

ZMATH 2011f.00676

Girnat, Boris; Eichler, Andreas

Secondary teachers' beliefs on modelling in geometry and stochastics.

Kaiser, G. (ed.) et al., Trends in teaching and learning of mathematical modelling. Proceedings of the 14th international conference on the teaching of mathematical modelling and applications, ICTMA, Hamburg, Germany, July 27–31, 2009. Berlin: Springer (ISBN 978-94-007-0909-6/hbk; 978-94-007-0910-2/ebook). International Perspectives on the Teaching and Learning of Mathematical Modelling 1, 75-84 (2011).

Summary: This chapter presents two combined qualitative studies on secondary teachers' beliefs on modelling in geometry and stochastics. The teachers' views on modelling, which are described in detail, differ considerably in both parts of mathematics from a pragmatic approach to modelling. In case of elementary geometry, a conflict with a traditional view on geometry is detected and elucidated. In case of stochastics, the need for data and real situations are revealed as controversial. The chapter ends with the invitation to analyse the parts of factual school mathematics including teachers' beliefs more specifically, that is, to compare applied-oriented aims with other didactical requests, and to design tasks which are supposed to be a response to the teachers' hesitations on modelling analysed before.

Classification: M10 B50 C29

Keywords: mathematical modeling; teacher beliefs; educational research

doi:10.1007/978-94-007-0910-2_9