



High-Quality, Full-Scale Preschool Programs Boost School Readiness and Produce Sustained Benefits

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High-quality preschool programs represent a significant investment of resources, but that investment may be paid back through improved outcomes during the school-age years and beyond, according to a new RAND Corporation study.

The analysis of evaluation findings from 15 full-scale preschool programs implemented at the national, state and local levels indicates high-quality programs produce meaningful gains in school readiness, along with such long-term benefits as lower rates of special education use, reduced grade repetition and higher high school graduation rates.

Based on these short-term and longer-term impacts, credible estimates of the economic return for full-scale high-quality preschool programs range from about \$2 to \$4 for every \$1 invested.

“Our goal was to compile the most-reliable research evidence concerning whether publicly funded, high-quality preschool programs — implemented under real-world conditions — benefit participating children and whether the associated economic costs and benefits generate favorable economic returns,” said Lynn Karoly, lead author of the study and a senior economist at RAND, a nonprofit research organization.

In total, the team examined the evaluation findings for one national program (Head Start), 11 state-funded programs (Arkansas, Georgia, Michigan, New Jersey, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, West Virginia and Washington) and three school district-level programs (Boston, Chicago and Tulsa, Oklahoma). These 15 full-scale programs share a common objective of delivering a high-quality preschool program to children one or two years before entering kindergarten.

Programs that have the largest initial impacts and demonstrate sustained effects into the early elementary grades on key aspects of education performance share several features in common. Those items include:

- the quality of teacher-child interactions, including a warm and supportive emotional climate characterized by responsive teacher-child relationships
- the quality of instructional support for children, such as a language-rich environment supporting learning in specific content areas (e.g., early literacy and math), while also promoting higher-order thinking skills
- quality improvement supports for teachers through coaching and other professional development that fosters effective use of a curriculum, encourages reflective practice and supports improvement of knowledge, skills and competencies
- a systematic approach to monitoring and improving quality on an ongoing basis
- employing a proven curriculum and providing teachers with the training to implement it well.
- The research indicates that high-quality preschool programs can be effective under a range of alternative designs, including universal or enrolling a targeted group of children, part-day or full-day, and serving children for one or two years before they begin kindergarten.

A consistent finding from evaluations of universal programs is that children across the income spectrum may benefit from high-quality preschool, but the impact tends to be larger for more-disadvantaged children.

Researchers address the evidence that the benefits of preschool participation fade out over time. A careful review of the evaluations with longer-term follow-up shows that the differences in achievement scores between preschool program participants and nonparticipants tends to narrow as they advance through the elementary grades. However, there are sustained gains in other areas of school performance, including lower rates of special education use, reduced grade repetition and higher rates of high school graduation.

RAND researchers suggest that improving the alignment between preschool and the early elementary grades may help sustain the initial boost in cognitive and noncognitive skills from preschool participation.

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The report, “Informing Investments in Preschool Quality and Access in Cincinnati: Evidence of Impacts and Economic Returns from National, State, and Local Preschool Programs,” is available at www.rand.org. An upcoming report will look at the Cincinnati preschool landscape and consider design options for expanding access to high-quality preschool in Cincinnati.

The other author of the study is Anamarie Auger.

This research was conducted by RAND Education and RAND Labor and Population, divisions of the RAND Corporation. RAND Education’s mission is to bring accurate data and careful, objective analysis to the national debate on education policy. RAND Labor and Population examines issues involving U.S. labor markets, the demographics of families and children, policies to improve socio-economic wellbeing, the social and economic functioning of the elderly, and economic and social change in developing countries.



Lynn Karoly is a RAND senior economist and a professor at the Pardee RAND Graduate School. Her recent research has focused on human capital investments, social welfare policy, child and family well-being, and labor markets. Much of her recent child policy research has focused on early care and education (ECE) programs with studies of their use and quality, publicly subsidized programs such as Head Start, professional development for the ECE workforce, and quality rating and improvement systems.

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