

ZMATH 2014b.00809

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Modelling from the perspective of commognition – an emerging framework.

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, 47-56 (2013).

Summary: This chapter explores an emerging framework on mathematical models and modelling using the theoretical perspective of commognition to analyse and discern discursive objects in a dialogue between two students engaged in a modelling activity. The results, partly presented as realization trees, show a variety of signifiers from different discourses coming into play during the modelling, and examples are given of the activity of negotiation, which plays an important role in any modelling activity. In addition, it is argued that the framework has potential to bridge different research perspectives on mathematical models and modelling.

Classification: M10 C70 C30

Keywords: modelling; commognition; thinking; learning; conversation; discourse; Fermi problems

doi:10.1007/978-94-007-6540-5_3