



## Addressing the Question of “Fade Out”:

### The Enduring Benefits of High-Quality Early Childhood Education

#### **What is “fade-out?”**

A key question about the effectiveness of quality early childhood programs is “fade out”—do the results of these programs endure over time? The answer helps determine the value of quality programs in impacting long-term results, such as educational and employment success, that improve lives and economies. It is true that *some* studies find fade out over time, in that children who attended those programs do not appear to be showing the same level of lasting advantage over children who did not attend. This is usually measured in the form of test scores in elementary school. However, other evidence points to the lasting effects of quality programs and a more nuanced story about whether long-term results can be expected from even the programs appearing to show fade out:

#### ***Long-term and new results from many high-quality programs do not show fade out.***

- Children from lower-income school districts who attended **New Jersey’s** state preschool were three-fourths of a year ahead in math and two-thirds of a year ahead in literacy by the fourth and fifth grades. They were 31 percent less likely to be placed in special education and 40 percent less likely to be held back in school.<sup>i</sup>
- Counties in **North Carolina** that invested in “Smart Start” or “More at Four” early education initiatives found that the children in their counties were five months ahead in reading and three to five months ahead in math by third grade compared to the children in counties that invested less in improving their early education.<sup>ii</sup>
- Children in **Michigan’s** Great Start Readiness Program were 51 percent less likely to be held back in school and 35 percent more likely to graduate from high school.<sup>iii</sup>
- The well-known long-term studies -- Perry Preschool Program of Michigan and the Chicago Child-Parent Centers (which covered more than 100,000 children) – also saw some fade out of interim test scores in elementary school. Yet by adulthood, differences in outcomes emerged such as educational attainment, participation in crime, and employment.<sup>iv</sup> New results from the Abecedarian Project in North Carolina show that, in addition to better education and employment outcomes, by their 30’s, participants had significantly lower risk factors for heart disease, stroke and diabetes.<sup>v</sup>

#### ***Early education affects deep-seated factors that may show up later in youth and adulthood***

Dr. James Heckman, a University of Chicago economist and Nobel Laureate, concludes that the most important impact is likely to be effects on social and emotional development, and on executive function skills that may not show up in the early years but do contribute to the long-term benefits of educational and employment achievement.<sup>vi</sup> Young students become acclimated to the classroom setting and understand the importance of listening to the teacher, raising their hands, sharing, self-control and other social skills that help yield long-term benefits.<sup>vii</sup> The National Institute for Early Education Research (NIEER) observes that while short-term benefits such as IQ may diminish over time, “Overall, the methodologically strongest studies indicate that meaningful effects on achievements persist.”<sup>viii</sup>

#### ***“Control” children are catching up, rather than program children fading out***

In the current K-12 environment, children who don't receive early education and so enter school at a disadvantage often receive intensive remedial services once they enter kindergarten. So the narrowing of the gap between children who did and didn't get preschool may be due less to the results in pre-k children fading out than non-pre-k children are catching up. In many cases we could eliminate these far more expensive remedial efforts if we invest in quality early education in the first place.<sup>ix</sup>

### ***What about Head Start?***

Head Start is the federal preschool program for poor children. The Head Start Impact Study found that initial results did diminish by third grade. However, according to Prof. Steven Barnett, Director of NIEER, non-program children caught up based on the intensive remedial services they received after kindergarten entry.<sup>x</sup> Since that 2002 study, Head Start has instituted reforms; improved literacy instruction, increased numbers of teachers with BAs, required low-performing programs to re-compete for funding. These reforms produce better results. Data show large increases in Head Start children's language and literacy gains between 2003 and 2009.<sup>xi</sup>

**No Excuses:** If a particular preschool program isn't achieving meaningful and lasting results, such as reductions in children's behavior problems or improved math and literacy skills, the program administrators and policymakers need to find out what needs to change to achieve the results that children, families and taxpayers expect. We need all children to be successful.

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<sup>i</sup> Barnett, W. S., Jung, K., Youn, M., & Frede, E. C. (2013, March 20). *Abbott Preschool Program longitudinal effects study: Fifth grade follow-up*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers-The State University of New Jersey. Retrieved from: <http://nieer.org/sites/nieer/files/APPLES%205th%20Grade.pdf>

<sup>ii</sup> Ladd, H. F., Muschkin, C. G., & Dodge, K. (2012, February). From birth to school: Early childhood initiatives and third grade outcomes in North Carolina. Retrieved from: <http://research.sanford.duke.edu/papers/SAN12-01.pdf>

<sup>iii</sup> *Michigan Great Start Readiness Program evaluation 2012: High school graduation and grade retention findings*. Retrieved from <http://bridgemi.com/wp-content/uploads/2012/06/GSRP-evaluation-may-21-12.pdf>

<sup>iv</sup> Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool study through age 40*. Ypsilanti, MI: High/Scope Press ; Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001, May 9). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *Journal of the American Medical Association*, 285, 2339-2346.

<sup>v</sup> Campbell, F.A., Ramey, C.T., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, 6(1), 42-57; Campbell, F., Conti, G., Heckman, J. J., Moon, S. H., Pinto, R., Pungello, E., et al. (2014). Early Childhood Investments Substantially Boost Adult Health. *Science*, 343(6178), 1478-1485.

<sup>vi</sup> Heckman, J.J. (2003). "Inequality in America. What role for human capital policies." Cambridge, MA. MIT Press

<sup>vii</sup> Moffitt, T. E., Poulton, R. & Caspi, A. (Sept.-Oct. 2013). Lifelong Impact of Early Self-Control: Childhood self-discipline predicts adult quality of life. *American Scientist*. 101(5). 352-359.

<sup>viii</sup> National Institute for Early Education Research. (2008). *Meta-Analysis of the Effects of Early Education Interventions on Cognitive and Social Development*.

<sup>ix</sup> Barnett, W.S. (2004). *Does Head Start have lasting cognitive effects?: The myth of fadeout. [need rest of reference]*

<sup>xi</sup> Barnett, W. S. (2013, December). Expanding access to quality pre-K is sound public policy. Retrieved from: <http://nieer.org/sites/nieer/files/Why%20expanding%20quality%20PreK%20is%20a%20sound%20public%20policy.pdf>