

ZMATH 2014b.00893

Widjaja, Wanty

Building awareness of mathematical modelling in teacher education: a case study in Indonesia.

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, 583-593 (2013).

Summary: Interest to teach mathematics closely connected to its use in daily life has grown in Indonesia for over the last decade. This chapter reports an exploratory case study of the building of an awareness of mathematical modelling in teacher education in Indonesia. A modelling task, re-designing a parking lot, was assigned to groups of pre-service secondary mathematics teachers. All groups collected data on a parking lot, identified limitations in the current design, and proposed a new design based on observations and analyses. The nature of the mathematical models elicited during the modelling task were examined. Implications of this study suggest a need to encourage pre-service teachers to state assumptions and real-world considerations and link them to the mathematical model in order to validate if the model is appropriate and useful.

Classification: M99 M59 B50

Keywords: modelling; awareness; teacher education; pre-service teachers

doi:10.1007/978-94-007-6540-5_50