

Delivering on the Promise of Preschool: Investing in Social and Emotional Development and Early Math Skills

MDRC is dedicated to learning what works to improve the well-being of low-income people. Through our research, we seek to enhance the effectiveness of social and education policies and programs. As part of our “Looking Forward” series, we provide policymakers with memos that suggest ways to make progress on critical issues.

Bottom line: Total federal and state expenditures on all preschool programs targeting children from birth to age 5 added up to more than \$30 billion in 2011. The potential payoff on this investment is large: high-quality model preschool programs have been found to return \$4 to \$10 in future benefits per dollar spent — in preventing later risky behavior and in boosting academic and labor market success. However, not all preschool programs yield positive benefits, particularly when implemented at scale — as the modest findings from the recent national evaluation of Head Start have demonstrated.

Growing investments in preschool at the federal and state levels — particularly in evidence-based approaches to language acquisition and reading — are predicated in part on the hope that high-quality preschools might help close the gap between the school achievement of low-income children and their more affluent peers. Indeed, the problem is substantial: as early as preschool, poor children exhibit substantially lower scores on tests of early literacy and math abilities. Left unaddressed, gaps in school achievement in preschool and kindergarten don’t close and may widen over the ensuing elementary years. Equally concerning, the gains achieved in preschool programs like Head Start appear to decline as children age.

How do we make the most of the promise of preschool, particularly as preschool programs scale up and become universal? How do we avoid the “fade out” of early positive effects as children transition to elementary school? Recent investments in testing new approaches to enhancing children’s social and emotional development and their early math skills suggest a new direction to address these challenges.

What Do We Know About Enhancing Social and Emotional Development Among Preschoolers?

Children with problem behaviors do less well in preschool, disrupt the learning environment for all children in preschool classrooms, and are a source of concern and stress for teachers. As many as 20 percent of preschool-enrolled children have high levels of behavioral problems — meaning that, in a typical class of 20 students, teachers may have to work with four children who have serious symptoms of sadness, withdrawal, aggression, and disruptiveness. Preschool teachers receive little training and guidance in how to manage children’s challenging behaviors. Research finds that child engagement is higher in classrooms where teachers are able to manage children’s behavior challenges.

Rigorous research shows that professional development and in-class coaching for preschool teachers in social and emotional development can improve classroom management and increase the time spent on instruction. In MDRC’s Foundations of Learning demonstration, teachers who received training and coaching not only had more effective classroom management, but they also were able to free up additional time for instruction, by nearly an hour a week. Children saw improvements in reducing peer conflict and increasing their classroom engagement. While better managed classrooms are a necessary prerequisite for increasing student achievement, the in-classroom gains did not translate into improved academic achievement, suggesting that more attention should be paid to what is taught. Encouragingly,

the better classroom management by teachers was sustained into the following year, even after the coaching and training had ended, implying that the effects for teachers may last beyond the year of intensive intervention. The next challenge is to learn more about which social-emotional teaching strategies are most effective, and how preschool can be structured to bring measurable benefits for children in both social-emotional and academic domains. The federal Head Start CARES project, which MDRC is conducting, is testing three different social-emotional program models in approximately 100 national Head Start centers and 300 classrooms. The demonstration is focused on identifying the central features of effective programming for wider replication.

What Role Do Early Math Skills Play in Children’s Later Academic Success?

Developing early math skills for preschoolers may be the key to later academic success, but most preschools neglect to focus on math. Recent nonexperimental scholarship by Duncan and colleagues suggests that, as important as social and emotional development may be for other aspects of children’s development, early math skills may be the key to later academic achievement and economic success. They show that math is the *only one* of a range of skills and behaviors acquired during the preschool period that predicts higher levels of achievement in *both* math and reading in later elementary school, and children who maintain math skills are more likely to graduate from high school and attend college. Unfortunately, research suggests that preschool teachers place the lowest priority on teaching early math skills to children. Even when teachers do provide lessons in math, they focus only on the simplest aspects, such as the names of shapes and numbers from 1 to 20, rather than richer, developmentally appropriate concepts.

An important next step will be to test promising early math programs for low-income preschoolers, at scale. MDRC is partnering with the Robin Hood Foundation to pilot a demonstration in New York City’s preschool system that would include high-quality training and coaching to improve teaching practice in math, particularly in low-income communities. Studies show that training and coaching in a math-focused program can boost teachers’ effective delivery of math content and increase children’s preschool math skills. This study will tell us whether *changing* children’s math skills in preschool makes a long-term difference for them across outcomes as they move into their elementary years and beyond.

Ultimately, coupling the two approaches described here may have an additive impact: well-managed classrooms that focus on enhancing children’s emotional and social development may create more instructional “space” that can be better used to develop preschoolers early math (as well as literacy) skills. Children can emerge from their preschool experience better prepared for school, both emotionally and academically.

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