Agenda

- Presenters
- How did the Common Core State Standards Initiative Develop?
- How Are These Standards Different?
- What are the Implications for Higher Education?
- Discussion
Presenters

- Tracy Halka, Achieve, Associate Director, ADP Assessment Consortium
- Carrie Heath, Council of Chief State School Officers (CCSSO), Senior Program Associate
- Bernadette Sandruck, Ed.D., Howard Community College, Mathematics Division, chair
How did the Common Core State Standards Initiative Develop?
Beginning in the spring of 2009, Governors and state commissioners of education from 48 states, 2 territories and the District of Columbia committed to developing a common core of state K-12 English Language Arts/Literacy (ELA/Literacy) and mathematics standards.

The Common Core State Standards Initiative (CCSSI) has been a state-led effort coordinated by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO). www.corestandards.org
Why Common Core State Standards?

**Preparation:** The standards will help prepare students with the knowledge and skills they need to succeed in education and training after high school.

**Competition:** The standards are internationally benchmarked to help ensure our students are globally competitive.

**Equity:** Expectations are consistent for all—and not dependent on a student’s zip code.

**Clarity:** The standards are focused, coherent, and clear so students (and parents and teachers) understand what is expected of them.

**Collaboration:** The standards create a foundation to work collaboratively across states and districts, pooling resources and expertise.
Process and Timeline

K-12 Common Core State Standards:

- Core writing teams in English Language Arts and Literacy and Mathematics (See [www.corestandards.org](http://www.corestandards.org) for list of team members) supported by external work groups which included many from higher education sector.

- External and state feedback teams provided on-going feedback to writing teams throughout the process.

- Draft K-12 standards released for public comment on March 10, 2010; 9,600 comments received.

- Validation Committee of leading experts reviewed standards.

- **Final standards were released June 2, 2010**

- To date, **40 States and the District of Columbia have adopted the Common Core State Standards.**
40 States + DC Have Adopted the Common Core State Standards

*Washington has adopted the CCSS conditionally
**Minnesota has adopted the CCSS in ELA only
Feedback and Review

External and State Feedback teams included:

- Postsecondary Faculty
- K-12 Faculty and staff
- State curriculum and assessments experts
- Researchers
- National organizations (including, but not limited, to):
  - American Council on Education (ACE)
    - American Mathematics Association of Two Year Colleges (AMATYC)
    - Mathematics Association of America (MAA)
  - American Federation of Teachers (AFT)
  - Campaign for High School Equity (CHSE)
  - Conference Board of the Mathematical Sciences (CBMS)
    - American Statistical Association (ASA)
  - Modern Language Association (MLA)
  - National Council of Teachers of English (NCTE)
  - National Council of Teachers of Mathematics (NCTM)
  - National Education Association (NEA)
Common Core State Standards Research Base

Standards from individual high-performing countries and provinces were used to inform content, structure, and language, as well as rigor, coherence, and progression.

Mathematics
- Belgium (Flemish)
- Canada (Alberta)
- China
- Chinese Taipei
- England
- Finland
- Hong Kong
- India
- Ireland
- Japan
- Korea
- Singapore
The CCSS deliver what postsecondary has requested over the years (some examples)

**American Diploma Project (ADP) Benchmarks include:**
- Read informational texts; write effectively and construct arguments; work collaboratively
- Exhibit strong foundation in mathematics linked to advanced skills and mathematical reasoning.

**Early Assessment Program (EAP) of the California State University (CSU):**
- Identifies mathematics through Algebra II as critical; offers on-line mathematics lessons in algebra, geometry, probability, and statistics
- Identifies expository writing as critical; offers on-line course for 12th grade teachers

**ICAS Competencies (CCC, CSU, and UC)**
- Call for Academic Literacy across all content areas
- Specify application of mathematics to everyday life and deep mathematics reasoning

**Association of American Colleges and Universities (2009 National Survey)**
- Nearly 80% of colleges identify learning outcomes that include critical cross-cutting skills and areas of knowledge such as writing, critical thinking, quantitative reasoning, oral communication, intercultural skills, information literacy, and ethical reasoning.
How Are These Standards Different?
Features of the standards

- Aligned with college and work expectations
- Focused and coherent
- Include rigorous content and application of knowledge through high-order skills
- Build upon strengths and lessons of current state standards
- Internationally benchmarked
- Based on evidence and research
Foundation for the Standards

Aligned with college and work expectations

- Prepare students for success in entry-level, credit-bearing, academic college courses (2 and 4 year postsecondary institutions)

- Prepare students for success in careers that offer competitive, livable salaries above the poverty line, opportunities for career advancement, and are in growing or sustainable industries.
Standards for Mathematical Practice

- Carry across all grade levels
- Describe habits of mind of a mathematically expert student

Standards for Mathematical Content

- K-8 standards presented by grade level
- Learning progressions: organized into domains that progress over several grades
- Grade introductions give 2–4 focal points at each grade level
- High school standards presented by conceptual theme

Appendix A: Designing High School Mathematics Courses
ELA standards include standards on Literacy in History/Social Studies, Science, and Technical Subjects for grades 6-12.

Literacy (reading, writing, speaking, listening, language) is the responsibility of educators in all disciplines.

Literacy skills provide students greater access to and deeper knowledge of the mathematics content they must learn.
3. Develop an understanding of fractions as numbers.

4. Extend understanding of fraction equivalence and ordering.

4. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

4. Understand decimal notation for fractions, and compare decimal fractions.

5. Use equivalent fractions as a strategy to add and subtract fractions.

5. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

6. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
Conceptual themes in high school

- Number and Quantity
- Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability

College and career readiness threshold

(+ ) standards indicate material beyond the threshold; can be in courses required for all students.
Math Key Advances

- Emphasize mastery in learning progressions
- Focus in early grades on number (and properties of operations) to build a solid foundation in math
- Evened out pace across the grades
- High school math focus on using math and solving complex problems, similar to what would be seen in the real world (modeling and quantity)
- Problem-solving and communication emphasized
Common Standards

Building on the excellent foundation of standards states have laid, the Common Core State Standards are the first step in providing our young people with a high-quality education. It should be clear to every student, parent, and teacher what the standards of success are in every school.

Learn more »

Mission Statement

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.

Read the Common Core State Standards
What are the Implications for Higher Education?
Implications for Post Secondary

Conceptual themes in high school

- Number and Quantity
- Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability

What is different?
Implications for Post Secondary

Expectations from the common core

- Stronger Bridge from grade 8 to college-level
- New emphasis on Statistics for everyone
- More emphasis on retention of knowledge
- Greater emphasis on conceptual understanding
- Greater emphasis on analytical skills
- Greater emphasis on communication skills
- Less repetition
Implications for Post Secondary

Appropriate Roles for Higher Ed Faculty

- Assist with the development of meaningful assessments of the Common Core
  - **PARCC**: [http://www.fldoe.org/parcc/](http://www.fldoe.org/parcc/)
  - **SMARTER/BALANCED**: [http://www.k12.wa.us/SMARTER/RTTTApplication.aspx](http://www.k12.wa.us/SMARTER/RTTTApplication.aspx)

- Work with local school districts and/or state education agencies on:
  - Professional development for faculty and teachers
  - Design of senior year courses
  - Development of content for “teaching how to read mathematics”
Implications for Post Secondary

Appropriate Roles for Higher Ed Faculty

- Mathematical Literacy - Whose responsibility is it to teach students how to read a mathematics text?
- Work with research institutions on the development of standards in mathematical literacy
  - Revise the content of “Reading in the Content Areas” courses
  - Provide professional development for faculty and teachers
  - Expand the content for “teaching reading of mathematics”

Could this be the focus of an AMATYC grant?
Planning for the Future—
- what will we do when all students complete the common core?

- Evaluate the educational value of college-level mathematics
- Evaluate our placement systems
- Align the content of developmental mathematics with the common core
- Extend the national alignment to include some college-level courses
Thank you for joining this discussion.

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www.corestandards.org