

ECONOMIC RETURN ON EARLY CHILDHOOD AND SUSTAINING GAINS



11 a.m.-12:15 p.m. | Research shows that early childhood education has a strong rate of return on investment. How do economists quantify the rate of return? Research shows that disadvantaged children who attend high-quality early childhood programs are less likely to start kindergarten behind, need special education, repeat a grade and are more likely to graduate from high school. They also tend to have higher earnings, pay more in taxes, and commit less crime.

Moderator

- Julie Poppe, NCSL

Speaker

- Rob Grunewald, Federal Reserve Bank of Minneapolis



The Economic Case for Investing in Young Children

Omaha, Nebraska

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Roadmap for Discussion

- § Overview of the Federal Reserve System and Community Development
- § Economic case for investing in young children, focus on fiscal effects
- § Placing “fade out” into context and sustaining early childhood gains
- § Costs and benefits of child care as workforce infrastructure

Federal Reserve System

Overview



Federal Reserve System

Community Development



@MplsFedCMD 

- § Promote the economic resilience and mobility of low- to moderate-income (LMI) individuals and communities.
- § Research. Information Sharing. Training. Convening.

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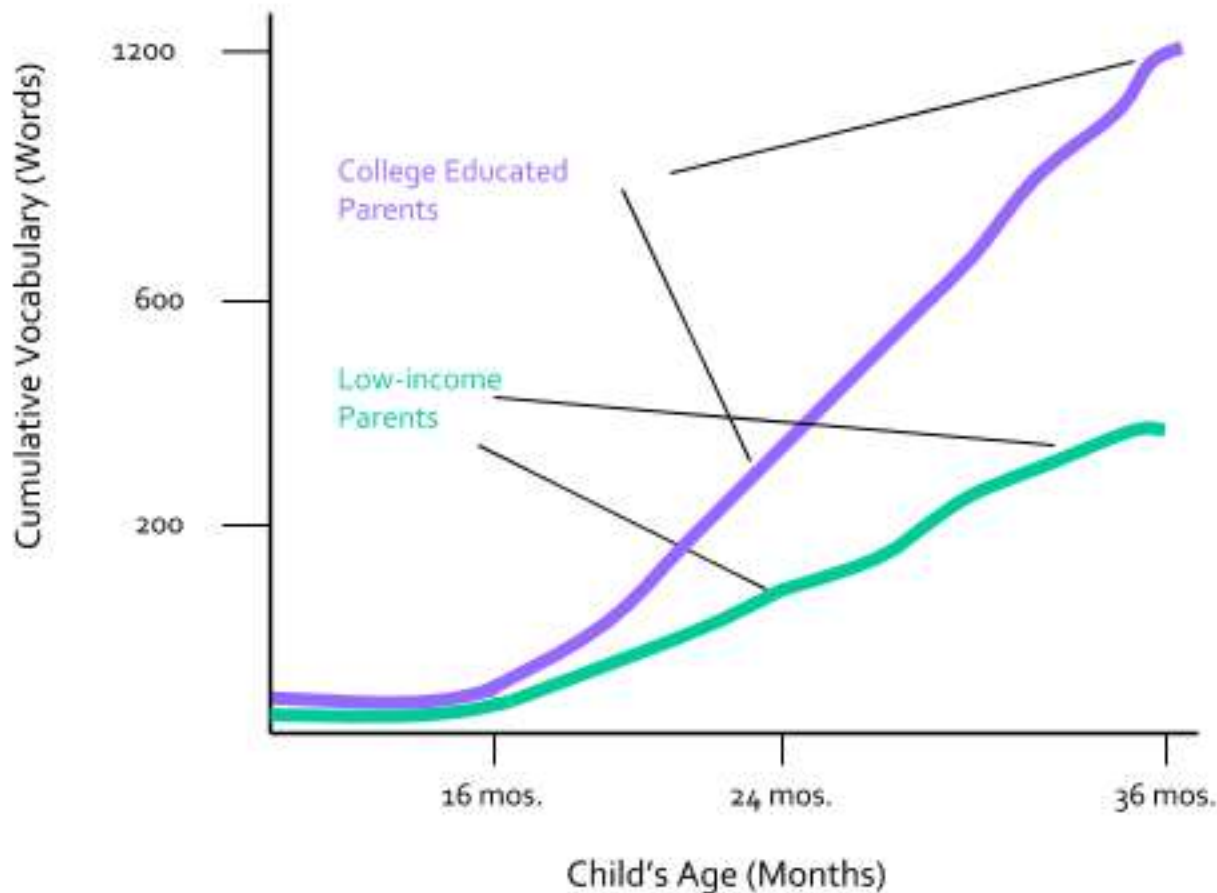
Economic case for investing in young children:

Key concepts

- § Conducting cost-benefit analysis requires rigorous research studies that include a non-treatment comparison group, ideally through a Randomized Control Trial.
- § Research on early childhood programs is conducted in the context of developmental science, which shows the early years are a sensitive period for growth.
- § Benefits to early childhood programs occur both near-term and long-term and are spread across various government jurisdictions and agencies.
- § Investments achieve a high return when they are high-quality, engage parents, start early, effectively scaled, and match the risk profile of children served.

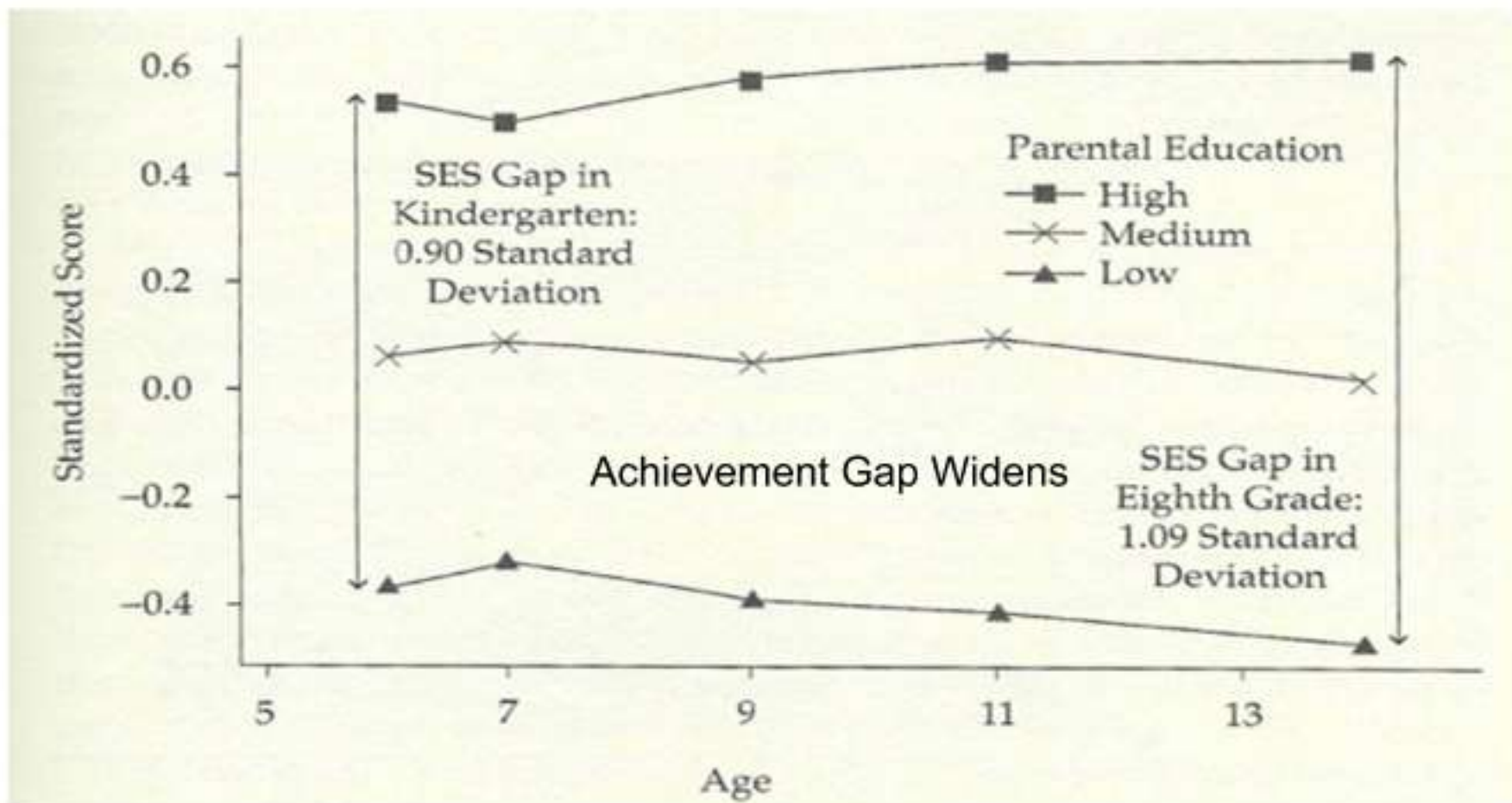


Barriers to **Social Mobility** Emerge at a **Very Young Age**



Source: Hart & Risley (1995)

Average reading scores of U.S. children by socio-economic status group (parent education)



Early childhood development investments

- Home visiting HV
- Health & nutrition HN
- Early learning programs ELP
- Quality Rating and Improvement System
- Parent education
- Child welfare system

Fiscal-related benefits prenatal to age 5

- Better maternal and child health HV, HN
- Fewer low-weight births HV, HN
- Fewer emergency room visits HV
- Reduced costs to Medicaid, TANF, and food stamps HV
- Reduced child abuse and neglect HV, ELP
- Higher maternal earnings and tax revenue HV, ELP
- Lower cash assistance HV
- Lower maternal crime HV

Sources: Bartick & Reinhold (2010); Devaney, Billheimer, & Schore (2008); Green, et al. (2014); Karoly, et al. (1998); Olds, et al. (1997); Miller (2015); Reynolds, Temple, White, Ou, & Robertson (2011)

Fiscal-related benefits ages 5 to 17

- Improved school readiness HV, ELP
- Reduced need for special education ELP
- Less grade repetition ELP
- Higher high school graduation rates ELP
- Reduced juvenile crime HV, ELP

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Muschkin, Ladd, & Dodge (2015); Olds, et al. (2004); Reynolds, Temple, White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

Fiscal-related benefits ages 18+

- Higher educational attainment ELP
- Higher earnings and tax revenue ELP
- Lower cash assistance ELP
- Improved health ELP
- Lower crime ELP
- Higher homeownership rates ELP

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Reynolds, Temple, White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

■ Early childhood investments by government jurisdiction

	Federal	State	County	City	School District
Home visiting					
Health & nutrition					
Early learning programs					
Quality Rating and Improvement					
Parent education (group)					
Child welfare system					

■ Government cost savings or increased revenue associated with early childhood investments

	Federal	State	County	City	School District
Medicaid and unpaid medical care					
TANF					
Child welfare system					
Education					
Criminal justice system					
Increased tax revenue					

Return on Investment

Evidence from longitudinal early childhood studies

- Perry Preschool
 - Schweinhart: \$16 to \$1
 - Heckman: \$7–\$12 to \$1

- Abecedarian Educational Child Care
 - Barnett: \$4 to \$1
 - Heckman: \$7 to \$1

- Chicago Child-Parent Center
 - Reynolds: \$10 to \$1

- Elmira Prenatal/Early Infancy Project
 - Karoly: \$5 to \$1

Sources: Garcia, Heckman, Leaf, & Prados (2016); Heckman, Moon, Pinto, Savelyez, & Yavitz (2010); Karoly, et al. (1998); Masse & Barnett (2002); White, Ou, & Robertson (2011); Schweinhart, et al. (2005)

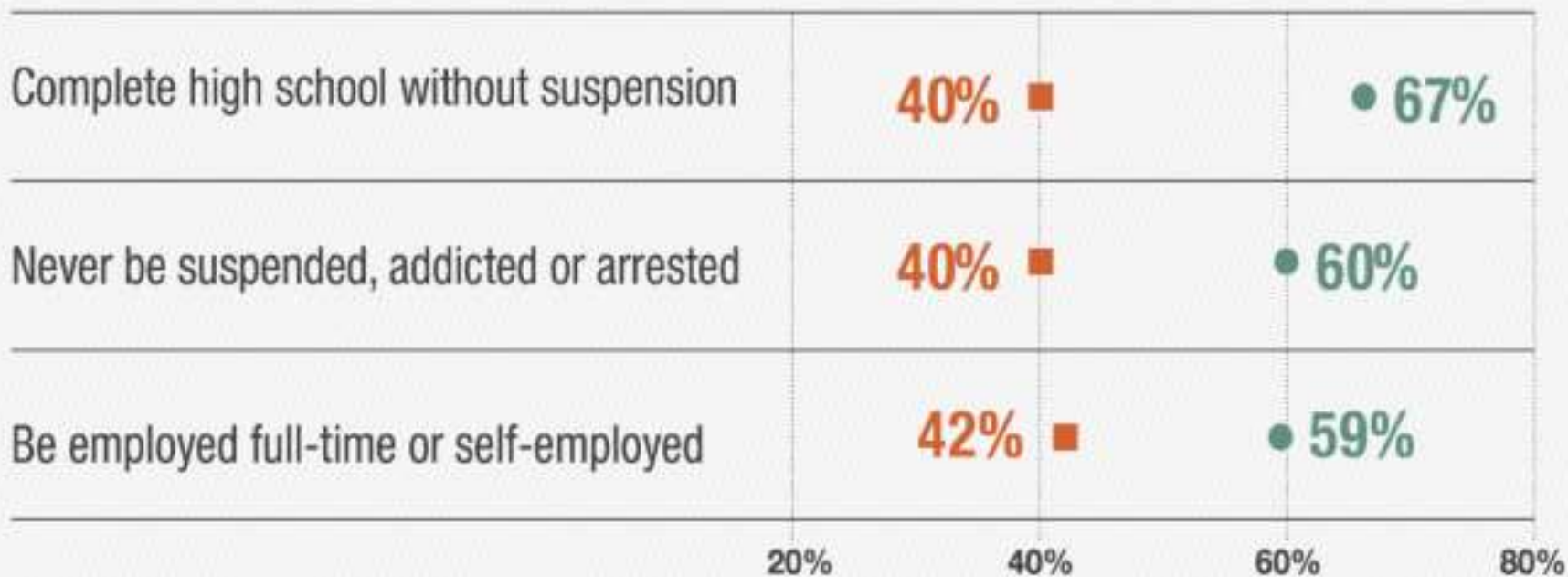


New Research

Perry Preschool: Intergenerational Effects

■ Children of nonparticipants

● Children of Perry participants



Source: Heckman & Karapakula

Early Childhood Development Investment Opportunities

- Access to high-quality early learning programs
 - Address both access and quality for infants, toddlers, and preschoolers
- Home visiting programs for families with pregnant women and young children
- Intersection between child protection system and early childhood services, including mental health services
- Health and dental care

High return principles

- Invest in quality
- Engage parents
- Start early
- Bring to scale
- Match services to risk profile
 - Intensive and free services that start early for high-risk children
 - Less-intensive services with partial subsidy for moderate-risk children
 - No subsidy for low-risk, higher-income children

Language and culture as protective factors



Lakota Immersion
Childcare

Pine Ridge
Reservation

South Dakota

Minnesota Early Learning Scholarships

Incorporate high-return principles

- \$70 million annually
- Attend QRIS-rated providers
- Eligibility
 - Children ages 3 and 4 below 185% poverty and younger siblings
 - Children ages 0 to 2 who have a teen parent, homeless, child welfare services, or foster care

Head Start Randomized Control Trial

- “Head Start improved children’s preschool outcomes across developmental domains, but had few impacts on children in kindergarten through 3rd grade.”
- Measures Intent-to-Treat
 - Includes Head Start enrollees who don’t show up
 - 60 percent of the control group children participated in child care or early education programs

Source: Puma, Bell, Cook, Heid, Broene, Jenkins, Mashburn, and Downer (2012)

Positive small and medium effects after 1 year, few effects after entering school

Exhibit 2a. Summary of ITT Cognitive Impacts for 4-Year-Olds by Year

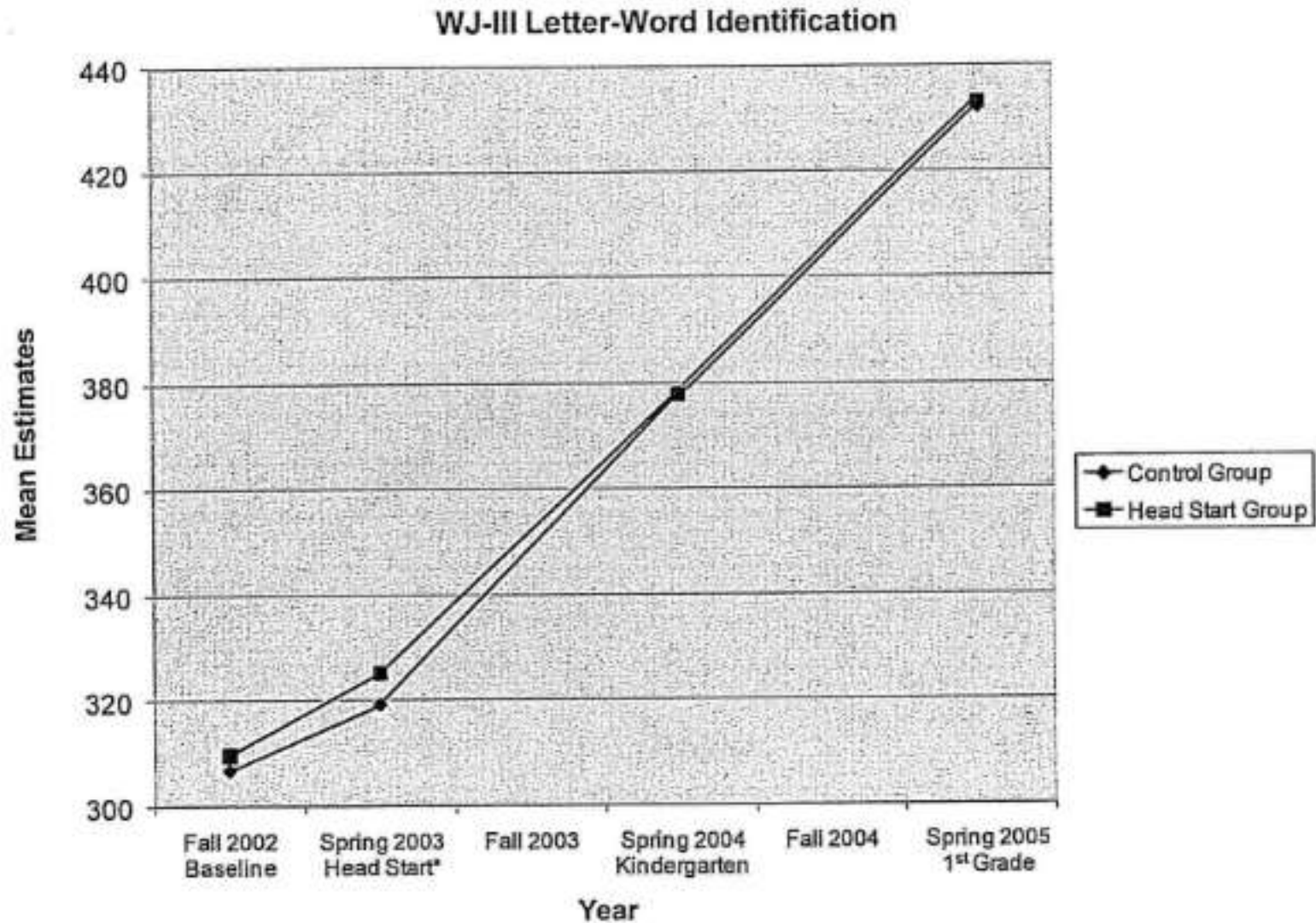
Measure	Age 4 (Head Start Year)	K	1 st Grade	3 rd Grade
Language, Literacy, and Pre-Writing				
Color Identification	0.16	NA	NA	NA
Pre-Writing (McCarthy Draw a Design)		NA	NA	NA
Emergent Literacy Scale (parent report)	0.31	NA	NA	NA
Letter Naming	0.25		NA	NA
Test of Phonological Processing (CTOPPP Elision)			NA	NA
Receptive Vocabulary (PPVT)	0.09		0.09	
Letter-Word Identification (WJIII)	0.22			
Spelling (WJIII)	0.15			NA
Oral Comprehension (WJIII)				NA
Pre-Academic Skills (WJIII)	0.19			NA
ECLS-K Reading	NA	NA		0.11

Source: Puma, Bell, Cook, Heid, Broene, Jenkins, Mashburn, and Downer (2012)

Placing “fade out” into context

- Measures that indicate fade out may not fully capture effects.
- Even when fade out is detected, benefits can be found later in childhood and early adulthood.
- Several long-term evaluations show sustained early childhood education program impacts into adulthood.
- “Catch up” may be a better descriptor than fade out.

Head Start children continue to improve, but control children catch up



Source: Presentation by Steve Barnett, Rutgers University

Sources

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