percent. In 12 years, the United States will be short 25 million college graduates⁴, leading to numerous unfilled jobs.

Simply put, most states’ old standards set the bar too low. Moreover, state assessments were never intended to be an indicator of college or career readiness, at least not for 21st century careers. For example, one state that has an 80 percent proficiency rate on state assessments recently reported that only 38 percent of its high school graduates could enroll in credit-bearing courses without the need to take remedial courses.⁵

The time has come for building leaders and counselors to take up the civic and economic necessity to ensure that students leave their schools ready for college and career through focused attention on strong implementation of the CCSS and school transformation.

Start Now: Instructional Shifts
The CCSS require educators and school leaders to make fundamental shifts in practice. Some have called these shifts monolithic in scope. For school leaders and counselors, implementing the CCSS is not about thinking out of the box. It is about transforming the box itself.

The CCSS represent a real shift in instructional intent from high school graduation to college and career readiness. This shift in intent means profound changes in the way students learn and are assessed, in the way teachers teach, and in the way instructional leaders lead. The reality is that the responsibility for ensuring high-quality, transformative professional development and fidelity of implementation will fall squarely on the shoulders of the school leaders.

Raising literacy and mathematics achievement cannot be the work of a small group of teachers and cannot be done in one content area. For example, English teachers alone cannot be responsible for teaching reading and writing skills. With the CCSS, explicit literacy instruction is now a shared responsibility of all teachers throughout the school.

These are new, higher standards.

Most schools are building the capacity to effectively implement the new standards. School leaders, counselors and teachers will all need to take on the role of learner. Learning new ways of teaching and leading will take months and years of deliberate practice to master. Because each of the instructional shifts below can be expected to take years to implement with fidelity, school leaders will need both short- and long-term plans that are based on the assessed needs of students as well as the professional development needs of the teachers.

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The respective shifts required by the CCSS are as follows:

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<thead>
<tr>
<th>Six INSTRUCTIONAL Shifts in English language arts/Literacy</th>
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<tbody>
<tr>
<td><strong>1. Balancing Informational and Literary Text (PK–5):</strong> Students read a true balance of informational and literary texts. Elementary school classrooms are, therefore, places where students access the world — science, social studies, the arts and literature — through text. At least 50 percent of what students read is informational.</td>
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<td><strong>2. Building Knowledge in the Disciplines (6–12):</strong> Content area teachers outside of the ELA classroom emphasize literacy experiences in their planning and instruction. Students learn through domain-specific texts in science and social studies classrooms — rather than referring to the text, they are expected to learn from what they read.</td>
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<td><strong>3. Staircase of Complexity:</strong> To prepare students for the complexity of college- and career-ready texts, each grade level requires a “step” of growth on the “staircase.” Students read the central, grade-appropriate text around which instruction is centered. Teachers are patient, create more time and space in the curriculum for this close and careful reading, and provide appropriate and necessary scaffolding and supports so that it is possible for students reading below grade level.</td>
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<td><strong>4. Text-Based Answers:</strong> Students have rich and rigorous conversations that depend on a common text. Teachers insist that classroom experiences stay deeply connected to the text on the page and that students develop habits for making evidentiary arguments both in conversation and in writing to assess comprehension of a text.</td>
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<td><strong>5. Writing from Sources:</strong> Writing needs to emphasize use of evidence to inform or make an argument rather than the personal narrative and other forms of decontextualized prompts. While the narrative still has an important role, students develop skills through written arguments that respond to the ideas, events, facts and arguments presented in the texts they read.</td>
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<td><strong>6. Academic Vocabulary:</strong> Students constantly build the vocabulary they need to access grade-level complex texts. By focusing strategically on comprehension of pivotal and commonly found words (such as “discourse,” “generation,” “theory” and “principled”) and less on esoteric literary terms (such as “onomatopoeia” or “homonym”), teachers constantly build students’ ability to access more complex texts across the content areas.</td>
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## Six INSTRUCTIONAL Shifts in Mathematics

1. **Focus:** Teachers use the power of the eraser and significantly narrow and deepen the scope of how time and energy is spent in the mathematics classroom. They do so to focus deeply on only the concepts that are prioritized in the standards so that students reach strong foundational knowledge and deep conceptual understanding and are able to transfer mathematical skills and understanding across concepts and grades.

2. **Coherence:** Principals and teachers carefully connect the learning within and across grades so that, for example, fractions or multiplication spiral across grade levels and students can build new understanding onto foundations built in previous years. Teachers can begin to count on deep conceptual understanding of core content and build on it. Each standard is not a new event but an extension of previous learning.

3. **Fluency:** Students are expected to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize, through repetition, core functions such as arithmetic operations so that they are more able to understand and manipulate more complex concepts.

4. **Deep Understanding:** Teachers teach more than “how to get the answer” and instead support students’ ability to access concepts from a number of perspectives so that students are able to see mathematics as more than a set of mnemonics or discrete procedures. Students demonstrate deep conceptual understanding of core mathematics concepts by applying them to new situations as well as by writing and speaking about their understanding.

5. **Applications:** Students are expected to use mathematics and choose the appropriate concept for application even when they are not prompted to do so. Teachers provide opportunities at all grade levels for students to apply mathematics concepts in real-world situations. Teachers in content areas outside of mathematics, particularly science, ensure that students are using mathematics — at all grade levels — to make meaning of and access content.

6. **Dual Intensity:** Students are practicing and understanding. There is more than a balance between these two things in the classroom — both are occurring with intensity. Teachers create opportunities for students to participate in “drills” and make use of those skills through extended application of mathematics concepts. The amount of time and energy spent practicing and understanding learning environments is driven by the specific mathematical concept and, therefore, varies throughout the given school year.

Collectively, these shifts in the CCSS mean teaching and learning need to be organized to have students:

- **Conduct** short, focused projects and longer term in-depth research;
- **Produce** clear and coherent writing, whatever the selected format;
- **Communicate** research findings (speaking and listening skills) and mathematical thinking;
- **Model** quantitative problems with mathematics;
- **Persevere** in solving problems; and
- **Reason** deeply about mathematics and mathematical situations by applying concepts to real world situations while demonstrating higher-level thinking.

Beyond knowing about the standards, principals and counselors need to know how schools must change to successfully implement the CCSS. School leaders need a practical understanding of
the schoolwide changes made necessary by the new CCSS and how to lead those changes to create a culture of success in schools. Such change does not happen by itself in schools. It results from changes in attitudes encouraged by new information, reflection and changes in practice. School leaders will need to engage in both instructional leadership and systemic leadership to affect the necessary changes.
Implementing the CCSS for Secondary School Leaders

Start Now: Schoolwide Changes

The shift in instructional goals from high school completion to college and career readiness effectively places each and every student on a pathway to college and career readiness. The CCSS were developed using a **backward design** beginning with college- and career-ready standards and working back through each grade, resulting in **grade-level shifts** in content down through the grades.

Successful implementation of the CCSS requires that national and state educational leaders work hand-in-hand with building principals. Building principals need to be able to turn to educational leaders for guidance and need to both understand the CCSS vision and be willing to put in the hard effort that is required to shift expectations, curriculum, and instruction in their schools. This will take time, patience and resolute leadership.

School leaders will need to focus on building teacher capacity, not inspecting individual processes, and must remind themselves that these changes are profound and will be intimidating to many teachers. Therefore, school leaders must work to create a teacher-friendly culture in which the norm is trying new things and running the risk of making mistakes.

**Schoolwide Change #1: Culture.**

The principal, with the support of the district and state, will be the key to the success of the standards. Study after study points to the principal as the single key to a strong school culture. Having an effective principal in a school is nearly as important as having an effective teacher in each classroom. An effective principal accounts for 25 percent of a school’s impact on student gains, while teacher effectiveness accounts for 33 percent. While each teacher may have greater impact on his or her own students, the principal affects the entire school culture in addition to the performance of each and every teacher and student in the school.

Just as the culture of the classroom is the sum of the teachers’ attitudes and expectations, so too, the school culture is a result of the staff’s collective thoughts, beliefs, expectations and conversations that lead directly to both individual and group behaviors. If these new ways of interacting and teaching are practiced consistently over time, they will turn into new habits and new patterns of behavior.

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A recent survey revealed that 73 percent of teachers think they are prepared to teach the CCSS.

Given that many states and districts have only just begun to implement the CCSS, such a high percentage raises questions about just how deeply educators across the system understand the CCSS.

Since it is likely such deep knowledge is only now taking root, middle and high school leaders will be faced with recalibrating teachers’ expectations relative to the amount of learning that needs to be done.


“**If you attempt to implement reforms but fail to engage the culture of a school, nothing will change.**”

— Seymour Sarason

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Are you driving your school’s culture, or is your culture driving you?
Because culture drives decisions and, ultimately, behavior, they are simply the reflection of the mindsets or expectations of the staff. In high-performing schools, these practices reveal a focus on student needs as opposed to staff wants.

Strong school culture results faculty and staff who are:  
- More adaptable to change;  
- Higher motivation;  
- More commitment;  
- More cooperation and collaboration;  
- Better able to resolve conflicts;  
- Greater capacity for innovation; and  
- Effective in achieving goals.

**Action Steps: Culture**

Principals set the tone for a climate of trust and a culture that is open to innovation, focused on improvement, and ready to work hard for common goals.

Schools with strong cultures have leaders who focus on four general areas:

- Through frequent conversations, school leaders keep the focus on learning by acting as a catalyst to build partnerships with teacher leaders, instructional and literacy coaches, and technology specialists.
- Build collaborative cultures characterized by conversations centered around student learning and reflective inquiry, shared ownership, and short- and long-term thinking.
- Build trust through shared decision making, frequent communications, frequent visits to classrooms and consistency over time.
- Grow leaders by creating opportunities for teacher leadership to emerge and by sharing and distributing leadership throughout the school. This prepares schools for the reality that “many tasks... require many leaders.”

**Schoolwide Change #2: Literacy Instruction**

The CCSS envision the literate 21st century student who possesses the reading, writing, listening and speaking skills necessary for success in college and career.

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8 [www.kappanmagazine.org/content/92/5/52.full](http://www.kappanmagazine.org/content/92/5/52.full)
The success of the new standards will depend heavily on the ability of school leaders to implement schoolwide literacy initiatives in their schools. In a literacy-rich school environment, cross-content or schoolwide literacy instruction has moved from an option to a necessity. In addition to English teachers, mathematics, science and social studies teachers will be expected to integrate literacy throughout their instruction on top of the more rigorous course content.

Cross-content or schoolwide literacy — reading, writing, speaking and listening — is perhaps the most significant change faced by middle schools and high schools.

Despite a shift in attitudes toward literacy instruction and advances in the field of adolescent literacy, few middle and high schools across the country have successfully implemented or attempted to implement a comprehensive schoolwide literacy initiative.

From a practical standpoint, middle schools and high schools currently lack the capacity to integrate literacy instruction in the content areas. Even if teachers are receptive to the idea of incorporating literacy into their daily instruction, they lack the training and resources needed to deliver that instruction. The result is the need for building principals to begin immediately to start building teacher capacity, which begins with addressing common misconceptions about literacy instruction.

Overcoming Three Common Misconceptions to Literacy Instruction

1. “Students ‘should’ already know how to read.”
   Response: “First, with a few exceptions, students are functionally literate but lack the skills needed to read academically at grade level. Second, all students can learn, but not all students learn at the same rate or in the same way. Many students, particularly under-resourced students, need direct, explicit literacy instruction every year, or their skills will not improve. Finally, literacy instruction is not just for struggling learners. Even our best students need to improve their reading and writing skills.”

2. “I don’t have the time.”
   Response: “The best place to teach literacy skills is in the content areas. Reading, writing, listening and discussing course content improves student understanding and promotes higher-level thinking, application and long-term retention of learned content.”

3. “I’m not a reading teacher.”
   Response: “Teachers teach using language. It is not expected that all teachers be reading teachers. It is expected that each teacher teach the language of the content area — more directly and more explicitly. For example, science teachers need to teach students to read science text, write like a scientist, and think and discuss employing the scientific method.”

Action Steps: Literacy Instruction

- Begin by analyzing the current state of your school from a literacy perspective. Gather and analyze data related to standardized test scores, state assessments, grades, quantitative measures of student reading comprehension, and the number of Tier 2 and Tier 3 interventions.
- Form a schoolwide literacy council comprised of volunteer teacher leaders from throughout the school.
Open discussions with staff related to the capacity of teachers to integrate literacy skills into content area instruction and identify teachers with particular strengths in adolescent literacy.

Use the "Three Common Misconceptions to Literacy Instruction" as a conversation starter with the school leadership team.

Work with the literacy council to develop a plan that includes both short- and long-term components. Identify possible quick wins.

Ask members of the literacy council to begin piloting various aspects of the plan.

Communicate the plan together with other members of the literacy council.

Monitor progress during the year and make needed adjustments.

Revise the literacy plan to reflect the previous year’s experiences.


Schoolwide Change #3: Text Complexity and Informational Text

The CCSS signify an intentional return to placing reading and text at the center of classroom instruction, including an increase in text complexity and the inclusion of much more informational or non-fiction text. In fact, including high-frequency words, the word “text” (including “textual,” “texts,” etc.) represents 19 percent of the total words in the CCSS compared to less than 1 percent on former state standards.9

Note that a shift to more informational text does not mean an abandonment of nonfiction or literature.

Reading complex text does for reading skills what resistance training does for muscle strength — it makes students stronger readers.

Because literacy is now a shared responsibility among all teachers, reading should dramatically increase in all content areas. While English teachers may use more informational text, students may actually read more literature not less.

Students will be expected to actively engage with increasingly complex text in all content areas.

Teachers will be challenged to find appropriate level texts for their students, which will require additional training in evaluating the appropriateness of the material for their students based on quantitative and qualitative measures and reader and task considerations. This means that, to truly differentiate instruction, teachers must have a current quantitative measure of student reading comprehension skills as well as the complexity of the text. The following provide

9 www.burkinsandyaris.com/the-centrality-of-text
three different filters that school leaders can use in working with staff to think about issues of text complexity.

- **Filter 1: Can students read the text?**
  Appendix A of the Common Core State Standards contains a review of the research stressing the importance of being able to read complex text for success in college and career. The research shows that while the complexity of reading demands for college, career, and citizenship have held steady or risen over the past half century, the complexity of texts students are exposed to has steadily decreased in that same interval. In order to address this gap, the CCSS emphasize increasing the complexity of texts students read as a key element in improving reading comprehension.10

  The first filter or “quantitative” measure of text complexity asks, “Can the students read and comprehend the text?” To help teachers better answer this question, secondary school leaders must help their teachers and those working directly with curriculum understand the breadth and depth of information required to make such a decision, including the following:

  1. The quantitative level of the text (Lexile, Flesh-Kincaid, ATOS);
  2. The reading comprehension level of the student; and
  3. The expected comprehension level of the student (the difference between the complexity of the text and the current reading level of the student).

  Recognizing that teachers employing their professional judgment, experience, and knowledge of their students and their subject are best situated to make such appraisals, secondary school leaders must work to ensure that their teachers have access to each of these critical pieces of information.

- **Filter 2: Should students read the text?**
  In addition school leaders should be helping teachers realize that just because students can read and comprehend text does not necessarily mean that they should read a particular text. For example, *To Kill a Mockingbird*, with an 870 Lexile level, could be read by 4th or 5th graders. However, based on an evaluation of the book’s content on the basis of the four quantitative measures below, most would consider this work to be much more appropriate for a high school student. The following qualitative aspects of text complexity should be considered:

  1. **Structure.** Texts of low complexity tend to have simple, well-marked and conventional structures, whereas texts of high complexity tend to have complex, implicit and (in literary texts) unconventional structures.
  2. **Language Conventionality and Clarity.** Texts that rely on literal, clear, contemporary and conversational language tend to be easier to read than texts that rely on figurative, ironic, ambiguous, purposefully misleading, archaic or otherwise unfamiliar language (such as general academic and domain-specific vocabulary).
  3. **Knowledge Demands.** Texts that make few assumptions about the extent of readers’ life experiences and the depth of their cultural/literary and content/discipline knowledge are generally less complex than are texts that make many assumptions in one or more of those areas.
  4. **Levels of Meaning** (literary texts) or **Purpose** (informational texts). Literary texts with a single level of meaning tend to be easier to read than literary texts with multiple levels of meaning (such as satires, in which the author’s literal message is intentionally at odds

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10 [http://corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf](http://corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf)
with his or her underlying message). Similarly, informational texts with an explicitly stated purpose are generally easier to comprehend than informational texts with an implicit, hidden or obscure purpose.

Again, it is important for secondary school leaders to work with their teachers to examine these dimensions when considering texts.

- **Filter 3: Do students want to read the text?** Teachers do not necessarily assign texts that students are interested in reading. However, more challenging texts may be appropriate for highly knowledgeable or skilled readers, who are often willing to put in the extra effort required to read harder texts that tell a story or contain complex information. In other words, students who have a great deal of interest or motivation in the content are also likely to handle more complex texts.

Taken together, these three filters provide teachers a tool to make informed and appropriate decisions for texts, and it is important for secondary school leaders to support teachers in their use.

In addition to engaging with more complex text, there is an accompanying shift to reading more informational text — 70 percent by high school. Although there should be more informational text used in English classes, teachers will not have to abandon fiction. Instead, by expanding the size of the “reading pie,” a comprehensive schoolwide literacy initiative can make up the difference with more reading of informational text in mathematics, science and social studies classes as well as technical subjects.

**Action Steps: Text Complexity and Informational Text**
- Begin discussions of text complexity and the move to informational text.
- Analyze library books, teacher-supplied texts and textbooks to determine their quantitative level (Lexile, ATOS, DRP Analyzer, REAP, SourceRater, Pearson Reading Maturity Matrix) and compare them to the quantitative bands in Appendix A of the CCSS for ELA.
- Conduct an annual diagnostic literacy assessment of all students or use state assessment data, if reported in Lexiles or a comparable vertical scale tied to text.
- Analyze available assessment data to identify the current expected reading comprehension level of students.

**Schoolwide Change #4: Close Reading and Text-Based Response**
The CCSS emphasize “text-based answers,” which means that students need to carefully read and cite specific evidence to support their assertions about and interpretations of a text. Instead of reading and answering questions, students must now read and re-read, engage with, and analyze text as evidenced by their highlighting, annotating and note-taking.

Said another way, text-based answers means that,

“Students have rich and rigorous conversations, which are dependent on a common text. Teachers insist that classroom experiences stay deeply connected to the text on the
Students must learn to cite specific evidence to support their points and opinions about a text. Building close reading skills in students is the ultimate goal of the CCSS, a skill that will most likely be assessed through writing.

**Action Steps: Close Reading and Text-Based Response**
- Work with the school literacy council to plan professional development for teachers.
- Analyze teacher-developed formative and summative assessments to determine the degree to which students are asked to engage in close reading and to construct responses that refer to evidence contained in the text.

### Schoolwide Change #5: Writing across Content Areas

Most middle and high school classrooms feature little reading and even less writing. However, the CCSS seek to create a “literacy rich” environment in which reading and writing become a shared responsibility of all teachers and a normal part of every lesson in every classroom.

Research demonstrates that writing improves reading skills and that reading improves writing. Furthermore, when students write about what they read, their comprehension improves. Not only will students need to write more, but now they also must move away from narrative to argumentative writing styles.

A shift away from narrative to more argumentative writing does not mean that teachers should abandon narrative writing. In fact, even through high school, 20 percent of all writing will continue to be in a narrative form, according to the CCSS.

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<thead>
<tr>
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<th>Grade 4</th>
<th>Grades 9–12</th>
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<tbody>
<tr>
<td>Narrative</td>
<td>35%</td>
<td>20%</td>
</tr>
<tr>
<td>Informative</td>
<td>35%</td>
<td>20%</td>
</tr>
<tr>
<td>Argumentative</td>
<td>30%</td>
<td>40%</td>
</tr>
</tbody>
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**Action Steps: Writing across Content Areas**
- Emphasize the importance of writing with teachers.
- Work with the school literacy council to develop an agreed-upon schoolwide approach to writing instruction.
- Adopt a schoolwide writing rubric and work with feeder schools to develop consistency.
- Adopt grade-level expectations for the amount and type of formal and informal writing.
- Increase student time spent writing.
- Ask students to respond in complete sentences in every classroom.

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12 http://carnegie.org/fileadmin/Media/Publications/WritingToRead_01.pdf
To thrive in today’s world, all students will need to graduate with very strong math skills. That can only mean one thing: Advanced math courses are now essential courses. — Achieve, Math Works

According to veteran math teachers, the emphasis on application to real-world problem solving “will completely change the way math is taught.”

Schoolwide Change #6: Mathematics Instruction

For most of the states that have adopted the CCSS, the cognitive demand of the expectations has increased substantially. In addition, there are other notable differences between the CCSS in mathematics and previous sets of mathematics standards, including the following:

- The CCSS include much greater focus: Students have less content to learn in a particular year, yet the expectation for the content to be learned is deeper.
- The expectations are more coherent: Standards within a grade work together to deepen student learning and also logically progress across grades to support content development, and the extent to which these two types of coherence exist will not be easily seen through common methods of cross-walking old standards with the CCSS. Rather, deep study of the CCSS is necessary.
- There is a much stronger balance among procedure, application and understanding: Students will be expected to know not only how to do mathematics (e.g., work problems) but also how and why to apply mathematics concepts to real-world situations. Most state standards expect procedure from students, making school mathematics a 12-year process of learning tricks. The CCSS expect students to deeply understand why mathematics functions as it does and how to apply mathematics to novel situations, particularly through the modeling expectations.

The primary implication of these changes is that the current predominant practice of didactic-only instruction, with some guided practice of rote procedures, must give way to more well-rounded approaches to instruction that give students the opportunity to make deep sense of the content they are to learn and the practices in which they are expected to engage.

A secondary implication is the considerable increase in algebraic content in 8th grade, which come as a result of the CCSS’s attention to focus and coherence in particular. Keeping in mind the predominant practice in many middle/junior high schools of enrolling 8th grade students in so-called “Algebra I” courses, school leaders should carefully consider the content found in those courses to ensure they truly are more rigorous than what is seen in the 8th grade CCSS. If they are not more rigorous, school leaders are encouraged to do the following:

- Work with teachers and curriculum staff to make adjustments to their 8th grade “Algebra I” course to ensure the content aligns with the demands of high school; or, alternatively,
- Encourage students to remain in the 8th grade mathematics course that tightly aligns to the CCSS, knowing that students will be expected to learn rigorous algebra content and will be well prepared for high school mathematics.

For more information on this topic, school leaders are encourage to read Appendix A of the CCSS in Mathematics, found here: http://www.corestandards.org/assets/CCSSI_Mathematics_Appendix_A.pdf.

A third notable change seen in the CCSS is the expectation that all students learn mathematics up to and including content normally seen in an Algebra II class or its equivalent. In other words,
experts in mathematics education generally agree that there are around three years of high school mathematics content expected by the CCSS, which has many benefits for students.

**Principal Talking Points:**

**Benefits of a College- and Career-Ready Mathematics Program**

1. **Improved student achievement** — Juniors and seniors who take higher-level mathematics make larger learning gains during their last two years in high school.
2. **College success** — Enrollment in high-level mathematics is the best predictor of college success. According to research by Achieve, students’ enrollment in advanced mathematics actually doubles their chances of graduating from college by reducing remediation rates.
3. **Career success** — Technology has driven up the complexity of virtually every career. The advanced mathematics skills required by electricians, plumbers, and heating and air-conditioning now match what is necessary to do well in college courses.
4. **Level playing field** — Advanced mathematics advances equity in college access and success as well as in economic opportunity. Taking advanced mathematics has a greater influence on whether students will graduate from college than any other factor — including family background. For those who go straight to college, taking advanced mathematics in high school boosts college completion rates from 36 to 59 percent among low-income students and from 45 to 69 percent among Latino students.

Leading schoolwide support of mathematics education for all students is not yet a fait accompli. Tending to educators’ and parents’ perceptions of mathematics education is an ongoing requirement of CCSS implementation.
**School Leaders Managing Mathematics Mindsets**

Parent and teacher mindsets — attitudes, beliefs and expectations — are critical to student success. When those mindsets are detrimental to student success, school leaders have the responsibility to work to change them.

- When teachers were asked what factors may influence students’ performance in mathematics, 41 percent of American teachers believed that innate intelligence was more important than studying hard, which was just the opposite of Chinese teachers, according to research by Achieve. When two of every five teachers believe that mathematics achievement is due to innate ability, they will not take the extra steps to encourage students to work harder, put in more time or participate in additional tutoring sessions.

- When asked what parents could do to encourage their children to take more science, technology, engineering and mathematics (STEM) courses, one National High School Principal of the Year said, “Stop telling your children that you weren’t good at mathematics. You never hear a parent say, ‘I wasn’t good at reading.’ It does not matter how well you, the parent, did in any subject. It only matters how hard your child is willing to work.”

- School leaders need to communicate to teachers and parents that researchers like Lauren Resnick (www.lrdc.pitt.edu/people/person-detail.asp?Dir_id=9) and Carol Dweck (www.stanford.edu/dept/psychology/cgi-bin/drupalm/cdweck) have shown that work and effort create ability. Mathematics success is no different than success in any other subject. It takes work and effort.

**Action Steps: Mathematics Instruction**

- Begin considering whether current mathematics instructional practices align to the expectations in the CCSS.
- Begin by analyzing available student mathematics achievement data, including student grades. Keep in mind that mathematics skills are cumulative. Students earning marginal grades in one mathematics course will predictably struggle in future mathematics courses.
- Convene a learning community focused on how to implement the Standards for Mathematical Practice in concert with the Standards for Mathematical Content.
- Begin by analyzing data on student mathematics participation including:
  - Students repeating mathematics courses;
  - Number and percentage of students who successfully complete a three-year mathematics sequence of either Algebra 1, Geometry, Algebra II or an integrated sequence of Mathematics 1, Mathematics 2, Mathematics 3; and
  - Students enrolled in International Baccalaureate, Advanced Placement or dual-enrollment mathematics and science courses as well as the scores on the externally moderated exams.
- Use such data to inform course-taking policies.
- Discuss the “Benefits of a College- and Career-Ready Mathematics Program” and “Mathematics Mindsets” with the school leadership team.
Schoolwide Change #7: Student Engagement and Collaboration

Because students cannot improve their reading, writing or discussion skills by listening to a teacher talk, teachers need to reverse the typical ratio of teacher talk and student work.

“Students are engaged when they are actively interacting with the teacher or other students in relation to the content of the lesson.”
— Anita Archer

Students must be engaged and must be actively interacting with the teacher and other students relative to the content of the lesson, and they must be reading and writing in every classroom. Students will be expected to collaborate and engage in meaningful, productive classroom discussions centered on worthwhile content.

Action Steps: Student Engagement and Collaboration

- Work with the school leadership team to develop a definition of student engagement.
- Help teachers develop classroom protocols that will encourage student engagement.
- Have teacher leaders construct a plan to teach collaborative skills to students schoolwide.

Schoolwide Change #8: Instructional Time

While they have input into the curriculum, school leaders directly control three variables in teaching and learning — time, setting and methods. Of the three, increasing quality instructional time may offer the most immediate gains in student achievement.

“Maximizing learning time is one of the most effective means for increasing student achievement.”
— Northwest Regional Education Laboratory

Teachers will likely need more instructional time in order to teach more rigorous, higher-level content in more depth and to integrate literacy skills into their lessons. Even as policy makers are considering ways to make extended school days, an extended school year, after-school tutoring and multi-tiered interventions financially possible, school leaders must help teachers make maximum use of the time they already have. Teaching “bell to bell” under the CCSS is now a minimum, first step. In the long term, school leaders will need to work to improve teaching methods by greatly enhancing teacher capacity to actively engage students and employ high-level questioning and thinking strategies.

Action Steps: Instructional Time

- Discuss the relationship of learning time to student achievement with the school leadership team, particularly with respect to Tier 1 interventions.
- Communicate an expectation that all teachers will teach “bell to bell.”
- Ask teacher leaders to identify all the ways that teachers are extending learning time for students, including such Tier 2 interventions as tutoring and additional review sessions.
- Identify the number of opportunities students have to participate in extended learning opportunities, including such Tier 3 interventions as reading classes and extended time or “double-block” mathematics classes.
- Identify extended learning opportunities for students to participate in accelerated or enriched learning opportunities that go beyond standard course offerings.
**Schoolwide Change #9: Create-and-Learn versus Sit-and-Get**

In a nutshell, the CCSS expect that, instead of knowing the answer, students must now be able to create the answer, make claims and produce evidence from text to support their claims. Instead of working only procedural mathematics problems, students must also be able to apply mathematics concepts to real-world situations and write about their thinking in moving to a solution. This change requires a different style of instruction than what many have come to call “sit-and-get.”

In the past, teachers have been giving students the answers and expecting them to give the answers back. Now, students must find the answers, demonstrate understanding by applying their knowledge to real-world situations and explain them in writing. That means that, in most cases, teachers will have to encourage much more student work and student discourse and engage in far less teacher talk.

**Action Steps: Create-and-Learn versus Sit-and-Get**

- Work with the school leadership team to develop a set of agreed-upon, defined, schoolwide instructional practices that specifically address the following:
  - Bell-to-bell instruction;
  - Beginning of the lesson;
  - End of the lesson;
  - A definition of student engagement;
  - Classroom protocols for questioning students and for collaborative discussions;
  - The frequency of checks for understanding;
  - Guidelines for the inclusion of close reading and argumentative writing; and
  - Desired proportion of teacher talk to student work.

**Schoolwide Change #10: Professional Learning**

Increasing instructional time will improve student achievement if that additional learning time is coupled with appropriate settings (class size) and enhanced pedagogy (teaching methods). In the short and long run, improving the quality of teaching methods will be the foundation for increased student performance.

Studies show that teachers often lack capacity in the areas that are deemed most critical to the CCSS. They are strong in organization and classroom management and lack higher-order questioning skills and skills in engaging students. Implementation of these standards will require a deepening and a retraining of most of the teaching corps. The adoption of the CCSS means that school leaders are faced with the challenge of increasing the capacity of most of their instructional staff within a relatively brief period of time.

School leaders have learned much about what constitutes good instruction but have yet to create highly effective instructional systems. Traditionally, school leaders have focused on building individual capacity and attempted to improve teaching one teacher at a time, and they must continue to do that. School leaders can build individual capacity by carefully recruiting and hiring staff who are first and foremost team players. But they must also work like musical conductors, bringing out the best across the entire ensemble using systems approaches, such as...
instituting problem-based learning structures. The new standards mean that teamwork, both within the school and among schools, must become a non-negotiable.

The changes wrought by these new standards are of such a magnitude that school leaders must seek to build the collective capacity of the entire staff through mutually agreed-upon, defined, schoolwide instructional practices. Ironically, schools have long used defined schoolwide practices to increase capacity in such areas as attendance, discipline, transportation and school safety, but very few schools have applied what they have learned to build the collective instructional capacity schoolwide.

**Action Steps: Professional Development**

- Meet with school leadership team, data team and literacy council and discuss professional development needs based on the assessed needs of the students and the observed needs of the teachers as they relate to implementation of the CCSS.
- Establish three to five goals for professional development.
- Work with your district and state agencies to seek highly effective professional development experiences aligned to the CCSS and to Learning Forward’s Standards for Professional Learning.
- Because the school staff will need short-term wins to maintain motivation, create both short-term and long-term (minimum of three years) plans for continuous, connected, ongoing and job-embedded professional development.

**Schoolwide Change #11: Assessment**

Because teachers currently spend approximately 35 percent of their time on assessment and have been provided little or no training in its effective use, there is a considerable amount of interest focused on the development of common assessments.

There are two assessment consortia committed to building assessments based on the CCSS in ELA/Literacy and mathematics for all but the most cognitively challenged students. The Partnership for the Assessment of Readiness for College and Careers (PARCC) contains 23 states, of which 19 are governing states that lead the consortium’s efforts. The PARCC states are seen here, where the dark blue states are governing states:

The SMARTER Balanced Assessment Consortium contains 25 states, of which 20 are governing states that lead the consortium’s efforts. The SMARTER Balanced states are seen here where the green states are governing states:

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13 For more information on the one-percent consortia, please visit: www.ccsso.org/Resources/Digital_Resources/1_Percent_Assessment_Consortia_Webinar.html
14 As of 11/2012
15 As of 11/2012
States within each consortium will begin piloting its tests in the spring of 2013. The first operational year of the assessments, when nearly all students will take the tests, will be the 2014 – 2015 school year.

While currently in the developmental stage, the common assessments will:

- Move beyond the current reliance on multiple-choice to a more advanced 21st century design.
- Be more rigorous and place greater emphasis on high-order thinking based on student responses to performance-based tasks and computer-enhanced test items.
- Require more writing and constructed response, not just multiple choice.
- Require students to articulate their understanding of reading selections while using evidence from them to develop explanations and arguments.
- Require students to demonstrate the ability to apply mathematics and demonstrate conceptual understanding and procedural fluency.
- Be computer based.
- Adhere to accessibility principles to maximize the number of students who can access the assessments without the need for accommodations.
**Principal Talking Points:**

**Benefits of Next Generation Assessments**

1. *Provide a better assessment of what a student knows and is able to do.*
2. *Measure what students actually need to be college and career ready.*
3. *Set a common benchmark across schools, districts and states.*
4. *Demonstrate current achievement as well as growth.*
6. *Because they are computer based, will be tailored to the student’s ability.*
7. *Because both consortia will provide non-summative assessment tools, schools will be able to gather more data to inform instruction.*
8. *Greatly reduce the security issues that paper tests present.*

**Action Steps: Assessment**

- Work with the school leadership team to form content and cross-content teams.
- Make use of common assessment-created supplemental tools.
- Ask the teams to collaboratively develop a common syllabus and pacing guide, as well as common formative and summative assessments that include the following:
  - Questions that simulate CCSS sample questions and performance tasks;
  - A focus on both application of mathematics and demonstration of conceptual understanding in both shorter and longer tasks;
  - The reading of multiple related selections;
  - Requiring students to analyze those readings;
  - Asking students to write about multiple readings; and
  - Embedded critical academic vocabulary.
- Ask teacher leaders to review and discuss teacher-developed assessments in relation to high-order thinking skills and the quality of the constructed responses, as they align or do not align to the CCSS.

**Schoolwide Change #12: Technology Integration**

The CCSS are designed to be challenging and relevant to the real world, reflecting the knowledge and skills that students need to succeed in college and career.

The CCSS were developed with the intention to support effective use of technology for instructional purposes. The CCSS call for a departure from traditional technology instruction because technology is integrated throughout the standards; it is not viewed as a separate subject but as a vehicle for core subjects. Therefore, schools should continue to teach technology skills to ensure they support student learning across the disciplines.

The CCSS emphasize connections, linkages and logical progressions across grades. Thus, technology skills are expected to be taught in a logical sequence of increased rigor and sophistication through the grades. Students are ready for each new skill based on the foundation laid by prior skills. Students are expected to “use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.”

**Action Steps: Technology Integration**

- Ensure that technology is carefully integrated with writing instruction.
Conduct an assessment of the scope and nature of technology integration in regular classroom instruction.
Identify the professional development needs of teachers.
Identify the specific technology skills students will need to apply at each grade level.

Summary
The transition to the CCSS will challenge middle and high schools most directly in terms of implementation. In placing every student on a pathway to college and career readiness, our schools are embarking on a journey into uncharted waters that will challenge our willingness to learn and our resolve to persist in the face of adversity.

Underlying this Action Brief is a belief in the power of collaboration and collective action. No one person alone can possibly affect the kind of transformation in school culture necessary to successfully implement the CCSS. Instead of control, school leaders must work to build collaborative communities of learners. In today's schools “the lead learner is the learning leader.”

Used separately, each of the action steps and talking points suggested in this Action Brief will positively affect student achievement. Employing the high-leverage suggestions in concert will produce a synergistic effect that will transform the school culture to support each student, regardless of zip code or circumstances, in their effort to become college and career ready.

Appendix A: Talking Points for Leaders

School Leaders Talking Points:
7 Benefits of the Common Core State Standards

1. **Equity** — All students in every state will be expected to meet the same rigorous standards, which will prepare each of them to be college and career ready.

2. **Results** — When implemented with fidelity internationally and in states like Massachusetts, “fewer, higher and clearer” standards have resulted in significant gains in student achievement.

3. **Efficiency** — Instead of each state developing all of its own instructional supports, states now have multiple partners among whom they can share resources. Small states will have the same standing as large states and will not be compelled to purchase instructional materials or textbooks simply because they were adopted by another, much larger state.

4. **Cost Effectiveness** — Pooling resources eliminates duplication and takes advantage of economies of scale.

5. **Consistency** — In an increasingly mobile population, all students, regardless of zip code, will have the same high standards and expectations.

6. **Collaboration** — Even in the early stages of implementation of the CCSS there is a dramatic increase in attention being paid to approaches to teaching, strategies for teacher preparation and cross-state initiatives, which draw on the collective experience and knowledge of teachers nationwide.

7. **Innovation** — Historically, the adoption of agreed-upon standards in business, technology and industry have resulted in dramatic increases in innovation. Examples include the Transcontinental Railroad, wireless network standards and DVD standards.
Appendix B: Resources

In addition to the list below, the National Assessment of Elementary School Principals has developed a Common Core Implementation Checklist for Principals, which is designed to help K – 8 principals determine the knowledge and skill sets they need to lead their school’s implementation of the CCSS.

The checklist sets the stage for implementing the standards by providing concrete ways to reflect on how a school operates. The questions create a way to assess the aspects that will need to be altered to most smoothly implement the changes demanded by the CCSS. We know that enthusiasm, conviction and free-flowing communication create a dynamic that can nurture change. Teachers need to be brought on board early, and parents, too, need to be brought into the information circle. Providing professional development opportunities to teachers to help them dismantle old and create new teaching strategies will keep the CCSS changes moving forward.

While concerns for changes in the classroom are on the front line of the standards, principals also need to examine and consider broad issues, such as resources, budgets, parent groups, union negotiations, volunteers, timelines and more. They need to be sure that all student groups, from English language learners to gifted students, are included in the attention for change. The checklist can provide a resource to principals who are uncertain about how to address the CCSS in their schools.

- **Achieve**: [www.achieve.org](http://www.achieve.org) — a nonprofit, bipartisan organization supporting states as they implement policies to ensure students graduate prepared for college and career. Achieve is guiding states in their implementation of the CCSS
- **ASCD**: [www.ascd.com](http://www.ascd.com)
- **College Summit**: [www.collegesummit.org](http://www.collegesummit.org) — a national education non-profit supporting schools and districts in increasing college enrollment rates and creating college-going cultures
- **Common Core State Standards (CCSS)**: [www.corestandards.org](http://www.corestandards.org)
- **Council of Chief State School Officers (CCSSO)**: [www.ccsso.org](http://www.ccsso.org)
- **Hunt Institute**: [www.hunt-institute.org](http://www.hunt-institute.org) — a nonprofit supporting many areas of education, including implementation of the CCSS
- **Illustrative Mathematics**: [www.illustrativemathematics.org](http://www.illustrativemathematics.org) — a website devoted to illustrating the CCSS for mathematics
- **MetLife Foundation**: [www.metlifefoundation.org](http://www.metlifefoundation.org)
- **National Association of Elementary School Principals (NAESP)**: [www.naesp.org](http://www.naesp.org)
- **National Association of Secondary School Principals (NASSP)**: [www.nassp.org/commoncore](http://www.nassp.org/commoncore)
- **Partnership for Assessment of Readiness for College and Careers (PARCC)**: [www.parcconline.org](http://www.parcconline.org) — an assessment consortium of 23 states building a common assessment system aligned to the CCSS
- **Smarter Balanced Assessment Consortium (SBAC)**: [www.smarterbalanced.org](http://www.smarterbalanced.org) — a second assessment consortium of 25 states building a common assessment system aligned to the CCSS
Student Achievement Partners: www.achievethecore.org — a nonprofit organization supporting implementation of the CCSS