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Impact of classroom connectivity on learning and participation.

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, 203-229 (2013).

Summary: Our study reports the development of the SimCalc environment that integrates interactive and connected mathematical representations with the latest affordances in wireless connectivity. We describe the development of several instruments to measure the interaction between learning and participation in terms of changes in attitude over time. In addition to empirical data from a quasi-experimental study, we qualify our findings through analysis of discourse patterns in specific forms of participation and explain how the communication infrastructure of an algebra classroom can be radically enhanced.

Classification: U50 C20 C30 C70

Keywords: networked classroom; classroom connectivity; computer aided instruction; learning; participation; learning outcomes; achievement; attitudes

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