

Mathematics and Science Learning Opportunities in Preschool Classrooms

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Abstract

Research findings-The present study observed and coded instruction in 65 preschool classrooms to examine (a) overall amounts and (b) types of mathematics and science learning opportunities experienced by preschool children as well as (c) the extent to which these opportunities were associated with classroom and program characteristics. Results indicated that children were afforded an average of 24 and 26 minutes of mathematics and science learning opportunities, respectively, corresponding to spending approximately 25% of total instructional time in each domain. Considerable variability existed, however, in the amounts and types of mathematics and science opportunities provided to children in their classrooms; to some extent, this variability was associated with teachers' years of experience, teachers' levels of education, and the socioeconomic status of children served in the program.

Practice/policy-Although results suggest greater integration of mathematics and science in preschool classrooms than previously established, there was considerable diversity in the amounts and types of learning opportunities provided in preschool classrooms. Affording mathematics and science experiences to all preschool children, as outlined in professional and state standards, may require additional professional development aimed at increasing preschool teachers' understanding and implementation of learning opportunities in these two domains in their classrooms.

Keywords: mathematics instruction; science instruction; preschool; early childhood education

Full text: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4256529/pdf/nihms614024.pdf>