

DG08: TOWARDS NEW PERSPECTIVES AND NEW METHODOLOGIES FOR THE USE OF TECHNOLOGY IN MATHEMATICS EDUCATION

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Various research studies on the use of technology in Mathematics Education have explored different conceptual frameworks and methodologies for analysing teaching and learning situations in microworlds environment. Early research using more essentialist perspectives (taking technologies as given) often worked within a narrow model. Later research involving more anti-essentialist perspectives (taking technologies as problematic), such as social shaping, cultural studies and actor network models of epistemology, tried to understand the role of technology in educational settings. This discussion group seeks to initiate a dialogue that moves away from current methods and frameworks to new perspectives and new methodologies for considering the use of technology in mathematical education. We are particularly interested in developing international, and possibly alternative, anti-essentialist perspectives that would help us to understand the role of designers, technology and users of technology, such as mathematics teacher educators, teachers and students.

Questions for Discussion

1. What perspectives are used to investigate the use of technology in Mathematics Education in different countries?
2. How would new perspectives allow us to re/think the role of users of technology?
3. What new methodologies would enable us to investigate difficult issues concerning teaching and learning situations in microworlds environment?

Discussion Sessions

We will begin with short presentations about emerging perspectives on the study of the use of technology in Mathematics Education, leading to discussion of the above questions. All participants are encouraged to elicit what problems remain that need to be addressed by research. We intend to form a network of participants to continue discussion via email and possibly develop joint research projects.