

ZMATH 2010a.00190

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Teaching and learning with technology: realising the potential.

Forgasz, Helen (ed.) et al., Research in mathematics education in Australasia 2004–2007. Rotterdam: Sense Publishers (ISBN 978-90-8790-500-2; 978-90-8790-499-9/pbk; 978-90-8790-501-9/ebook). New Directions in Mathematics and Science Education 12, 165-193 (2008).

Summary: In this chapter we have examined research that focused on two major themes that involve technology and mathematics learning: teacher knowledge and practice, and students' conceptual development. Our review indicates that there is a high level of enthusiasm from both students and teachers to embrace a variety of technologies, a trend consistent with findings of the previous MERGA review. The increase in the number of studies on technology and mathematics is healthy and the findings of these studies highlight the importance of the teacher and suggest alternative ways of adopting such tools. We would also like to see more studies that provide specific information about a) how students' learning can be enhanced and b) what role teacher knowledge plays in producing robust mathematical understandings that are required of numerate students.

Classification: D30 C70 U50

Keywords: beliefs; digital media; pedagogical practices; pedagogical technology knowledge; technology in teaching; research review; Australasia