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A school-based professional development programme for teachers of mathematical modelling in Singapore.

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Summary: A school-based professional development programme (SBPD) aimed at developing secondary school mathematics teachers' competencies to teach mathematical modelling in Singapore is presented and evaluated in this article. The SBPD is characterized by two key features – content elements to develop teachers' knowledge and skills, and transformative learning cycles for teachers to elicit, enact and reorganize their orientations in a mathematical modelling classroom. Goal-based decision-making analysis of teachers' practice suggests that this SBPD positively influences teachers' knowledge and resources, goals and orientations in planning, designing and enacting modelling learning experiences.

Classification: B50 D39

Keywords: school-based professional development; mathematical modelling; transformative learning; teaching decisions; goal-based decision-making

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