

Editorial

The eighth consecutive annual workshop for doctoral students in mathematics education by the editors of NOMAD was to take place in Gothenburg this spring. Unfortunately, it had to be cancelled due to the current pandemic. However, the editors are planning to arrange a video seminar on "the publication process for NOMAD" in the autumn. More information will be posted on the NCM and NOMAD web.

In May the editors held their annual meeting and among other things, changes in the editorial group was discussed. NOMAD follows the practice of replacing editors one at a time after some years of service, in order to maintain continuity in the editorial work. Janne Fauskanger, who has been an editor since 2017, will now retire as editor but will continue to contribute to NOMAD as member of the editorial committee. We wish to thank Janne for all her good work. Janne is replaced by Martin Carlsen from the University of Agder. Another change is that Britta Eyrih Jessen from the University of Copenhagen, will replace Tomas Højgaard. Tomas will however continue for one more year and will work in parallel with Britta the coming year. It means that the number of editors temporarily will be increased to six. We welcome Martin and Britta to the group of editors.

Invitation to propose thematic issue 2022

It is a tradition that the last issue of NOMAD each year is a thematic issue with invited guest editors. The theme for 2020 is *Students in need of support in mathematics* and it will be a double number due to the number of papers submitted and accepted. The theme for 2021 is *Practice-based research on mathematics teaching*. The work on preparing this special issue is already on its way and we are looking forward to an issue with interesting articles in autumn of 2021.

The theme for 2022 has not yet been decided. The editors would like to *invite our readers to propose a theme* for 2022. Please contact one of the editors for more information.

In this issue

In their article *Potentialer og begrænsninger ved anvendelse af lærebøger i matematikundervisningen: Resultater fra et systematisk review*, Steen, Stenhøj Madsen and Højgaard present a qualitative literature review

guided by the question: Which potentials and limitations of using textbooks in mathematics teaching can we identify? They start out by presenting an overview of the literature with regard to geographic origin and year of publication followed by describing how they used a concept map as an analytic tool to illustrate connections of the themes in the literature. A descriptive review of the included sources, resulting in ten themes sorted in four categories: "the textbook", "the textbook and the students", "the textbook and the curriculum" and "the textbook and the teacher" express relations that the textbooks are part of. After presenting some of the findings in the four themes and take a deeper look at the qualitative analysis of three of these themes, they end by proposing a suggested definition of the concept "textbook".

In the second article, *Swedish primary teacher education students' perspectives on linear equations*, the focus is on linear equations. According to Andrews, the understanding primary teacher education students bring to their studies has been rarely examined, and in this study, students are invited to explain in writing how an unannotated solution to $x + 5 = 4x - 1$ had been conceptualised by the hidden solver. Data is coded against an iteratively derived framework, and the analysis shows that most students are familiar with linear equations, able to articulate an objective for equation solving and offer solution strategies, typically based on either doing the same to both sides, swapping the side swapping the sign or both.

The third article has the title *Conservative and transformative changes in algebra in Swedish lower secondary textbooks 1995–2015*. Palm Kaplan and Prytz examines the way Swedish textbooks approach algebra in order to understand changes related to the curriculum reform of lower secondary school algebra. They investigate three Swedish textbook series, editions both before and after the curriculum reform in 2011, by analyzing altogether 1557 tasks for grade 8 in terms of algebraic activities and school algebra discourses. Palm Kaplan and Prytz find that the textbooks hardly stress the new syllabus' focus on mathematical competences and they even seem to provide rather conservative approaches to learning mathematics. According to their findings, manipulations and solving equations continue to form a stable Swedish textbook tradition. Furthermore, the textbooks hardly provide tasks that require new types of algebraic activities. The greatest increase concerns word problems in everyday situations.

In the article *Guidelines for utilizing affordances of dynamic geometry environments to support development of reasoning competency*, Højsted investigates the potentials of dynamic geometry environments to support student learning. The study is based on an extensive literature review, and constructs from Instrumental approach, Theory of semiotic

mediation, and the van Hiele model are used in the analysis. The guidelines have three dimensions: students' cognition, task design, and the role of the teacher. The study shows four types of potentials: feedback, dragging, measuring, and tracing, used within these dimensions. The guidelines are elaborated on regarding its potential for support students' development of mathematical reasoning competency.

In the article, *Fostering an intimate interplay between research and practice: Danish "maths counsellors" for upper secondary school*, Jankvist and Niss present and discuss the work of some of the participants in an in-service teacher programme in Denmark. The aim of the programme is to establish a close connection between mathematics education research and the teachers' practice by utilising research findings in activities of upper secondary school mathematics teachers. Experiences from the in-service programme have been presented in two books, reviewed in NOMAD 2016 and 2017 (vol. 21 no. 2 and vol. 22 no. 4). The six authentic examples in the article illustrate the research-based work by prospective maths counsellors. The works consist of identifying students with mathematics specific learning difficulties, diagnosing the nature of the difficulties, and designing interventions to help the students overcome them. In the article the authors discuss how these activities draw upon and are grounded in mathematics education research findings.

The Editors

