



Welcome to Today's Webinar:
Writing for the MTE Journal: Come learn how to get started!

Panelists:

Karen Hollebrands, *Editor of the MTE journal*

Mike Steele, *Editor-Designate of the MTE journal*

Andy Tyminski, *MTE Journal Editorial Board member*

Alison Castro Superfine, *MTE Journal Editorial Board member*

Babette M. Benken, *AMTE's Board Designee to the MTE journal*

Hosted by:

Megan Burton, *AMTE President*

Shari Stockero, *AMTE Executive Director*



Announcement:

- **AMTE Conference Registration is now open!** Early registration ends September 30. See the conference website (<https://amte.net/content/2022-annual-amte-conference>) for details. Join us in beautiful Henderson, NV **February 10-12, 2021!**



MTE Editorial Board

Karen Hollebrands, Editor (2018-2022)
Valerie Faulkner, Associate Editor (2018-2022)

Mike Steele, Editor Designate (2021-2025)
Kate R. Johnson, Associate Editor Designate (2021-2025)

Matthew Campbell, Panel Chair, (2019-2022)
Zandra de Araujo (2019-2022)
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Robert Q. Berry, III (2021-2024)
Andy Tyminski (2021-2024)
Beth Kobett, NCTM Liaison (2018-2021)

David Barnes, NCTM Staff Liaison
Babette Benken, AMTE Liaison and Publications Director



Presenters

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Outline of Today's Webinar

Overview of the journal

Abstract sorting task

Resources for writing a manuscript for the MTE journal

The MTE Writing Tool

Other general suggestions, advice, and tips

Other AMTE publication opportunities

Questions and discussion



Mission and Goals

The *Mathematics Teacher Educator* contributes 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 public, shared, and stored, but also verified and improved over time (Hiebert, Gallimore, and Stigler 2002).

The *Mathematics Teacher Educator* is a peer-reviewed (double blind), online, journal. We publish three issues (Feb, June, Sept) each year. Each issue includes an editorial and four articles.



Audience

The primary audience of *Mathematics Teacher Educator* is practitioners in mathematics teacher education, with practitioner broadly defined as anyone who contributes to the preparation and professional development of pre-K–12 pre-service and in-service teachers of mathematics.

Mathematics teacher educators include mathematics educators, mathematicians, teacher leaders, school district mathematics experts, and others.



Manuscripts

The journal welcomes manuscripts that address a problem or issue in mathematics teacher education (a problem of practice), the interventions/innovations/tools that were used, the means by which these interventions/innovations/tools were studied, and a description of how the results can be applied to practice.

Manuscripts should be no longer than 25 pages of text or 6,250 words (exclusive of references). For ease of reading by reviewers, all figures and tables should be embedded in the correct locations in the text. All manuscripts should be formatted according to the guidelines of the Publication Manual of the American Psychological Association (7th edition).

https://pubs.nctm.org/view/journals/mte/mte-overview.xml?tab_body=SubmissionGuidelines



Evidence

The nature of evidence in a practitioner journal is different from that in a research journal, but evidence is still critically important to ensuring the scholarly nature of the journal.

Authors must go beyond simply describing innovations to providing evidence of their effectiveness. Note that effectiveness implies that something is better and not just different as a result of the innovation.

The specific contribution to our knowledge should be made explicit.

Findings should be reported with enough warrants to allow the construction or justification of recommendations for policy and practice.



Review Criteria

The manuscript contains:

- a description of the problem or issue of mathematics teacher education.
- the methods/interventions/tools used.
- a description of how the results were studied and documented.
- a description of how results apply to broader practice.

The manuscript also:

- connects to the existing knowledge base in mathematics teacher education.
- is grounded in theory and/or on previously published articles.
- provides sufficient detail to allow for verification, replication, and modification.
- goes beyond simple description to provide evidence of effectiveness.
- makes explicit the specific new contribution to our knowledge.

Abstract Sorting Activity

Abstract 1: Groups 1 & 6

Abstract 2: Groups 2 & 7

Abstract 3: Groups 3 & 8

Abstract 4: Groups 4 & 9

Abstract 5: Groups 5 & 10

Abstract 6: Group 11 & 12

Decide: YES this abstract is from the MTE journal or NO this abstract is not from the MTE journal

Discuss why...

You will have about 10 minutes and then we will return to discuss your decisions

Hey, students!

Go to student.desmos.com
and type in:

5CY TKK

You can also share this invitation link with your students:


<https://student.desmos.com/join/5cytkk>

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Abstract 1

Two major challenges in mathematics teacher education are developing teacher understanding of (a) culturally responsive, social justice–oriented mathematics pedagogies and (b) mathematical modeling as a content and practice standard of mathematics. Although these challenges may seem disparate, the innovation described in this article is designed to address both challenges in synergistic ways. The innovation focuses on a mathematical modeling task related to the ongoing water crisis in Flint, Michigan. Through qualitative analysis of instructor field notes, teacher generated mathematical models, and teacher survey responses, we found that teachers who participated in the Flint Water Task (FWT) engaged in mathematical modeling and critical discussions about social and environmental justice. The evidence suggests that integrating these 2 foci—by using mathematical modeling to investigate and analyze important social justice issues—can be a high-leverage practice for mathematics teacher educators committed to equity-based mathematics education. Implications for integrating social justice and mathematical modeling in preservice and in-service mathematics teacher education are discussed.



Shared problem
of practice

Two major challenges in mathematics teacher education are developing teacher understanding of **(a) culturally responsive, social justice-oriented mathematics pedagogies** and **(b) mathematical modeling as a content and practice standard of mathematics**. Although these challenges may seem disparate, the innovation described in this article is designed to address both challenges in synergistic ways.

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Innovation

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Evidence

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Contribution



Abstract 2

This theoretical article describes a framework to conceptualize computational thinking (CT) dispositions—*tolerance for ambiguity, persistence, and collaboration*—and facilitate integration of CT in mathematics learning. Discussion of the CT framework highlights the complementary relationship between CT and mathematical thinking, the relevance of mathematics to 21st-century professions, and the merit of CT to support learners in experiencing these connections.



Abstract 3

Teachers and mathematics teacher education scholars have identified field experiences and quality mentoring as influential components of math teacher preparation and development. Yet, quality mentoring is a complex and demanding practice. Providing educative feedback to novices, particularly that which encourages reflection versus evaluation, can be challenging work for mentors. To study the potential of an intervention for providing professional development for mentors, I worked with pairs of mentors and prospective teachers (PSTs) offering Smith's (2009) noticing and wondering language as a way of structuring mentoring conversations that maintain both descriptive and interpretive analytic stances. Analysis of before and after conversations provided evidence of how mentor-PST pairs adopted noticing and wondering language, and in particular illuminated the ways in which the language structure might support interpretive mentoring conversations for studying teaching. The results suggest that mathematics teacher educators may want to consider what makes wondering challenging work and how to best support wondering in educative mentoring conversations.



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Abstract 4

Mathematics teacher educators play a critical role in translating research findings into frameworks that are useful for mathematics teachers in their daily practice. In this article, we describe the development of a representation that brings together four research-based learning trajectories on number and operations. We detail our design process, present the ways in which we shared this representation with teachers during a professional development project, and provide evidence of the ways teachers used this translation of research into a pedagogical tool to make sense of students' mathematics. We conclude with revisions to the representation based on our analysis and discuss the role of mathematics teacher educators in translating research findings into useful tools for teachers.



Abstract 4

Mathematics teacher educators play a critical role **in translating research findings into frameworks** that are useful for mathematics teachers in their daily practice. In this article, **we describe the development of a representation that brings together four research-based learning trajectories on number and operations**. We detail our design process, present the ways in which we shared this representation with teachers during a professional development project, and **provide evidence of the ways teachers used this translation of research into a pedagogical tool to make sense of students' mathematics**. We conclude with revisions to the representation based on our analysis and **discuss the role of mathematics teacher educators in translating research findings into useful tools for teachers**.



Abstract 5

This study addresses a longstanding question among high school mathematics teachers and college mathematics professors: Which is the best preparation for college calculus—(a) a high level of mastery of mathematics considered preparatory for calculus (algebra, geometry, precalculus) or (b) taking calculus itself in high school? Mastery of the mathematics considered preparatory for calculus was found to have more than double the impact of taking a high school calculus course on students' later performance in college calculus, on average. However, students with weaker mathematics preparation gained the most from taking high school calculus.



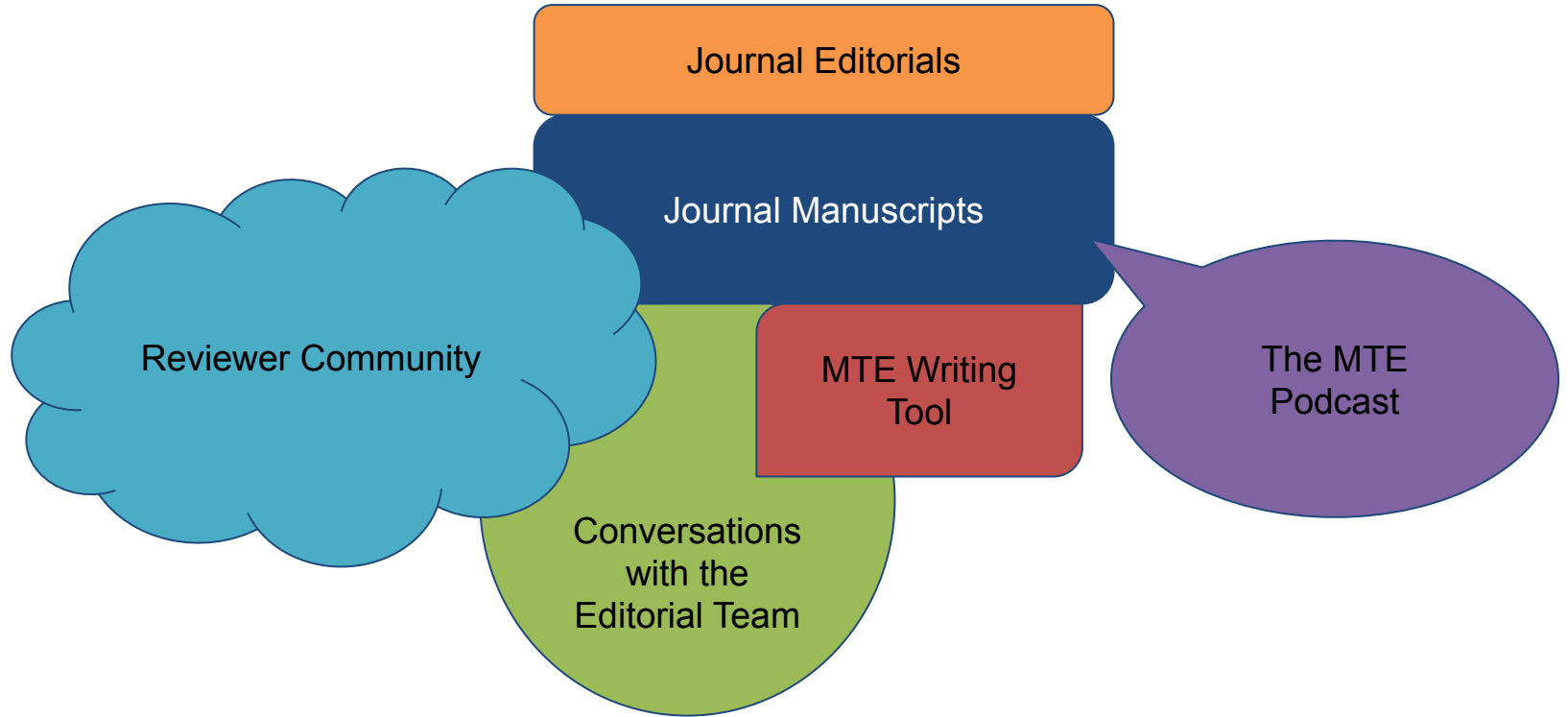
Abstract 6

Mathematics teaching at secondary levels has proven surprisingly resistant to change over the past century. This study draws on two theoretical models to investigate how the process of changing secondary teaching in algebra through school-based professional learning might occur, and its relationship to different external and internal influences on teachers and researchers. A cyclic change model is used to discuss three different change pathways that were found amongst six practising secondary teachers participating in an algebra teaching experiment, one phase of a larger design-based research project. Meta-didactical transposition is used to examine the dynamics between teachers and researchers and the institutional dimension of professional learning. Affordances and constraints related to the teachers' internal domains and social contexts in responding to professional learning opportunities are discussed. The bidirectional nature of brokering processes between teachers and researchers during professional learning is examined.



Resources for Writing for *MTE*

The *MTE* Ecosystem



Resources for Writing for *MTE*

[Download the writing tool](#)

Read published articles

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Read the editorials

Editorial: *Mathematics Teacher Educator: An Opportunity to Share, Verify, and Improve*

Editor: Margaret S. Smith

Volume/Issue: Volume 1: Issue 1

Page(s): 3-4

So You Want to Be an MTE Author? A Tool for Writing Your Next MTE Manuscript

Editor: Sandra Crespo and Kristen Bieda

Volume/Issue: Volume 5: Issue 2

Page(s): 85-93

Building a Knowledge Base: A "Thinking Model" to Understand the Flow of an MTE Manuscript

Author: Valerie Faulkner¹

[View More +](#)

Volume/Issue: Volume 8: Issue 2

Page(s): 3-7

MTE Writing Tool

Identify Shared Problem of Practice

- **Identify the shared problem of practice for MTEs and provide a rationale for addressing it**
- Questions to consider:
 - What important problem or issue in the practice of mathematics teacher educators does the manuscript address?
 - What is the justification for attending to this problem and why is it important to do so?

Define the Problem of Practice

- **Define the problem theoretically and/or conceptually**
- Questions to consider:
 - To which existing knowledge base in mathematics teacher education does the manuscript connect?
 - How are the primary phenomena defined?

Intervention/Tool or Theoretical Consideration?

Provide a description of and argument for the interventions or tools

- Questions to consider:
 - What argument does the manuscript make for how the interventions or tools address the identified problem?
 - What details does the manuscript provide to allow for replication or modification of the interventions or tools by subsequent authors?
 - How are claims about the effectiveness of the interventions or tools supported with evidence from the data and connected to existing research and/or theories?

Description and argument for the theoretical/philosophical consideration

- Questions to consider:
 - What description does the manuscript contain for how the theoretical or philosophical consideration was studied?
 - What details does the manuscript provide to allow for applied use of the theoretical or philosophical considerations presented?
 - Beyond simply describing the issue, how does the manuscript illuminate the trade-offs that would result from alternative solutions to the issue?

Report Details of the Research

Intervention/Tool

- Report details of the research on the interventions or tools
- Questions to consider:
 - What questions guided the scholarly examination of the effects of using the interventions or tools with prospective or practicing teachers of mathematics?
 - What methods were used to collect and analyze data?
 - How are claims about the effectiveness of the interventions/tools supported with evidence from the data and connected to existing research and/or theories?

Theoretical Consideration

- Report details for understanding engagement with this theoretical or philosophical consideration
- Questions to consider:
 - What details does the manuscript contain for how the theoretical or philosophical consideration was studied?
 - What details does the manuscript provide to allow for applied use of the theoretical or philosophical considerations presented?
 - Beyond simply describing the issue, how does the manuscript illuminate the trade-offs that would result from alternative solutions to the issue?

Make Explicit the New Contribution to MTEs

- **Make explicit the new contribution to knowledge and practices of MTEs**
- Questions to consider:
 - What specific new contribution to our knowledge does the manuscript make explicit?
 - What discussion does the manuscript contain about how this study can inform or influence the shared problem of MTEs' practice?
 - What warrants does the manuscript provide so that recommendations for policy and practice can be constructed or justified?
 - How does the manuscript provide sufficient detail to allow for verification, replication in other contexts, or modification by subsequent authors?



General Suggestions, Tips, and Advice

- Begin with something unique that you do with your preservice/in-service teachers that addresses a shared problem of practice.
- Before your course/activity
 - What do we already know about this shared problem of practice?
 - Prepare an IRB



General Suggestions, Tips, and Advice

- During
 - Describe your enactment
 - Collect evidence/data (work produced for class, responses to prompts, interviews, surveys, research instruments)
- Afterwards
 - Analyze the data
 - Be clear about the new contribution



Babette Benken, AMTE
Vice President for Publications

Publication Ideas



Lots of Options

- *Mathematics Teacher Educator* (MTE)
- *Contemporary Issues in Technology and Teacher Education – Math* (CITE-Math)
- *Connections*
- Professional Book Series (4 volumes; 5th volume spring 2022)
- Supplementary Materials for AMTE Standards



AMTE *Connections*

- Opportunity to publish short (6 page or less) article with ideas and resources for fellow math teacher educators
- What is appropriate? Essays addressing questions related to theory and practice, reviews of resources for math teacher educators, research summaries, and news articles related to math teacher education
- Blind, peer-review publication
- Each quarterly issue has 2-4 externally-submitted articles
- Can propel your writing for a full MTE manuscript and/or provide an opportunity to share big “take-aways” from a published manuscript
- <https://amte.net/publications/amte-connections-submit>

Questions?