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Promoting fundamental change in mathematics teaching: a theoretical, methodological, and empirical approach to the problem.

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Summary: Mathematics education reform, as conceptualized in the United States and a number of other countries, represents a fundamental change in the teaching of mathematics and the results it would produce for students. Whereas there are data that suggest some progress is being made in the direction of reform, teacher education and professional development during the last two decades have been largely unsuccessful in preparing teachers to enact the reform vision. In this article, the author presents a theoretical construct, major assimilatory structures, that can contribute to explaining the difficulty of promoting change in mathematics teaching. He describes a methodology – accounts of practice – for identifying major assimilatory structures of teachers and present an example of a major assimilatory structure, perception-based perspective, that emerged from our empirical work.

Classification: D20 B50

Keywords: teaching; educational reforms; teacher education; professional development; theoretical construct; major assimilatory structures; accounts of practice

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