

**ZMATH 2016c.01093**

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**Using simulations to foster preservice mathematics teachers' self-assessment, learning, and reflections on teaching.**

Math. Teach. Educ. 1, No. 2, 162-171 (2013).

Summary: We present 2 technology-involved tasks that we use in our mathematics pedagogy courses to ostensibly give preservice secondary mathematics teachers (PSMTs) sample activities they can use in their teaching or use to assess their own future students' ability to apply trigonometric functions in contextual situations using technology. However, we have two other purposes for posing these tasks. One purpose is to provide occasions for PSMTs to self-assess their mathematical and technology knowledge, and subsequently take action to learn mathematics and technology features. The other purpose is to use such tasks as springboards for substantive discussions about teaching, learning, technology, and assessment. Such simulation tasks have engaged PSMTs and helped them develop their knowledge base for teaching mathematics.

*Classification:* U79 I29 D49 D69 C39

*Keywords:* preservice teachers; self-assessment; simulations; trigonometry