



# Smart Investment, Big Returns

When at-risk children experience high-quality early learning programs, they have better school, employment, and life outcomes. These results demonstrate the significant economic gains generated by investing in quality early childhood development.

## The Results



### School readiness by kindergarten

Children who participated in Early Head Start performed better than non-participants on measures of cognition, language, and social and emotional behaviors.



### Meeting standards in elementary school

Low-income students in Louisiana who did not receive state preschool were 37 percent more likely to fail to meet basic third grade statewide standards.



### Reduced special education costs

Children who received early education through the North Carolina Abecedarian Project were half as likely as their peers to require special education.



### Reduced crime and delinquency

Chicago children who did not attend preschool were 70 percent more likely than peers who did attend to be arrested for a violent crime by age 18.



### Fewer teen pregnancies

North Carolina children who attended the Abecedarian Project were almost half as likely to become teen parents than peers who did not attend.



### Increased high school graduation rates

Children who attended quality preschool were 29 percent more likely to graduate from high school than their peers who did not attend, and were less likely to repeat grades.



### Increased college attendance

Students who attended quality early education programs, including Perry Preschool, the Abecedarian Project, and Chicago Child Parent Centers, were more likely to attend college than their peers.



### Greater adult employment and higher wages

Adults who attended Perry Preschool as children were more likely to be employed and had a 33 percent higher average income than their peers who did not attend.



# Smart Investment, Big Returns

## The Heckman Equation: The Economics of Human Potential

### Professor James Heckman

Dr. James J. Heckman is a Nobel Memorial Prize winner in Economics at The University of Chicago. His groundbreaking work with economists, developmental psychologists, sociologists, statisticians, and neuroscientists has proven that early childhood development determines potential health, economic, and social outcomes not just for individuals, but for society at large. His decades of research found that investing in early childhood development for disadvantaged children and their families provides **an annualized 10 percent return on investment** through increased personal achievement and social productivity.

### The Heckman Principles:

**1. Intelligence and social skills are set at an early age—and both are essential for success.** Many major economic and social problems in America—crime, teenage pregnancy, high school drop-out rates, adverse health conditions—can be traced to low levels of skill and social ability such as attentiveness, persistence, and impulse control. When social skills are combined at an early age with cognitive skills, they help create more capable and productive citizens. Heckman says that we must invest in the early development of the cognitive and social skills package in order to create better success for individuals and society.

**2. Early investment produces the greatest returns in human capital.** Heckman found that early nurturing, learning experiences, and physical health from birth to age 5 greatly affect success or failure in society. The most economically efficient time to develop these skills and abilities is in the very early years when developmental education is most effective. Heckman's work proves that quality early childhood development is more cost-effective than remediation.

**3. America's advantage will come from helping the disadvantaged.** Disadvantaged families are least likely to have the economic and social resources to provide the early developmental experience every child needs. Providing developmental resources pays dividends for the disadvantaged child and society as a whole by providing better future outcomes in social and economic productivity.

**4. Quality economic returns come from quality investments in early childhood development.** Investing in the highest-quality early childhood programs for disadvantaged children provides a high return on investment to society.

**5. We already have successful programs that can and should be implemented in local communities across America.** Heckman's analysis of economic return is based on two long-running pilot programs in the United States, Perry Preschool and Abecedarian. Similar programs, such as Early Head Start and Educare, are built on many of the principles Heckman has identified as necessary for an effective investment in locally run and controlled early childhood education.

*For more information, visit [www.heckmanequation.org](http://www.heckmanequation.org)*

## The Research behind the Results

**The Abecedarian Project** demonstrated that young children who receive high-quality early education from infancy to age 5 do better in reading and math. Also, they are more likely to stay in school longer, graduate from high school, and attend a four-year college. Children who participated in the early intervention program posted higher cognitive test scores beginning from the toddler years to age 21. As adults, graduates of this high-quality early education program tended to wait longer to have their first child. This was the first study to track participants in an early learning program from infancy to age 21. Based in North Carolina, this study tracked 111 low-income African-American families until participating children were age 21.

*To read the executive summary online, go to <http://fpg.unc.edu-abc/>*

**High/Scope Perry Preschool** participants were, at age 40, more likely to have graduated from high school, make higher earnings, hold a job, and commit fewer crimes than those who didn't attend this high-quality preschool program. In 1962, researchers began following 123 high-risk three- and four-year-olds and their families in Ypsilanti, Michigan.

*For more information on High/Scope Perry, go to <http://highscope.org/Content.asp?ContentId=219>*

**Chicago Parent-Child Centers**, a high-quality early learning program that served children beginning at age 3, demonstrated that participants did better in school and were less likely to drop out of high school, be arrested, repeat grades, or be placed in special education services. The study followed 989 students enrolled in 20 Chicago Parent-Child Centers.

*For a cost-benefit analysis of the program, go to <http://waisman.wisc.edu/cls/cbaexecsum4.htm>*

