WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Carolyn Stanford Taylor, State Superintendent

Wisconsin Standards for Mathematics

Where We've Been and Where We're Going

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In 1998, the Wisconsin Department of Public Instruction (DPI) published *Wisconsin's Model Academic Standards for Mathematics*, which had been adopted by State Superintendent Benson. The standards included mathematical processes, number operations and relationships, geometry, measurement, statistics and probability, and algebraic relationships delineated at grades 4, 8, and 12. About 10 years later, DPI convened a group of Wisconsin educators to update the mathematics standards. At the same time, the Council of Chief State School Officers (CCSSO) and National Governors' Association (NGA) joined together in a bipartisan effort, with almost every state represented, to convene a group to write mathematics standards for each grade level that reflected college and career goals for mathematics. This work resulted in the Common Core State Standards for Mathematics (CCSSM)(2010). The Department of Public Instruction engaged many Wisconsin educators in review and providing feedback. Following this, State Superintendent Evers formally adopted the Wisconsin Standards for Mathematics based on CCSSM in June 2010.

In an effort to expand transparency and engagement in reviewing and revising Wisconsin academic standards, State Superintendent Evers authorized and appointed the State Superintendent's Academic Standards Review Council (SSASRC). Beginning in 2016, each set of academic standards was put into a seven year review cycle, giving Wisconsin a process to keep standards in all content areas current and relevant.

Wisconsin Standards for Mathematics are undergoing review and possible revision in 2020.

Wisconsin's Standards Review Process

The math standards review and revision process includes multiple opportunities for public and stakeholder participation. A digital survey is available during late January and the month of February 2020. The survey asks for input about the current standards and the need for revision. Based on the input, the SSASRC will provide the State Superintendent with a recommendation regarding the need to revise the current standards. The State Superintendent will consider this recommendation, potentially starting a revision process for mathematics in April. More information on how to engage in the revision process would then be distributed to the mathematics community. The last opportunity to give feedback on any revised standards will be during July of 2020, when a draft of revised standards is scheduled for release for public comment, and public hearings will be held. If the State Superintendent determines it is necessary to revise the current standards for mathematics, a formal adoption would happen in the Fall of 2020. From there, a roll out plan will be implemented to support CESAs (Cooperative Educational Service Agencies) and districts as they learn about the standards as well as how the new standards impact state initiatives and programs. As soon as feasible, Wisconsin's statewide summative assessments - as required by federal law - will be aligned to the standards adopted at the state level. More information about the specific steps in the standards review process can be found at https://dpi.wi.gov/standards.

What Have Other States Done?

In preparation for the review and possible revision of Wisconsin Standards for Mathematics, we asked, "What are other states doing?" A general look at all state

standards, as well as, a more in depth look at some specific states led us to some important findings.

The influence of CCSSM's organizational structure and the shifts that occurred in mathematics education due to the CCSSM was apparent in the vast majority of state standards that were looked at. Approximately one-third of states use CCSSM exactly as they were written in 2010, and a significant number of states use standards that have only been superficially changed from CCSSM. The CCSSM were designed to help students acquire a deep, conceptual understanding of core math content through focus, coherence, and rigor. Focus shifts teaching and learning from a mile long and an inch deep model to a deeper, richer understanding of fewer concepts. The shift of coherence ensures math connections are made between grade levels and builds a logical progression. The shift of rigor promotes the balance of conceptual understanding, application, and procedural skill and fluency. CCSSM K-8 grade level content standards illustrate a focused, coherent, and rigorous curriculum for each of these grades. The high school content standards are not organized by grade or course, but instead are grouped in conceptual categories that can be clustered in multiple ways to design courses and programs of study. These standards provide focus by identifying critical areas that should be the primary focus for instruction in a specific grade or high school conceptual category. They provide coherence through connections and progressions both within and across grade levels. They are rigorous through a focus on college and career readiness, and by emphasizing the Standards for Mathematical Practice across K-12. Finally, an overwhelming majority of states maintained the hierarchical structure of the domains and conceptual categories from CCSSM to organize their Mathematics Content Standards.

After considering what states were using in general, the DPI selected certain states to investigate more closely. Achieve, an independent, nonpartisan, nonprofit education organization, evaluated state standards in, "Strong Standards: A Review of Changes to State Standards Since the Common Core" (2017) to help determine how

successful states were in revising their standards since CCSSM were written. Achieve's findings provided us with useful data that narrowed our focus. Reviewers applied eleven indicators to examine key aspects of state math standards. Eleven states were rated as strong on ten or eleven out of the possible eleven indicators, suggesting standards that were worthy of a closer look. The DPI did an in-depth look at the standards for Alabama, California, Georgia, Idaho, Louisiana, Massachusetts, Mississippi, New Jersey, North Dakota, Ohio, and West Virginia.

Some of the most notable modifications of the standards of the states warranting a closer look aimed to bring more clarity to specific standards. Some lengthy standards, in paragraph form, were broken into dot points. Sometimes standards that originally had an example written in the middle of the standard statement, now brought the example to the end or added visual examples. Links to standard appendices were sometimes embedded as part of the standard to which they were relevant. Finally, at times, details from the Progression Documents or CCSSM footnotes were included within a standard to make it more user friendly and more precise without the need to confirm specifics about the standard elsewhere.

Next Steps

The formal process for mathematics standards review is underway with a survey. The public survey results will be presented to the SSASRC. The SSASRC will analyze and synthesize the data to prepare a set of recommendations to give to the State Superintendent. Throughout this process, DPI relies upon your expertise and experience. Complete the survey and provide feedback on a draft of the standards this summer.

Supporting Resources:

- Current Wisconsin Standards for Mathematics:

  https://dpi.wi.gov/math/standards

- Wisconsin Statute about CCSS: 115.293(2)

  https://docs.legis.wisconsin.gov/statutes/statutes/115/II/293/2

- Standards revision process: https://dpi.wi.gov/standards

- Strong Standards: A Review of Changes to State Standards Since the Common

  Core: https://www.achieve.org/files/StrongStandards.pdf

State standards reviewed for this article:

- Alabama: https://www.alsde.edu/sec/sct/COS/2016%20Revised%20Alabama%20Course%20of%20Study%20Mathematics.pdf

- California:

  https://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

- Georgia:

  https://www.georgiastandards.org/Georgia-Standards/Pages/Math.aspx

- Idaho: https://www.sde.idaho.gov/academic/math/

- Louisiana: https://www.louisianabelieves.com/docs/default-source/teacher-toolbox-resources/louisiana-student-standards-for-k-12-math.pdf

- Massachusetts: http://www.doe.mass.edu/frameworks/math/2017-06.pdf

- Mississippi: https://sos.ms.gov/ACProposed/00021704b.pdf

- New Jersey: https://www.state.nj.us/education/aps/cccs/math/

- North Dakota: https://www.nd.gov/dpi/sites/www/files/documents/Academic%20Support/v3.Mathematics%20Standards%20Final%208.14.17.pdf

- Ohio: http://education.ohio.gov/Topics/Learning-in-Ohio/Mathematics/Ohio-s-Learning-Standards-in-Mathematics

- West Virginia: https://wvde.us/math4life/educators/grade-specific-resources/

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