

Comments on MET II and the Common Core

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Why a revision of the *Mathematical Education of Teachers* report?

MET I was an influential document. It provided the basis for many teacher preparation programs to change their practice, add content courses or capstone courses, and engage mathematics faculty in thinking about teacher preparation.

It was addressed to mathematics departments but useful for and used by many others. Although its primary audience was university departments of mathematics, many other audiences have made use of it: e.g. colleges of education stepping up to the recommendations for elementary teacher preparation.

So why have a new report?

1. **We know more about the knowledge of mathematics required for teaching.** We have learned a lot about mathematical knowledge for teaching in 10 years. At the elementary level, there has been the work Ball, Bass, Thames and others at the university of Michigan. At the secondary level, there has been work of Joan Ferrini-Mundy on knowledge of algebra for teaching. Also relevant is the work of Bill Schmidt on the coherence of the curriculum, which informed much of the work of the Common Core State Standards in Mathematics.

2. **Curriculum in teacher preparation has advanced.** The particular audience of MET has risen to the challenge. Many mathematics departments have developed capstone courses, and at least one textbook has been produced (Usiskin et al), and textbooks have been written by mathematicians (Beckman, Parker and Baldrige, Wu).

At the elementary level, the idea is gaining strength that one might have common agreement on what teachers need to be able to do before they enter the classroom.

3. **Professional development.** The role of mathematics departments in professional development is growing, through Math Science Partnerships, middle school programs such as Nebraska Math, the Vermont Mathematics Initiative, and the Arizona Teacher Initiative, PROMYS for teachers, Focus on Mathematics, and the Park City Mathematics Institute.

We are ready for recommendations about the entire teacher professional continuum, not just teacher preparation.

The Common Core

What is new about the Common Core State Standards? State standards are not new. The problems of adjusting to new standards—students who have had the old standards the previous year, high stakes assessments based on standards, the swamp of current PD offerings, insufficient teacher knowledge of the mathematics they must teach, administrators insisting on "teaching the standards"—none of these problems is new.

What is new is "common", and the power this provides us to solve shared problems and share solutions to problems. Common is the glue with which we will build the social networks to solve these problems. An example of this is the new Committee on Teachers as Professionals described in another talk.

Gail Burrill told me a story that illustrates the potentiation of common standards: when she was a school principal she faced the problem of the difference between hiring teachers from UW Oshkosh and UW Whitewater. One group was proficient in technology, the other none at all; one group had 20 hours of experience in classrooms, the other an entire semester. Do we hire doctors this way? Plumbers? If you let a thousand flowers bloom, 500 flowers die from heat, another 500 from flooding. It's time for us to do better.

We hear a lot about the obstacles to the Common Core, but the obstacles are old. Having a shared text is new. Let's use it to prepare the ground for 1000 flowers that will last.