

# Linking

## RESEARCH & PRACTICE

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### Executive Summary

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IN AMERICAN education today, widespread agreement exists about the critical need to improve the mathematical proficiency of all students in elementary and secondary schools. Toward that end, numerous reform initiatives have been undertaken over the past 15 years, specifying high expectations for student learning, designing assessments aligned to the expectations, developing new curriculum materials to support learning and teaching, and improving the recruitment, preparation, and continuing education of mathematics teachers. Although research underlies the development of these efforts, the research base is sometimes lacking or uneven. Moreover, research is often not considered in practice; practitioners often make and implement decisions about curriculum, instruction, and assessment without regard to research.

Even when school and district-based practitioners seek to make decisions that are informed by educational research, the findings that they seek are often published in research journals that are difficult for practitioners to access or are reported in an academic style that makes them difficult to interpret. Too often, the practical implications of academically written research reports are not apparent to practitioners. Further, once practitioners identify and locate appropriate research that could help them solve a problem of practice, they may have difficulty finding time to read and digest research findings—an activity that

is not a part of the educational system in most U.S. schools (Burkhardt & Schoenfeld, 2003).

NCTM has a long history of involvement in and support for mathematics education research, including, but certainly not limited to, sponsorship of research agenda conferences in the 1980s and research catalyst conferences in 1991 and 2003, sponsorship of a research pre-session each year before the NCTM annual meeting, co-publication of the first and second *Handbook of Research on Mathematics Teaching and Learning* (Grouws, 1992; Lester 2007), and publication of a prestigious research journal in the field of mathematics education (the *Journal for Research in Mathematics Education*). Although these efforts have greatly supported the mathematics education research community, none of them has focused explicitly on the relationship between research and practice.

In 2004, the NCTM Board of Directors identified linking research and practice as a strategic priority. In an effort to increase support for this priority and the relationship between research and practice, NCTM has undertaken several initiatives in the past few years, one of which was the launching of the Research Agenda Project. NCTM subsequently secured funding for a subproject titled Linking Research and



Practice—Challenges and Opportunities (NSF DRL No. 0736558). This funding allowed NCTM to organize a small conference intended to bring together mathematics education researchers and practitioners to identify a “research agenda that addresses significant problems of practice and is informed by experiences and expertise of practitioners” (NSF proposal, J. Rubillo, PI).

Under this grant, NCTM brought together approximately 60 mathematics education researchers and practitioners in August 2008 for a 4-day working conference focused on supporting the link between research and practice. During this working conference, the participants analyzed over 350 mathematics education practitioner-generated questions in seven areas: assessment, curriculum, equity, student learning, technology, teaching, and teacher preparation or professional development. These inductive, theme-identifying analyses produced a set of 25 questions that communicate practitioners’ needs for research that would affect their teaching.

This publication is a result of that working conference. Specifically, its purpose is to (a) emphasize the need for communication and col-

laboration between practitioners and researchers around issues that are important to practitioners; (b) make practitioners’ research needs, both as initiators and consumers of research, explicit to the mathematics education research community; (c) promote a set of research-guiding questions that focus researchers’ attention on critical problems of practice; and (d) urge funding agencies, policymakers, and other mathematics education stakeholders to support research that is grounded in practitioners’ problems of practice.

The full publication is available online at <http://www.nctm.org/researchagenda>.

## REFERENCES

- Burkhardt, H., & Schoenfeld, A. H. (2003). Improving educational research: Toward a more useful, more influential, and better-funded enterprise. *Educational Researcher*, 32(3), 3–14.
- Grouws, D. A. (1992). *Handbook of research in mathematics teaching and learning*. Reston, Va.: National Council of Teachers of Mathematics.
- Lester, F. K. (2007). *Second handbook of research on mathematics teaching and learning*. Charlotte, N.C.: Information Age.