

**Preparation for selection and implementation: The role of instructional materials**

When you think about your district’s vision, where do instructional materials fit? Are they central to district improvement of mathematics program, or do they play a less pivotal role? In the subsection the authors of the articles examine the potential impact of instructional materials and shed light on why the selection of mathematics textbooks is an opportunity for change.


In this article, Ball and Cohen discuss the central role of curriculum materials in the instructional system and examine the concept of materials as agents of improvement. The authors also analyze the relationship between textbooks, teachers, and teaching and offer suggestions regarding how curriculum materials might contribute to reform efforts.

Link: [http://edr.sagepub.com/content/vol25/issue9/](http://edr.sagepub.com/content/vol25/issue9/)


This article presents a general overview of the constantly shifting landscape of digital textbooks. While highlighting the benefits of digital content, including increased assessment options, self-paced learning, and richer material, Dillon also outlines some of the issues districts face when considering an electronic option. Cost is an issue, both in terms of the materials and in terms of improving schools’ infrastructures. Districts and publishers face additional challenges in attempting to work within the traditional textbook selection process when selecting electronic materials.


Classroom materials represent substantive discretionary dollars in all schools and districts, and often represent the unofficial curriculum in classrooms. As an often overlooked strategy for improving student achievement, aligning classroom materials with specific data-driven learning needs can be an answer for classroom teachers. Additionally, the authors provide 10 recommendations for selecting, negotiating, and implementing new classroom materials to improve instruction in a cost-efficient manner.

Link: [http://www.pdkmembers.org/members_online/members/orders.asp?action=results&t=A&desc=Leverage&text=&lname_1=House&fname_1=&lname_2=&fname_2=&kw_1=&kw_2=&kw_3=&kw_4=&mn1=&yr1=&mn2=&yr2=&c1=](http://www.pdkmembers.org/members_online/members/orders.asp?action=results&t=A&desc=Leverage&text=&lname_1=House&fname_1=&lname_2=&fname_2=&kw_1=&kw_2=&kw_3=&kw_4=&mn1=&yr1=&mn2=&yr2=&c1=)


Based on interviews with 50 first- and second-year teachers in Massachusetts, this article explores the issue of how new teachers experience curriculum. Teachers expressed frustration over a perceived lack of guidance, support, and materials. The authors examine the additional demands placed on new teachers when a curriculum is not provided, and call for legislators and other officials to consider this issue in the context of
standards-based reform.


In mathematics classes, textbooks wield real power. They often dictate how teachers should sequence material, suggest the content teachers should teach, and provide activities and instructional ideas for engaging students. According to the authors, the great limitation of the traditional mathematics textbook is its presentation of mathematical ideas as facts to memorize rather than as a web of meaningful relationships. New models of mathematics textbooks, specifically those developed by the National Science Foundation, help correct this flaw. Using a common problem from a mathematics lesson—solving for the volume of a cylinder and a cone—the authors show that the new instructional approach challenges students to think and engages them in discovering the mathematical relationships that are at the heart of the discipline.

Link: [www.ascd.org](http://www.ascd.org)


A new analysis shows that the mathematics curricula used in the highest achieving countries are very similar—and very coherent. Through a stunning visual comparison, we can see where the U.S. comes up short. We've all heard that curricula in the U.S. are a "mile wide and an inch deep." Here's the research behind the rhetoric.


A common, coherent, and challenging curriculum can transform mathematics education in the United States. The No Child Left Behind Act's vision is to provide rigorous and demanding subject matter content for all students. As a crucial subject area, mathematics is vital to this effort. How can educators change the curriculum of mathematics to make it rigorous and accessible to all students? The author reviews the Third International Mathematics and Science Study (TIMSS) data showing significant curricular differences between the United States and other countries, especially in the degrees of standardization, coherence, and challenge. He examines briefly the role of teachers, noting that differences in subject matter background account for significantly different levels of achievement in different countries. The author argues that even the best teachers need an effective curriculum to be effective and that such a curriculum does not substantially threaten the U.S. commitment to local control of schools.

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