

Preface

From November 1–4, 2012, nearly 500 faculty and graduate students in mathematics education converged on Kalamazoo, Michigan, for the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA). Throughout and following the conference, many participants noted the high quality and richness of the scholarly work and of the intellectual exchanges at the sessions. An invitation from Jinfa Cai and James Middleton, the series editors for the Springer monograph series *Research in Mathematics Education*, to the conference co-organizers, Jane-Jane Lo and Laura Van Zoest, to submit a proposal that included expansions of select papers presented at the conference provided the opportunity to further share and expand on some of these important ideas.

The first task was to identify a theme for the monograph. Out of 319 research report and brief research report proposals submitted for review, over one third had focused on themes related to mathematics teacher education. This heightened interest in mathematics teacher education at PME-NA prompted the choice of mathematics teacher education as the theme. At this point, Keith Leatham was invited to join the editorial team to contribute his expertise in mathematics teacher education research.

To select the authors, the editors identified major themes related to mathematics teacher education in the 2012 PME-NA Proceedings. Three main themes emerged: (1) Mathematics Knowledge for Teaching, (2) Beliefs and Identities, and (3) Tools and Techniques to Support Mathematics Teacher Learning. These three themes thus became the three sections of this book. We then reviewed more carefully a set of 34 research reports and brief research reports that related to these themes and narrowed down the collection to 13 papers. We contacted the authors of these 13 papers to explore their interests in expanding their papers to chapters. The authors from 11 of the papers accepted our invitation. The other papers had already been expanded and submitted to journals for review. One set of authors, however, had written a related paper for the 2013 PME-NA, which we reviewed and found to fit nicely in the collection. This is how we arrived at the collection of 12 core chapters included in this volume.

We then set out to identify colleagues with research expertise in mathematics teacher education to serve as external reviewers and to write commentary chapters. Mark Hoover Thames, Denise Spangler, and Randolph Philipp accepted

the invitation to become the commentary authors for the sections on Mathematics Knowledge for Teaching, Beliefs and Identities, and Tools and Techniques for Supporting mathematics Teacher Learning, respectively. Each section commentary chapter contains a brief review of the studies in that particular section, a discussion of major themes that cut across the studies, and suggestions for future directions in that particular area of research. Furthermore, Olive Chapman, the editor of the *Journal of Mathematics Teacher Education*, accepted the invitation to write a commentary for the entire collection to situate the findings of these 12 studies in the landscape of mathematics teacher education, and to offer her thoughts on future directions.

Each editor assumed the role of editor for one section: Laura for Mathematical Knowledge for Teaching, Keith for Beliefs and Identities, and Jane-Jane for Tools and Techniques to Support Teacher Learning. In so doing, we became the primary contact person for the authors of that section. We then went through a two-stage process to expand and refine the papers. During the first stage, we each read and reviewed all the papers from our own sections and two more from each of the other two sections. Section editors compiled this feedback and provided a list of suggestions for the authors to consider as they expanded their papers. During the second stage, each paper was read by the section commentary author, by the section editor, and again by one other member of the editorial team. Again, a list of suggestions, along with a marked manuscript with edits and comments, was sent to the authors for another round of revisions. Section editors then worked with authors in an iterative fashion to create final drafts. We also provided feedback to the commentary authors to help them clarify the main ideas in their papers.

We thank all the authors of this volume for their dedication in meeting the extremely tight deadlines involved in bringing this book together. We thank Hope Smith for her dedication to the technical details for the final preparation of the manuscripts, and series editors Jinfa Cai and James Middleton for their support and encouragement. We are pleased to present this volume as a timely and important resource for the mathematics teacher education research community.

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