

The Battle Over Head Start: What the Research Shows

W. Steven Barnett, PhD
Director of the National Institute for Early Education Research (NIEER)

Overview

Head Start is effective. As a comprehensive child development program, Head Start provides education, health, nutrition, and social services to children and their families through direct services or referrals. Nearly four decades of research establish that Head Start delivers the intended services and improves the lives and development of the children and families it serves.¹ Despite these successes, questions continue to be raised about the extent to which Head Start produces lasting educational benefits. Many have been persuaded that Head Start produces no lasting academic benefits for children. Some have gone so far as to label Head Start a “scam.”² A careful review of the research yields a different conclusion—Head Start produces substantial long-term educational benefits. Moreover, Head Start can produce even greater gains for children in the future. This will require increased funding and standards, particularly to raise Head Start teacher qualifications.

Head Start “fade-out” is largely a myth. This widespread misunderstanding about Head Start results from failure to consider the full-range of cognitive and academic outcomes as well as flawed research methods that generate faulty conclusions. As with most myths, there is a grain of truth to the fade-out story. Initial IQ gains produced by Head Start during a child’s program attendance do fade-out gradually after the child leaves the program. This is true for all types of preschool education interventions that began after age three.

However, IQ scores do not tell the whole entire story. Follow-up studies of Head Start also have looked at achievement test scores, grade retention, special education, and high school graduation to assess Head Start’s long-term cognitive and academic benefits. At first glance, achievement test results appear consistent with IQ results. Most, but not all, Head Start studies find that achievement effects decline and disappear a few years into school. Yet, nearly all studies that measured school progress find lasting impacts on grade repetition, special education, and high school graduation. This has led some to conclude that the cause of these persistent effects must be social rather than cognitive. Closer examination yields another explanation. Head Start studies have systematically erred in the collection of achievement test data in ways that caused the appearance of fade-out. Common problems include the loss of statistical power due to high attrition and differential attrition that systematically eliminates children who have been held back or placed in special education from the achievement test sample. Studies that do not have these design flaws (including randomized trials of other preschool programs) find persistent effects on achievement test scores together with effects on grade repetition, special education, and graduation.³

The “fade-out” myth has given rise to another questionable notion, that continued intervention beyond Head Start is needed to maintain its benefits. It has been suggested that Head Start’s educational benefits might fade-out because Head Start children enter schools of poor quality.⁴

Empirical support for this view is weak. Fade-out is more apparent than real (except for IQ), and several studies demonstrate that educational benefits endure without prolonged intervention. Of course, it remains true that improvements in elementary education for disadvantaged children could independently contribute to cognitive development and school success.⁵

Head Start's effects are reasonable given its budget, but there is room for improvement. The estimated effects of Head Start on achievement and school progress (especially grade repetition and special education for which a good number of studies provide data) are smaller than the effects of model programs that informed the creation of Head Start. Head Start has been expected to replicate the results of "model" preschool programs, but has never been funded anywhere near the levels of the model programs. Moreover, with its lower budget Head Start is asked to provide far more comprehensive services than most model programs. Inadequate funding impairs Head Start's ability to hire and retain highly qualified staff and hurts staff morale; both are likely to reduce educational quality.⁶

Observations of Head Start classrooms reveal them to be higher in quality than preschool and child care programs outside the public schools and much less likely to be of very poor quality. Head Start has a reasonably low class size and ratio, as well. Nevertheless, many Head Start classrooms are not of the quality that would be expected to produce the large gains in cognitive development that more intensive, higher-quality programs have demonstrated.⁷

Head Start teachers should meet higher standards and be better paid. A recent report from the National Research Council recommended that every preschool teacher have four-year college degree with specialized education related to early childhood. This recommendation was based upon a review of the evidence regarding preschool teacher effectiveness and an analysis of new expectations for preschool teachers and young learners. Teacher education strongly predicts the quality of teaching, as does teacher compensation, which is inextricably related to teacher quality. Yet, only one in three Head Start teachers has a four-year college degree. The chief impediment to acquiring better teachers is teacher pay. The average Head Start teacher salary is only \$21,000, less than the average secretary and little more than half what the average kindergarten teacher earns. Research offers no hope that specialized training in teaching methods alone, no matter how "teacher proof" the design, is a substitute for well-educated and reasonably compensated professional teachers.⁸

Over time, higher pay and increased opportunities for existing staff to obtain college degrees would enable Head Start to increase the quality of its teachers to a level that would ensure children receive a high-quality education that will maximize their potential to succeed in school. Head Start's current goal of assuring that half of the teachers have at least a 2-year degree falls far short of that goal and is already met on average. Head Start is being left behind state pre-kindergarten programs requiring teachers to have a four-year degree, and this presents problems for integrating these programs to best serve children and families. Full pay parity with teachers in the public schools would require an eventual increase in Head Start's annual funding of only \$1 billion. Logically, this would be phased-in over a number of years, with some funding made available to support Head Start teachers in meeting the new requirements. In addition, to maximize the benefits of improved pay and qualifications, it might be advisable to increase the reliance on systematic assessments of teacher performance in the classroom for hiring and promotion should be based.⁹ This

initiative would do much to increase the effectiveness of Head Start as means to ensure that the children it serves will not be left behind.

Footnotes

1. Hale, B., Seitz, V. & Zigler, E. (1990). Health service and Head Start: A forgotten formula. Journal of Applied Developmental Psychology, 11, 447-58. McKey, R., Condelli, L., Ganson, H., et al. (1985). The impact of Head Start on children, families, and communities. Final report of the Head Start Evaluation, Synthesis, and Utilization Project. Washington, DC: U.S. Department of Health and Human Services. Zigler, E., and Muenchow, S. (1992). Head Start: The inside story of America's most successful educational experiment. New York: Basic Books.
2. Herrnstein, R.J. and Murray, C. (1994). The bell curve: Intelligence and class structure in American life. NY: Free Press. Hood, J. (1992). Caveat Emptor: the Head Start Scam. Policy Analysis, 187. Washington, DC: Cato Institute.
3. Barnett, W.S. (1998). Long-term effects on cognitive development and school success. In W.S. Barnett and S.S. Boocock (Eds.) Early care and education for children in poverty: promises, programs, and long-term outcomes (11-44). Buffalo, NY: SUNY Press. Barnett, W.S. (May 19, 1993). Does Head Start Fade Out? Education Week. Studies that found no effects or that effects faded were vulnerable to either selective attrition resulting from the use of school-administered tests (which compare only the part of each group that has stayed at grade level) or a similar problem that arose because of another design flaw. Routine testing administered by grade misses children who repeat a grade and many children in special education. The Westinghouse Learning Corporation study of Head Start (often cited as evidence of fade-out) matched former Head Start children in grades 1, 2, and 3 with other children in their grade levels. This procedure roughly equated the two groups on grade level and distorted the comparison to the extent that children were differentially lost from Head Start and comparison groups due grade repetition and special education. The problem is evident in the age gap between Head Start and comparison groups which increases across the three grades (Head Start children are younger each year relative to the comparison group) paralleling the decline in estimated effects across grades.
4. Lee V., & Loeb, S. (1995). Where do Head Start attendees end up? One reason why preschool effects fade out. Educational Evaluation and Policy Analysis, 17(1), 62-82.
5. Ceci, S.J. (1991). How much does schooling influence general intelligence and its cognitive components? A reassessment of the evidence. Developmental Psychology, 27, 703-22. Husen, T., and Tuijnman, A. (1991). The contribution of formal schooling to the increase in intellectual capital. Educational Researcher, 20(7), 17-25. Slavin, R.E., Karweit, N.L., & Wasik, B.A. (1994). Preventing early school failure: Research, policy, and practice. Boston: Allyn & Bacon.
6. Barnett, W.S. (1998). Long-term effects on cognitive development and school success. In W.S. Barnett and S.S. Boocock (Eds.) Early care and education for children in poverty: promises, programs, and long-term outcomes (11-44). Buffalo, NY: SUNY Press. Chafel, J. A. (1992). Head Start: Making "quality" a national priority. Child and Youth Care Forum, 21(3), 147-163. Helburn, S. W. (1995). Cost, Quality, and Child Outcomes in Child Care Centers. Denver, CO, Economics Dept. University of Colorado at Denver. Howes, C. & Brown, J. (2000). Improving child care quality: A guide for Proposition 10 Commissions. Los Angeles: UCLA Center for Healthier Children, Families, and Communities. Vandell, D. L. and B. Wolfe. (2002). Child Care Quality: Does It Matter and Does It Need to be Improved? (Madison, WI: Institute for Research on Poverty, University of Wisconsin, at aspe.hhs.gov/ccquality00/ccqual.htm). Whitebook, M., C. Howes, and D. Phillips (1990). Who Cares? Child Care Teachers and the Quality of Care in

America. Oakland, CA: Child Care Employee Project. Bowman, B., Donovan, S., & Burns, S. (Eds.) (2001). Eager to Learn: Educating our Preschoolers. Washington, DC, National Academy Press.

7. Zill, N., Resnick, G., Kim, K., Hubbell McKey, R., Clark, C., Shefali, P., Connell, D., Vaden-Liernan, M., O'Brien, R., D'Elio, M. (2001). Head Start FACES: Longitudinal Findings on Program Performance Third Progress Report. Research, Demonstration and Evaluation Branch & Head Start Bureau, Administration on Children, Youth and Families, U.S. Department of Health and Human Services. Bryant, D.M., Burchinal, M., Lau, L., & Sparling, J. (1994). Family and classroom correlates of Head Start Children's Developmental Outcomes. Early Childhood Research Quarterly, *9*, 289-309. Frede, E.C. (1998). Preschool program quality in programs for children in poverty. In W.S. Barnett and S.S. Boocock (Eds.) Early care and education for children in poverty: promises, programs, and long-term outcomes (77-98). Buffalo, NY: SUNY Press.
8. Bowman, B., Donovan, S., & Burns, S. (Eds.) (2001). Eager to Learn: Educating our Preschoolers. Washington, DC, National Academy Press. Zill, N., Resnick, G., Kim, K., Hubbell McKey, R., Clark, C., Shefali, P., Connell, D., Vaden-Liernan, M., O'Brien, R., D'Elio, M. (2001). Head Start FACES: Longitudinal Findings on Program Performance Third Progress Report. Research, Demonstration and Evaluation Branch & Head Start Bureau, Administration on Children, Youth and Families, U.S. Department of Health and Human Services.
9. Murnane, R., Singer, J., Willett, J., Kemple, J., & Olsen, R. (1991). Who will teach? Policies that matter. Cambridge, MA: Harvard University Press.

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