Early Learning and Curriculum

A summary of the scientific literature on early learning and curriculums.



How This Impacts Children's Development

Early learning in preschool is crucial for preparing children for kindergarten and can have lasting benefits for their health, educational outcomes, and career success. Evidence-based curricula and early math instruction

are especially beneficial for children from low-income families, children of color, and dual language learners.

READ THE BRIEF: Evidence-Based Curricula and Job-Embedded Coaching for Teachers Promote Preschoolers' Learning, 2021

READ THE BRIEF: Leveraging Research on Informal Learning to Inform Policy and Promoting Early STEM, 2019

READ THE BRIEF: Improving Early Mathematics Education May Enhance Children's Academic Success, 2008

Talking Points from the SRCD Briefs

- Research shows that the best preschool curricula have a scope and sequence that matches how young children learn. These curriculums are play-based, fun, and engaging for children, and can be implemented by teachers in real-world settings.
- Evidence-based curricula can promote equity and reduce disparities in learning opportunities, with children from low-income families, children of color, and dual language learners often benefiting as much or more than their peers.
- Early math teaching in the U.S. is often of poor quality, with social, emotional, and physical learning typically taking priority in preschool. Teachers tend to prioritize social-emotional learning over literacy, and literacy over math, while preschool teacher preparation programs focus more on literacy than math.
- Head Start has begun to strengthen its mathematics curriculum, and states like Texas and New Jersey are implementing early childhood math programs, especially for minority children from low-income families.
- Leading professional organizations in the field recommend early math instruction to cover the “big ideas” of mathematics (numbers and operations, shape and space, measurement, algebra) within learning contexts that promote problem solving, analysis, and communication.

Policy Considerations in the Briefs

1. Improve teacher training and in-service support to promote the use of research-based curricula. This should include ensuring that teachers are well-versed in subject matters like math, understand their students' needs, and are proficient in both the curriculum and effective teaching and assessment methods.
2. Mandate and fund the use of effective, research-based curricula in all preschool settings, and support the development and evaluation of new curricula.
3. Increase funding for research on critical topics, including children's potential to learn math, the most effective methods for teaching math to young children, optimal strategies for teachers to assess students' learning and thinking, and valid approaches for evaluating curricula.
4. Early childhood math teachers should provide a diverse array of objects and materials to create an engaging environment for math learning. They should initiate and guide explorations of complex topics that relate to everyday experiences, helping children connect mathematical concepts to the world around them.

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