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**Developing and enhancing elementary school students' higher order mathematical thinking with SimCalc.**

Hegedus, Stephen J. (ed.) et al., The SimCalc vision and contributions. Democratizing access to important mathematics. Dordrecht: Springer (ISBN 978-94-007-5695-3/hbk; 978-94-007-5696-0/ebook). Advances in Mathematics Education, 319-340 (2013).

Summary: A fundamental question regarding the use of technology in mathematics education is the way in which technology supports and promotes higher order thinking in mathematics. In this chapter, we try to describe and analyze the way in which SimCalc might develop and enhance elementary school students' higher order mathematical thinking. To this end, we use an adaptation of the integrated thinking model of Iowa Department of Education [A guide to developing higher order thinking across the curriculum, Des Moines: Department of Education (1989)]. Specifically, we argue that SimCalc offers elementary school students the opportunity to develop not only content knowledge, but also critical, creative, and complex thinking skills. We justify the above argument by providing examples of mathematical activities using SimCalc, and students' responses.

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