

# *NOMAD* moves from Sweden to Norway

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## **An international field of collaborative work**

The articles in this twelfth issue of *Nordic Studies in Mathematics Education* represent what mathematics education more and more looks like today – an international field of research and collaborative work. Australia, Finland, Greece, Russia, USA, and Sweden are represented by the authors. All the articles in this third *NOMAD* issue in English are examples of co-operation between researchers from different countries.

*Erkki Pehkonen* and *Ildar Safuanov* report from a comparative study of pupils' views of mathematics teaching in Finland and Tatarstan, Russia. The study is one of many international comparative studies in mathematics education done in the 1990's where the TIMSS project is the latest large-scale example (see pp. 86–87). For example Erkki and Ildar have found differences in students' self-confidence and the degree of demands on the correctness of students' work between the two countries. They also describe differences in the roles teachers and students play and are supposed to play in the mathematics classroom. We look forward to the result from a proposed interview study where the conclusions from their study can be more explored in depth and across a larger number of countries. You can read more about Erkki's work in the proceedings from a conference in August last year on the Current State of Research on Mathematical Beliefs (see p. 87).

In the second article *Anastasios Barkatsas* and *Robert Hunting* give us a review of recent research on different aspects of problem solving. Problem solving is a very complex phenomenon and successful ability to solve problems in mathematics can be developed through many ways of teaching and different methods and ways of thinking. The acquisition of mathematical problem solving skills is a major goal of mathematics courses all over the world. Should we try to develop a "Grand Unified Theory of Mathematical Problem Solving" on the basis of work by people like Polya, Schoenfeld, Lester and Goldin on cognitive, metacognitive and affective aspects or is it more productive to look at the phenomenon from alternative perspectives? What advice can we give to teachers who would like to improve their students' problem solving abilities while waiting for a deeper understanding of this important quality of human knowledge?

*Barbara* and *Robert Reys* visited our department at Göteborg University as Fulbright Visiting Professors during the spring of 1995. Based on earlier work by Barbara, Robert and others, the concept of number sense was the focus of a series of seminars at the Department of Mathematics Education and a study of Swedish pupils' number sense. The results were published in a series of articles in *Nämnaren* which provided background information

regarding number sense, test items with guidelines and suggestions for using the test items. Data from about 300 Swedish pupils using the number sense items as well as observations in giving the test were given. Teachers were invited to collaborate with the researchers, welcoming their reactions, suggestions, and questions. The article "Using a journal to engage teachers in developmental work" stresses the importance of developing better forms for communication and collaboration between researchers, teacher educators and teachers in order to improve mathematics education in our schools, in teacher colleges and as a field of research.

As you can see in the *Announcements*, the number of conferences of interest to mathematics educators is still growing and it is more and more easy to get necessary information from the Internet. Please pay special attention to the 1997 conferences in Sweden in March and April, in Finland in July, in Norway and Denmark in August and in Norway, June 1998.

We start the presentation of recent literature with a summary of how to get access to the reports from the TIMSS project of interest for our readers. The U.S. report "Pursuing Excellence", for example, gives us a first preliminary look into the results from a very extensive and interesting classroom study conducted within the TIMSS-project. What is said about the described differences in instruction and skill practice between the Japanese schools on the one hand and the German and the U.S. schools on the other? Singapore, ranked top for both mathematics and science, has just published its national report on the web. What is the "inside" explanation to the Singapore results? Is their school system and mathematics education program something to recommend to the Nordic countries? Have a look at <http://...>

The increasing international collaborative work is also expressed in a series of reports from University of Oslo – here between Norway and the Czech Republic. The new series of books from Cooney, Dossey, Wittman and some of their colleges for preservice and inservice programs, integrating content and pedagogy in a teacher education context is another example.

Marja van den Heuvel–Panhuizen's dissertation on assessment and realistic mathematics education has attracted attention among many people in our field. An English version is now available. Paul Ernest's *Philosophy of Mathematics Education Newsletter* has changed form and is now a journal available on the Internet.

We also inform about an OECD book on case studies in mathematics and science education. One of the cases is a study of how the NCTM Standards were developed. This study will be important for the new NCTM project aimed at rewriting the Standards. Will this work be a starting point for developing a national curriculum in mathematics in the U.S.? What has been done so far in this country has not, according to TIMSS, been enough to reach the goals, formulated by president Bush in 1990: *By the year 2000, U.S. students will be first in the world in science and mathematics achievement* (U.S. Department of Education, 1991, P. 49)

## The end of the beginning ...

We have now come to the end of our editorial work with the first volumes of the first journal for research in mathematics education in the Nordic countries. According to the plans for the publishing of this journal, the responsibility for the operative editorship will rotate. During the first four years, 1993–1996, we have been en-

trusted with the responsibility for the editing, publishing and marketing of *NOMAD*. From 1997 and Volume 5, *Gard Brekke* and *Gunnar Gjone* in Norway will take over. When we look at the 35 abstracts for *NOMAD* 1(1)–4(4), on pp. 75–85, we remember a lot of inspiring moments, hard work and also some moments of despair. Altogether working with the twelve issues has been an instructive and stimulating job.

We would like to thank all the authors and reviewers for their careful work with the manuscripts and for all the constructive comments and reactions, and the editorial board for support and encouragement. We would also like to express special gratitude to *Jeremy Kilpatrick* for his contributions to our work with *NOMAD*, to our colleagues at the journal staff of *Nämnaren* for their mental and technical support for this project, and to our colleagues at the Language Teaching and Testing Research Unit for their patient and skilful support reviewing articles and translations in English. Last but not least we thank all our readers for their supporting comments and suggestions.

Our most important aims have been to stimulate, support and foster readers and authors in the new field of mathematics education and to develop mathematics teaching and teacher education. We think that *NOMAD* plays a very important role to

promote the development of mathematics education in the Nordic countries.

We wish our colleges and friends *Gard Brekke* and *Gunnar Gjone* good luck with the editing and publishing when *Nordic Studies in Mathematics Education* now migrates to Norway. We do hope that *NOMAD* is going to be an important part of the Nordic culture in the field of mathematics education in the future, with more authors and more readers.

*As an international community and as a field of knowledge, theory, practice, and research, mathematics education needs the help of its journals in building not simply the invisible colleges that promote intellectual growth within the field but also an "invisible university" that would promote the development of the field itself.*

(Kilpatrick, 1991)

## References

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