

High-Quality Early Education: Student Achievement

The human brain develops most rapidly from birth through age five.¹ This is a time of enormous social, emotional, physical and cognitive development when children can build either a strong or fragile foundation for future growth and learning.² High-quality early education provides essential supports for future success in school and life.³

Improved school readiness and early learning

- Children who participate in high-quality early education develop better language skills, score higher in school-readiness tests and have fewer behavioral problems in school.⁴
- In Georgia, kindergarten teachers report that children enrolled in pre-k were better prepared for kindergarten, especially in the areas of pre-reading, pre-math and social skills.⁵
- The Oklahoma universal pre-k program significantly improves pre-reading and reading skills, pre-writing and spelling skills, and math reasoning and problem-solving abilities.⁶

Higher academic achievement

- Longitudinal studies of early childhood interventions during infancy as well as the pre-kindergarten years have shown that *high-quality* programs have academic benefits for children of various socio-economic backgrounds.⁷
- Low-income children who attended high-quality early education programs scored higher on average on school achievement tests between ages 9 and 14 than children who did not.⁸
- Low-income children with high-quality early learning experiences are 40% less likely to need special education or be held back a grade, helping to reduce educational costs.⁹

Greater educational attainment

- Low-income children who attended high-quality early education programs on average outperformed those who did not on literacy tests at ages 19 and 27.¹⁰
- Low-income children with high-quality early learning experiences are 30% more likely to graduate from high school, and more than twice as likely to attend college.^{11,12}
- At age 40, adults who participated in high-quality early childhood education programs during their preschool years were more likely to be employed, and had 36% higher median annual earnings than the control group.¹³

¹ Shonkoff, J. P. & Phillips, D. A. (Eds). *From Neurons to Neighborhoods: The Science of Early Child Development*. National Research Council, Institute of Medicine, Washington: National Academy Press, 2000.

² Ibid.

³ Bowman, B., Donovan, M.S. & Burns, M.S. *Eager to Learn: Educating our Preschoolers*. National Research Council, Washington: National Academy Press, 2000.

⁴ *The Children of the Cost, Quality, and Outcomes Study Go To School*. NICHD, June 1999, p. 2 and Karoly, Lynn, et al, Investing in Our Children: What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions. RAND, 1998, xv.

⁵ Vecchiotti, Sara. *Kindergarten: The Overlooked School Year*. The Foundation for Child Development, October, 2001, p. 24.

⁶ William T. Gormley, Jr. and Ted Gayer, Public Policy Institute, Georgetown University; Deborah Phillips, Department of Psychology, Georgetown University; Brittany Dawson, Center for Research on Children in the U.S., Georgetown University.

⁷ Melhuish, E.C., Phan, M.B., Sylva, K., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2008). Effects of home learning environment and preschool center experience upon literacy and numeracy development in early primary school. *Journal of Social Issues*, 64(1), 95-114; McCormick, M. C., Brooks-Gunn, J., Buka, S. L., Goldman, J., Yu, J., Salganik, M., Scott, D. T., Bennett, F. C., Kay, L. L., Bernbaum, C., Bauer, C. R., Martin, C., Woods, E. R., Martin, A., & Casey, P. H. (2006). Early intervention in low birth weight premature infants: Results at 18 years of age for the Infant Health and Development Program. *Pediatrics*, 117, 771-780.; in Barnett, W. S. (2006). A Review of the Reason Foundation's Report on Preschool and Kindergarten. Retrieved from: <http://nieer.org/resources/research/ReasonFoundation.pdf>.

⁸ Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. Lifetime Effects: The High Scope/Perry Preschool Project Through Age 40. Ypsilanti, MI: High/Scope Press, November 2004.

⁹ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. Age 21 Cost-Benefit Analysis of the Title I Chicago Child-Parent Center Program. Institute for Research on Poverty. Discussion Paper no. 1245-02, 2001.

¹⁰ Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. Lifetime Effects: The High Scope/Perry Preschool Project Through Age 40. Ypsilanti, MI: High/Scope Press, November 2004.

¹¹ Reynolds, A. J. et al. (2001). Long-term Effects of an Early Childhood Intervention on Educational Achievement and Juvenile Arrest. *JAMA*, 285(18), 2339-2346.

¹² Barnett, W. S. & Masse, L. N. (2007). Comparative benefit-cost analysis of the Abecedarian program and its policy implications. *Economics of Education Review*, 26, 113-125.

¹³ Employment at 40: 76% treatment vs. 62% control. Earnings: \$20,800 treatment vs. \$15,300 control. Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. Lifetime Effects: The High Scope/Perry Preschool Project Through Age 40. Ypsilanti, MI: High/Scope Press, November 2004.

[Updated, July 2009]

Quality Makes All the Difference

The quality of the early childhood education a child receives has a direct impact on positive child development. Ensuring that early education programs are high-quality is key to producing benefits throughout a lifetime. While this quality can be delivered in a variety of settings – from family child care homes to center-based programs to public preschools – there are certain characteristics that distinguish high-quality early learning settings:

- Well-educated and caring teachers
- Program quality standards
- Developmentally-appropriate curriculum and learning activities.

Source: "The Children of the Cost, Quality, and Outcomes Study Go To School," National Institute of Child Health and Human Development, June 1999.