

The third year of activities in the Nordic Graduate School in Mathematics Education

The board of NoGSME had its first meeting of 2006 in Malmö, just before the Madif 5 research seminar, and planned the activities for 2006. Here we offer some first insights into the programme of 2006.

Doctoral courses in the Nordic countries offered with support from NoGSME

In the spring of 2006 NoGSME will support three doctoral courses. This means, among other things, that doctoral students can get their travel costs to these courses covered by NoGSME. The courses are MA604 *Problem-solving* and MA607 *Methodology in mathematics education research* at Agder University College and *Gender and Mathematics*, a new course developed in cooperation with the Norwegian Centre for Mathematics Education, NSMO, in Trondheim. The first course was also given in the spring of 2005; the second one is a larger version of MA605 Research design and methods in mathematics education, which was also given in spring of 2005. MA607 is a 15 ECTS course and the other two are 5 ECTS. The course on *Gender and Mathematics* is the first Nordic doctoral course on this theme, as far as we know, and the main lecturer will be Paul Ernest from Exeter University, who has done work in this area. All courses are given as distance courses in the sense that students can do their work at their home university and only need to be at the course campus for the specific intense course-days on two or three occasions during the semester. More information about the first two courses is available on the web at www.hia.no/realfag. The *Gender and Mathematics* course will have its first course days 5-7 April, and the second session will be 10-12 May. Between these meetings students are expected to work with given tasks, read literature and write essays. The examination is in the form of written assignments, which are intended to serve as starting points for some part of the students' dissertation chapters. With this form of examination, the course work is intended to support and strengthen the writing of the dissertation.

In autumn of 2006 we intend to offer the courses MA601 *Theory of science from a mathematics education perspective* and MA602 *Learning*

theories in mathematics education given at Agder University College. Information about these courses is available on the web. We also hope to be able to offer one course at Helsinki University in cooperation with professor Erkki Pehkonen. The title and content of this course will be announced later. We are also investigating the possibilities of giving a later course in Estonia, with assistance from professor Markku Hannula at Tallinn University.

The summer school 2006 in Norway

The first summer school of NoGSME, at Jyväskylä University in 2005, attracted over 30 students. In 2006 the plan is to run the summer school in Dømmesmoen in Norway. Dømmesmoen is part of the campus of Agder University College. It used to be a horticultural college and is situated about 30 kilometres east of Kristiansand in a beautiful environment. The campus offers everything that is needed, including lecture rooms with modern equipment, a computer room with Internet access, group rooms and a communal lounge, dining room and sleeping rooms with all facilities in one and the same place. Dømmesmoen is situated near the coast with swimming facilities and has a fine park and surrounding natural countryside. We expect the campus to offer excellent opportunities for studies, scientific discussions and collegial conversations during the summer school.

Building on experiences from the first summer school we will develop the programme along the lines suggested by participants in 2005 and the evaluation carried out there. Most of the time will be devoted to group work coordinated by one group leader for each group. In the groups students will be invited to discuss their research questions, choice of theoretical framework and design of the study, methods, data analysis, results and conclusions, all based on a written report produced by each participant student and sent in advance to all participants and the group leader. There will also be four lectures and some workshops where participants are invited to work in groups with a specific theme as for example how to write a scientific paper, or principles for reviewing a scientific paper. The social programme contains an excursion, nature events in the surroundings, walks to the sea and informal meetings among participants. The summer school will probably include about 25 participants, and eight senior researchers will lead the programme in cooperation with the doctoral students. The second announcement will be sent out during February 2006 and those interested are invited to contact NoGSME as soon as possible. We hope that NoGSME will be able to pay most of the costs as in 2005.

Workshop on textbook studies

In late May (25-28) NoGSME will run a workshop for doctoral students and researchers active with studies on mathematics curricula and textbooks. In the summer school 2005 it was noticeable that a group of doctoral students is working in this area and the idea was brought forward to try to create a network with all those interested. NoGSME will now organise a workshop where this network can meet and invite new interested participants. Building links between studies and opening for comparisons of different kind are expected to be fruitful for the research outcome of such studies. Anyone working with mathematics curriculum or textbook studies is welcome to contact NoGSME regarding this event.

A second workshop will take place 5-7 October. This workshop could preferably be for both doctoral students and supervisors. We are discussing the content of this workshop and the vision is that it will be organised in cooperation between NoGSME and SMDF, The Swedish Society for Research in Mathematic Education. In 2005 SMDF had a seminar on *The formal language of mathematics* and it has been suggested to continue and expand this theme and focus on *Mathematical language*. More information about this workshop will come later.

Supervisors programme

In early May (around 5-6) we plan to offer a seminar for supervisors, this time again in Finland. The previous seminars have taken place in Finland, Denmark, Norway and Sweden so it is appropriate to start a second round in the countries. A possible theme this time will be the construction of different doctoral programmes in mathematics education. Through NoGSME it has become evident that the doctoral programmes at different universities have some things in common but also some interesting differences, both concerning prerequisites, content, profile of the programme, modes of examination and combination of course work and thesis writing. As plans are evolving to establish new doctoral programmes in mathematics education in many places it would be useful to investigate the existing programmes.

In the autumn there will be a second seminar for supervisors and the content of this will be announced later. The time for this seminar will be late November.

NoGSME in full activity during 2005

In the yearly report to NordForsk we could demonstrate that NoGSME is now exploiting the opportunities afforded by the collaboration and the

resources. The costs for 2005 are at the level of our funding one million per year and we reported six courses, three seminars for supervisors, the first summer school, a workshop on classroom research during Norma05, three mobility stipends and many students who received travel support for participation in courses. The board had three meetings in connection with other arrangements. During 2006 it is expected that NordForsk will make a midway evaluation of the graduate school, which we hope will secure the funding for the coming two years. The board will start planning how activities can be organised after the funding has ceased in 2009. It is hoped that by then the Nordic network will have grown and demonstrated its value and that the different research groups will be strong enough to take responsibility for different activities in cooperation with each other. The initiatives for Nordic doctoral courses at different places have already proven to be of great value. For example the course initiated by the Danish Pedagogical University with Paul Cobb was taken by not fewer than 23 doctoral students, and the evaluation shows that they are highly satisfied with the course. We invite researchers at other universities to come up with similar suggestions or initiatives for courses or workshops on themes of value. The year 2006 will be exceptional as many doctoral students will defend their dissertations during the year. Not in the least is this the case in Sweden, where the defence of 10 dissertations will take place by students from the Swedish graduate school in the didactics of mathematics. The NoGSME board is looking forward to another year with many exciting activities and collaboration with colleagues in all the Nordic and Baltic countries.

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