Professional Development and The Implementation of the CCSSM

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NC STATE UNIVERSITY

COLLEGE of EDUCATION

SUPPORTING IMPLEMENTATION OF THE COMMON CORE STATE STANDARDS FOR MATHEMATICS

RECOMMENDATIONS FOR PROFESSIONAL DEVELOPMENT

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System-level Professional Development:

Articulating research ideas that support the implementation of the PD needed to make CCSS-M a reality for K-12 teachers

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Support from professional associations

- Association of Mathematics Teacher Educators (AMTE)
- Association of State Supervisors of Mathematics (ASSM)
- Mathematical Association of America (MAA)
- National Council of Supervisors of Mathematics (NCSM)
- National Council of Teachers of Mathematics (NCTM)

If we take for shared that effective professional development:

1) is intensive, ongoing, and connected to practice

2) should focus on student learning and address the teaching of specific content

3) should align with school improvement priorities and goals

4) should build strong working relationships among teachers

Darling-Hammond, L. *et al.* (2009)

Then the question becomes:

What knowledge from research supports designing, providing and assessing professional development that is *intensive, ongoing, connected to practice, focused on student learning, focused on teaching of specific content, aligned with school improvement priorities, and designed to build strong working relationships among teacher* **at scale and in service of the implementation of the CCSS-M?**

How we created the recommendations

- Invited a set of scholars and practitioners with diverse backgrounds to participate in:
  - Writing brief papers about what it will take to achieve PD consistent with the CCSS at a system level
  - A meeting bringing together the scholars and practitioners to generate recommendations

NINE RECOMMENDATIONS

1: **Emphasize the Substance of CCSSM-PD**
2: **Create and Adapt Materials for Use in CCSSM-PD**
3: **Design CCSSM-PD Based on Features that Support Teacher Learning**
4: **Build Coherent Programs of CCSSM-PD**
5: **Prepare and Use Knowledgeable Facilitators for CCSSM-PD**
6: **Provide CCSSM-PD Tailored to Key Role Groups in Addition to Teachers**
7: **Educate Stakeholders about the CCSSM**
8: **Continuously Assess CCSSM-PD**
9: **Create CCSSM-PD Consortia**

1. Emphasize the Substance of CCSSM-PD

Professional development provides opportunities for teachers to engage with both the CCSSM content and the CCSSM practices in a focused and integrated way.

2. Create and Adapt Materials for Use in CCSSM-PD

Professional Development materials are needed that explicitly address the content and practices of the CCSSM and provide vivid images of teaching and learning that are consistent with CCSSM.

3. Design CCSSM-PD Based on Features that Support Teacher Learning

Professional development takes into account existing knowledge about effective ways to organize learning experiences for teachers of mathematics.

4. Build Coherent Programs of CCSSM-PD

Programs of professional development provide a continuous and coherent set of experiences in which teachers engage over an extended period of time.

5. Prepare and Use Knowledgeable Facilitators for CCSSM-PD

Professional development uses expert facilitation to ensure teacher learning of CCSSM at scale.

6. Provide CCSSM-PD Tailored to Key Role Groups in Addition to Teachers

Strong programs of professional development target a variety of role groups within the education system attending to the professional needs of each group as the system builds capacity at all levels.

7. Educate Stakeholders about the CCSSM

Members of the general public need to be apprised on how the CCSSM will impact instruction and learning in our nation's classrooms.

8. Continuously Assess CCSSM-PD

Professional development programs are regularly assessed to provide formative information for program improvement and revision and to establish the effectiveness of the programs.

9. Create CCSSM-PD Consortia

Professional development consortia are needed to oversee and improve the role professional development plays in successful implementation of the CCSSM.

Thank you!

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Who is in charge of the reality that must change to achieve the Common Core State Standards (CCSS)? Teachers are. We can and should write more coherent and focused instructional materials for teachers to use, specify better uses of technology, create assessments that pull deeper instead of wider and shallower, and develop district management systems that encourage rather than inadvertently discourage spending time on good practices. But at the end of the last mile on the journey from the noble intentions of common standards to the reality of students learning our hopes are in the hands of the teachers. This report tells us what we can do to ready those hands.

(Daro, 2012)

Implementing recommendations for professional development on the CCSSM in one school district

Kimberly Yoak
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Presentation given at DR K-12 PI Meeting
Arlington, VA – June 15, 2012

Stow-Munroe Falls City Schools

- Suburban district just north of Akron, Ohio
- Met all 26 state report card indicators in 2011 (“Excellent”)
- 5,800 students (K-12): 90% white, < 4% in each other subgroup; 20% economically disadvantaged
- 6 elementaries (K-4), 1 intermediate (5-6), 1 middle school, 1 high school
- About 170 mathematics teachers (K-12)
- NSF-funded textbooks used in K-8, traditional textbooks in 9-12
- One mathematics consultant – about half of each day in classrooms, half of each day working with PD, assessments, Response to Intervention, other organizational matters

Current SMFCS Mathematics PD

- Three half-days of inservice with each grade level K-6 during the school year (including intervention specialists) – next year, these will focus entirely on the CCSSM practices and content
- One 40-minute meeting per month with grades 7-8 (including most intervention specialists) – focused on CCSSM next year
- Half-days as needed with grades 9-12 (including intervention specialists) – about two per teacher last year – focused on CCSSM next year
- Mathematics consultant meets and works with building and district administrators (perhaps about once per month in direct contact for an hour or less)

Current PD: Professional Learning Community

- Our K-8 PLC is now entering its fifth year
- About 30 teachers participate each year (of their own choosing)
- Stipends were awarded at first, but no longer (only CEUs awarded now)
- Teachers meet for 3 days during the summer and 3-4 half-days during the school year
- Mathematics consultant co-teaches with each teacher for 15-20 classes during the year (mostly consecutive)
- Online discussion board provides forum for ongoing collaboration
- Focuses for 2012-13 are the CCSSM and transforming teaching to transform student learning (teachers have also always set their own individual goals for improving their practice)

Enacting the recommendations from Raleigh in what we do now (to some degree)

- 1 – Emphasize the substance of CCSSM-PD
- 2 – Create and adapt materials for use in CCSSM-PD
- 3 – Design CCSSM-PD based on features that support teacher learning
- 4 – Build coherent programs of CCSSM-PD
- 5 – Prepare and use knowledgeable facilitators
- 8 – Continuously assess CCSSM-PD

Potential SFMCS Mathematics PD: Challenges

- Monthly staff or department meetings at each building (these do occur, but discussion is often focused elsewhere)
- After-school sessions (becoming increasingly difficult to schedule for even the most dedicated teachers, due to family schedules and lack of funding for stipends – we can award Continuing Education Units - CEUs)
- Summer work sessions (lack of funding for stipends, though CEUs awarded)
- Creation of a voluntary PLC at the high school (time will be an issue)
- Teachers being out of the classroom is *always* a challenge (from the perspectives of teachers, administrators, and parents)

Challenges in enacting the recommendations from Raleigh

- One main challenge: 4 – Build coherent programs of CCSSM-PD (continuity)
- 2 – Create and adapt materials for use in CCSSM-PD
- 5 – Prepare and use knowledgeable facilitators
- 6 – Provide CCSSM-PD tailored to key role groups, in addition to teachers
- 7 – Educate stakeholders about the CCSSM [a great challenge for full-time educators]
- 8 – Continuously assess CCSSM-PD

Supporting parents

- Our greatest challenge is to help parents understand why what we are working to do in mathematics (i.e., enact the CCSSM) will provide *their children* with a better education than most students had in the past
- Parents often struggle to understand the goals of NSF-funded curricula and our Ohio standards (now the CCSSM, perhaps even more so when the Standards for Mathematical Practice [SFMP] are included)

Supporting parents

- We have created "home help" websites for parents that now need to be updated, due to new standards and new editions of textbooks (mathematics consultant will need to take on this task)
- We have sent home parent letters in the past (explaining the content in each unit) that will also need to be updated
- Teachers have suggested sending parents explanations of the SFMP (and, for the PLC teachers, a description of what PLC does and why teachers are out of the classroom)
- Parent math nights have been sporadically successful – as we schedule more, we see our attendance decrease

Enacting the recommendations from Raleigh (for parents) – potential and challenges

- Essential: 7 – Educate stakeholders about the CCSSM
- 1 – Emphasize the substance of CCSSM
- 2 – Create and adapt materials for use in [supporting parents]
- 3 – Design [education] based on features that support [adult] learning
- 4 – Build coherent programs of CCSSM [education]
- 5 – Prepare and use knowledgeable facilitators (not all teachers are comfortable with this role)
- 8 – Continuously assess CCSSM [education]

A challenge (though perhaps an opportunity) for any one district

- *Recommendation 9: Create CCSSM-PD consortia*
- SMFCS would appreciate the opportunity to work with other districts to create and provide CCSSM-PD
- Kent State University has begun to organize some PD with several participating districts (both in Mathematics and in English Language Arts)
- This is most definitely a need nationally – organizations like NCTM, NCSM, and others can help, but an independently established consortium may be able to support PD more broadly and help to share "success stories"

Challenges for many districts (and for the field at large)

- ***Lack of a mathematics specialist or coaches in any given district will make all nine recommendations challenging***
- Funding is a constant challenge
- Teacher turnover in some districts is a great challenge
- "Scaling up" is a challenge when, at a basic level, we must work with every teacher in an individual way to change beliefs/values/practice (*personal relationships and interactions* are a key part of this effort)
- The mathematics education community must work especially to enact recommendation 9 (creating consortia) so that districts without specific mathematics leadership will have quality resources (human and otherwise) on which to draw

Concluding remarks: Next steps for SMFCS

- Enact PD in 2012-13 and beyond as described earlier
- Collaborate within our own district and with others in the field to work to overcome some of the challenges we face in providing CCSSM-PD
- Invite researchers to conduct more studies in our schools
- Collaborate to educate and support parents
- Find better ways to assess ongoing needs and the results of PD
- **Focus on student learning and what occurs daily in every classroom – this must guide our work**

Questions? Thoughts?

- Kim's e-mail address: st_kyoak@smfcsd.org

Professional Development and Implementation of the CCSSM: A View from NCTM

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Overview

- What Professional Development has been at NCTM
- Ideas for the future
- Moving from ideas to implementation

Professional Development at NCTM

- Print/electronic publications
  - School Journals – *Teaching Children Mathematics, Mathematics Teaching in the Middle Schools, Mathematics Teachers*
  - Publications that specifically focus on practice, content, or sample lessons
    - *5 Practices for Orchestrating Productive Mathematic Discussions*
    - *Developing Essential Understandings*
    - Illuminations
  - NCTM Website

Reflection Guides

Conferences and Workshops

- Annual Meeting and Exposition
  - Strands
- Three Regional Conferences
  - Learn-Reflect Strand
- E-Seminars Anytime

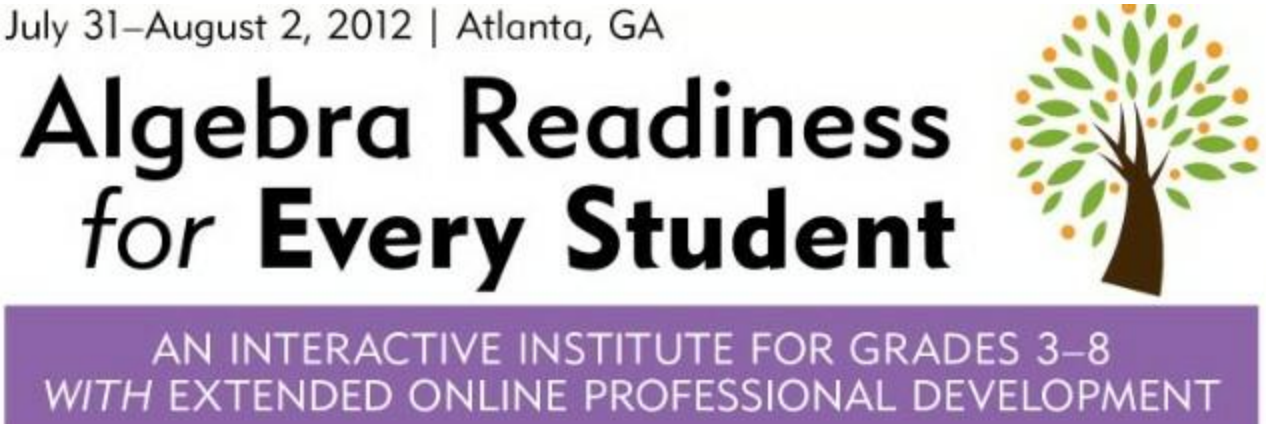
Affordances of Prior NCTM PD

- Self-directed by the teacher (supportive for adult learning)
- Offers a wide array of professional development opportunities
- Able to be embedded into local PD options

Limitations

- Did not always meet the recommendations that underpin the report (Darling-Hammond, et al., 2009)
  - professional development should be intensive, ongoing, and connected to practice;
  - professional development should focus on student learning and address the teaching of specific content
  - professional development should align with school improvement priorities and goals; and
  - professional development should build strong working relationships among teachers

Interactive Institutes



What we don't know

- How do teachers use the articles, books, electronic resources as part of professional development for themselves? (R2)
- How do professional developers use the resources from NCTM to create coherent professional development systems? (R2, R4)
  - Can we leverage this prior use to share widely with colleagues?
- What kinds of resources teachers need to support professional development that we don't currently produce? (R2, R3)
  - Digital Library of Mathematics Teaching Practice

What else we don't know

- Who is doing mathematics professional development for teachers? (R5)
  - Should NCTM develop a professional development certification that vets professional developers?
- How can the structure of NCTM and its affiliates be leveraged to help create PD consortia?(R9)
- How much should NCTM embed its work in the CCSS and how much should be focused on "good mathematics teaching?" (R1)

Discussion?

- kking@nctm.org
- www.nctm.org
- www.mathcommoncore.org
- Illuminations.nctm.org