

## EDITORIAL

### *Mathematics Teacher Educator: An Opportunity to Share, Verify, and Improve Practitioner Knowledge*

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*Mathematics Teacher Educator* is the first journal dedicated specifically to issues in mathematics teacher education, providing a much-needed forum for supporting and improving the practice of educating teachers of mathematics. As the Editorial Panel articulated in the call for manuscripts (<http://www.amte.net/publications/mte>), the mission of *Mathematics Teacher Educator* is “to contribute to building a professional knowledge base for mathematics teacher educators that stems from, develops, and strengthens practitioner knowledge. The journal provides a means for practitioner knowledge related to the preparation and support of teachers of mathematics to be not only shared but also verified and improved over time. The journal is a tool to build the personal knowledge that mathematics educators gain from their practice into a trustworthy knowledge base that can be shared with the profession.”

Building a trustworthy knowledge base for mathematics teacher education requires that manuscripts convey more than stories of practice, however compelling. They must describe a problem or issue in mathematics teacher education with which readers can identify; the methods/interventions/tools that were used to explore or address the problem or issue; and the means by which these methods/interventions/tools and their results were studied and documented. In addition, manuscripts must be connected to the existing knowledge base in mathematics teacher education, grounded in theory and/or previously published articles, provide evidence of the effectiveness of the intervention being described beyond anecdotal claims, make explicit the specific new contribution to our knowledge base, and provide sufficient detail to allow for verification, replication in other contexts, or modification by subsequent authors.

The articles in this first issue of *MTE* provide both rich illustrations of these criteria and solid examples of the types of problems and issues that are sure to be of interest to practitioners who contribute to the preparation and professional development of pre-K–grade 12 preservice

and in-service teachers of mathematics (e.g., mathematics teacher educators, mathematicians, teacher leaders, school district mathematics specialists, professional developers). Although the articles share these general characteristics, they differ along several dimensions: the nature of the issue or problem being addressed, the context in which the intervention was enacted, and the level and experience of the teachers participating in the work. The descriptions that follow provide a brief summary of the articles, highlighting the three key dimensions along which they vary.

In the opening article, “Mathematics Preservice Teachers Learning About English Language Learners Through Task-Based Interviews and Noticing,” Anthony Fernandes describes the use of task-based interviews in a content course focused on geometry and measurement to help preservice middle school teachers develop an awareness of the challenges that English language learner (ELL) students face and the resources on which they draw as they learn mathematics and communicate their thinking in English only classrooms. He provides evidence that in addition to developing awareness, preservice teachers also adopted strategies that were aligned with best practices for teaching ELLs outlined in the literature.

In “The Role of Writing Prompts in a Statistical Knowledge for Teaching Course,” Randall E. Groth describes the use of writing prompts to help preservice elementary teachers (K–8) enrolled in a content course focused on statistics develop statistical knowledge for teaching (SKT). He provides evidence that preservice teachers developed SKT as well as knowledge of introductory college-level statistics.

In “Capitalizing on Productive Norms to Support Teacher Learning,” Laura Van Zoest and Shari L. Stockero describe the results of a study they conducted with both preservice and in-service secondary mathematics teachers to determine the extent to which teachers’ experiences and learning in an initial methods course had long-term effects on their professional practice. The authors argue that explicitly cultivating professional norms impacts teachers’ knowledge and habits of practice. Specifically, cultivating professional norms improves teachers’ own mathematical understanding, particularly the specialized content knowledge needed for teaching; supports teachers in learning to view and analyze classroom practice in productive ways; provides teachers an experiential basis for thinking about fostering productive norms in their classrooms; and helps teachers to develop professional dispositions that support continued learning from practice.

In “The Content-Focused Methods Course: A Model for Integrating Pedagogy and Mathematics Content,” Michael D. Steele and Amy F. Hillen posit the creation of hybrid courses that focus on developing specific mathematical content (in this case functions) in the context of a methods course with the intent of helping teachers developed more integrated knowledge of content and pedagogy. In the specific example provided, preservice and in-service teachers with elementary, secondary, and special education backgrounds collaboratively engage in a course that is designed around three key principles, which the authors argue are generalizable to a wide range of teacher education settings.

In the final article in this issue, “Using ‘Lack of Fidelity’ to Improve Teaching,” Anne K. Morris describes how variations in the implementation of lesson plans can serve as a source of information for improving curricula. She draws on her observations of two instructors of a content course for preservice elementary teachers (K–8) and identifies significant variations and positive adaptations in the lessons that lead to increasingly rich lesson plans that, she argues, can move toward building an accumulated knowledge base in teacher education.

Although these five articles represent diversity along several dimensions, as with any finite set of exemplars, they do not begin to exhaust the possibilities for articles that would be suitable for *MTE*. For example, none of the articles focuses on professional development for in-service teachers, delivery systems other than face-to-face meetings, or field experiences for preservice teachers. As the collection of *MTE* articles grows over time, it is expected that a wider range of issues, contexts, and populations will be addressed.

Because one of the goals of the journal is to build a knowledge base for the field, submissions that deliberately build on prior published work are encouraged. Careful descriptions of how previous methods/interventions/tools have been modified and the comparison/contrast to earlier reported results should be articulated.

Please consider contributing to the journal by writing an article or serving as a reviewer. As you can see by the authorship of the articles that appear herein, authors have a range of experience (assistant professors to full professors), are at different types of institutions, are housed in different departments, and have different areas of expertise. What they have in common is a passion for teacher education and the motivation to share their work with colleagues in order to improve the practice of teacher education.

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