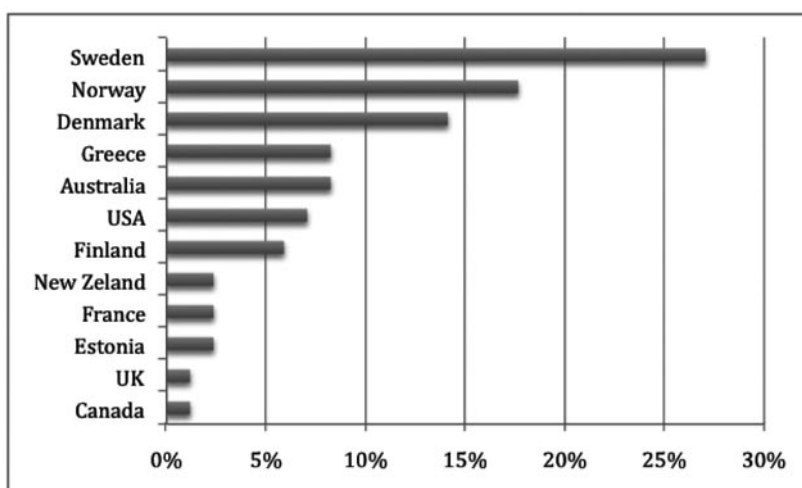


Four new years of Nomad – a time of growth

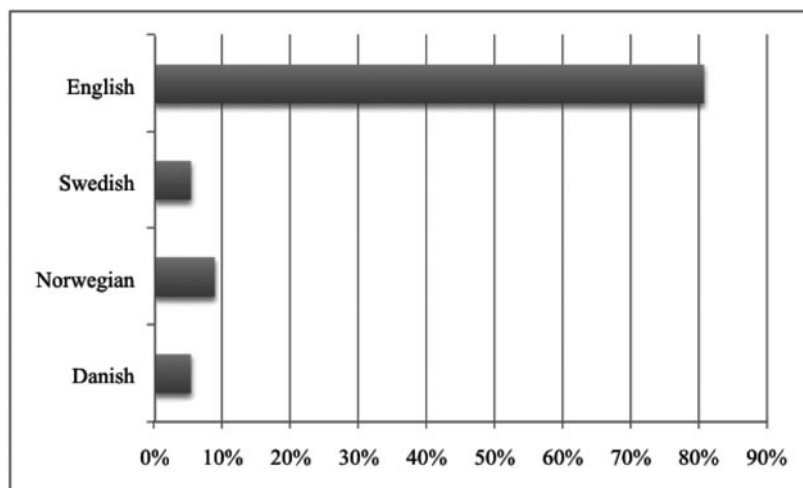
With this issue we are ending the 14th volume of NOMAD, the journal of the mathematics education research community of the Nordic region. The existence of a journal such as NOMAD for more than 14 years passes through different stages; some of birth and growth, some of decline and of expansion and some of consolidation. In this editorial we would like to look back at the last four years of the journal and present to the readers some of the reflections that for us seem of great importance when thinking about the sustainability of the journal in the future.

Four volumes with four numbers each, a total of 50 research papers and 7 book reviews have been published in the last four years. The papers were authored mainly by Nordic researchers, but there were papers submitted and published by authors from eight countries outside the region. Some papers were the result of collaborative projects between authors in the region and authors outside of it. Most of the papers were authored by individual persons, and the rest were co-authored enterprises, mainly with one other colleague. Regarding the distribution of countries of authors, the chart below represents the percentage of authors from each country.



People with institutional affiliation in Sweden, Norway, Denmark and Finland account for 65 % of the participating authors in the journal. There were two authors from Island. However, currently these two people have affiliation in the USA and were counted as USA authors. Very few authors contributed to more than one paper. It is interesting to notice the great participation of Swedish and Norwegian researchers, who together account for 45 % of the authors contributing to the journal. 33 % of the contributing authors represent countries outside of the Nordic region. The distribution of authors shows for us the recent growth in the research community in Norway and Sweden due to the strengthening of their doctoral programs. The participation from authors outside the region can be interpreted as the expression of an interest in publishing papers in NOMAD, and as a reflection of the collaboration that Nordic authors hold with researchers outside the region. We see the significant international participation in NOMAD as a sign of openness of the journal in a time where policies of internationalization have had an effect both in our field and in our universities and research.

In relation to this last point, it is also interesting to examine the language of publication chosen by authors. It is clear that English is the mostly used language in contributions. Nordic languages only appear in 19 % of all papers.



The preferred and extended use of English as a language of publication in the last four years is an interesting phenomenon in relation to the previous history of NOMAD. The use of Danish, Swedish and Norwegian was

predominant in earlier volumes. For many authors using their mother language to present their research was not only a matter of convenience; there were also important considerations connected to the need of developing scholarship in mathematics education in these languages. The discussion on the importance of keeping the Nordic languages as a means of publication has also been present in the last four volumes of *NOMAD* (see editorial in *NOMAD*, 11 (1), 2006). The practice of the last four years has shown, however, that the choice for the English language has become stronger. As touched upon previously, policies of internationalization have directed the attention of academics towards publication in English. Some people may argue that such a trend goes against national strengthening of the field and the possibility of communicating with teachers on research results. Others may argue that the internationalization associated with the use of English has also opened the doors to an international community that considers it interesting to be informed about the production of research in the Nordic region.

During the last four years the editors introduced the idea of producing one thematic issue per volume, as a strategy to pay special attention to emergent topics of relevance. Three such thematic issues have been produced dealing with: Difficulties in/with mathematics, the relation between research and the improvement of practice, and the teaching and learning of mathematics in multicultural settings. We have received good feedback on these thematic topics and many colleagues consider them to be useful collections that provide insight into the topic areas. The process of completing these issues has not been easy since a considerable amount of time has been used in securing interesting submissions. One of the consequences of such strategy has been that, for example, the planned thematic topic for this issue could not be completed in due time for publication, and therefore, it has been postponed until the first issue of volume 15. In future we invite the community to propose topics of interest and relevance for thematic issues, and such issues will be completed on the grounds of a commitment of some authors to collaborate actively in the submission of papers for inclusion in an issue. Suffice to say that all papers in the thematic topics have followed and will continue to follow the review procedure of *NOMAD*.

As the number of submissions has increased significantly with the years, it has also been important to strengthen the handling of our communication with reviewers and authors. We have realized that this is one of the great challenges of the stability of *NOMAD* in the future, and we hope that the enlargement and the new structure of the editorship described below will be instrumental in this respect.

The work of researchers in the universities in the Nordic countries has been under the pressure of productivity measurement systems. The time that researchers have to participate in reviewing papers is diminishing significantly. Although we have tried to use a policy of inviting people who have published papers to participate as reviewers, it is not always easy to find colleagues who are willing to contribute to reviewing and who can do it in due time. We apologize to all those who have submitted a paper and have had to wait long for an answer, and we urge members of the NOMAD community to participate actively in this important activity. We have seen that a good review system has helped raising the quality of the journal. Therefore, it is the community's responsibility to support and participate in reviewing papers.

From our own world

One of the reasons for looking back on the previous four years of NOMAD in this editorial is the fact that 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 and that one of these should serve as editor-in-chief. The editorship should be renewed gradually to secure continuity and each editor should serve preferably between four and six years.

The process of changing the editorship started in 2009 when Johan Häggström began as editor, and he has agreed to serve for another three years. And now is the next step in the gradual renewal of the editorship. Paola Valero has decided to finish her work as an editor by the end of 2009 after four years of work. For Paola these last four years have been an intense period of work. It has been a pleasure to be in close contact with many of the researchers who have contributed with chapters, and with many of the reviewers who have commented, advised and supported authors in improving their papers. Paola thanks all authors, Morten and Johan, as well as the three editorial assistants (Hanne Lützow Kirk, Anita Pedersen and Elin Emborg) for a good and efficient collaboration in publishing NOMAD. And we thank Paola for her great contribution to NOMAD and congratulate her with her new position as a professor at the Department of Education, Learning and Philosophy at Aalborg University.

Frode Rønning, professor at the Programme for Teacher Education at the Norwegian University of Science and Technology (NTNU) in Trondheim has agreed to step in as an editor from now on. In order to secure continuity Morten Blomhøj has agreed to serve as an editor-in-chief for the next two years. In this function he will have the support of Elin Emborg who has worked as the editorial assistant of NOMAD since August 2009. Financially Elin Emborg's employment is supported by IMFUFA, Department of Science, Systems and Models (NSM), Roskilde University. The managing of the production and distribution of NOMAD is permanently taken care of by the National Centre for Mathematics Education (NCM) in Gothenburg, and NCM has supported NOMAD generously through Johan Häggström's work as managing editor, and by securing the budget for NOMAD in general.

This issue

In this issue we publish three research papers. In the first paper, *Translating test items into Norwegian – without getting lost in translation?*, Reidar Mosvold, Janne Fauskanger, Arne Jakobsen and Kjersti Melhus present some of the challenges and complexities involved in an attempt to translate and adapt a set of measurements created to study teachers' Mathematical Knowledge for Teaching (MKT). The measures were originally created for use in the USA and teachers in that country. It is clear that the difference between these countries, their teacher education and organization of teachers' work contribute to increase the difficulty of adapting the items in the measurements. Their study builds on a similar study in Ireland, and this article points to some similar but also to several additional issues that arise when attempting to translate and adapt the measurements for use in Norway. This paper does not only present interesting information about the particular process of recontextualization of measurement tools in relation to teachers. It also casts light on the general issue of translation involved in the many international comparative studies that have become a common activity of great policy impact in the last decades.

The second paper, *An investigation of Norwegian students' affective domain in mathematics*, by Kirsti Kislenko reports on the findings from a quantitative survey investigation conducted as part of the KUL-project, *Kunnskap, Utdanning og Læring*, at Agder University. The survey encompasses 245 students representing 9 grades and two groups with different choices of mathematics at first year in the upper secondary system. The students' answers to the 42 questions in the survey were analysed by means of factor analysis. This analysis yields six factors labelled *Interest*,

Hard-working, Self-confidence, Usefulness, Insecurity and *MAD* (Mathematics as an Absolute Discipline) to explain the variation in the students' answers. The correlations between these factors are measured by means of Spearman's coefficients, and the results are discussed in terms of differences between gender and the groups. Not all the results are presented in the paper but they are made available through the NOMAD web site – ncm.gu.se/nomad. The factors and their mutual connections are analysed qualitatively with references to the research literature within the affective domain of learning mathematics. Hereby the paper represents an interesting example of the use of large quantitative investigations to pinpoint and better understand possible pathways in the students' formations of beliefs and attitudes towards mathematics teaching and learning.

Kristina Juter reports in the third paper, *Development of students' concept images in analysis*, from her study on students' pre-knowledge and conceptual development in analysis in a teacher education program. Data are collected by means of questionnaires and interviews and analysed to investigate 15 students' pre-knowledge before attaining a course in analysis and their perception of the main concepts one year after the course had ended. For three of the students the data has been analysed in great detail to uncover the students' concept images and their conceptual network relations between five central concepts in analysis, namely: function, limit, derivative, integral and continuity. For two of the students these analyses are documented in the paper. It is concluded that the students had developed a conceptual network that allows them to understand and explain some important relationships between the key concepts investigated, but they had not yet developed formal concept images. Interestingly enough, the students seem very satisfied with their understanding and expressed a self-confidence that might even prevent them from seeking a deeper understanding. The paper is of interest for teacher education in terms of its contribution to our understanding of the learning difficulties related to analysis and it raises new issues concerning the students' reflection on their own mathematical understanding.

Thanks to authors and reviewers

Finally, we would like to thank all authors who have submitted papers, book reviews and other contributions to NOMAD in 2009. Many special thanks also to the reviewers who have performed an important task for the journal.

The editors

Reviewers in volume 14 of *Nomad*, 2009

Alexandre Pais	Liv Sissel Grønmo
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