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Teachers' self-perceptions of their pedagogical content knowledge related to modelling – an empirical study with Austrian teachers.

Stillman, Gloria Ann (ed.) et al., Teaching mathematical modelling. Connecting to research and practice. Dordrecht: Springer (ISBN 978-94-007-6539-9/hbk; 978-94-007-6540-5/ebook). International Perspectives on the Teaching and Learning of Mathematical Modelling, 317-326 (2013).

Summary: Empirical research into teachers' views and pedagogical content knowledge related to modelling in the mathematics classroom is still relatively scarce, such as in the domain of self-perceptions of modelling-specific pedagogical content knowledge. Consequently, this study concentrates on such views of an Austrian sample of pre-service and in-service mathematics teachers. Both quantitative and qualitative methods were used to explore how teachers perceive their knowledge about possibilities of providing students with specific help in the modelling process and how they see their professional development at university with respect to modelling. The findings show that the mean self-perceptions in both of these areas were not positive, indicating a need for intensified professional development support.

Classification: M10 C29 C39 C49

Keywords: teachers' views; pedagogical content knowledge; modelling; self-perception; professional development

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