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Abstract

Implementing teaching through mathematical problem-solving entails substantial challenges and calls for sustained teacher-researcher collaboration. The joint research and development project "Teaching that supports students' creative mathematical problem-solving" has a fundamental ambition to be symmetric in that both teachers' and researchers' needs and conditions are attended to and complementary in that their different areas of expertise are utilised and valued. In this paper we show how the interplay and development of symmetry and complementarity can function as a means for studying teacher-researcher collaborations.

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Johan Sidenvall

Johan Sidenvall is a researcher and teacher at Municipality of Hudiksvall and a member of Umeå Mathematics Education Research Center. His research interest is how and under what conditions mathematical teaching, aimed at supporting students' own construction of solutions via reasoning, may lead to more effective learning. He is also involved in teacher professional development projects on both organisational and practical level.

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Johan Lithner is a professor in mathematics education at Umeå University and director of Umeå Mathematics Education Research Centre. His research concerns learning difficulties and learning opportunities in mathematics, with a particular focus on learning by imitative and creative reasoning. The work is carried out in collaboration with researchers in mathematics education, psychology and neurology, and also includes research and development in collaboration with schools and teachers.