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TRANSITIONS IN MATHEMATICS EDUCATION

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This panel addresses crucial issues concerning transitions in mathematics education (crucial for students, teachers, teacher educators, and researchers), and proposes a debate around sensitive questions related with these transitions.

Within an educational context any change can be viewed as a transition. In this panel we mainly consider two kinds of changes (separately or simultaneously):

- Conceptual change and learning as transition processes;
- Transitions between social groups or contexts with different mathematical practices.

We address mathematics teaching and learning at all ages: from preschool to university, and in the workplace (including the teachers' passage from university to school).

Firstly, we synthesize research on these topics: what specific questions have been addressed; what findings were obtained. We show how different theoretical perspectives focus on different questions and obtain different results even concerning the same transitions, and we show how the articulation of different theoretical perspectives can enrich the analysis of transitions. Then we discuss sensitive issues, in particular:

- Are some transitions best viewed as continuous processes, or should they all be viewed as discontinuous?
- In the case of discontinuities, do they inevitably cause or constitute difficulties, or do they also offer productive opportunities, and how?
- In the case of continuities, how do we conceptualize both difficulties and opportunities?

Finally, drawing on the research synthesized and on the discussion about the above questions, we present different kinds of teaching interventions or teacher education programs (actual or potential) likely to support students and teachers in the transition process.