

Our mission is to coalesce, inspire and support the Head Start field as a leader in early childhood development and education.



The Head Start Advantage

A Research Compendium

JUNE 2017

The Head Start Advantage

For more than 50 years, Head Start has provided early learning opportunities for our country's most vulnerable children and comprehensive supports to families that address long-term economic stability and better health prospects, ultimately mitigating the devastating impacts that poverty can have on the future success of young children.

Today, Head Start serves more than one million children and their families each year.

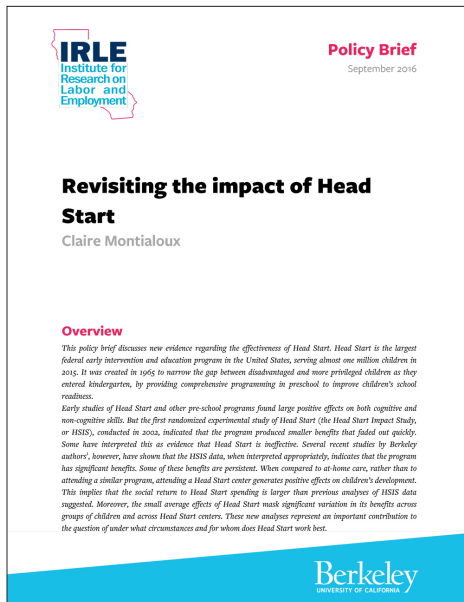
This compendium compiles summaries of several key studies that have been published in recent months that represent the best knowledge to date about Head Start's effectiveness. These findings, including economic analyses, longitudinal studies, and secondary analyses, reveal positive cognitive and non-cognitive outcomes for children who participated in Head Start.

These outcomes have significant implications for cost benefits to society in the short and long terms. Among the findings are impacts on vocabulary, cognitive skills, parent involvement, high school graduation rates, college enrollment and completion, absenteeism, grade retention, classroom quality, self-control, and self-esteem. The studies also point to particularly impactful effects of Head Start on certain populations, including children with low initial skills, Hispanic children, and African American children.

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Revisiting the Impact of Head Start

The Institute for Research on Labor and Employment at the University of California at Berkeley | Claire Montialoux



The Study Design

In September 2016, Claire Montialoux, an economics researcher at the University of California Berkeley's Institute for Research on Labor and Employment (IRLE), wrote a policy brief, titled *Revisiting the Impact of Head Start*. The brief explores how our understanding of the Head Start Impact Study (HSIS) has evolved in light of the deeper understanding of early childhood development, data, and outcomes that has occurred in the 15 years since the HSIS was conducted.

The HSIS (Puma et al. 2010) was conducted in 2002 and was the first randomized study that examined Head Start's effectiveness. The HSIS randomly assigned almost 5,000 three- and four-year-old children to either a Head Start center (treatment group) or to not be admitted to the center (control group). The initial analysis done by Puma et al. found modest gains in pre-literacy skills, fewer challenging behaviors, and specific dental health benefits by kindergarten. However, in a follow-up study published in 2012, Puma et al. did not find clear evidence of improved non-cognitive outcomes and that the positive effects on cognitive skills mostly dissipated by third grade. Initially, despite some positive findings, this analysis raised questions about the effectiveness of Head Start.

Montialoux reviews the secondary analyses (research that used the same HSIS data) that shift the question from whether Head Start works to exactly how and for whom Head Start works best.

The Study Findings

Montialoux examined five studies that reanalyzed the HSIS data and provided a more nuanced understanding of the effects of Head Start. The findings of these studies are summarized below:

- » A significant design flaw in the HSIS, namely contamination of the control group with quality preschool experience, understated Head Start's positive impacts on participating children by third grade.
- » Head Start improves vocabulary and cognitive skills for particular subgroups, including children with the lowest initial skill levels and Spanish-speaking children, respectively.
- » Head Start has demonstrated critical parent involvement outcomes, such as more reading time and more father engagement, as well as greater involvement from African American and Hispanic families.

Revisiting the Impact of Head Start

Evolving Understanding of the Head Start Impact Study (HSIS)

HSIS findings	The re-analysis	Today's understanding
1. The HSIS compared children in the treatment group (Head Start children) with a control group. However an entire $\frac{1}{3}$ of the control group attended other preschool programs, rather than receiving at-home care. In other words, the control group was contaminated.	Feller et al. (2016) and Kline and Walters (2016) found much larger impacts when they accounted for the contamination of the control group.	Both re-analyses found that Head Start has a substantial impact on children who would otherwise be cared for at home.
2. The HSIS assumed a homogeneous effect across various subgroups and centers.	Bitler, Domina, and Hoynes (2015) showed that Head Start has heterogeneous effects, meaning the effects are different for different groups of children. Walters (2015) showed variation in effects across different centers.	Bitler, Domina, and Hoynes (2015) found that Head Start helps the most disadvantaged students improve their school readiness. They found that, for children with the lowest skill levels, Head Start results in a significant gain in vocabulary skills and has positive effects on cognitive skills that persist through first grade for Spanish speakers. Walters found that Head Start's effectiveness is different across centers, based on home visiting services and how many hours children attend.
3. The HSIS examined the impacts on parents by evaluating five outcomes, isolated by both cohort and time period.	Gelber and Isen (2013) examined effects on parental involvement across an additional 84 outcomes across collective cohorts and time periods to assess average outcomes.	Gelber and Isen (2013) found that Head Start has a number of impacts on parents, notably that it 1) increases the time that parents spend reading to their children by 20 percent, 2) increases the time that absent fathers spend with their children by one day per month, and 3) leads to greater increases in parental involvement for African American and Hispanic parents in comparison to White parents.

Revisiting the Impact of Head Start



“Early pessimism about the results of the Head Start Impact Study was not warranted.”

Claire Montialoux, UC Berkeley

Addressing Long-Standing Flaws with New Analysis

With these findings verifying Head Start’s effectiveness, Montialoux addresses flaws in the HSIS calculations of the costs and benefits of providing Head Start by discussing the cost-benefit analysis conducted by Kline and Walters (2016).

Previous analyses, she says, overestimated the net costs by overlooking the children who would have enrolled in another preschool had they not been admitted to Head Start. In other words, previous analyses were based on the assumption that, if children did not attend Head Start, they would not incur any costs by attending another program.

After correcting for this, Kline and Walters (2016) found that those who attend Head Start “can expect a discounted **after-tax lifetime earnings gain of \$5,513.**”

Importantly, Montialoux points out that Kline and Walters (2016) did not account for the benefits that Head Start has on participants’ future health, civic engagement (Milligan et al. 2010), crime (Lochner and Moretti, 2004 and Heckman et al. 2010) or inequality.

According to Kline and Walters (2016), every one dollar invested in Head Start, generates \$1.84 in future after-tax earnings when Head Start draws from other nearby preschool programs that would then fill the open seat; alternatively, if the nearby preschool provider downsizes as

a result of an increase in Head Start, then each dollar generates \$2.02 in future after-tax earnings.

Montialoux’s analysis ultimately leads to her conclusion that, “[e]arly pessimism about the results of the Head Start Impact Study was not warranted; to the contrary, this study validates the important impact of the program and shows that high quality early childhood programs can have important beneficial effects when delivered at scale.”

The Long-Term Impact of the Head Start Program

The Hamilton Project at The Brookings Institution | Lauren Bauer and Diane Whitmore Schanzenbach

The Study Design

In this economic analysis, Bauer and Schanzenbach evaluated the long-term impact of Head Start by analyzing data from the National Longitudinal Survey of Youth (NLSY). Simply put, they reach three conclusions:

1. Head Start improves educational outcomes.
2. Head Start causes social, emotional, and behavioral development.
3. Head Start participation increases positive parenting practices.

Bauer and Schanzenbach analyzed data from the National Longitudinal Survey of Youth (NLSY), which was a nationally representative sample of nearly 13,000 men and women in 1979. Children of the women originally in the study were included in a second generation sample. Using this sample, the study's authors compared children who attended Head Start to their siblings who went to another preschool or did not attend any program at all. This design effectively controlled for differences that stem simply from children from different families. The authors used this comparison, building on work done earlier by David Deming of Harvard, to examine the impact of Head Start participants and the children they have later in life.

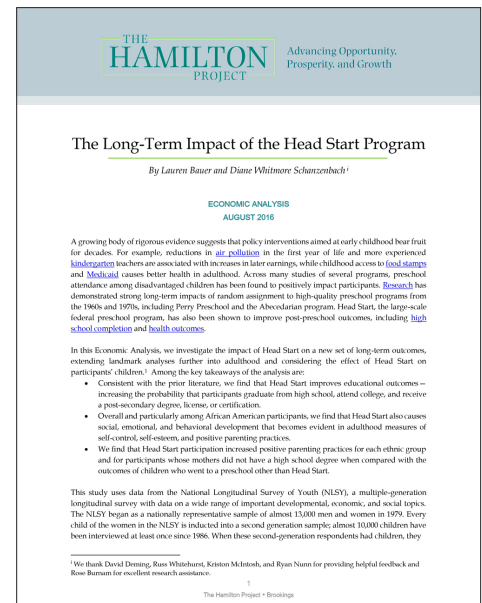
The Study Findings

The analysis showed that children who attended Head Start more recently have shown a larger impact than did children from earlier years did and that certain subgroups of Head Start participants experience significantly more positive impacts, such as Hispanic children and children of mothers who did not graduate high school. Further, Bauer and Schanzenbach also found greater effects of Head Start on high school graduation rates than did earlier studies. Children who attended Head Start also experienced positive effects on self-control and self-esteem, with larger gains in both areas for African American children and children whose mothers did not complete high school.

Bauer and Schanzenbach examined outcomes beyond previous studies that had evaluated parent behavior while children attended the program. Specifically, they evaluated whether participation in Head Start affected participants' parenting behaviors decades later when they had children of their own. Measuring variables, such as time spent reading to their child or time spent teaching numbers and the alphabet, they found that Head Start caused parents to invest more time in their own children.

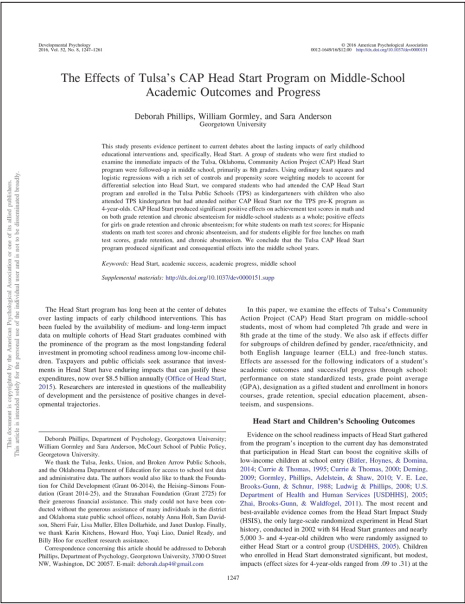
The authors also found that Head Start participation increases a student's likelihood of enrolling in and completing higher education. Specifically, they reported that students are 4 to 12 percentage points more likely to pursue higher education if they attended Head Start. Similarly, Bauer and Schanzenbach found that Head Start increases postsecondary completion, including an estimated 15 percent increase for Hispanic students.

In short, Bauer and Schanzenbach effectively extended existing analyses of Head Start further into the future and find that "Head Start not only enhances eventual educational attainment, but also has a lasting positive impact on behavioral outcomes including self-control and self-esteem [and] it improves parenting practices - potentially providing additional benefits to the next generation."



The Effects of Tulsa’s CAP Head Start Program on Middle-School Academic Outcomes and Progress

Georgetown University | Deborah Phillips, William Gormley and Sara Anderson



The Study Design

Phillips and her team at the Georgetown Department of Psychology studied Tulsa’s Community Action Program (CAP) Head Start program to evaluate whether the program had effects on academic and school progress that lasted into middle school and whether these effects varied by certain demographic characteristics, such as gender or race/ethnicity.

To do this, they studied the 2005-2006 cohort of Tulsa CAP Head Start participants into the eighth grade.

The Study Findings

This particular study examined the effects of Head Start on children who attended the Tulsa CAP Head Start program in 2005-2006. For Tulsa CAP Head Start, many of the factors that may have contributed to their success mirror trends that are increasingly being adopted across Head Start programs, both through regulation and practice, namely lead teachers with bachelor’s degrees, low child-teacher ratios, and longer service hours. Other aspects of the Tulsa CAP Head Start program are exceptional in the broader community—such as paying teachers according to the public school wage scale.

Head Start children, in comparison to children who did not attend Head Start or Oklahoma’s state preschool program, had higher math scores on the state test, were less likely to be chronically absent, and were less likely to have been held back a grade. Many subgroups, including those who were eligible for the free and reduced lunch program, girls, Hispanic students, and white students, were less likely to repeat a grade and scored higher on the state math tests.

“We conclude that the Tulsa CAP Head Start program produced significant and consequential effects into the middle school years.”

- Deborah Phillips et al, Georgetown University

Tracking Quality in Head Start Classrooms: FACES 2006 to FACES 2014



Office of Planning Research and Evaluation

U.S. Department of Health and Human Services (HHS)

From 2006 to 2014, there was an overall increase in classroom quality. Fifteen percent of this growth is attributed to positive changes in specific teacher characteristics.

The Study Design

The Head Start Family and Child Experiences Survey (FACES) collects data on cohorts of a nationally representative sample of three- to four-year-old children who are entering Head Start for the first time. The survey collects data through a number of means, including:

- » A one-on-one child assessment that collects information on school readiness skills, including language, literacy, and mathematics, as well as height and weight
- » Interviews with the child's Head Start teacher and kindergarten teacher to collect information about their educational background and credentials and information about the child's social skills and classroom behaviors
- » Interviews with the Head Start program center director and education coordinator about program policies and practices
- » Classroom observations to measure quality and teacher-child interactions
- » Parent interviews about the child's health, family life, and experience with Head Start

While most of the information was collected through surveys and interviews, the quality of the Head Start classrooms was measured using two tools: the Classroom Assessment Scoring System (CLASS; Pianta et al. 2008) and the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms et al. 1998).

To date, there have been six FACES cohorts. In November 2016, the US Office of Planning, Research, and Evaluation within HHS published a report on a cross-cohort analysis of the data collected in three cohorts—2006, 2009, and 2014. The agency evaluated the data to identify trends in classroom quality and teacher characteristics.

The Study Findings

The cross-cohort analyses identified the following trends:

Classroom Quality:

- » From 2006 to 2014, there was an overall increase in classroom quality. Fifteen percent of this growth is attributed to positive changes in specific teacher characteristics.
- » From 2009 to 2014, the number of classrooms rated as inadequate by the ECERS-R tool in the Teaching and Interactions subscale fell from five to one percent.
- » From 2006 to 2014, average ECERS-R Provisions for Learning scores improved from 3.6 to 4.4 on the 7-point scale.
- » From 2006 to 2014, average CLASS scores improved from 1.9 to 2.4 (out of 7), and fewer classrooms scored in the low range (96 to 76%) while more scored in the mid-range (4 to 24%).

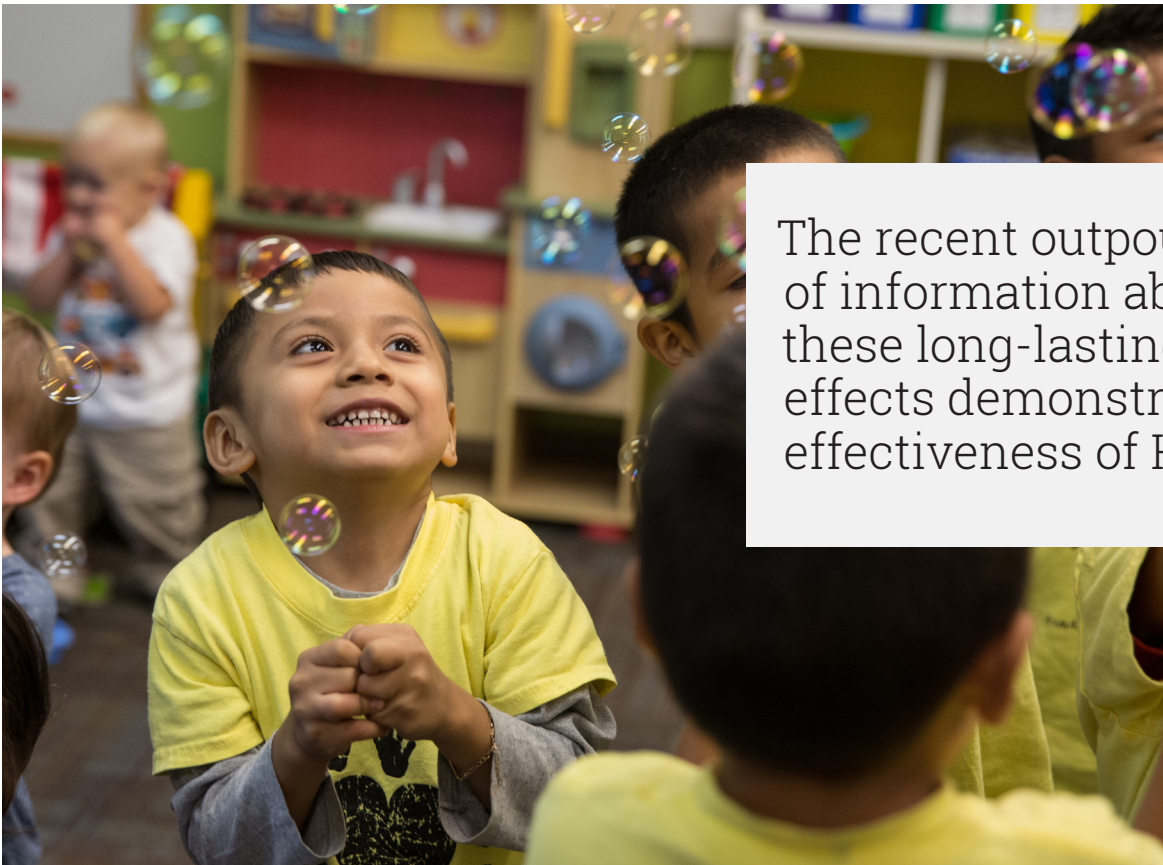
Professional Development:

- » Across cohorts, the number of teachers with a mentor stayed stable at about three-quarters. Mentors were increasingly educational coordinators or specialists, rather than center or program directors.
- » From 2006 to 2014, there was an increase in teachers receiving support from either a mentor or master teacher and from other Head Start teachers.

Teacher Credentials:

- » From 2006 to 2014, the percent of teachers with a bachelor's degree or higher increased from 40 to 70%.

These Reports Provide the Best Evidence of the Head Start Advantage



The recent outpouring of information about these long-lasting effects demonstrates the effectiveness of Head Start.

The four reports highlighted in this compendium were published between August and December of 2016 and provide some of the best evidence to date of the Head Start advantage.

What is the Head Start advantage? The Head Start advantage is the individual opportunity to thrive in a safe, stable, nurturing space that puts children and their families on the path to success in school, in work, and in life. It is the hundreds of thousands of dedicated staff and teachers contributing to their communities as they build brighter futures. It is the several thousand partner organizations, working hand-in-hand with Head Start and enriching local economies.

More than 33 million children and families have benefited from Head Start's comprehensive model, receiving education, healthy meals, and vision, dental, and hearing screenings, parenting skills, nutrition training, and direct involvement in their children's education. The Head Start advantage can be seen in the lives of these 33 million children and families. It is seen in the research, which has documented time and again the mental, physical, developmental, educational, and social-emotional benefits that Head Start imparts.

Ultimately, the reports' findings reveal increasing program quality, that Head Start children have positive outcomes at the end of their year in the program, and that these results persist throughout their lives.

The recent outpouring of information about these long-lasting effects demonstrates the effectiveness of Head Start and answers many questions about what exactly works best and for whom, ensuring the Head Start advantage for generations to come.

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