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Early math comes just in time, preschool teachers say

Erikson Institute program for small children to multiply as training is extended to primary grade teachers in CPS

By Patty Pensa
SPECIAL TO THE TRIBUNE

In the countless times preschool teacher Cecelia Blue-Ford has read "Goldilocks and the Three Bears" to her preschool students at Kellman Corporate Community Elementary School, she never saw the book as a way to teach math.

Since her training in the Erikson Institute's Early Mathematics Education Project, she now uses the story to bring to life math concepts as much as the characters and plot. Classification, a key concept in math, is a big part of the story. Blue-Ford has her students group different-size bowls and spoons according to which family member — Papa Bear, Mama Bear or Baby Bear — would use them.

"I would have never thought to do something like that," said Blue-Ford, who has taught at Kellman on the West Side for the last four of her 13 years as a preschool teacher. "Now, when I pull out stories and read to the kids, I always am thinking about what math I can extract from there."

Blue-Ford is one of more than 230 Chicago Public Schools teachers who have trained with the Erikson Institute, a Chicago graduate school focusing on child development. With up to \$2 million in private funding — and no money from the school district — the early math program has reached about 7,500 preschool and kindergarten students in about 110 schools.

Starting next fall, the program will include first- through third-grade teachers in eight Chicago public schools. Erikson recently won a five-year, \$5 million federal "Investing in Innovation" grant to expand its teacher training. It was one of 49 programs selected from nearly 1,700 institutions that applied for the funding.

"Math has been neglected and certainly, as a

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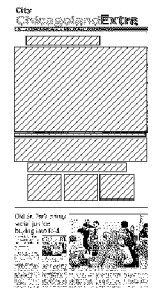
nation, we need to do a better job" teaching it, said Jennifer McCray, Erikson's Early Mathematics Education Project director. "It's a matter of deciding what's important. I certainly wouldn't want an arts program to be gone. But the math education kids are getting now is not as good as it could be or as it should be."

Teaching math is often relegated to a few lessons in preschool and kindergarten, McCray said. Erikson's program gets teachers to think about adding math throughout the school day, whether it's counting how many boys and girls are lined up or having the students decide how to group objects such as their shoes.

In 2007, the year the early math program launched, Erikson found that 21 percent of preschool and kindergarten teachers covered math on any given day while 90 percent covered language arts and literature.

"By third grade, it's critical kids read and read well," said Barbara Bowman, the school district's chief officer of early childhood education. "It's also critical they have math skills. Some kids shut down in math because they haven't got the underpinnings they need."

Erikson's teacher training program is part of a broader movement in early education to make math skills as important as literacy. The school district started exploring the issue about five



years ago as research showed that children's math skills are as much a predictor of their success as their literacy skills, said Bowman, who also is a professor at Erikson.

The program is also intended to narrow the achievement gap between children whose families are middle class versus low-income, said McCray of Erikson.

Erikson's research in 2008-09 showed that students who were behind national norms for test scores gained 10 months of math knowledge under the guidance of trained teachers. Students whose teachers weren't trained gained seven months, the study showed.

The Chicago Mercantile Exchange Foundation has committed \$1.65 million to Erikson's program over seven years. Foundation officials see the effort as a way to give students from low-income communities an academic boost.

"We want to make sure kids growing up in our inner-city neighborhoods have just as much a chance to succeed," said Kassie Davis, foundation executive director. "Investing in early childhood education, especially for inner-city kids, is really going to pay big dividends down the line."

Tamika Wells, whose daughter Azaria, 4, is a student in Blue-Ford's preschool class at Kellman, said she hopes her daughter's love of math doesn't fade.

Wells, 27, said the math activities Blue-Ford does in class carry over into their daily routine. Azaria is always counting, whether it's the number of people in the car or the number of steps she is climbing.

"She does it a lot," said Wells, who is studying to be an early childhood teacher herself and works on a math activity book with her daughter at home. "I'm hoping she doesn't develop a fear of math. As long as they start young and carry it on, I think the students will come out much better."

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Preschool teacher Cecelia Blue-Ford reads the story of Goldilocks and the Three Bears to members of her preschool class at Kellman Corporate Community School. Blue-Ford uses the story in part to teach about sorting sizes and amounts. It's one of the activities for teaching early math skills that she learned at the Erikson Institute. CHRIS WALKER/TRIBUNE PHOTO



Ke' Aira Collins, 3, from left, Kari Fancher, 3, and Azaria Williams, 4, may not know it, but they're getting a math lesson as they listen to the story of the Three Bears. **CHRIS WALKER/TRIBUNE PHOTO**