

Essential Information for Education Policy

Research Points

Early Childhood Education: Investing in Quality Makes Sense

With about 60 percent of American children under age 5 spending part of their day in care outside the home, many policymakers seem to be jumping on the early childhood education bandwagon. Most states now fund or are creating preschool programs, many have developed learning standards for young children,¹ and it is becoming widely accepted that high-quality early childhood education enhances school readiness and reduces racial and ethnic achievement gaps.

That is all good. But before students and society can fully reap the rewards of early education, policymakers need to know where to direct their efforts. In designing high-quality early childhood programs, many important choices need to be made, such as deciding whether to provide universal care or to target services to the most vulnerable youngsters; how much time is needed in preschool (i.e., what age to start, how many years it should last, and whether it should be full day or half day); and what kind of follow-up might be needed in “regular school.”

The first step in making such decisions is knowing what makes a program “high quality.” Research suggests that the most effective programs are center based — preschools, nursery schools, learning centers, and the like. Center-based care does not encompass programs operating out of a caregiver’s home or programs involving only caregiver visits to a child’s home.

Effective Early Childhood Programs

Strong evidence pointing to the benefits of high-quality early childhood education, and how to achieve them, comes from carefully conducted short- and long-term studies.² The studies compared school and life outcomes for participants in the program to those of a randomly selected control group of children who did not participate.

Although the programs varied in duration, the age at which care began, the curricula used, the characteristics of the families and children, and some of the social and health services provided, the results are remarkably similar. At-risk children who participate in high-quality, center-based programs have better language and cognitive skills in the first few years of elementary school than do similar children who did not have such experiences. They tend to score higher on math and reading tests, and they are less likely to repeat a grade, drop out of school, need special education or remedial



services, or get into trouble with the law in the future. They also tend to complete more years of education and are more likely to attend a four-year college. These and other studies also found the most significant benefits accrued to low-income and minority children and those whose mothers had a high school education or less.³

One of the longest-running and best-known studies of preschool found that children who attended the High/Scope Perry Preschool Project in Ypsilanti, MI, four decades ago continue to be more law-abiding, earn higher incomes, and have more stable home lives than similar adults who were not enrolled in the program.

Because of such positive results, experts agree that investments in high-quality early childhood education make financial sense. Economic analyses show that such programs have stronger and longer-lasting effects than alternative options such as remediation, class size reductions, and programs that start later in life. In addition, every \$1 invested generates a return to society of anywhere from \$3 to more than \$17 because of reduced special education costs, less grade repetition, higher adult earnings, more tax revenues, reduced crime rates (which produce the greatest savings), and other benefits.⁴

It must be noted, though, that most of these long-term effects stem from relatively small-scale, intensive model programs, designed and conducted by experts who did not face the challenge of selecting, training, and overseeing large numbers of teachers and centers. These programs typically incorporate best practices such as language-rich, developmentally appropriate education; highly trained teachers; and low child-staff ratios.

Scaling Up High-Quality Preschool

Although the best early childhood education results are seen in center-based programs, all center-based programs are not top notch. Low-quality programs can be found in affluent and middle-class communities, and some children in poor communities have access to very good preschools, although subpar programs most often affect our most vulnerable children.⁵

In an effort to cast a wider net, Oklahoma has launched a landmark program offering preschool to all 4-year-olds in the state.⁶ The program emphasizes high quality in part by requiring lead teachers to have a college degree and early childhood certification, as well as by guaranteeing teacher pay rates equivalent to those received by other public school teachers. A study of the

program's impact on school readiness found four- to seven-month gains in premath, prewriting, and prereading skills, above and beyond the normal gains that come with getting older. Improvements were seen in all ethnic groups, with the highest for Latino children.

Although Oklahoma's gains surpass those of Head Start,⁷ the far larger federally sponsored preschool program started in 1965, they fall short of results generated by the smaller model programs. Nevertheless, the Oklahoma efforts, along with those in five other states,⁸ show that it is possible to incorporate many of the hallmarks of high-quality child care in a scaled-up effort that reaches thousands of children and produce commensurate effects.

Ready for Regular School

Research has found that investments in high-quality early childhood education can increase readiness for school and provide long-term social benefits, particularly for low-income and minority children and those whose parents have little education. Highly effective preparation for formal schooling is vital to shrinking the sizable academic gaps that already exist for these students when they enter kindergarten. According to one report, about half the test score gap between black and white high school students is evident when children start school.⁹

Much of the policy debate, and most research, focuses on the academic skills children need to start school. The federal No Child Left Behind Act emphasizes literacy and math skills, while reauthorization bills for Head Start call for the development of education performance standards. Similarly, the National Research Council recommends that all states draft content standards for the early years that address areas often omitted from early childhood programs,¹⁰ including phonological awareness (understanding the sounds that make up words), number concepts, methods of scientific investigation, and cultural knowledge and language.

While children with weak academic skills predictably struggle in school, children who cannot sit still, are disruptive in class, or otherwise show poor self-regulation also are at greater risk of juvenile delinquency and other problems later in life. Fully preparing children for school involves addressing a broad range of social and emotional needs. Therefore, high-quality preschool programs must attend to both academic and social skills.

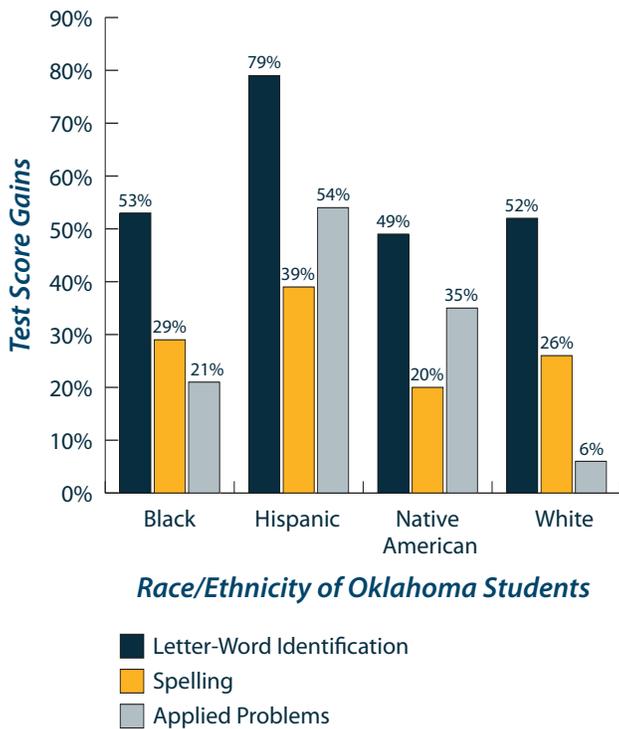
The National Education Goals Panel recognized the importance of nonacademic skills in 1997 when it cited

continued on page 4

Benefits of High-Quality Preschool

Improved School Readiness

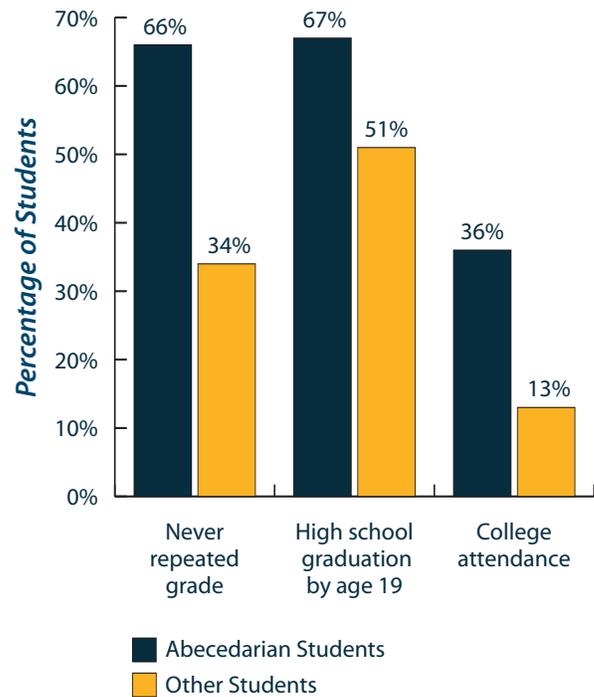
Oklahoma kindergarten students who completed the state's high-quality preschool program show higher gains in tests of letter-word identification, spelling, and applied problems compared to other students. Hispanic and black students enjoyed marked improvement in all three areas.



Source: Gormley, W.T., et al. (2004). *The Effects of Oklahoma's Universal Pre-K Program on School Readiness: An Executive Summary*. Washington, DC: Center for Research on Children in the United States, Georgetown University.

More Success in the Education System

The Carolina Abecedarian Project is the only randomized trial of child care with a longitudinal follow-up to adulthood. Although the program has a somewhat modest positive impact on long-term cognitive measures of student achievement, it significantly enhances progress in later academic efforts.



Source: Barnett, W.S., Masse, L.N. (in press). "Comparative Benefit-Cost Analysis of the Abecedarian Program and Its Policy Implications." *Economics of Education Review*.

Facts at a Glance

- ▶ High-quality early childhood programs produce children with better school readiness skills and yield substantial long-term benefits, including higher graduation rates, fewer school dropouts, less need for special education, and less crime.
- ▶ The most effective preschool programs are center-based and offer a curriculum that is both intellectually rich and broad enough to meet children's social and emotional development needs.

What Should Policymakers Do?

five categories of learning and development that must be addressed so that all children can start school ready to learn: physical well-being and motor development; social and emotional development; positive approaches to learning; language development and communication skills; and cognition and general knowledge.¹¹

Conclusion

Today, nearly four out of five states invest in preschool programs. However, states' financial commitment to early childhood education, their eligibility requirements, and the number of children who actually receive care vary widely, making high-quality and readily available state-funded preschool programs the exception rather than the rule.¹²

Research shows that high-quality, center-based programs include two major components:

- ▶ **A rich curriculum.** The best early childhood programs emphasize language, emergent literacy, and early mathematics skills; motor, social, and emotional development; health and nutrition services; structured and unstructured play; and typically, parent involvement and education. While no single curriculum or pedagogical approach works for everyone, all young children tend to learn more and be better prepared for formal schooling when they attend well-planned, high-quality preschools in which curricular aims are specified and delivered.
- ▶ **A responsive and well-educated staff.** One of the strongest predictors of high-quality early learning programs is the preparation and compensation of teachers and their responsiveness and sensitivity to the children in their care, which can be affected by teacher-child staffing ratios. The National Research Council recommends assigning at least one teacher with a bachelor's degree and specialized education in early childhood to each group of children.

Early childhood programs that incorporate those features have been found to yield substantial, long-term benefits to the children and to society at large, including higher academic achievement, higher graduation rates, and less criminal activity. Despite the positive results, even significant academic effects tend to diminish over time, especially if children end up in poor-quality elementary and high schools. Programs that follow children into elementary school and offer more intensive early intervention can help to sustain long-term academic benefits.

First, provide access to high-quality early childhood programs to the most vulnerable children because of their greater need and the higher return on the public's investment.

Second, pay attention to quality by developing state standards for early childhood programs, including content standards that address what young children should know and be able to do.

Third, improve the education and compensation of early childhood educators by requiring preschool teachers to have a four-year college degree and specialized training.

Fourth, closely monitor early childhood education programs as they expand to make sure quality is maintained.

Bibliography

- 1) National Governors Association (2005). *Building the Foundation for Bright Futures*. Washington, DC: NGA.
- 2) See Campbell, F.A., Ramey, C.T. (1995). "Cognitive and School Outcomes for High-Risk African-American Students at Middle Adolescence: Positive Effects of Early Intervention." *American Educational Research Journal*, Vol. 32, pp. 743-772.
- Campbell, F.A., et al. (2002). "Early Childhood Education: Young Adult Outcomes from the Abecedarian Project." *Applied Developmental Science*, Vol. 6, pp. 42-57.
- Reynolds, A.J. (2000). *Success in Early Intervention: The Chicago Child-Parent Centers*. Lincoln: University of Nebraska Press.
- Reynolds, A.J. (Ed.) (1999). "Schooling and High-Risk Populations: The Chicago Longitudinal Study." *Journal of School Psychology*, Vol. 37, No. 4. Special Issue.
- Schweinhart, L.J. (February 2005). "The HighScope Perry Preschool Study Through Age 40: Summary, Conclusions, and Frequently Asked Questions." Ypsilanti, MI: HighScope Educational Research Foundation.
- Brooks-Gunn, J. (2004). "Intervention and Policy as Change Agents for Young Children." In P.L. Chase-Lansdale, K. Kieman, and R.J. Friedman (Eds.) *Human Development Across Lives and Generations*. New York: Cambridge University, pp. 293-340.
- Brooks, Gunn, J. (2003). "Do You Believe in Magic? What We Can Expect From Early Childhood Intervention Programs." *SRCD Social Policy Report*, Vol. 17, pp. 3-14.
- 3) Hill, J.L., Brooks-Gunn, J., Waldfogel, J. (2003). "Sustained Effects of High Participation in an Early Intervention for Low-Birth-Weight Premature Infants." *Developmental Psychology*, Vol. 39, No. 4, pp. 730-744.
- 4) See Heckman, J., Masterov, D.V. (2004). "The Productivity Argument for Investing in Young Children." *Working Paper 5, Invest in Kids Working Group*. New York: Committee for Economic Development.
- Barnett, W.S., Masse, L.N. (in press). "Comparative Benefit-Cost Analysis of the Abecedarian Program and Its Policy Implications." *Economics of Education Review*.
- 5) NICHD Early Child Care Research Network (2002). "Early Child Care and Children's Development Prior to School Entry: Results from NICHD Study of Early Child Care." *American Educational Research Journal*, Vol. 39, No. 1, pp. 133-164.
- 6) Gormley, W.T., et al. (2005). "The Effects of Universal Pre-K on Cognitive Development." *Developmental Psychology*, Vol. 41, No. 6.
- 7) U.S. Department of Health and Human Services, Administration for Children and Families (May 2005). *Head Start Impact Study: First Year Findings*. Washington, DC.
- 8) Barnett, W.S., Lamy, C., Jung, K. (2005). *The Effects of State Prekindergarten Programs on Young Children's School Readiness in Five States*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers University.
- 9) Phillips, M., Crouse, J., Ralph, J. (1998). "Does the Black-White Test Score Gap Widen after Children Enter School?" In C. Jencks and M. Phillips (Eds.) *The Black-White Test Score Gap*. Washington, DC: Brookings Institution.
- 10) Bowman, B., Donovan, S., Burns, S. (Eds.) (2001). *Eager to Learn: Educating Our Preschoolers*. Washington, DC: National Academy Press.
- 11) National Education Goals Panel (1995). *Reconsidering Children's Early Development and Learning: Toward Common Views and Vocabulary*. Washington, DC: Government Printing Office. See also National Education Goals Panel (1997). *Special Early Childhood Report*. Washington, DC: Government Printing Office.
- 12) Barnett, W.S., et al. (2004). *The State of Preschool: 2004 State Preschool Yearbook*. New Brunswick, NJ: The National Institutes for Early Education Research, Rutgers University.

Research Points

Editor: Lauren B. Resnick

Managing Editor: Chris Zurawsky

Issue Researcher: Jeanne Brooks-Gunn

Issue Reviewers: W. Steven Barnett, Ron Haskins, Arthur J. Reynolds

Issue Writer: Lynn Olson

Editorial Board: Eva Baker, David Cohen, Susan Fuhrman, Edmund Gordon, Lorrie Shepard, Catherine Snow

AERA Executive Director: Felice J. Levine

American Educational Research Association

1230 17th Street, NW
Washington, DC 20036
phone (202) 223-9485
fax (202) 775-1824

ResearchPoints@aera.net
www.aera.net



Research Points is published in accordance with AERA review standards; its contents do not necessarily reflect the views and positions of the Association.

Copyright © 2005 by American Educational Research Association