Foster, Matthew E.; Anthony, Jason L.; Clements, Doug H.; Sarama, Julie; Williams, Jeffrey M.
Improving mathematics learning of kindergarten students through computer-assisted instruction.

Summary: This study evaluated the effects of a mathematics software program, the Building Blocks software suite, on young children’s mathematics performance. Participants included 247 Kindergartners from 37 classrooms in 9 schools located in low-income communities. Children within classrooms were randomly assigned to receive 21 weeks of computer-assisted instruction (CAI) in mathematics with Building Blocks or in literacy with Earobics Step 1. Children in the Building Blocks condition evidenced higher posttest scores on tests of numeracy and Applied Problems after controlling for beginning-of-year numeracy scores and classroom nesting. These findings, together with a review of earlier CAI, provide guidance for future work on CAI aiming to improve mathematics performance of children from low-income backgrounds.

Classification: U71 D41 C31

Keywords: at-risk students; computer-assisted instruction; kindergarten; numeracy
doi:10.5951/jresematheduc.47.3.0206