



15th International Congress on  
Mathematical Education

7-14 July 2024 • ICC Sydney, Australia  
Come and be counted

# Topic Study Group 4.8: Knowledge and practice of mathematics teacher educators

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## Team details

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## Overview

Research in mathematics teacher education has historically focussed on those participating in teacher education and professional development (PD), i.e., prospective and practising mathematics teachers. As the field seeks to better understand how mathematics teachers can be best supported, the significance of the mathematics teacher educator (MTE) has been more widely recognised and has led to an increased interest in researching the knowledge and practice of MTEs, the broad focus of TSG4.8. Within the label 'MTE' we are including anybody who engages in the education or professional development of teachers of mathematics and in doing so, highlight the diverse range of contexts, settings and backgrounds represented within this international community. Since the previous TSG on the same topic at ICME-14, research on MTEs has been expanding and includes





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attention to the expertise and development of MTEs both within teacher education contexts and more commonly within PD contexts (where MTEs are often referred to as facilitators or teacher leaders).

Existing reports of MTE knowledge and practice have often drawn from and expanded upon frameworks for mathematics teachers' knowledge and practice. This direction has led to the formulation of various categorised descriptions. MTE knowledge has been identified as complex and contingent and has called for the development of new conceptualisations that capture this complexity. The methodological challenges involved in research that is focussed on MTEs continue to exist as MTEs wrestle with articulating the roles of theories, frameworks, and introspection in research involving MTEs. Methodologies that show promise for capturing the complexity of MTEs' work are often represented in book chapters or outside of mathematics education. The present TSG aims to build upon the growing research about MTEs and their work, identify gaps in the existing literature, and discuss the theoretical and methodological complexities and challenges involved in research with MTEs.

We would like to support participating authors by working towards the publication of a book (academic/professional) and/or special issue of an academic journal. Depending on interest from the group, we could pursue a proposal for an ICMI Study conference with a focus on MTEs.

## Areas of interest

We invite contributions relating to the full range of contexts in which MTEs work where the focus is on knowledge and practice. By 'knowledge and practice' we include other descriptions such as learning, development, growth, views, experiences, characteristics, decisions or decision-making processes, orientations, values, beliefs, identities and so on, relating to MTEs. We are particularly interested in submissions that maintain or highlight connections between different aspects of MTE knowledge and practice. In addition, we encourage submissions from authors using self-based or intimate methodologies as well as other methodological approaches.

The following list of questions is a guideline only, we welcome any submissions relating to the topic of interest:

- What are the practices that MTEs engage in? How can MTE practices be conceptualised? What are the relationships between context (e.g., pre-service teacher education, in-service professional development, primary/secondary teacher education) and practices and how are these relationships the same/different across different contexts? What are the relationships between MTE knowledge and practices?





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- What theoretical frameworks are appropriate for the study of MTE knowledge and practices? How can MTE knowledge and/or practices be described or conceptualised? What theoretical frameworks have the potential to offer new insights in relation to MTE knowledge or to maintain connections between knowledge and practice?
- How do MTEs become MTEs? What pathways are taken to becoming an MTE (e.g., transitioning from mathematics teacher to MTE) and how do these different pathways inform the knowledge and practices of MTEs? How do MTEs learn and develop?
- What prior experiences do MTEs draw upon in their work with mathematics teachers? How do these prior experiences inform MTE knowledge and practices?
- How do various methodological approaches help to expand views on an MTE's own knowledge and practices (e.g., self-based methodologies) or on other MTEs' knowledge and practices?
- How do MTEs change their practices in relation to a changing world? How do MTEs use technology in their work with mathematics teachers?
- How do accreditation processes and/or standardisation of teacher education curriculum and/or sanctioning of professional credentials inform the knowledge and practices of MTEs? What insight does a socio-political perspective offer in relation to the role of the MTE (e.g., in relation to power, knowledge and subjectivity)?

## How to make a submission to this Topic Study Group

Submissions for Topic Study Group Papers and proposals for Posters open 28 April 2023 via the official ICME-15 website, [icme15.org](http://icme15.org). The website also contains a timeline of dates for the activity of the Topic Study Groups in the lead up to the Congress.

For questions about this TSG, please contact the Co-Chairs using the email addresses provided.

