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The theory of conceptual change as a theory for changing conceptions.

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Summary: It has become widely accepted that what and how mathematics teachers teach is linked to what it is they believe. What teachers believe, however, is not always in alignment with contemporary notions of mathematics and the teaching and learning of mathematics. As such, it is important for teacher educators to help facilitate changes in teachers' beliefs in ways that will enable them to become more effective teachers of mathematics. In this article I present the results of a research project designed to examine the feasibility of using the theory of conceptual change as a theory for changing mathematics teachers' conceptions about key aspects of mathematics and the teaching and learning of mathematics. The results indicate both that the theory of conceptual change is a viable theory for designing interventions for the purpose of changing beliefs, and that the implementation of these aforementioned interventions resulted in the rejection of participants' a priori beliefs.

Classification: C39 C29 D29 B50

Keywords: cognitive psychology; cognitive processes; beliefs; teacher attitudes; teaching; theory of conceptual change; epistemology; educational research; changing beliefs through teaching; inservice teacher education; classroom observation; interviews; theory for designing interventions for changing conceptions; empirical investigations