

Early Childhood Education: Investing in Missouri's Children



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Missouri Family Impact Seminars Briefing Report 2014

A project of the Center for Violence and Injury Prevention, George Warren Brown School of Social Work, Washington University in St. Louis in collaboration with the Policy Forum at the Brown School with assistance from the Policy Institute for Family Impact Seminars at UW-Madison/Extension



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Background & Purpose

This briefing report for state policymakers and their aides is a companion to the annual Missouri family impact seminar presentation.

The Center for Violence and Injury Prevention at the George Warren Brown School of Social Work, Washington University in St. Louis in collaboration with the Policy Forum at the Brown School with assistance from the Policy Institute for Family Impact Seminars at UW-Madison/Extension convened the seminar. The purpose of Family Impact Seminars is to provide objective, non-partisan, and solution-focused research on family issues to state-level policymakers. Seminar topics are issues of importance to Missouri children and families, and are based on legislator choice. Through presentations by experts on the annual topic and subsequent issue brief reports, legislators gain exposure to the latest evidence to help inform decision-making. The seminar presenter for 2014 is Dr. Gormley.

William T. Gormley, Jr., Ph.D. is a professor of public policy at Georgetown University and serves as Co-Director of the Center for Research on Children in the U.S. (CROCUS). He has a strong research interest in the effects of public policy on children. His most recent book, *Voices for Children: Rhetoric and Public Policy*, examines the effectiveness of different “issue frames” for advancing children’s programs. He can be contacted at:

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The next Missouri family impact seminar will be held in January 2015. Current Missouri family impact seminar co-directors are:

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For additional information about family impact seminars, please contact our co-directors or visit: <http://familyimpactseminars.org>

Briefing Report

Prepared by: Melissa Jonson-Reid, PhD, Patricia L. Kohl, PhD, William T. Gormley, PhD, Kate Marcal, MSW Candidate, & Jacob Perkins, MSW Candidate

Early Childhood Development: The Case for Preschool

Early childhood is a crucial period for brain development. Before age five, children experience more rapid brain development than at any other stage of life, powerfully influencing their cognitive, social, and emotional wellbeing over time (Hanson, et al., 2013; Mehnert et al., 2013). Researchers and policymakers have identified the transition from preschool to kindergarten as a critical window for intervening with children at-risk for later academic and behavioral problems (Wayne, Wright, Cheung, & Hahs-Vaughn, 2012). Higher quality care during this transition has been linked to improved school readiness and later academic outcomes (Anderson et al., 2003; Gormley, Gayer, Phillips & Dawson, 2005; Johnson, Martin, & Brooks-Gunn, 2013).

In addition to improving kindergarten readiness among this age group, quality preschool can have short- and long-term effects on cognitive, socioemotional, and educational development. Recent scholarship shows that early childhood education programs have the potential to prevent developmental delays, increase attentiveness, reduce crime, improve academic outcomes, and increase eventual earnings (Anderson et al., 2003; Gormley, Phillips, Newmark, Welti, & Adelstein, 2011; Klebanov & Brooks-Gunn, 2008; Temple & Reynolds, 2007).

Healthy childhood development and subsequent school readiness is linked to socioeconomic status, parental resources, and family structure (Anderson et al., 2003; Hawkinson, Griffen, Dong, & Maynard, 2013; Klebanov & Brooks-Gunn, 2008). Adverse events in early childhood such as poverty and chronic stress can impede healthy brain growth and reduce readiness for kindergarten (Hanson et al., 2013). Racial gaps exist as well, with white children entering kindergarten better able, on average, to recognize letters than African American children (Anderson et al., 2003). Low-income families are less likely to send their children to preschool, and those who do are less able to afford high-quality programs than their more affluent counterparts (Temple & Reynolds, 2007).

Affordable, high-quality pre-school programs are frequently difficult for minority, low-income families to access, placing their children at a greater disadvantage in school and beyond. Positive effects of high quality universal preschool, however, have been shown for children across racial and ethnic groups (Gormley, Gayer, Phillips, & Dawson, 2005), and may particularly benefit children living in or near poverty (Yoshikawa et al., 2013).

Throughout the United States, fewer than 30 percent of 4-year-olds and only 5 percent of 3-year-olds were enrolled in preschool in 2012 (Figure 1; Barnett, Carolyn, Fitzgerald, & Squires, 2012). Furthermore, Missouri was among the states with the lowest percentages of 4-year-olds served by state pre-K programs. State funding for pre-K programs fell by 18 percent in 2012, which translated to a \$500 decrease in spending per child (Barnett et al., 2012).

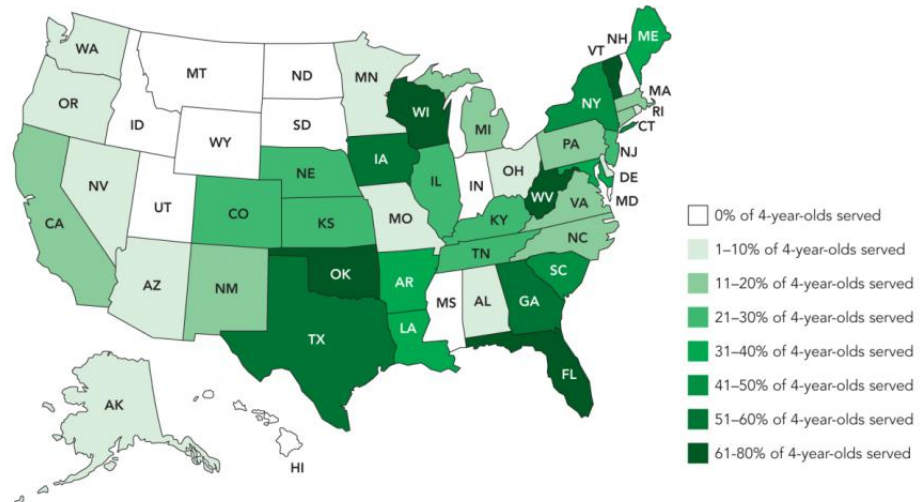
From Intervention to Investment

Early childhood education not only benefits children's socioemotional and cognitive wellbeing, but pays off for society in the long run.

Prevention programs administered during early childhood may be more cost-effective than delaying until adolescence or

adulthood, when interventions such as vocational training or crime reduction are likely to be more expensive with less impact (Temple & Reynolds, 2007). Investing in educational programs before age five not only prepares children for kindergarten, but reduces the need for further spending on remedial educational, social, and psychological interventions later in life (Harlin & Brown, 2006). Evidence suggests that investments in public preschool programs can save between three and seven dollars for every dollar spent (Yoshikawa et al., 2013)

FIGURE 1: PERCENT OF 4-YEAR-OLDS SERVED IN STATE PRE-K



Barnett et al., 2012

State and Local Pre-Kindergarten Initiatives

A number of state and local initiatives have addressed the need for high quality, affordable preschool throughout the country (Gormely et al., 2005).

State

- Georgia established universal pre-K in 1995
- Oklahoma established universal pre-K in 1998
- Michigan increased the number of state pre-K slots by 25 percent
- Alabama increased pre-K funding by nearly 50 percent
- California, Indiana, Kansas, and Nebraska all have legislative proposals to expand state-funded pre-K

Local

- Boston, Massachusetts established universal pre-K in 2005
- San Antonio, Texas voted in universal pre-K funded by sales tax increase in 2012
- New York City mayor Bill de Blasio has proposed a tax on the wealthiest residents to fund universal Pre-K
- Seattle, Washington has proposed universal pre-K for 3- and 4-year olds

Conclusions

To summarize, a growing number of state and local initiatives are focusing on quality, public preschool education. This is likely related to the growing body of evidence supporting its effectiveness. The short term effects of participation in high quality prekindergarten on children's cognitive and socio-emotional development is positive. Children who participate in pre-K are better prepared for kindergarten. Further, there appear to be substantial long term benefits as well, such as improved high school graduation rates, college attendance rates, adult earnings and criminal justice outcomes.

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Useful Links & Resources

CENTER FOR RESEARCH ON CHILDREN IN THE U.S. (CROCUS) WEBSITE

- <http://www.crocus.georgetown.edu>

FOUNDATION FOR CHILD DEVELOPMENT

- <http://fcd-us.org/>

NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH

- <http://nieer.org/>

EARLY CHILDHOOD EDUCATION: INVESTING IN THE FUTURE

William T. Gormley, Jr.
Georgetown University
Family Impact Seminar
Jefferson City, Mo., March 25, 2014

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*"Today we're going to explore in paint how we feel
when we're picked up late from preschool."*

THE CASE FOR EARLY CHILDHOOD INTERVENTION

- Brain Research – Children’s brains grow more rapidly from 0 to 5 than at any other time in life (new cells, new synapses)
- Brain maturation is a hierarchical process in which higher level functions depend on and build on lower level functions
- Early brain development has lifelong consequences

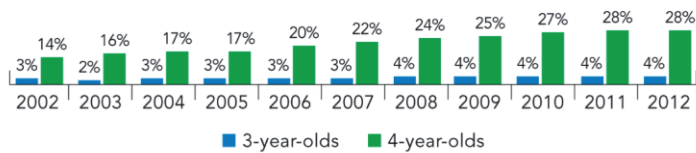
THE CASE FOR PRESCHOOL

- Children’s brains are like sponges – they can soak up huge quantities of information
- Teachers provide cognitive stimulation, emotional support
- Children become exposed to numbers, letters, and shapes ... and they learn how to socialize
- Learning begets learning, skill begets skill (Heckman)

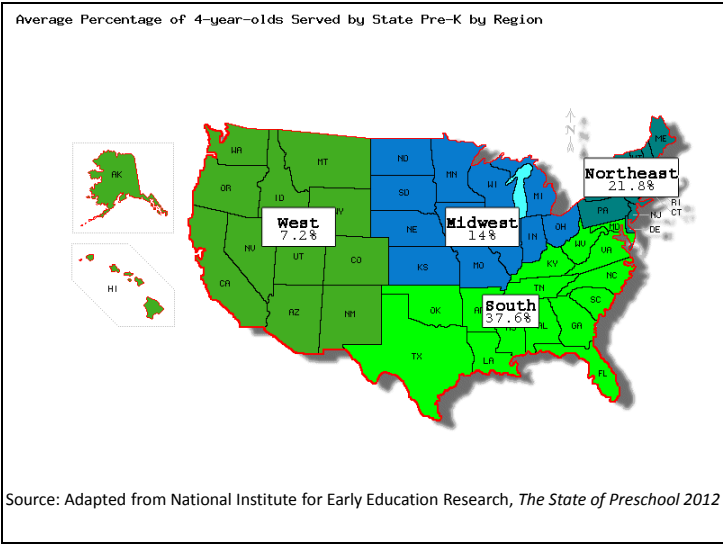
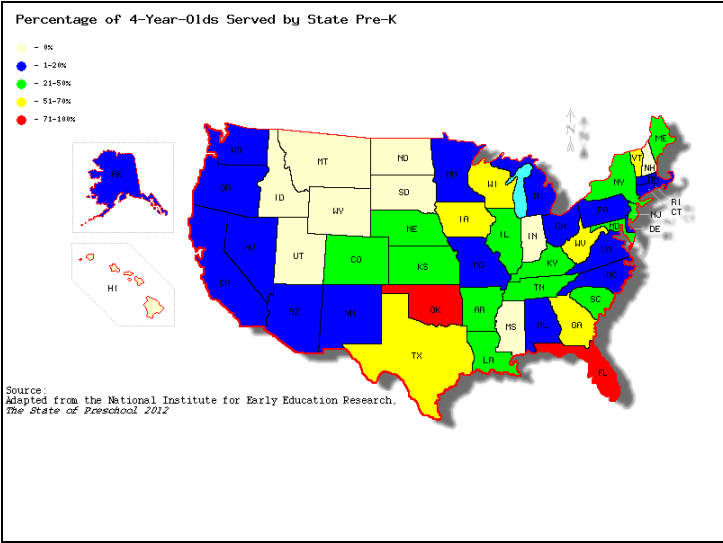
THE CASE FOR HIGH-QUALITY PRESCHOOL

- Studies of day care centers and preschool show that quality matters
- High quality is especially important for disadvantaged children (e.g., vocabulary growth)
- We are becoming more sophisticated in our understanding of what quality looks like
- Effective interventions can reduce risks and improve the developmental outcomes of young children

Percent of National Population Enrolled in Pre-K



Source: National Institute for Early Education Research, *The State of Preschool 2012*



RECENT STATE INITIATIVES

- Michigan – Governor Rick Snyder persuaded State Legislature to increase number of pre-K slots by about 25 percent
- Alabama – Governor Robert Bentley persuaded State Legislature to increase pre-K funding (49 percent)
- Legislative proposals to expand state-funded pre-K in California, Indiana, Kansas, Nebraska

RECENT LOCAL INITIATIVES

- San Antonio, Texas voters approved universal pre-K initiative in 2012, supported by Mayor Julian Castro, funded by sales tax increase (1/8 of a cent)
- New York City Mayor Bill de Blasio has proposed universal pre-K initiative, to be financed by tax on wealthiest New Yorkers
- Seattle, Wash. City Council has proposed universal pre-K for 3s and 4s

PRESIDENT OBAMA'S EARLY CHILDHOOD EDUCATION PROPOSAL

- Federal grants to states, then from states to school districts
- High-quality, early childhood education for 4-year-olds, < 200 % of federal poverty level
- Some incentives for states to serve children > 200% of federal poverty level
- \$75 billion over 10 years
- To be funded by increase in cigarette tax

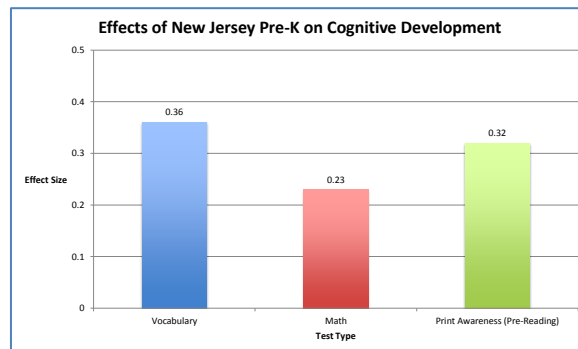
DOES PRE-K BOOST SCHOOL READINESS?

- Central focus – cognitive effects at kindergarten entry
- Additional focus – socio-emotional effects, executive functioning

NEW JERSEY PRE-K

- Pre-K for 3s and 4s in high-poverty school districts mandated by state Supreme Court in Abbott v. Burke (1998)
- Now required in 35 school districts
- Mixed service delivery model, with public schools as conduit or provider (2/3s of students served by private providers)
- Every lead teacher must have a B.A. and must be early childhood certified

Effects of Pre-K on School Readiness, New Jersey (Abbott Schools)

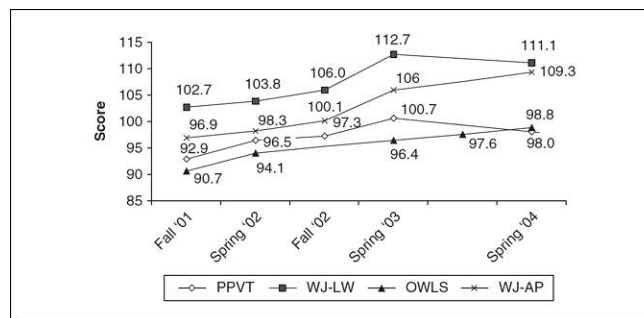


Source: Wong et al. 2007, "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs"

Georgia Pre-K

- Governor Zell Miller and Georgia State Legislature enacted UPK for 4s in 1995
- Funded by state lottery
- Mixed services delivery system: 54 percent of children served by private providers, 46 percent by public providers
- Teacher credentials vary by type of service provider

Georgia Pre-K Participants v. National Norms

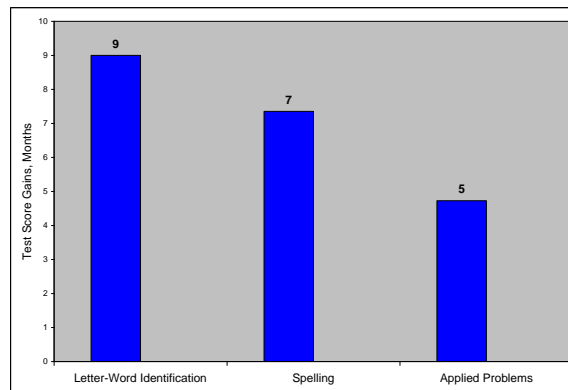


Source: Gary Henry and Dana Rickman, "The Evaluation of the Georgia Pre-K Program," Sage Publications, 2009.

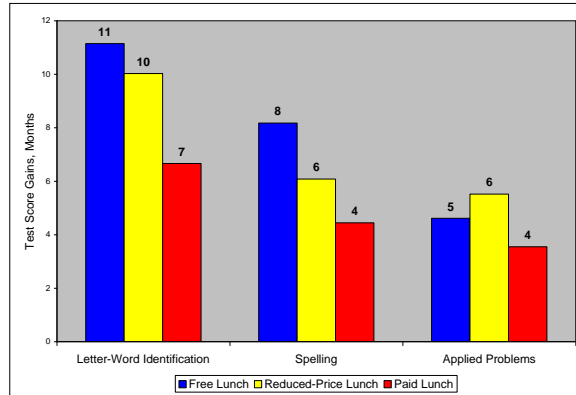
Oklahoma Pre-K: Tulsa

- Oklahoma established UPK in 1998
- Funded by general fund
- Public schools are primary service providers, but other providers may establish partnerships with public schools
- Every lead teacher must have B.A. and must be early childhood certified
- Pay comparable to K-12 teacher pay

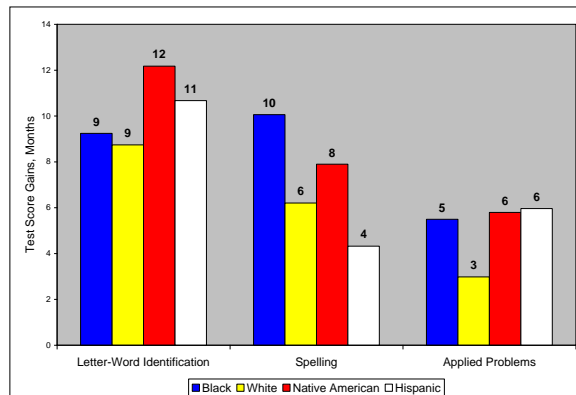
Effects of TPS Pre-K
on Cognitive Development, in Months



Effects of TPS Pre-K by Free Lunch Status, in Months



Effects of TPS Pre-K by Race/Ethnicity, in Months



Effects of TPS Pre-K on Hispanics by Primary Language Spoken at Home, in Months

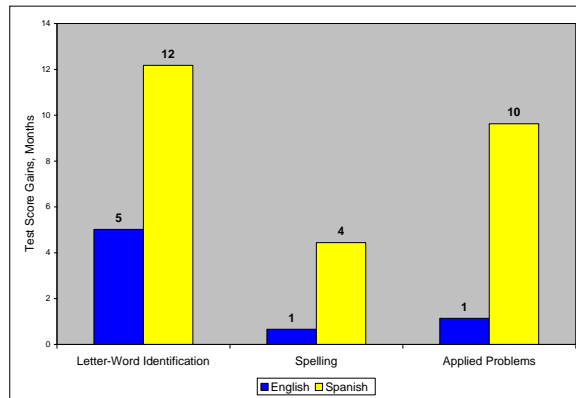
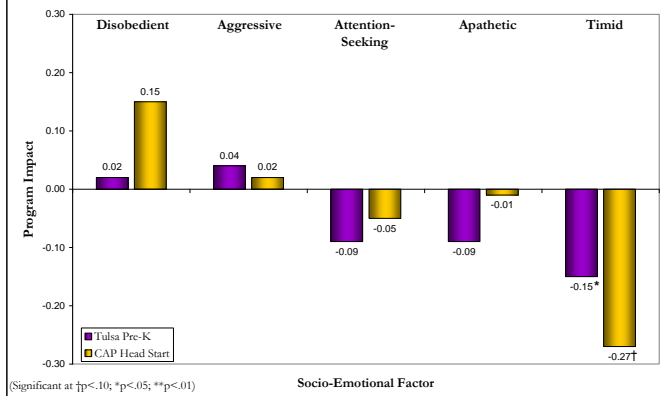
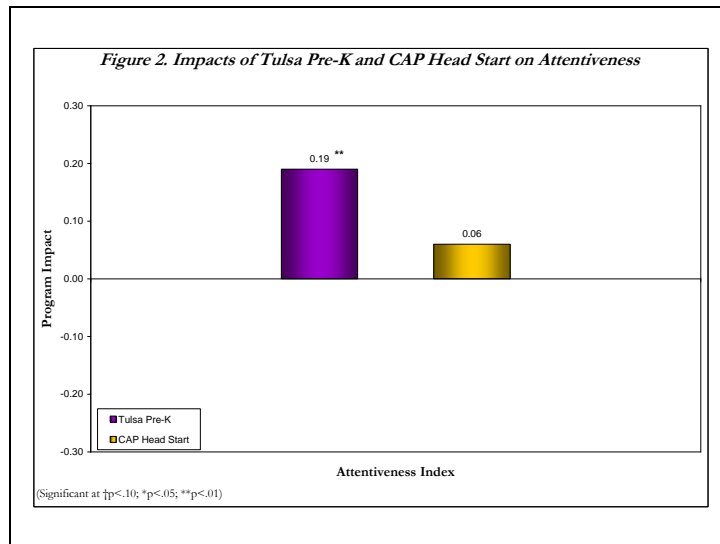


Figure 1. Impacts of Tulsa Pre-K and CAP Head Start on Behavioral Problems





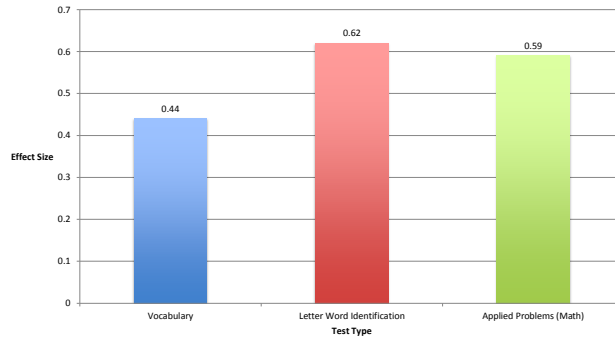
Massachusetts: Boston Pre-K Program

- Boston established UPK in 2005
- Run through Boston Public Schools
- Every lead teacher must have B.A. and must be early childhood certified
- Pay comparable to K-12 pay
- Strong emphasis on coaching of teachers
- Mixed service delivery model elsewhere

Effects of Pre-K on School Readiness

Massachusetts – Boston Public Schools

Effects of Boston Pre-K on Cognitive Development

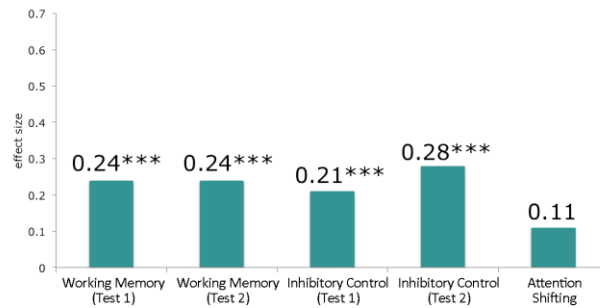


Source: Adapted from Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

Effects of Pre-K Programs

Massachusetts – Boston Public Schools

Effects of Boston Pre-K on Executive Functioning

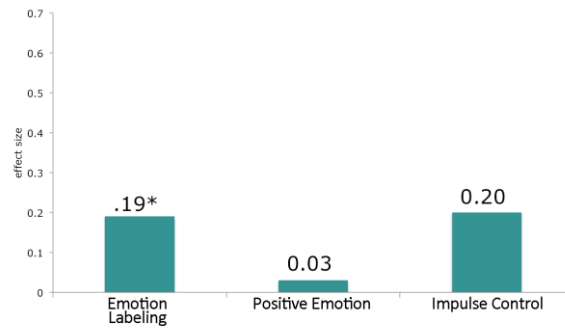


Source: Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

Effects of Pre-K Programs

Massachusetts – Boston Public Schools

Effects of Boston Pre-K on Emotional Development & Regulation



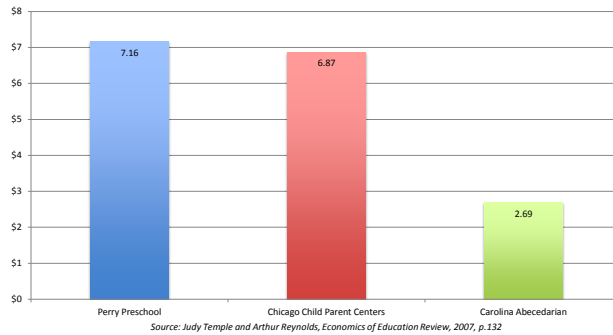
Source: Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

Do Pre-K Effects Fade Out or Persist over Time?

- Benefit-Cost Analyses
- Longitudinal Studies

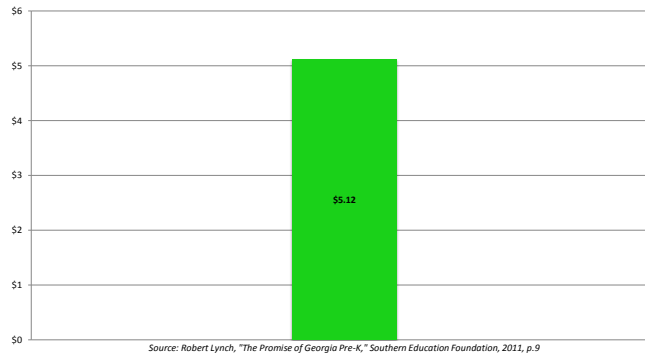
Long-Term Effects of Mature High-Quality Pre-K Programs

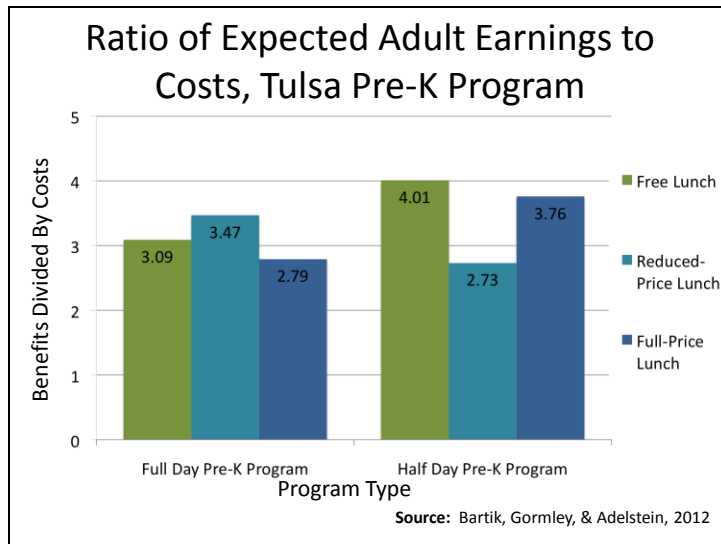
Benefit-Cost Ratios for Leading Early Childhood Programs



Long-Term Effects of Georgia Pre-K

Return for Each Dollar Spent on Georgia Pre-K



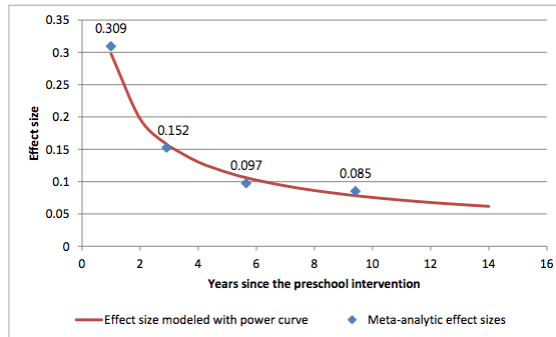


Benefit-Cost Results: Early Childhood Education Programs for Low-Income Three- and Four-Year-Olds

	Benefits	Costs	Benefits minus costs (net present value)	Benefit to cost ratio
State and district programs	\$29,210	\$6,974	\$22,236	\$4.20
Head Start	\$22,452	\$8,564	\$13,888	\$2.63

Source: "Early Childhood Education for Low-Income Students: A Review of the Evidence and Benefit-Cost Analysis" Washington State Institute for Public Policy. January 2014.

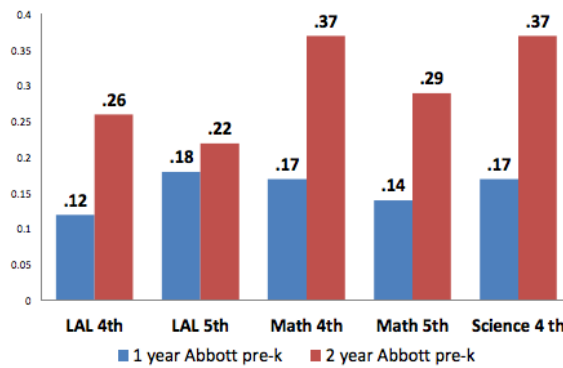
Estimation of Test Score Fadeout: Meta-Analytic Results and Power Curve Model



Source: "Early Childhood Education for Low-Income Students: A Review of the Evidence and Benefit-Cost Analysis" Washington State Institute for Public Policy, January 2014.

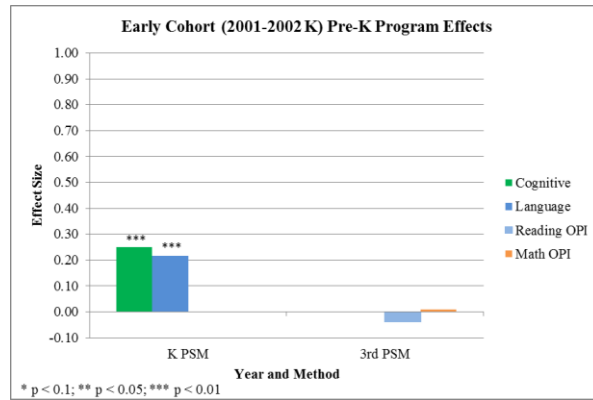
Long-Term Effects of New Jersey Pre-K (Abbott Schools)

Figure 1. Pre-K Abbott Effects on NJASK by Years of Participation

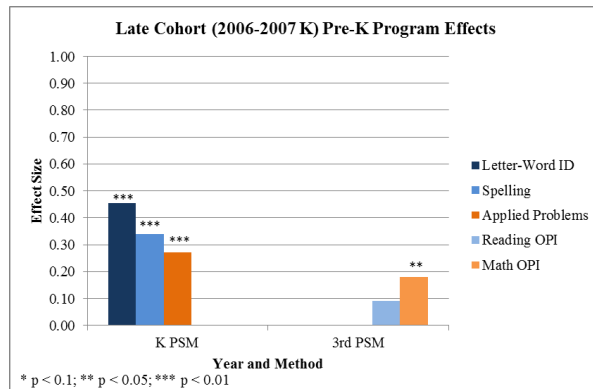


Source: Barnett et al., "Abbott Preschool Program Longitudinal Effects Study: Fifth Grade Follow-Up." NIEER Rutgers, 2013.

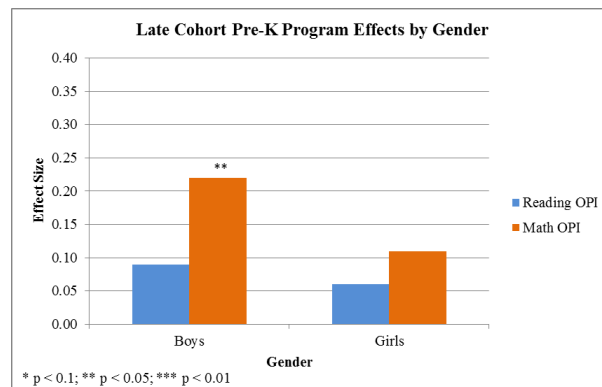
Results: Early Cohort



Results: Late Cohort



Results: Late Cohort



OBJECTIONS TO EXPANDING PRE-K

- 1. Evidence on pre-K effects is mixed
- 2. Pre-K effects “fade out” over time, thus eliminating long-term effects
- 3. NAEP scores in states with strong pre-K programs are disappointing
- 4. We cannot afford it

Objection # 1

- Objection: Evidence on pre-K effects is mixed
- Response: Evidence on short-term effects is strong, consistent, unequivocal. Participation in a high-quality pre-K program boosts reading and math skills.

Objection # 2

- Objection: Pre-K effects “fade out” over time.
- Response: Many of the leading studies show fade-out, as charged by critics, but also show long-term positive impacts on high school graduation rates, college attendance rates, adult earnings, and criminal justice outcomes.

Objection # 3

- Objection: NAEP scores in states with strong pre-K programs are disappointing
- Response: Some truth to that, but NAEP trends depend on lots of factors, including K-12 spending and growth in English language learner population.

Objection # 4

- Objection: We cannot afford to spend more money on pre-K
- Response: We cannot afford *not* to spend more money on pre-K. We are lagging behind other nations in educational outcomes. Our economic growth depends on regaining our educational supremacy. A strong pre-K program is an important first step.

CONCLUSION

- High-quality pre-K enhances cognitive development in the short run
- High-quality pre-K enhances socio-emotional development in the short run
- High-quality pre-K improves long-term adult outcomes
- High-quality pre-K is an excellent investment in the next generation

Quotes

- Corporation for Economic Development (2006) – “Broadening access to preschool programs for *all* children is a cost-effective investment that pays dividends for years to come and will help ensure our states’ and our nation’s future economic prosperity.”
- Gordon Brown – Children are 20 percent of the population but 100 percent of the future!



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