Editorial

Maike Vollstedt[1], Vesife Hatisaru[2,3], Martin Ohrndorf[1] and Aylin Thomaneck[1]

[1] University of Bremen, Germany
[2] Edith Cowan University, Australia
[3] University of Tasmania, Australia

This Special Issue in International Journal on Math, Science and Technology Education (LUMAT) has a unique history. It is a collection of selected papers from the 27th International Conference on Mathematical Views (MAVI27), which took place in Bremen, Germany, from 15 to 17 September 2021. At least that was the intention!

The unique story begins two years earlier, when Maike Vollstedt and her team (at that time Christoph Duchhardt, Neruja Suriakumaran, and Aylin Thomaneck, supported by Kerstin Düren, Vesife Hatisaru, and Ralf Erens) agreed to organize MAVI26 in Bremen in August 2020. Everything was already planned when the COVID-19 pandemic took over the world, making it impossible for participants to travel to Bremen. As an alternative, the organizers switched to an online conference format via Zoom. The opening plenary was given by Andreas Eichler, Federica Ferretti, and Andrea Maffia, who presented „A comparative study on German and Italian prospective teachers' view on mathematics", that originated during MAVI25 in Intra (Italy), in 2019. The closing plenary was given by Markku S. Hannula on „Revisiting the metatheory of affect: Special focus on studying states".

As the conference had already been completely organized locally, the Bremen team (then Maike Vollstedt, Martin Ohrndorf and Aylin Thomaneck, supported by Kerstin Düren, Vesife Hatisaru, and Ralf Erens) agreed to also host MAVI27. Unsurprisingly, the pandemic threw over everything again. The number of cases worldwide was on the rise, making it unsafe to hold the conference on site. Similarly, in 2021, there was no alternative but to hold MAVI27 online again. The keynote speech was given by Stanislaw Schukajlow-Wasjutinski on the topic „What objects are you targeting? Strategy-based motivation and emotions".

Albeit their online format, both conferences provided a wonderful opportunity to engage in scientific exchange on affect-related research projects and to discuss the studies constructively and critically at a high level. The submissions underwent a peer review process, where every paper was reviewed by two other conference participants. As the MAVI community values a constructive and critical atmosphere, the review was unblind. Of the 15 submissions, 13 were accepted and presented at the conference.

These 13 papers were revised according to the review reports and submitted for publication in the proceedings, following the conference. During the publication process, they underwent an additional review where every paper was reviewed by two reviewers. One reviewer was usually the reviewer of the pre-conference review, and the second reviewer was someone who was not previously engaged in the review of the respective submission. After this robust review process, we are pleased to bring together the following nine selected papers in this Special Issue.

The Special Issue brings research papers together on affect in mathematics education across all school levels and beyond. Topics of the papers on the focus include beliefs, attitudes, emotions, interest, motivation, identity, mindset, and interpersonal relationships. In 'Investigating the Complex Relations Among Affective Variables in the Context of Gambling', Chiara Andrà, Eleonora Averna, Ilaria Copelli, Gianluca Sini Cosmi, Elisa Paterno, and Claudia Chiavarino touch upon a dramatics phenomenon that has been spreading in the context of Italy and beyond: gambling disorder. The authors investigated the role of affect in a sample of secondary students' gambling behavior to understand how activities in mathematics lessons can help to prevent students from this behavior. In 'Attitudes in Mathematical Discovery Processes: The Case of Alex and Milo', Carolin Danzer presents six-grade students' attitudes in mathematical discovery processes and how they handle with counterexamples. As a modification of subject matter didactics, in 'Beliefs-oriented Subject-Matter Didactics – Design of a Seminar and a Book on Calculus Education', Frederik Dilling, Gero Stoffels, and Ingo Witzke focus on the students' views of a specific mathematical content: Calculus. As part of a larger research, Andreas Ebbelind and Tracy Helliwell present the language of one mathematics educator by utilizing the Systemic Functional Linguistics framework in their study 'Examining Interpersonal Aspects of a Mathematics Teacher Educator Lecture'. In 'Emotional Classroom Climate from a Psychological Perspective', Ana Kuzle presents a study on how grade three and grade six students perceive the emotional aspect of their geometry lessons through participant produced drawings. Maria Kirstine Østergaard provides the findings of a systematic literature review on students' beliefs about mathematics as a discipline in her study 'Characterizing Students' Beliefs about Mathematics as a Discipline'. In 'A Quantitative Study about Describing Correlations of Motivational and Affective Aspects and Digital Heart Rate Measurement', Felicitas Pielsticker and Magnus Reifenrath present a unique study on motivational heart rate measurement of students in a workshop on graph theory. Anna Schreck, Jana Groß-Ophoff, and Benjamin Rott focus on associative and

evaluative judgements of university students on mathematical epistemological beliefs (in other words, connotative aspects of epistemological beliefs) in their study 'Connotative Aspects of Epistemological Beliefs: A Pseudo-longitudinal Study with Students of Different Mathematical Programmes of Study'. In 'How to Deal with and Utilize (Mathematics (Education)) Researchers' Beliefs', Gero Stoffels concentrates on researchers' beliefs, a group whose beliefs are relatively less investigated.

The publication process took a while for a few reasons. First, we were still in a pandemic, which added to the workload, combined with difficult childcare situations and the like. Second, the organizing committee hosted the conferences free of charge, so there was no fund to spend on publication of the proceedings. Several options were considered. The Editorial Team was unwilling to make an agreement with any large international publisher, as this would have meant publishing with a charge; the papers could have been accessed with cost limiting their read, and citation accordingly. Another option was considered to publish the proceeding open access supported by the University of Bremen. Finally, the MAVI Board, in collaboration with Markku S. Hannula, worked out the possibility of publishing this Special Issue in LUMAT.

We are delighted to publish the proceedings in LUMAT, a high-quality international journal, and wish to thank Markku S. Hannula and the members of the MAVI Board for their wise and ongoing commitments to MAVI. Having said all this unique journey, we wish readers will gain rich insights into current studies on affective theories in the field of mathematics education upon viewing the papers available in the Special Issue.

Yours in research,
Maike Vollstedt, Vesife Hatisaru, Martin Ohrndorf, and Aylin Thomaneck
Editorial Team