RESEARCH TO PRACTICE MATHEMATICS KNOWLEDGE & SKILLS

WHAT WE KNOW ABOUT IMPROVING MATH TEACHING

Research indicates that children's math achievements improve when early childhood teachers participate in ongoing professional development on math knowledge and teaching (Baroody, 2004; Copley, 2004). Effective ways to improve teachers' knowledge and practices include training, coaching, peer support, and mentoring (Snyder, Hemmeter, Meeker, Kinder, Pasia, & McLaughlin, 2012).

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Quality Teaching and Learning

Here are some ways coaches and trainers can support teachers in improving their practices in teaching math to young children:

• Help teachers expand their understanding of math learning for young children and develop a deep appreciation of math concepts and skills that young children should learn.



- Focus on teachers' mastery of math knowledge and teaching strategies as well as their ability to assess children's mathematical knowledge and understanding.
- **Review curriculum collaboratively with teachers** to help them understand the logical sequence of mathematical concepts and the connections between learning activities.
- **Combine intensive training and periodic on-site support,** including classroom observation, coaching, and follow-up training.
- Set teaching goals and plan lessons with teachers, and ask them to review their teaching practices to see if they achieve their goals.
- Use an observational tool to keep track of teachers' behavioral changes in terms of the quantity and quality of math language and teaching.

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