



U.S. pushes preschool literacy skills, but what about math?

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In Early Childhood Education

Kindergarten math skills are the best predictor of later school success for children, say researchers. Yet, preschool education in the U.S. tends to focus more on building skills for reading rather than mathematics.

Around 120 early childhood educators from around the country gathered recently at the Erikson Institute's first international symposium on early math education, to hear educators from China, Japan, Austria and Singapore describe math instruction in those countries and to discuss strategies for improving math skills in young children in the U.S.

"We look at everything through a literacy lens. We don't look at what we can do with math," said Sara Slaughter, the education program director at the McCormick Foundation, which supported the symposium.

Children in countries like China and Japan often perform better on mathematics assessments than their U.S. peers, but youngsters in this country are also capable of high-level math achievement, said experts.

Young children naturally exhibit skills that are key to understanding mathematics concepts and solving mathematical problems, such as thinking abstractly, drawing logical conclusions and asking 'how' and 'why' questions, says Angela Andrews, an assistant professor of math education at National-Louis University.

Yet math teaching in the early school years fails to take advantage of these skills. "If math was nutrition, the U.S. would be Ethiopia," Andrews told the group. "We are in trouble. Our teachers need a deeper understanding of math and how to teach it to young children."

For example, a research study that compared math instruction by Chinese teachers to that of U.S. teachers found that Chinese teachers were more likely to understand math content and were better able to explain how they solved math problems. And in Japan, math is not taught just during a specific block of time; teachers embed instruction into everyday activities like singing, crafts and creative arts. In addition, lessons are hands-on rather than paper-and-pencil exercises, which educators here tend to rely upon.

Early childhood educators need to bring their expertise to the discussion over how to teach math to young children, says Jennifer McCray, a project director of the Early Mathematics Education Project at Erikson.

"While there is a desire to make this issue important, there is also a fear that people will push the 1st grade and kindergarten curriculum down" to preschool, McCray explains. "Young children are not ready for worksheets. They just need help seeing the math that is around them."

Here are some math exercises that both parents and teachers can do:

* Count: Count steps when children walk up and down stairs or the number of items that crop up in everyday life, like French fries during a meal. "Snack time is math time," says Andrews. "The higher children can count, the better they do in math. Research shows this."

* Compare: Nature is an excellent tool. Compare things like flowers, trees and dogs, says McCray. "When children learn terms like bigger and smaller, they move on to areas like thicker and wider," she says. "Comparison is the basis for measurement."

* Sort and classify: These are the underlying skills for algebraic thinking, says McCray. During laundry, ask youngsters to sort white and dark clothes, or match up pairs of socks.

Erikson plans to issue a policy brief before this fall and host another symposium next year to continue the early math conversation.

