

Creating A School Culture For Optimal Implementation of the Common Core Leadership Matters!

Traci L Knight

A leader takes people where they want to go. A great leader takes people where they don't necessarily want to go, but ought to be.

- Rosalynn Carter

What is the Common Core, Really?

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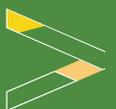
- What It Is Not...
 - It was not initiated by the Federal Government
 - It does not tell teachers what curriculum to use
 - It does not tell teachers how to teach

What is the Common Core, Really?

- What It Is...
 - It is a state-led initiative
 - It provides goals and standards for mathematics and ELA to prepare students for post high school
 - It provides for both content knowledge and skill acquisition

Framework for Success

- Leadership
- Teachers
- Students
- Community



LEADERSHIP

People buy into the leader before they buy into the vision

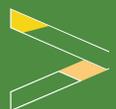
-John Maxwell

Leadership

Instructional Shifts in Mathematics

Shift #1: Focus Strongly where the Standards Focus

- Significantly narrow the scope of content and deepen how time and energy is spent in the math classroom.
- Focus deeply on what is emphasized in the standards, so that students gain strong foundations.

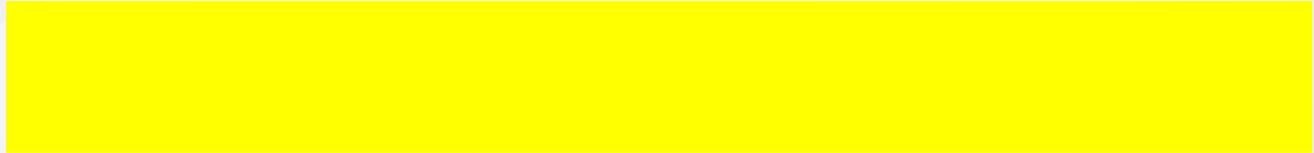


Traditional U.S. Approach

K

12

**Number and
Operations**



**Measurement
and Geometry**



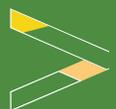
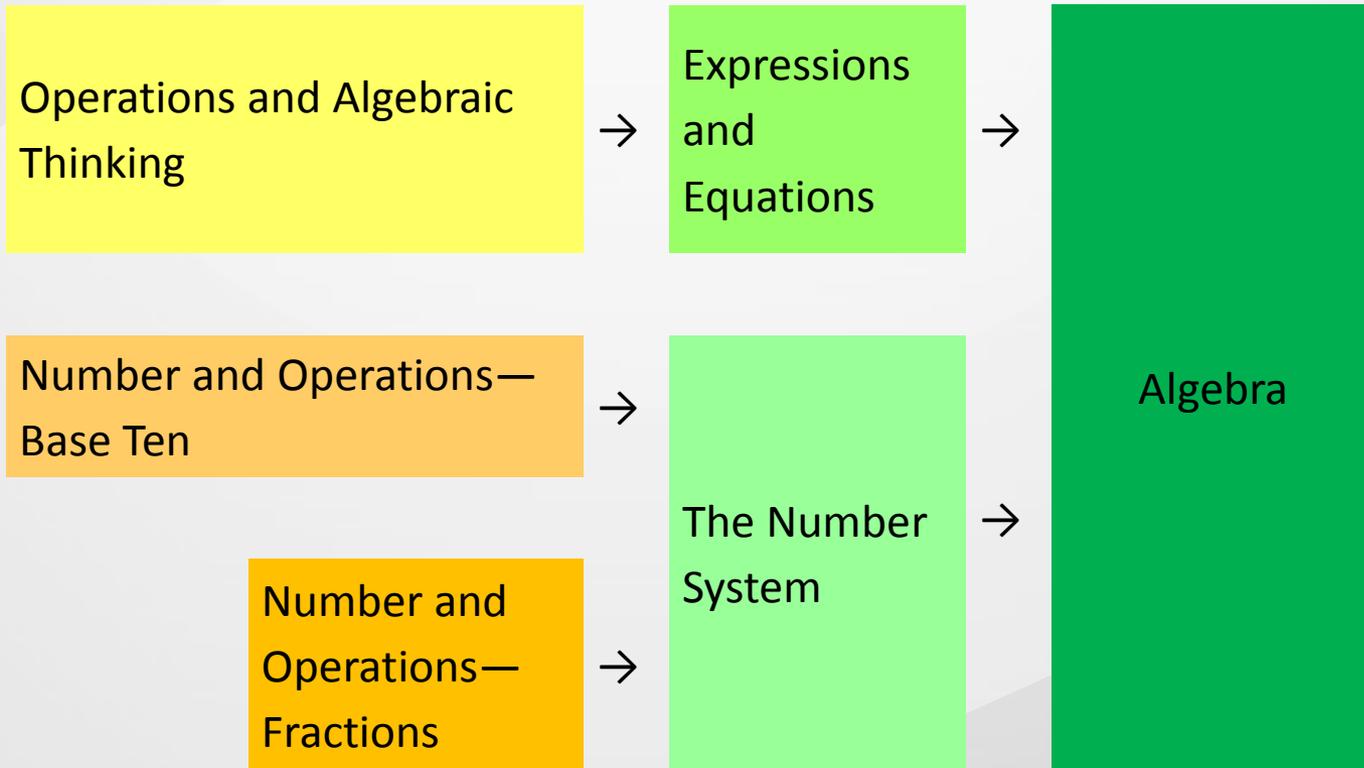
**Algebra and
Functions**



**Statistics and
Probability**

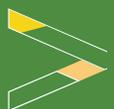


Focusing Attention Within Number and Operations



Shift #2: Coherence: Think Across Grades, and Link to Major Topics Within Grades

- Carefully connect the learning within and across grades so that students can build new understanding on foundations built in previous years.
- Begin to count on solid conceptual understanding of core content and build on it. Each standard is not a new event, but an extension of previous learning.

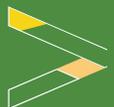


Coherence: *Think* Across Grades

Example: Fractions

“The **coherence** and sequential nature of mathematics dictate the foundational skills that are necessary for the learning of algebra. The most important foundational skill not presently developed appears to be proficiency with fractions (including decimals, percents, and negative fractions). **The teaching of fractions must be acknowledged as critically important and improved before an increase in student achievement in algebra can be expected.**”

Final Report of the National Mathematics Advisory Panel (2008, p. 18)



Coherence: *Link* to Major Topics Within Grades

Example: Data Representation

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

Standard
3.MD.3

Coherence: *Link* to Major Topics Within Grades

Example: Geometric Measurement

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

3.MD, third
cluster



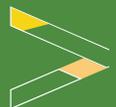
Shift #3: Rigor: In Major Topics, Pursue Conceptual Understanding, Procedural Skill and Fluency, and Application

- The CCSSM require a balance of:
 - Solid conceptual understanding
 - Procedural skill and fluency
 - Application of skills in problem solving situations
- Pursuit of all three requires equal intensity in time, activities, and resources

Standards for Mathematical Practice

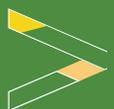
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Don't Bureaucratize



You have just purchased an expensive Grecian urn and asked the dealer to ship it to your house. He picks up a hammer, shatters it into pieces, and explains that he will send one piece a day in an envelope for the next year. You object; he says “don’t worry, I’ll make sure that you get every single piece, and the markings are clear, so you’ll be able to glue them all back together. I’ve got it covered.” Absurd, no? But this is the way many school systems require teachers to deliver mathematics to their students; one piece (i.e. one standard) at a time. They promise their customers (the taxpayers) that by the end of the year they will have “covered” the standards.

~Excerpt from *The Structure is the Standards*
Phil Daro, Bill McCallum, Jason Zimba



ACTIVITY

Reflecting on the Shifts for Mathematics

Leadership

- Professional Development
- School Culture/Infrastructure
- Relationships
- Relevance

Leadership

“Are You Driving Your School Culture, or Is Your Culture Driving You?”

Leadership

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

— *Seymour Sarason*

Leadership

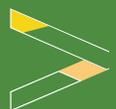
Schools with strong cultures have leaders who focus on four general areas:

- 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.

Leadership

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

- 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.”



TEACHERS

When you're finished changing, you're finished.

-Ben Franklin

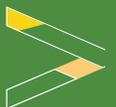


Teachers

- 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.

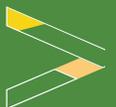
Teachers

- 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.



Teachers

What Does This Mean for Our Teachers?



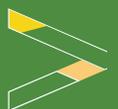
Teachers

- Teacher Leadership
- Professional Development
- Professional Learning Communities
- Collaboration

STUDENTS

“We are what we repeatedly do. Excellence, therefore, is not an act but a habit.”

-Aristotle



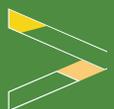
Students

- Engagement
- Motivation
- Ownership
- Responsibility for own Learning
- Relationships

Students

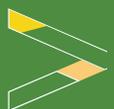
Benefits of a College- and Career-Ready Mathematics Program

- ***Improved student achievement*** — Juniors and seniors who take higher-level mathematics make larger learning gains during their last two years in high school.
- ***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.



Students

- **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.*
- **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.*

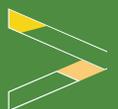


Community

- Knowledge
- Support

Community

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.



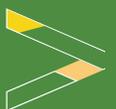
Community

How does this belief affect our parent-teacher relations?



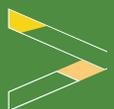
Community

- *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."*



Community

- *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.*



Tools for Success

- *“Maximizing learning time is one of the most effective means for increasing student achievement.”*

— Northwest Regional Education Laboratory

Tools for Success

What do we need for successful implementation of the Common Core?

How Do We Know Learning is Taking Place?

- School leaders directly control three variables in teaching and learning — time, setting and methods.

How Do We Know Learning is Taking Place?

- Action Steps Handout
- Administrative Walk throughs
- IFR (Implementation to Fidelity Rubric)

Leadership Infrastructure

- Optimizing Scheduling
- Providing time for collaboration and learning for both teachers and students
- Community Outreach

Where Do We Go From Here?

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."

Where Do We Go From Here?

- Next Steps....