

A new editorial team

With this issue new steps in the development of *NOMAD* have been taken through the change in editorship that recently has been done. We find this to be a good time to take a moment and look back at the history of *NOMAD*. The first preparations for developing a Nordic journal on mathematics education were made in the autumn of 1988 and a series of meetings were held, in Gothenburg, Copenhagen and Gilleleje. In October 1993 the first issue was published and the second issue in December the same year. These two issues make up the first volume and from volume 2 in 1994 four issues per year have been published. In the first issue it was stated that the responsibility for the operative editorship will rotate between the Nordic countries and this idea was kept during the first fourteen volumes. In the first four years (1993–1996) the editorship was placed in Gothenburg (Sweden) and then it moved to Norway, as a shared responsibility between Notodden and Oslo, for another period of four years. In the period 2001–2003 *NOMAD* could unfortunately not be published but from 2004 the journal was again up and running, now with the editorship in Finland (based in Vasa) and the operative responsibility for the production located at NCM in Gothenburg. In 2006 the editorship again moved, now to Denmark, shared between Aalborg and Roskilde. The period with Danish editorship lasted until the end of 2009, but towards the end of this period a gradual change of the policy with all editors from one country began. From 2009 Johan Häggström (Gothenburg) joined the editorial team and from 2010 Frode Rønning (Trondheim) came in when Paola Valero (Aalborg) decided to step back from the position as editor. In the last issue from 2009 (Vol. 14, 4) the new policy was officially launched, as can be seen from the quotation below.

Nomad was originally born with the idea that the editorship should be handed over to another Nordic country every four years. However, the technological developments and the developments of the infrastructure in the research community in mathematics education in the Nordic region have made it unnecessary and inefficient to rotate the editorship among the Nordic countries. The idea for a new structure of the editorship is that it should consist of four editors representing Denmark, Finland, Norway and Sweden ...

During the whole period, starting in 2006 and through 2011, Morten Blomhøj (Roskilde) has been the fixpoint in the group of editors. He has

laid down an enormous amount of work to ensure that NOMAD has come out with four issues every year and seen to it that the quality of the published papers has been kept at a high level. We, the current editors, would like to extend a very warm thank to Morten for all he has done for the journal. Since August 2009 the editorial group has also benefitted from the work of Elin Emborg (Roskilde) who has kept track of the records of submitted papers and seen to it that reviews have been asked for and collected from the reviewers. There is some uncertainty regarding Elin's work in the future, but the editors would like to thank Elin very much for her highly valuable work for NOMAD so far and hope that she will be able to continue.

Knowing well in advance that Morten Blomhøj wanted to step back by the end of 2011, discussions started in various forums about the continuation of NOMAD. Active in this discussion were the previous editors, members of the editorial committee, the board of NoRME, as well as NCM. The solution that has been found reflects the suggestion in the citation above, that the four largest Nordic countries should be represented in the editorial group. Also the group has been extended to five members, one from each of the countries Denmark, Finland, Norway and Sweden, and in addition one taking particular responsibility for the link to NCM. The new editorial group was formed in the spring of 2012 and is responsible as of volume 17. The group of editors now consists of *Frode Rønning*, Sør-Trøndelag University College, Trondheim, Norway, *Kristina Juter*, Lund University and Kristianstad University, Sweden, *Markku Hannula*, University of Helsinki, Finland, *Uffe Thomas Jankvist*, Roskilde University, Denmark, and *Johan Häggström*, University of Gothenburg and NCM, Sweden. Although editors have equal status, a division of labour has been agreed among them. For the first year, Frode acts as a coordinator for the incoming papers, distributing them within the editorial group for further processing with reviewing. Johan has the special responsibility for the connection to the publisher NCM.

To get the work in the new editorial group started a meeting was held at NCM in Gothenburg on 23 April 2012, where guidelines were discussed concerning the future work with NOMAD. One of the topics that were discussed was the idea of publishing thematic issues. At the moment we are working with two projects of this kind that we hope will lead to results. The day after the editors' meeting, on 24 April, a workshop for doctoral students in mathematics education was arranged in collaboration with the research school CUL at the University of Gothenburg. The title of the workshop was *NOMAD as a resource for mathematics education research in the Nordic countries*. A total of 10 doctoral students attended the workshop, where the main part consisted of group work on the question "How to write a scientific paper?" Each of the participants had in advance

submitted a draft of a paper, which was presented and discussed in groups consisting of students and NOMAD editors. We are grateful to CUL for financial support enabling us to hold the meeting and the workshop.

One of the intentions by increasing the number of persons in the editorial group has been to speed up the publishing process. We are sorry that it has not been possible in the last years to publish the whole volume within the calendar year to which it belongs. We apologise that also this issue is delayed but we are doing our best to get deadlines back on the track. We have recently gone through our archive of unfinished articles to see which of them are still "alive". This has resulted in a number of letters to authors in order to find out if the author still has plans to finish the article. Hopefully this will result in some articles being finished and published and also it will give us as editors a clearer picture of the status of the various submissions.

In this issue

Magnus Österholm and Ewa Bergqvist have written an article with the title *Methodological issues when studying the relationship between reading and solving mathematical tasks*. The article addresses the issue of determining a relation between reading ability and mathematical ability and the authors claim that it may not be possible to separate reading ability from mathematical ability. Relationships between reading ability and the ability of solving mathematical tasks can be studied in many different ways. In this article the authors examine four statistical methods used for characterising mathematical test items in terms of their demand of reading ability. The analysis focuses on the use of quantified measures of different abilities in relation to the solving of mathematical tasks. In this area one usually looks at input and output by examining student abilities as input and their performances on mathematical tasks as output. In previous studies a number of different statistical methods have been used to examine how students' performance on solving tasks depends on their abilities in reading and in mathematics. The main focus of the paper is to analyse aspects of validity and reliability of methods used to characterise mathematical test items regarding their demand on reading ability. The data are taken from PISA 2003 and PISA 2006 and the methods that are analysed are called *Correlation with reading ability*, *Regression*, *The matrix method* and *Principal component analysis*. The authors conclude that the last mentioned method has the best properties when taking into account aspects of both validity and reliability.

In the article *Using strands of tasks to promote growth of students' mathematical understanding* by John Fransisco and Gunnar Gjone the mathematical activity of a group of high school students from the US is

analysed. The students took part in a longitudinal research project and worked on a series of problems from probability/combinatorics, meant to be challenging in the sense that the methods for solving them should not be obvious to the students. A central issue in the article is the notion of *reasoning by isomorphism*. This means a form of mathematical reasoning where learners make sense of new tasks by relying on methods used for solving other tasks, with a similar (isomorphic) mathematical structure. In the article it is shown that carefully organised strands of challenging problems and problem solving activities can help students to make mathematically interesting and productive connections between different problems. The authors also discuss implications for classroom teaching and conditions that support reasoning by isomorphism. In the study reported on in this paper a group of five students has been followed closely over time to try to get an understanding of how they build mathematical ideas and different forms of reasoning and justification while working with challenging tasks. The activity that the students engaged in took place outside of the regular schooling. Hence, there was no particular curriculum connected to the activity and the authors refer to the sessions as *learning experiments* rather than *teaching experiments*. The results are presented as a sequence of six "critical episodes" where transcriptions of dialogues are presented and analysed.

The third article in this issue is written by Per-Olof Bentley and has the title *Interference of subtraction strategies*. This article takes as a starting point that errors that children make in addition and subtraction with positive integers are not as random and unsystematic as they may seem to be. The study is based on interviews with grade 2 pupils from five different classes in Sweden. It is part of a larger study aiming at discovering misunderstandings that may hinder pupils' mathematical development. In the present paper Bentley is in particular interested in understanding the reasoning behind the phenomenon where in subtraction tasks the answer is given as equal to the subtrahend, i.e. $16 - 6$ is taken to be equal to 6. The study is characterised as "a collective case study, aimed at investigating a phenomenon in a number of cases in order to provide insight". The interviews showed that the pupils who got answers like this used a counting down procedure where they started with the minuend, e.g. 16, and counted down, fifteen, fourteen, and so on, until they reached six. In this procedure the last word uttered will be "six" and this is then taken as the answer to the task. Bentley denotes the procedure used by the children "the last-number-word rule" and at the end of the paper he discusses an alternative analysis of previous investigations done by Dagmar Neuman.

The editors