24. Mathematics Education Research

Network Objectives

Research in mathematics education has primarily two purposes: first to better understand the nature of mathematical thinking, teaching, and learning; and second to use such knowledge in practice for learning and teaching mathematics. It is generally acknowledged that mathematics education has a social and political dimension (e.g. the importance of mathematics in society; the relevance of mathematics to other subjects; inclusion and exclusion in terms of gender, race and social class). Moreover, mathematics education as a research domain comprises also other educational sciences and disciplines such as sociology, psychology, anthropology, linguistics, philosophy, and more recently also neuroscience.

Over the last decades there have been many initiatives to reform mathematics education. One direction has been to shift from learning abstract concepts and procedures to engaging students with more concrete and problem-solving activities. This shift has been attended with a change, more fundamentally, from the passive absorption of decontextualised mathematical knowledge towards an active construction of knowledge by learners based on the modelling of reality. The ultimate goal of student learning is claimed to be the acquisition of a mathematical disposition- this is seen as a potential 'remedy' to counteract against the apparent decline of interest in mathematics at compulsory and pre-18 school level, and the level of performance of students leaving high school.

The aim of this network is to:

- Facilitate and promote communication and cooperation in mathematics education research amongst European researchers;
- Provide a base for those researchers in smaller countries without national Mathematics Education Research associations;

- Link issues in mathematics education to those in the wider field of educational research;
- Bring together and explore issues in mathematics education that are of scientific interest and which would benefit from collaborative research;
- Increase the visibility of mathematics education research within educational research in Europe.

As a network we would like to encourage contributions relating to all fields of mathematics education research, and in particular those comparing across regions and cultures. In the past contributions have focussed on Inquiry-based-learning and problem solving in mathematics education; affect and beliefs; modelling; authentic and real-life activities in mathematics education; mathematical tasks; assessment issues; mathematics and language; mathematics in teacher education; international & comparative studies in mathematics education; mathematics curriculum and curriculum materials/resources; ICT and math education; to name but a few. For ECER 2013 we continue to encourage, and especially support, contributions relating to **'Methodological Issues',** in particular in **'Design-based research'** and **'Activity Theory'** in Mathematics Education Research.

More generally, research groups who have worked on a joint project, and with a common framework, are particularly encouraged to apply. We believe that this makes the sessions more coherent. We would also like to stress that all presentation formats should be used, including Research Workshops, Roundtables, and Posters, for example.

The aim of this network is to:

- Facilitate and promote communication and cooperation in mathematics education research amongst European researchers;
- Provide a base for those researchers in smaller countries without national Mathematics Education Research associations;
- Link issues in mathematics education to those in the wider field of educational research;
- Bring together and explore issues in mathematics education that are of scientific interest and which would benefit from collaborative research;

- Increase the visibility of mathematics education research within educational research in Europe.

As a network we would like to encourage contributions relating to all fields of mathematics education research, and in particular those comparing across regions and cultures. In the past contributions have focussed on Inquiry-based-learning and problem solving in mathematics education; affect and beliefs; modelling; authentic and real-life activities in mathematics education; mathematical tasks; assessment issues; mathematics and language; mathematics in teacher education; international & comparative studies in mathematics education; mathematics curriculum and curriculum materials/resources; ICT and math education; to name but a few. For ECER 2013 we continue to encourage, and especially support, contributions relating to **'Methodological Issues'**, in particular in **'Design-based research'** and **'Activity Theory'** in Mathematics Education Research.

More generally, research groups who have worked on a joint project, and with a common framework, are particularly encouraged to apply. We believe that this makes the sessions more coherent. We would also like to stress that all presentation formats should be used, including Research Workshops, Roundtables, and Posters, for example.