

Linköping Spring Seminar in Mathematics Education

Goals and objectives of mathematics education

Linköping University, 22 May 2015

The increasing influence of quantitative international and national tests and comparisons in mathematics education on current policy discourse about the importance of STEM subjects in school, raises the issue of the goals of teaching and learning mathematics at different school levels. What are the rationales behind the prominent position given to mathematics in school curricula worldwide? How and why have they changed over time?

Apart from the official goals set up for compulsory and further mathematics education, sometimes found in regulative texts along with their justifications, one finds in curriculum documents also more specific objectives for the teaching and learning of mathematics, linking to the classroom work with content matter aimed to lead to the fulfillment of the goals. In curriculum texts from various countries, these are detailed to very different extents, both concerning the specificity of the content and issues related to pedagogy.

In this seminar official, unofficial and 'real' goals of mathematics education will be explored. Invited researchers with experiences from different countries will contribute to the discussion.

The seminar is arranged to the honor of Professor Christer Bergsten, recently retired as Emeritus.

Program

Friday 22 May 2015

10.00-11.00 Drop-in coffee

11.00-12.15 Title: ***New Goals – New Hierarchies?*** (see abstract below)

Speaker: *Eva Jablonka*, King's College London, UK

Reactor: *Sverker Lundin*, University of Gothenburg, Sweden

12.15-13.15 Lunch at [Universitetsklubben](#), Olaus Magnus v. 29.

13.15-14.30 Title: ***The Hobbesian Wake in the Internationalization of Mathematics Education*** (see abstract below)

Speaker: *Bharath Sriraman*, University of Montana, USA

Reactor: *Iben Christiansen*, Stockholm University, Sweden

14.30-15.00 Coffee

15.00-16.30 Round table discussion

Moderator: *Peter Nyström*, NCM (University of Gothenburg), Sweden

Location: All activities (except lunch) will take place in room [KY31](#) ([pdf](#)) in house [Key](#) ([pdf](#)) at Campus Valla, Linköping University.

Abstracts

Eva Jablonka: *New Goals – New Hierarchies?*

The benefits of mathematics education enunciated in many current curriculum statements and policy texts pertain to preparing students for both economic participation and for participation in the public sphere. In many places, local policies are influenced by the educational discourse disseminated through reports from the OECD's international assessments, which model local curricula and examinations. These constitute mathematics for all as instrumental for something else than recruiting students into careers associated with the completion of specialised mathematics courses. We will look at how reports from national and international assessments portray test-takers as competent (or not) for the successful accomplishment of tasks they face in a range of practices and so produce 'truths' about individuals or groups at different levels of achievement.

Bharath Sriraman: *The Hobbesian Wake in the Internationalization of Mathematics Education*

In this lecture, the growing importance of international comparison tests such as PISA in many countries is critically examined in relation to their socio-economic conditions. The homogenization of mathematics through internationally administered tests and performance of countries have misappropriately been linked to economic progress indicators for a particular country. The apathy of the U.S to international test results is contrasted with the success stories of many Asian countries. We will examine the socio-economic, cultural and ideological constraints to development in education as well as issues that fall through the cracks and segments of society that get left behind (both in the U.S and some Asian countries). Finally, the Darwinian nature and constraints of educational opportunities are examined within the macro-context of cultural or economic ideology that creates a Hobbesian trap, leaving large segments of these societies behind. We will examine whether internationalization of mathematics education has been a good thing or not?

Registration

The seminar is free of charge, including a lunch and coffees during the breaks.

To register for the seminar, please send an e-mail to [Jonas Bergman Ärleback](mailto:Jonas.Bergman.Arleback@liu.se) before 15 May to facilitate our planning.

Contributors

Iben Christiansen is Senior Lecturer in Mathematics Education at Stockholm University, Sweden.

Eva Jablonka is Professor (Chair) of Mathematics Education at King's College London, England.

Sverker Lundin is Research Coordinator at the University of Gothenburg, Sweden.

Peter Nyström is Director of National Center for Mathematics Education (NCM), Gothenburg, Sweden.

Bharath Sriraman is Professor of Mathematics Sciences at University of Montana at Missoula, USA.

Organization

The seminar is organized by the [Department of Mathematics](#) at [Linköping University](#) in cooperation with the [Department of Behavioural Science and Learning](#) and the Swedish Society for Research in Mathematics Education, [SMDF](#).

Organizing Committee

Hoda Ashjari, MAI (Department of Mathematics), Linköping University

Jonas Bergman Ärleback, MAI (Department of Mathematics), Linköping University

Peter Frejd, MAI (Department of Mathematics), Linköping University

Ola Helenius, NCM (National Center for Mathematics Education), Gothenburg, and SMDF (Swedish Society for Research in Mathematics Education)

Joakim Samuelsson, IBL (Department of Behavioural Science and Learning), Linköping University