



# Embracing local insights for global advancement

Thorsten Scheiner<sup>1,2</sup> 

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In the dynamic field of mathematics teacher education, the *Journal of Mathematics Teacher Education* (JMTE) serves as a vital platform for exploring and advancing the education and professional development of mathematics teachers from an international perspective. This issue of JMTE explores the profound impact of cultural, social and institutional contexts on mathematics teacher education and highlights the diversity of educational experiences that contribute to a global understanding of teaching and learning. By examining the rich and diverse studies presented in this issue, we can appreciate how local insights can be used to contribute to the global discourse on mathematics teacher education.

## The power of context in mathematics education

The context in which mathematics education takes place is not just a background, but a vital, dynamic component that shapes every aspect of teaching and learning. This issue brings together compelling evidence from a range of settings, with each study underlining the crucial role of contextual relevance in mathematics teacher education.

Capone et al.'s (this issue) research on the use of culturally crafted Lesson Study in Italian secondary schools illustrates how local cultural contexts can significantly enhance professional development. This study highlights the importance of adapting teaching practices to respect and reflect cultural nuances, ensuring that mathematics education is not only effective but also deeply relevant to students' cultural experiences. The Italian secondary school teachers who participated in the Lesson Study found that integrating culturally specific examples and approaches into their teaching not only improved their pedagogical strategies, but also increased student engagement and understanding. This underscores a broader insight: culturally responsive teaching practices foster an inclusive and supportive learning environment, which is essential for effective education.

Ratnayake et al. (this issue) explore the integration of digital technology in Sri Lankan classrooms, providing insights into the challenges and opportunities that arise in contexts where such integration is relatively new. Their study focuses on how teachers navigate the introduction of digital tools in a mathematics curriculum and highlights the critical role

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✉ Thorsten Scheiner  
thorsten.scheiner@acu.edu.au

<sup>1</sup> Institute for Learning Sciences and Teacher Education, Australian Catholic University, Brisbane, Australia

<sup>2</sup> Institute of Mathematics, Free University of Berlin, Berlin, Germany

of teacher decision-making in orchestrating these resources effectively. The study demonstrates that teachers' ability to adapt their pedagogical approaches to incorporate technology—especially in settings where digital literacy may be emerging—can transform traditional teaching methods and enhance student learning experiences. This case study from Sri Lanka illustrates the broader challenge of integrating technology into education in a way that is sensitive to and supportive of local contexts.

Auslander et al. (this issue) investigate the preparation of elementary mathematics specialists as teacher leaders, emphasising how local educational systems and needs shape the development of leadership skills and instructional strategies. Their research highlights the tailored approaches needed to develop teacher leaders who can effectively support their colleagues and foster a community of practice within their schools. In the context of their preparation program, these specialists learn to navigate and address the specific educational challenges and opportunities present in their local settings. This study reflects a broader trend in educational leadership: effective teacher leaders must be deeply attuned to their unique local contexts to guide and inspire meaningful improvements in teaching practices and student outcomes.

Rotem and Ayalon's (this issue) study on pre-service teachers' noticing skills highlights how different levels of coherency in understanding classroom interactions are deeply influenced by the specific educational and cultural context. This research delves into how pre-service teachers develop the ability to notice significant classroom events and how these skills are shaped by the context in which they are trained. In particular, the study reveals that the ability to notice student interactions and learning needs is not developed in isolation but is deeply embedded in the cultural and institutional context of the teachers' training environment. For instance, in environments that emphasise collaborative learning, pre-service teachers are more likely to develop advanced noticing skills that support student-centred pedagogical strategies. This underscores the necessity for teacher education programs to be sensitive to the specific educational contexts in which their teachers will teach.

Stovall et al.'s (this issue) exploration of high school mathematics teachers' noticing of inequitable talk within the classroom further emphasises the impact of context on teaching practices. This study focuses on how teachers recognise and address inequities in student participation and interaction, a critical aspect of fostering an inclusive learning environment. The findings show that teachers' ability to notice and respond to inequities is heavily influenced by their understanding of the cultural and social dynamics of their classrooms. Teachers who are deeply familiar with the diverse backgrounds and experiences of their students are better equipped to create equitable and inclusive learning environments. This highlights the importance of context in shaping teachers' awareness and responsiveness to issues of equity and inclusion in their classrooms.

## Addressing the challenge of global relevance

As JMTE aims to promote research of international significance, we face the critical challenge of ensuring that locally grounded research is appreciated for its global relevance without losing its unique contextual insights. This challenge is particularly acute for researchers from the Global South, who often need to situate their locally specific studies within a broader, sometimes Global North-centred, scholarly context in order to justify the international significance of their work (see Darragh et al., forthcoming).

Consider, for example, Lendínez Muñoz et al. (this issue) who discuss the growth of self-efficacy among prospective teachers, focusing on the specific educational settings of their participants. Their findings are invaluable for understanding teacher development within similar settings, yet they also highlight a broader pattern: the expectation for local insights to be framed in a way that aligns with a global scholarly discourse can obscure the unique and valuable aspects of these local experiences. This expectation can be particularly burdensome for researchers from regions where educational contexts are significantly different from those typically highlighted in global discussions.

Consider also Çelikdemir and Haser (this issue) who examine how participation in video clubs transforms preservice teachers' identities. This transformation is deeply rooted in the specific context of the participants, providing general insights into reflective teaching practices. However, the necessity to situate these findings within a broader international narrative can sometimes detract from the particularities that make such insights uniquely valuable. This study underscores the importance of allowing local contexts to inform and enrich our understanding of teacher identity development without requiring these insights to be framed solely within the parameters of global applicability.

It is important to note that the expectation for researchers, especially those from under-represented regions, to justify the global relevance of their work often exerts a homogenising pressure, potentially diluting the rich, specific insights that emerge from their unique contexts. This challenge highlights the need for a more equitable approach to academic publishing—one that values and celebrates diverse contexts and perspectives.

## Promoting an equitable global discourse

To promote an equitable, diverse and inclusive global discourse in mathematics teacher education (see Scheiner et al., 2024), JMTE and its contributors should:

- Situate local research within global scholarship: Each paper should demonstrate the relevance and significance of its research problem or questions by connecting them to broader international scholarly work. For example, in their study on culturally crafted Lesson Study, Capone et al. (this issue) link their findings to global discussions on culturally responsive teaching practices, making their local insights accessible and relevant to a wider audience.
- Include diverse geographical perspectives: Contributions should reference and integrate scholarly work from various geographical contexts, ensuring the inclusion of perspectives from both the Global North and the Global South. This approach enriches the dialogue and fosters a more comprehensive understanding of educational practices worldwide. Ratnayake et al.'s (this issue) work on digital technology integration in Sri Lanka, for instance, draws connections to similar challenges faced in other parts of the world, creating a broader context for understanding the unique aspects of their study.
- Provide sufficient local context: Authors need to provide enough background information to make the local dimensions of their research understandable and relevant to scholars from different regions. Auslander et al.'s (this issue) detailed exploration of the local education systems that shape the development of elementary mathematics special-ists is an example of how providing rich contextual information can make research findings more accessible and meaningful to an international audience.

In conclusion, the papers in this issue of JMTE highlight the indispensable role of context in shaping mathematics teaching and teacher education. They challenge us to embrace and celebrate the diverse educational experiences that inform and enrich our global understanding. By recognising the value of local insights and fostering inclusive scholarly dialogue, we can promote a more nuanced and equitable global discourse in mathematics education.

As JMTE continues to promote research that bridges local and international perspectives, we must remain committed to valuing the richness of each context and amplifying the diverse voices that contribute to the advancement of mathematics teacher education worldwide. In doing so, we celebrate the complexity and diversity of educational practices and pave the way for a more inclusive and representative global academic community.

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