

Editorial

The editorial group of NOMAD consists of scholars from Denmark, Finland, Norway and Sweden. In order to maintain continuity, editors hold their post for around four years and are replaced one at a time on a running schedule. This year it is Martin Carlsen's turn to step down and he will be replaced by Jorunn Reinhardtson, University of Agder. We thank Martin for his fine work as editor and for acting as gatekeeper, i.e. being responsible for the allocation of editors-in-charge to submitted manuscripts. We welcome Jorunn to the editorial group and are looking forward to working with her.

As mentioned in earlier editorials, starting this year NOMAD is an on-line-only journal and all articles are published with open access at ncm.gu.se/nomad. The journal has an agreement with the Royal Danish Library, and as soon as all old articles have been transferred they will also be available at tidsskrift.dk.

Best paper award

Every three years the NORMA conferences are held. The conferences are one of the activities of NoRME – *the Nordic society for research in mathematics education*. This summer, June 4–7 NORMA 24 – *the tenth Nordic conference on mathematics education* – takes place at Aarhus University, in Copenhagen. NORMA 24 is hosted by NCUM, the Danish national centre for developing mathematics teaching, and Danish school of education at Aarhus University. More information can be found at matematikdidaktik.dk/aktuelt/norma-24. For the fourth time the Nomad *Best paper award* will be presented at the conference. The prize is awarded to a paper published in NOMAD in a three year period before the conference. This time the prize is for the best paper published in the years 2020, 2021 and 2022. The editors nominate one paper each. The NOMAD editorial committee functions as the jury, and select the article of highest quality. The previous winners of the award can be found at ncm.gu.se/nomad-best-paper-award/

Thematic issue 2026

The last issue of NOMAD each year has traditionally been a thematic issue. This year the theme is *Mathematics teachers' professional identities*.

The thematic issue will be published in the autumn and will contain six articles. The work with this issue started in the autumn of 2022 by a group of guest editors; Jeppe Skott, Sonja Lutovac and Raymond Bjuland. Heidi Krzywacki is representing the ordinary editorial group. Next year the theme is *The teaching and learning of mathematical modelling in the Nordic and Baltic contexts* and the guest editors have started the first round of reviews for the submitted manuscripts.

One intention with thematic issues is to bring together researchers with a certain interest from all Nordic and Baltic countries. The thematic issues are proposed and organised by a group of guest editors from more than one country. As the work, with a thematic issue, spans over two years, it is time to begin planning for the thematic issue for the year 2026. The editors invite researchers from the region to propose a theme for 2026. A proposal should provide the following information.

- Guest editors
- Short description of the theme
- Background and aim
- Possible authors and research groups in the region
- Tentative timeline

If you have ideas about a suitable theme for a thematic issue, please contact the editors for more information.

In this issue

Jóhann Örn Sigurjónsson's study examines cognitive activation in mathematics lessons, focusing on how different instructional formats and teacher-student interactions contribute to deeper understanding. The research investigates cognitive activation, an aspect of teaching that engages students with challenging tasks to enhance their understanding. By analyzing eight lessons from a Nordic video database, the study uses thematic and content analysis to evaluate whole-class discussions and group work. The findings identify four types of connection-making interactions that bridge gaps within mathematics and between mathematical concepts and real-world experiences. One insight presented is that there is no single method for creating cognitively activating lessons, and that effective teaching rather involves a variety of instructional formats, challenging the idea that observation systems should favor uniform methods. This diversity highlights the importance of flexible and adaptive

teaching strategies tailored to different learning contexts in which traditional individual work is only a small part of a broader range of practices aimed at fostering deep understanding. In addition, the research highlights the crucial role of teachers in implementing cognitively demanding tasks, and that effective teaching depends not only on the selection of tasks but also on how teachers manage these tasks. This finding suggests that teacher training should focus both on selecting high-quality tasks and on mastering the practices of task implementation and interaction with students. The study also explores non-mathematical connections to enhance student motivation. While these connections help students to see the relevance of mathematics, their impact on understanding is less clear. The findings suggest that real-life applications can motivate students, but the focus should be on fostering a deep understanding of mathematical concepts. This research provides valuable insights into the components of cognitively activating teaching and the importance of professional flexibility in teaching. By examining different teaching formats and connective interactions, the study provides a nuanced understanding of how to create engaging and effective learning environments.

The study by Kristin Westerholm and Eva Norén examines the impact of the Swedish educational reform "Läsa, skriva, räkna – en garanti för tidiga stödinsatser" (Guarantee for early support) on teaching practices. The study investigates how grade 1 teachers support the development of students' number sense and what challenges they face in doing so. Based on interviews with 14 teachers, the study shows that teachers aim to make students feel involved and to cover the curriculum before the national assessments in grade 3. However, the need for extensive practice time often conflicts with the structured approach of mathematics textbooks. As a result, support is provided mainly through content adaptation and direct communication with students, rather than through individualized follow-up teaching. Using an ecological model, the study shows that teachers' agency is influenced by context, experience, and goals. While teachers have the intention and knowledge to provide quality education, they are often constrained by contextual factors. The Guarantee for early support, rather than facilitating support, sometimes acts as a barrier due to its strict assessment and curriculum requirements. Teachers report that mandatory assessments in grade 1, curriculum requirements, and national tests in grade 3 restrict their ability to provide necessary practice time for developing number sense. This finding aligns with previous research showing that assessment reforms can limit teachers' ability to offer effective support. The study also highlights the heavy reliance on textbooks in teaching practices. Despite the reform, this reliance remains unchanged due to ambiguous guidelines. Teachers tend to revert to

familiar methods, potentially undermining the reform's goal of improving mathematics outcomes. The research suggests that educational reforms should focus on creating supportive conditions rather than relying solely on individual teachers to drive change. Westerholm and Norén argue that more specific policies for support interventions could enhance teaching practices and help teachers meet the objectives of the reform, and that the lack of national data collection on the effectiveness of support interventions is a significant issue. Without this data, it is argued, assessing the impact of the reform on student learning is challenging, as students with weak number sense are at risk of future difficulties in mathematics, and ongoing evaluation of the outcomes of the reform is essential.

The third article has the title *Primary school students' engagement in the formative feedback process in mathematics*. In her study, Jenny Green scrutinizes 15 Grade 2 (7–8 years old) students' engagement in a formative feedback process, particularly focusing on the students' mathematical reasoning. The students were from three separate classes, with three different teachers, within two schools in Sweden. Green makes it clear that to engage students in formative feedback practices is a crucial aspect of mathematics teaching. The formative feedback was provided at four levels, task-, process-, self-regulation, and self-level. However, it is a fact that students do not always take an active part in such processes. Green pinpoints factors that contribute to the lack of student engagement, such as the design of the learning context and the nature of the subject. Green analysed the students' engagement with respect to formative feedback by video-recorded observations of the students in such an event and she conducted video-recorded stimulated recall semi-structured interviews. Observations and interviews were analysed and discussed in terms of socio-mathematical norms. Green's study shows that the students were focused on performance and in producing correct answers. Furthermore, the students had different views on the purpose of the formative feedback. This was identified as norm conflicts, acting as barriers for the involvement of students in the formative feedback practice.

The Editors