

# Chapter 51

## The Use of Digital Resources to Support Elementary School Teachers' Implementation of the Common Core State Standards

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### ABSTRACT

*This chapter describes the process of developing Web-based resources to support elementary school teachers' implementation of the Common Core State Standards in Mathematics in a large urban school district in the southeastern United States. Based on a learner-centered approach to teacher professional development the authors describe a three-fold process of supporting teachers: providing opportunities for teachers to deepen their understanding of the CCSSM, providing curricular resources that align with the CCSSM, and providing ongoing support through teachers' implementation of the CCSSM. Implications for the development of Web-based resources and researching these types of endeavors are also shared.*

### INTRODUCTION

Change is an inevitable part of life for educators. Regularly, school districts, states, and nations, are modifying such things as the academic standards that students are expected to master, the achievement scores that must be reached on large-scale tests, the ways that teacher performance is

evaluated, and the expectations and duties that are placed on classroom teachers. How teachers adapt to change is a vital component of their success over the course of their career. Further, how educational leaders at school, district, and state levels support their teachers is a crucial component of the success of those educational organizations.

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In order to ensure all students have access to rich curriculum resources, more and more schools have adopted the notion of Professional Learning Communities (PLCs; Dufour, Dufour, & Eaker, 2008). The era of “close your door and teach what you want” is coming to an end as schools develop schedules that allow teachers at a grade level to meet periodically to plan instruction. In American schools, teachers have become heavily dependent on both their curricular resources and pacing guide for direction on when to teach specific topics and concepts (David & Greene, 2007).

As the Common Core State Standards in Mathematics (CCSSM; CCSSI, 2011) continue to be rolled out through the early phases of implementation in schools, there is a drastic need for educational leaders to support teachers by:

1. Providing opportunities for teachers to deepen their understanding of the CCSSM.
2. Providing curricular resources that align with the CCSSM.

In this paper we will describe our process of addressing both areas of need in a large, urban school district in the southeastern United States. This process has been a multi-year endeavor, and is by no means an exemplar model. Rather, we offer a description of our experience to provide ideas that may be used, modified, or further examined in an attempt to find the most effective ways to best prepare teachers for the implementation of the CCSSM in elementary school mathematics classrooms.

The projects that we describe here took place in a large, urban school district in the southeastern United States. There are approximately 3,600 elementary school teachers who teach Kindergarten through Grade 5. Teachers in the district have had access to the standards-based curriculum, *Investigations in Number, Data, and Space* (TERC, 2008) since the 2009-2010 school year, when the district adopted that curriculum as their primary resource. The implementation of the

CCSSM has taken place over a few years, with every Kindergarten, Grade 1, and Grade 2 teacher implementing the CCSSM during the 2011-2012 year, and teachers in Grades 3, 4, and 5 starting implementation in the 2012-2013 school year. Teachers have access to multiple professional development opportunities in mathematics during the school year and during the summer. Some of these are detailed in this chapter.

## **THEORETICAL FRAMEWORK**

Our work is informed by a notion of teacher-learning referred to as learner-centered professional development (National Partnership for Educational Accountability and Teaching, 2000; Polly & Hannafin, 2011). Briefly, this construct claims that the most effective ways to support teachers' work and teacher learning are to provide opportunities:

1. That are directly relevant to teachers' classroom practice.
2. That are comprehensive and occur over time instead of one-time workshops.
3. That simultaneously deepen teachers' knowledge of both the content they teach and instructional pedagogies.
4. To collaborate with other teachers from their grade level, school, or others that they come in contact with outside of the professional development.
5. That address student-learning issues by helping teachers to identify low areas of student performance and devise a strategy to address them.
6. To reflect repeatedly about the teaching and learning processes.

During this entire endeavor, we and all of our teacher-leaders kept asking ourselves the driving question: “How will this work and these resources support our teachers?” In the next section we

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