

ZMATH 2013c.00890

Vahey, Phil; Roy, George J.; Fueyo, Vivian

Sustainable use of dynamic representational environments: toward a district-wide adoption of SimCalc-based materials.

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, 183-202 (2013).

Summary: In this chapter, we will discuss pilot research in our multiyear effort aimed at aiding a large, urban school district in the state of Florida to adopt SimCalc MathWorlds[®] as a sustainable and integral part of middle school mathematics education. Building upon analyses that identify important factors in sustainable use of SimCalc-based materials, we have built local capacity to support the program and designed teacher professional development and district rollout plans to increase the likelihood of sustained use in the district. We have found that our efforts resulted in a replication of prior effectiveness results, as well as strong local support for SimCalc-based materials. These factors have allowed us to steadily increase our presence in the district, and now the district and project team are actively working toward our shared vision of the materials being used by every middle school mathematics teacher in the district. We end with a discussion of next steps and risks associated with our ongoing efforts.

Classification: U50 B50 C29

Keywords: dynamic representational environments; computer aided instruction; educational software; professional development; curricula; classroom technology; graphing calculators; educational mathematics software; achievement; teachers' perceptions

doi:10.1007/978-94-007-5696-0_11