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**LEARN MORE ONLINE**

Access the online learning guide at [www.learningforward.org/news/jsd/](http://www.learningforward.org/news/jsd/) to support team-based learning using this issue.

**Quotable**

**Content is No. 1**

“Professional development with a sustained focus on subject teaching — strongly tied to the curriculum, instruction, and assessment that students would encounter — produces the most consistent effect on subject teaching and student learning. Other professional development emphases, such as using hands-on activities, organizing cooperative small groups, taking steps to increase gender equity, or preparing teachers for leadership roles, certainly respond to widespread interests and concerns. However, none of them shows a consistent relationship to teachers’ conceptions of subject teaching or reported practices of subject teaching. Only the professional development focused on subject knowledge for teaching does so.”

**Source:** Little, J.W. (2006, December). *Professional community and professional development in the learning-centered school*. Washington, DC: National Education Association.

For more information, see [www.nea.org/assets/docs/mf\\_pdreport.pdf](http://www.nea.org/assets/docs/mf_pdreport.pdf)

**OUT-OF-FIELD TEACHING**

“Teachers cannot teach what they don’t know.” So opens a recent Education Trust report (Ingersoll, 2008). Based on an analysis of data from the U.S. Department of Education, the report highlights out-of-field teaching and its disproportionate effect on high-poverty schools. When teachers do not have a solid grounding in the subjects they teach, particularly in middle and high school, they are just one chapter ahead of their students. While the report analyzes causes and promising practices, Learning Forward knows that the out-of-field teaching issue is just one of many reasons that content-specific professional development is critical.

For more information, see [www.edtrust.org/dc/publication/core-problems](http://www.edtrust.org/dc/publication/core-problems)

## STEM is in



Science, technology, engineering, and mathematics, or STEM, education is more intensely in the spotlight recently, thanks to several high-profile education initiatives and reports. Motivated in part by concerns about the United States' ability to compete in

a global marketplace, these initiatives concentrate resources and expertise on questions about creating more effective teaching and learning from kindergarten through college and beyond. Professional learning is always part of the equation.

**The Opportunity Equation:** A partnership between the Institute for Advanced Study and Carnegie Corporation of New York. <http://opportunityequation.org>

**Change the Equation:** Led by a network of CEOs, the initiative pairs business and education interests. [www.changetheequation.org](http://www.changetheequation.org)

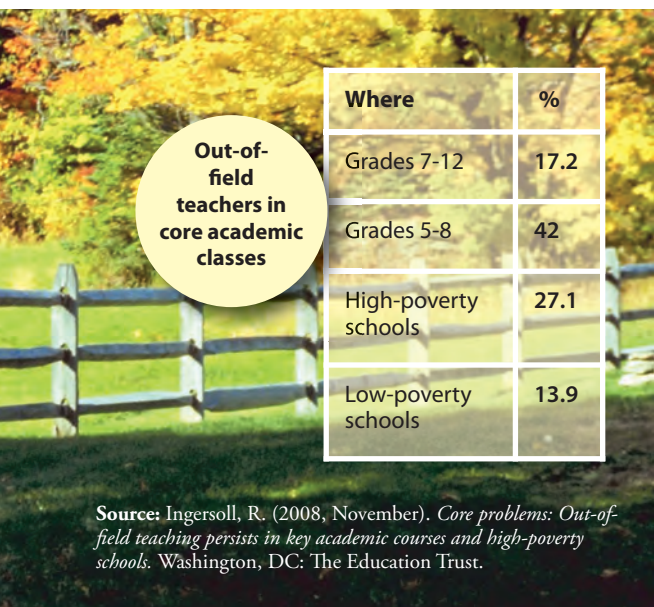
**Preparing the Next Generation of STEM Innovators:** The National Science Board's recommendations for developing talent in key fields. [www.nsf.gov/nsb/publications/pub\\_summ.jsp?ods\\_key=nsb1033](http://www.nsf.gov/nsb/publications/pub_summ.jsp?ods_key=nsb1033)

**Report to the President: Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Math for America's Future:** From the President's Council of Advisors on Science and Technology. [www.whitehouse.gov/administration/eop/ostp/pcast](http://www.whitehouse.gov/administration/eop/ostp/pcast)



Many of the writers in this issue of *JSD* share their professional learning strategies and student successes in specific content areas. In each case, educators set a vision for improvement. What is your school or district's highest need in this arena right now? Focus on just one area for improvement. Consider the following questions to take your first steps in creating a vision.

- How will the teacher start the class for the day?
- How will students in these classrooms be spending their time?
- What materials will they be using?
- What questions will teachers ask of their students?
- What questions will students ask of their teachers?
- What support will the student who struggles the most find in the room?
- What support will the most advanced student find in the room?
- If a principal enters the room 5 minutes before class is over, what will she or he see?
- How will the teacher know this was a successful day?
- How will the students know this was a successful day?
- How will the students describe the day to their parents?



Source: Ingersoll, R. (2008, November). *Core problems: Out-of-field teaching persists in key academic courses and high-poverty schools*. Washington, DC: The Education Trust.