

Editorial

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This LUMAT special issue is a collection of selected papers from the 24th international conference of mathematical views that was held on August 20–22, 2018 in Helsinki, Finland. The conference was a wonderful opportunity to elaborate issues related to mathematics-related affect among colleagues interested in this area of research. The keynote at the conference was given by Reinhard Pekrun with a title: “Achievement emotions in mathematics”. Out of the 25 conference presentations, 12 were submitted as a manuscript for peer review. We had one reviewer selected among MAVI 24 participants, and another reviewer was invited among mathematics affect researchers who were not at the conference. After the review and revisions, we ended up with eight articles that you can read in this special issue.

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1 Haataja

In the article “*Teacher-student eye contact during scaffolding collaborative mathematical problem-solving*” Eeva Haataja, Miika Toivanen, Anu Laine and Markku Hannula examine the role of eye-contact when the teacher scaffolds student non-routine problem solving. They used mobile gaze trackers in three lessons and their results showed that students often did not respond to the teacher’s gaze. Moreover, they found out that dyadic eye-contact usually happened during affective or cognitive scaffolding and were typically initiated by the student and terminated by the teacher.

2 Hatisaru

In the article “*Lower secondary students’ views about mathematicians depicted as mathematics teachers*”, Vesife Hatisaru discusses what kind of views lower secondary students have about mathematicians when depicted as a mathematics teacher. The most common patterns that emerged in the drawings and associated writings were that mathematics teachers are predominantly female, viewed positively, lecture, explain and demonstrate, and use whiteboards and books as tools of the profession. Based on the findings she makes recommendations both for research and for



mathematics education.

3 Lake

In the article “*Playing it safe’ or ‘throwing caution to the wind’, risk-taking and emotions in a mathematics classroom*”, Elizabeth Lake discusses risk-taking and related emotions as part of teacher profession. The article provides examples of teachers being playful and childish in order to keep teaching exciting and inspiring for themselves and their students. On the other hand, the paper also elaborates the teacher reflections for avoiding risk-taking. She concludes that the risk taking is most likely beneficial both for teachers and students, but only confident and experienced teachers tend to dare take risks.

4 Manderfeld

In the article “*Pre-service mathematics teachers’ beliefs regarding topics of mathematics education*”, Katharina Manderfeld and Hans-Stefan Siller examine the widely explored topic of beliefs of pre-service teachers from a novel perspective, that is, beliefs regarding didactics of mathematics. The beliefs on mathematics didactics differed from the general understanding in the research field, even though the students had participated in mathematics didactics education before the survey. The contents regarding curricular issues and the perspective of the learner in the didactics of mathematics were underrepresented, while the participants added contents of mathematics didactics that did not fit into the background theories.

5 Nyman

In their article “*The issue of ‘proudlyness’: Primary students’ motivation towards mathematics*” Martin Nyman and Lovisa Sumpter discuss about year 2 and year 5 students’ expressed motivations for doing mathematics. According to their results the children expressed both intrinsic motivation, that is cognitive-oriented emotional-oriented, normative and personal motivation, and extrinsic motivation like outward and compensation. Furthermore, they found out that motivational factors are intertwined and in relation to affective constructs. So, they suggest mathematics teaching cannot approach students’ motivation in a one-dimensional way, but researchers and teachers need to reevaluate the role of motivation in mathematics

education.

6 Portaankorva-Koivisto

Päivi Portaankorva-Koivisto and Barbro Grevholm examine 188 Finnish mathematics student teachers' metaphors for the teacher's role in their article: "*Prospective mathematics teachers' self-referential metaphors as indicators of the emerging professional identity*". About one third of the metaphors were classified as self-referential, focussing on the student teachers' personalities, their incompleteness as teachers, or new beginnings or eras. Most of the metaphors were dynamic in nature, describing the teacher as a live object, a person, or an animal. These metaphors show that while student teachers focus more on themselves and less on teaching than experienced teachers, they also see themselves embarking for a lifelong journey of learning through professional development.

7 Suriakumaran

Neruja Suriakumaran, Markku Sakari Hannula, and Maike Vollstedt compare Finnish and German students' personal meanings for mathematics. Their article "*Investigation of Finnish and German 9th grade students' personal meaning with relation to mathematics*" focuses on a comparison of personal meanings that students from Finland (n=256) and Germany (n=276) assign to (learning) mathematics. Indicators of educational system and curriculum could be found in students' responses to explain similarities and differences between the two samples. In both countries, social inclusion is meaningful for most of the students. In addition, Finnish students emphasize the importance of doing well in mathematics, which is likely related to the important selective application to secondary school after grade 9.

8 Wadanambi

In the article "*Exploring the influence of pre-service mathematics teachers' professed beliefs on their practices in the Sri Lankan context*", Gayanthi Wadanambi revisits the problematic relationship between teacher beliefs and their practices. The case study of two Sri Lankan teachers provides an account of how the teachers' professed beliefs encouraged them to adopt flexible practices. However, the influence of social expectations and contextual demands of their educational context, resulted in them

adopting these beliefs to a different degree.

The articles in this special issue provide an illustration of the rich variation of theories, contexts, research questions, and methods of research in mathematics-related affect. The articles cover beliefs, emotions, and motivation - the three main areas of affect often identified in mathematics education. The contexts vary from elementary education to teacher education. Most studies use surveys or interviews that are the mainstream methods in this area, while others have analyzed observational data, metaphors, pictures, or eye contacts.