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Beliefs and beyond: Hows and whys in the teaching of proof.

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Summary: In this paper, we report on a study aimed at describing the way secondary school teachers treat proof and at understanding which factors may influence such a treatment. This study is part of a wider project on proof carried out for many years. In our theoretical framework, we combine references from research on proof with those from research on teachers in relation to their beliefs. The study was carried out through interviews with secondary school teachers aimed at learning how they describe their work with proof in the classroom, and to elicit beliefs and other factors that shape this work. Through the interviews we were able to detect reasons behind teachers' choices in planning their work in the classroom. In the present paper, we concentrate on four cases that, among other factors, offer elements suitable to unravel the problem of inconsistencies using the construct of leading beliefs, i.e., beliefs (whose nature may vary from teacher to teacher) that seem to drive the way each teacher treats proof.

Classification: C29 C70

Keywords: teaching; proofs; teacher beliefs; case studies; teaching practice

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