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Teachers' professional learning of teaching proof and proving. (English) [Zbl 1247.97016](#)

Hanna, Gila (ed.) et al., Proof and proving in mathematics education. The 19th ICMI study. Berlin: Springer (ISBN 978-94-007-2128-9/hbk; 978-94-007-2129-6/ebook). New ICMI Study Series 15, 327-346 (2012).

Summary: This paper reviews studies on teachers' professional learning of teaching proof and proving. From them we conceptualise three essential components of successful teaching: teachers' knowledge of proof, proof practices and beliefs about proof. With respect to each component, we examine research studies of primary and secondary teachers. We also discuss the challenges teachers may face in teaching proof and proving, as well as teachers' professional learning activities. Throughout, we argue that the three components are interrelated in successful teaching of proof and proving. This argument raises a new challenge for further research.

For the entire collection see [[Zbl 1234.00015](#)].

MSC:

[97E50](#) Reasoning and proving in the mathematics classroom
[97B50](#) Mathematics teacher education
[97C70](#) Teaching-learning processes in mathematics education

Keywords:

teaching proof and proving; professional learning of teaching proof; teachers' knowledge of proof; teachers' proof practices; teachers' beliefs about proof

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