

CERME 8: Working Group 2

Teaching and Learning of Number Systems and Arithmetic

Leaders

Sebastian Rezat (Germany) sebastian.rezat@math.uni-giessen.de

Véronique Battie (France)

Luciana Bazzini (Italy)

Lisser Rye Ejersbo (Denmark)

Scope and Focus of WG2

Working Group 2 first assembled at CERME 7 as a forum for presenting and discussing theoretical and empirical research on the teaching and learning of number systems and arithmetic (including models for operations in the number systems, ratio and proportion, rational numbers and number theoretical aspects). Its scope comprises grades 1-12. An emphasis is put on:

- research-based specifications of domain-specific goals (What should be learned? What can be learned? Which priority is given to particular aspects and why?)
- analysis of learning processes and learning outcomes in domain-specific learning environments and classroom cultures;
- new approaches to the design of meaningful and rich learning environments and assessments.

Call for papers and poster proposals

Working Group 2 calls for substantial research-based theoretical, methodological, empirical or practical contributions from a wide range of perspectives, including cognitive, social and developmental ones. We especially welcome proposals for papers (ten pages maximum) or posters (two pages maximum) dealing with the following questions:

- What balance and which interplay between developing conceptual understanding and procedural skills for number operations can and should we aim at while designing learning environments?
- What does it mean to operate flexibly with numbers and what knowledge and skills are required to operate flexibly with numbers?
- What are the roles of models and teaching strategies in operating with numbers flexibly?
- What aspects of number theory should and can be taught in primary and secondary school, and how can these be taught?
- How can long-term learning processes from grade 1 to grade 12 be supported and analysed? How can the different transitions involved, especially the primary-secondary transition, be taken into account?
- What aspects of the number curriculum at the end of the secondary level can support the transition to the tertiary level?

Papers and poster proposals should use the CERME WORD template, and conform to the guidelines at <http://www.cerme8.metu.edu.tr> To submit it, you must email your paper as a WORD document to Sebastian Rezat at sebastian.rezat@math.uni-giessen.de, AND at the same time to the conference secretariat at <http://www.cerme8.metu.edu.tr>. If possible please also send a pdf version *in addition* to the WORD document.

Reviews and Decisions

Each paper will be peer-reviewed by three persons from among those who submit papers to this Working Group. Please expect to be asked to review up to three papers yourself between 15th September and 22nd October 2012. It may be necessary for you to revise your paper before final acceptance. Please reserve some time to do this in the second half of November. The group leaders will make the final decision on the acceptance of posters.

Important dates

15th September 2012: Deadline for submission of papers.

1st October 2012: Deadline for submission of poster proposals

22nd October 2012: Deadline for reviewers to submit their reviews.

1st December 2012: Deadline for revisions to papers.