Boling, C. (2016). The impact of simulations on achievement and attitudes in mathematics classrooms (Doctoral Dissertation, Towson University, 2016).

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## Abstract

A change in the national focus of education has led to a new curriculum more focused on the student developing their own knowledge. The Common Core State Standards (CCSS) have been developed to place a greater focus on the learner and less focus on rudimentary mathematics. Teachers are faced with a daunting task to not only implement the CCSS but also use alternative teaching practices and tools in the classroom that teachers are not familiar with. Computerized simulations provide teachers with a possible tool in which students can expand on mathematical principles and further their knowledge of mathematical theory. This study focuses on the use of computerized simulations in a common core mathematics classroom versus classes not using simulations. This study examines the use of computerized simulations and changes in mathematical attitudes (i.e., enjoyment, value, and motivation) compared to students not using simulations. Finally, this study examines the use of computerized simulations and changes in the technological attitudes (i.e., confidence with technology and attitude to learning mathematics with technology) compared to students not using simulations.