

CERME 13: Thematic Working Group 22
CURRICULAR RESOURCES AND TASK DESIGN IN MATHEMATICS EDUCATION

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Scope and focus of the Working Group

On a macro-level, mathematics curricular resources, both print and digital, are significant constituents of a broader curricular system; they communicate about and shape the mathematical practices of teachers and students. In many places around the world, teachers and students frequently engage with these resources prior to, during, and after teaching, inside and outside the classroom, individually and collectively - for design, teaching and learning, and assessment purposes. Because of their central role in mathematics education, curricular resources are often the focus of professional development around pedagogical design capacity and knowledge in/for teaching. Moreover, curricular resources provide a particular lens to study teaching and curriculum systems.

On a micro-level, curriculum resources usually consist of tasks. These mathematics tasks used in curriculum resources and learning environments (derived from textbooks or other sources), and the way they are adapted and implemented by teachers can influence the students' learning opportunities to make mathematical connections, and develop mathematical concepts, skills, or habits of mind. Indeed, it is well documented that tasks play a key role in effective teaching, as exemplified in studies on various aspects of task design (e.g., on task features that can help generate specific forms of mathematical activity), methods of task analysis (e.g., emerging use of data science methods to map and represent different phenomena), and principles for task implementation within both conventional and digital learning environments (e.g., factors influencing the level of engagement of students with the mathematics). Students are also expanding in recent years their role in activities of task-design to foster their reflections about what they know, understand, and do.

Call for papers and poster proposals

We warmly welcome research papers (max. 8 pages) and poster proposals (2 pages) on:

- Empirical research on teachers' and students' interactions with curriculum materials/resources/tasks, and influences on this interaction over time (e.g., longitudinal studies);
- Theoretical foundations and methodologies of task analysis informing task design and scaling-up.;
- Studies on the use of carefully designed curriculum materials/resources/tasks to support the implementation of particular learning goals connecting trajectories and curricular resources;
- The collaboration among teachers, between teachers and researchers, and possibly also students for designing tasks/resources and analyzing their implementation and their added value;
- How curricular resources function within and shape a broader curricular system, and how these resources provide a lens to study and compare curricular systems.

Papers and poster proposals should use the CERME template, and conform to the guidelines at <https://cerme13.renyi.hu/>. CERME 13 uses an electronic submission system <https://www.conftool.pro/cerme13/>. The authors submit the initial version of their paper on the website (uploading it both as a .doc and a .pdf file, and providing the required information, in particular the TWG number).

Reviews and decisions

Each paper will be peer-reviewed by two persons from among those who submit papers to this TWG. Please expect to be asked to review up to two papers yourself. The group leaders will decide about the acceptance of posters.

Important dates

- **15 February 2023:** Deadline for submission of papers and posters.
- **5 April 2023:** Preliminary decisions on papers and posters.
- **10-14 July 2023:** CERME 13 takes place.
- See <https://cerme13.renyi.hu/deadlines> for other important dates