

Editorial

This issue contains four research articles. We, the editorial team, think it is great to be a part of the growing interest in the nordic context of mathematics education and the high quality of research that is being published. We at NOMAD strive to keep being an excellent alternative for publishing mathematics education research from the nordic region and develop the journal. We will, for example, soon announce the 2026 workshop for young researchers. More news yet to come. Make sure you follow our journal page to not miss out. On to presenting this issue's four articles:

In the issue's first article, Reid's contribution provides a cross-cultural analysis of how proof-related competencies are represented in the mathematics curricula of Denmark, Finland, Norway, and Sweden. Using a refined analytic framework, the study reveals substantial differences in how and when competencies such as proof, argumentation, and structure appear throughout the school years. Denmark and Finland present a more coherent and explicit progression, while Norway emphasises reasoning but avoids the term "proof", and Sweden postpones most proof-related competencies to upper secondary school. These contrasts reflect differing curricular priorities and conceptions of mathematical thinking, with implications for both comparative international research and future curriculum development.

In the second article, Flaten investigates second graders' problem solving within a playful inquiry-based mathematics activity. Through a multimodal analysis of video-recorded group work, the study identifies how students' strategies develop across four levels, from initial, unstructured attempts to more systematic and comprehensive approaches. The findings underline how children's dialogue, use of artefacts, and collaborative inquiry support their emerging mathematical reasoning. The study expands our understanding of how young learners can engage in problem solving and strategy development within playful, exploratory learning environments.

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In the third article, Larsson and Olsson examine the kinds of task-specific questions teachers pose when monitoring students' reasoning in combinatorics. Drawing on the framework of Creative Mathematical Reasoning (CMR), the authors analyze two lessons from Swedish grades 5 and 6, taught by teachers with high mathematical knowledge for teaching. The lessons, based on similar combinatorial problems, are scrutinized through four principles of CMR-teaching: initiating, developing, justifying, and verifying students' reasoning. The findings reveal notable differences in teacher questioning: while one teacher's questions align with only the first two principles and include funneling strategies, the other teacher poses questions that support all four principles, avoiding funneling altogether. The study highlights how prepared, task-specific questions can foster deeper mathematical engagement and reasoning, and suggests that such preparation may be key to supporting students' systematic combinatorial thinking. Implications are drawn for teacher education, particularly in developing teachers' skills in crafting and using task-specific questions to promote CMR.

In the final article, by Hagvall Svensson, Marander and Larsson, the authors examine how upper secondary students make use of and experience student-generated hints during independent mathematical problem solving. Drawing on two classroom interventions, they show that students used the hints to initiate solution attempts, manage difficulties, and evaluate their ongoing work. Beyond the content of the hints themselves, the relationship between sender and receiver proved crucial: hints written by peers appeared to signal that both the task and the hints were accessible for someone at a similar level. The study thus highlights affective and relational dimensions of scaffolding that have received limited attention in earlier research.

The editors