

ZMATH 2014b.00865

Schofield, Mark

Extending model eliciting activities (MEAs) beyond mathematics curricula in universities.

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, 573-581 (2013).

Summary: This chapter recognizes the potential efficacy of MEA-related approaches in university classrooms. It explores principles associated with MEA design and raises challenges to their transfer beyond mathematical settings into natural and environmental sciences, engineering and beyond. It attempts to address the state of readiness of individuals to engage with MEA-related processes. A first stage model of progression of learners and teachers into MEA-related activities is proposed alongside consideration of the phenomenon of flow and the beginnings of a set of questions intended to set the scene for emerging development and research agendas. A new seventh ‘entry’ principle for MEA design is proposed.

Classification: M55 M65 C35 C25 D55

Keywords: modelling; model eliciting activities; individual readiness; complex problem solving

doi:10.1007/978-94-007-6540-5_49