

## EARLY CHILDHOOD EDUCATION: INVESTING IN THE FUTURE

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Family Impact Seminar  
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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

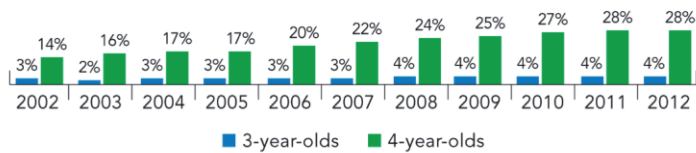
## THE CASE FOR PRESCHOOL

- 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)

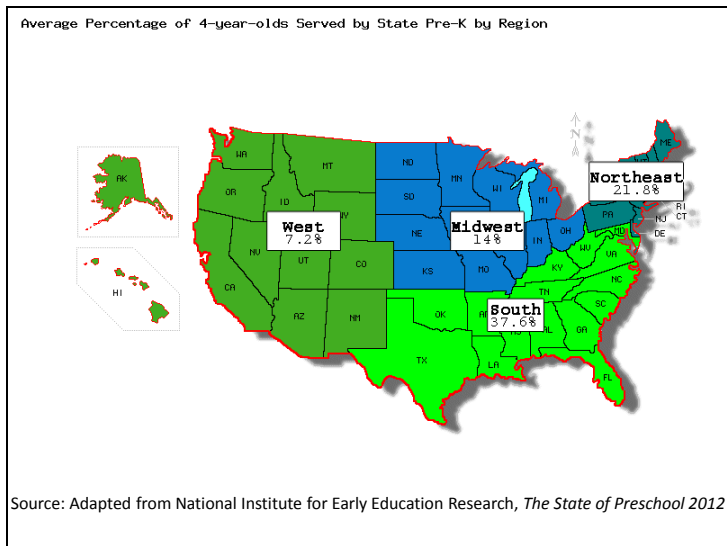
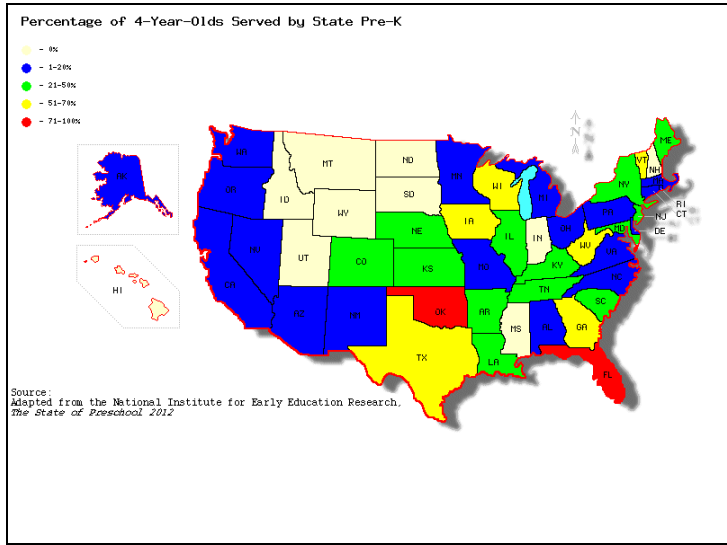
## THE CASE FOR HIGH-QUALITY PRESCHOOL

- 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

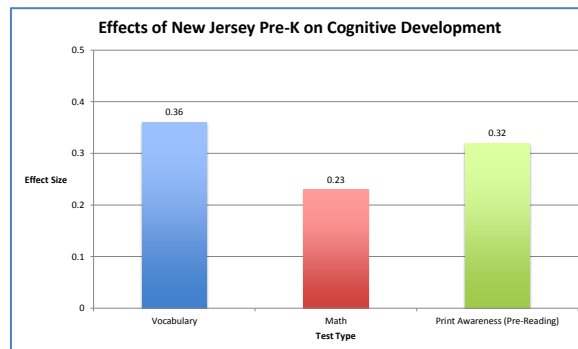
## DOES PRE-K BOOST SCHOOL READINESS?

- 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)

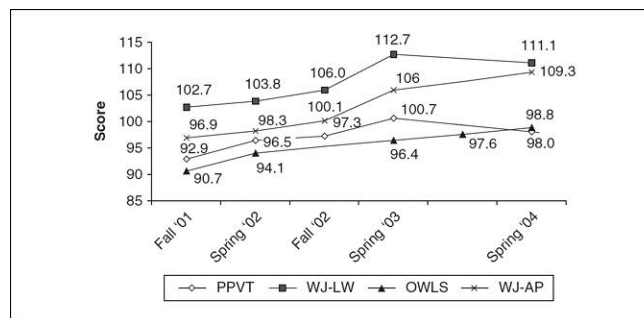


Source: Wong et al. 2007, "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs"

## 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



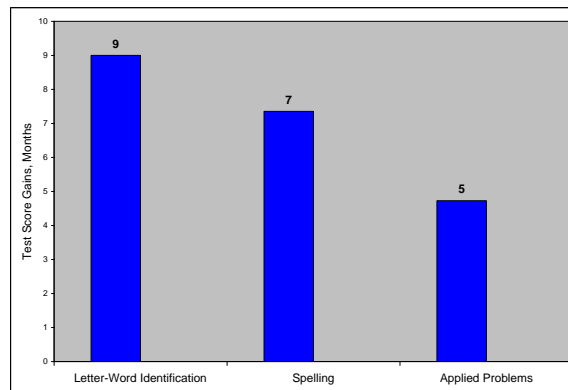
Source: Gary Henry and Dana Rickman, "The Evaluation of the Georgia Pre-K Program," Sage Publications, 2009.



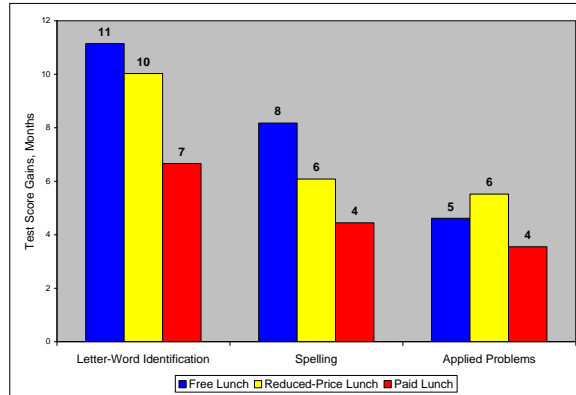
## Oklahoma Pre-K: Tulsa

- 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

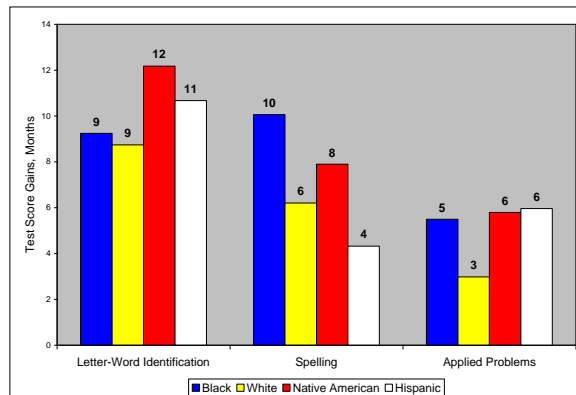
Effects of TPS Pre-K  
on Cognitive Development, in Months



### 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

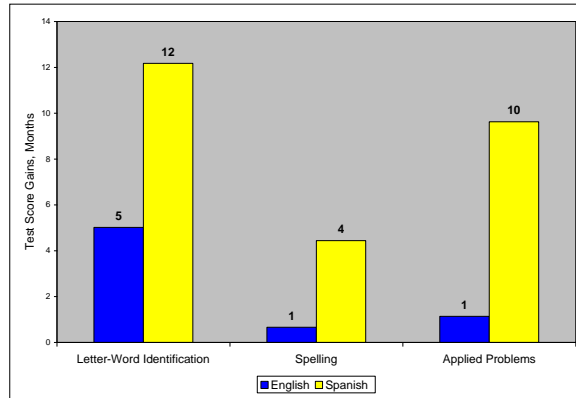
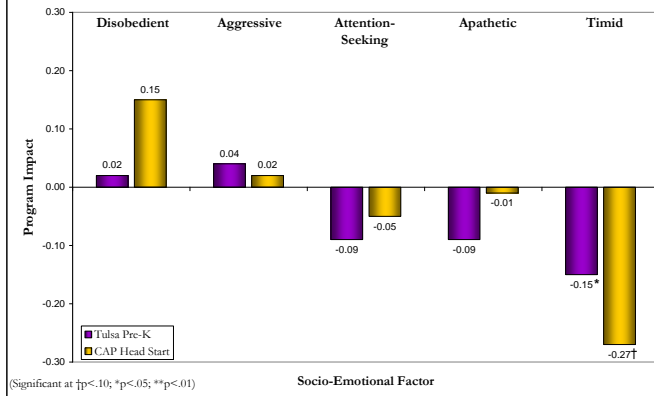
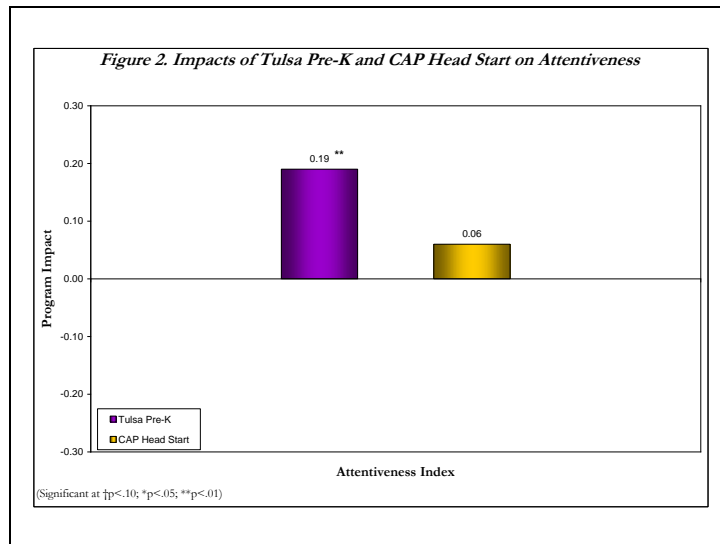


Figure 1. Impacts of Tulsa Pre-K and CAP Head Start on Behavioral Problems





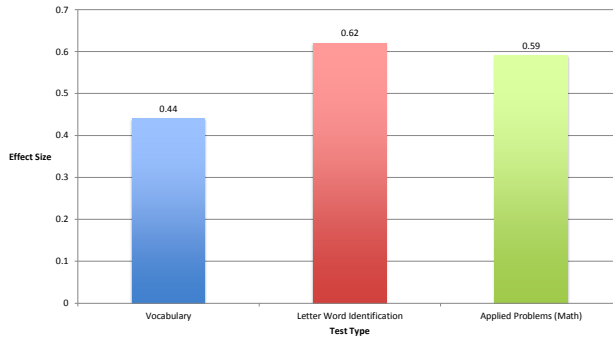
## Massachusetts: Boston Pre-K Program

- 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

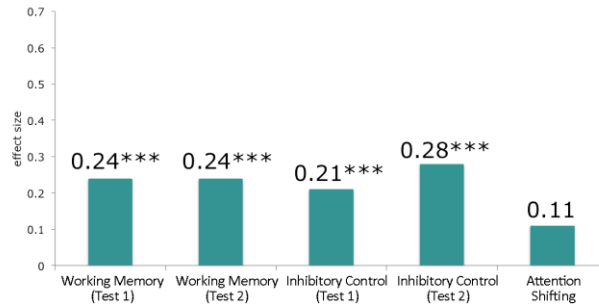


Source: Adapted from Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

# Effects of Pre-K Programs

Massachusetts – Boston Public Schools

## Effects of Boston Pre-K on Executive Functioning

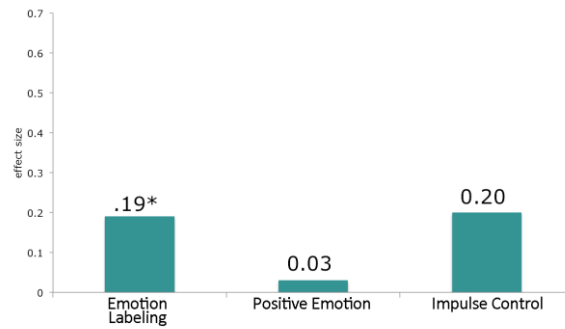


Source: Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

## Effects of Pre-K Programs

Massachusetts – Boston Public Schools

### Effects of Boston Pre-K on Emotional Development & Regulation



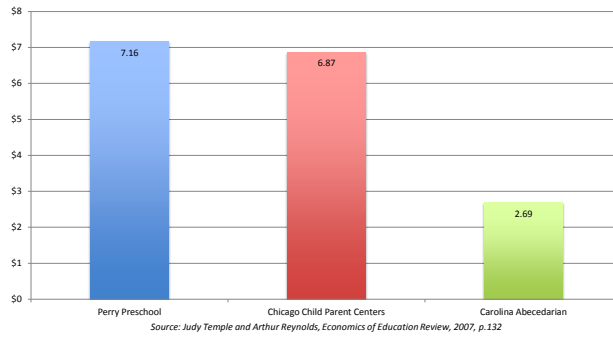
Source: Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

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

- Benefit-Cost Analyses
- Longitudinal Studies

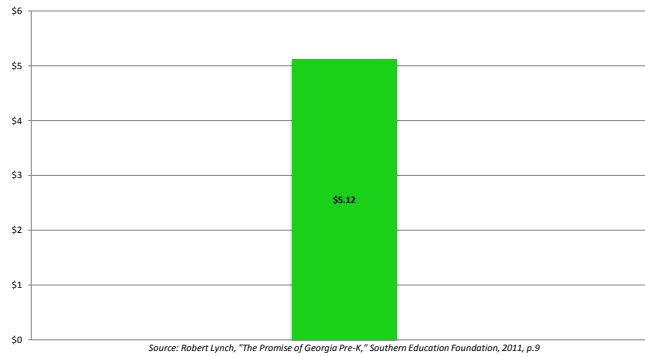
## Long-Term Effects of Mature High-Quality Pre-K Programs

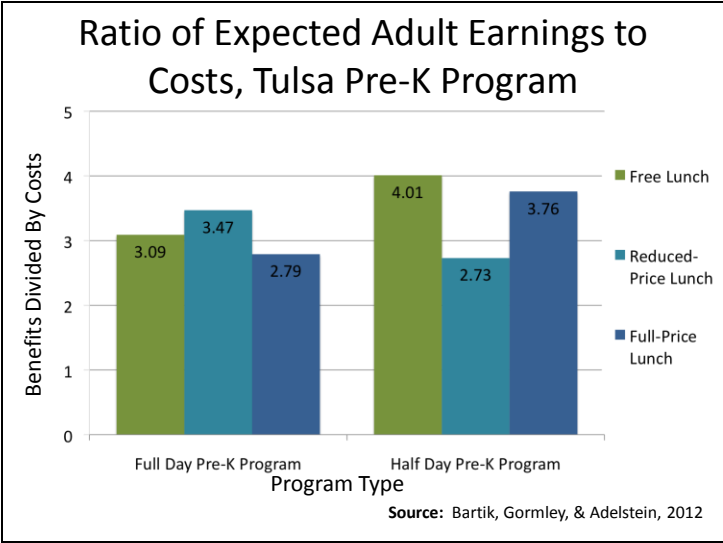
Benefit-Cost Ratios for Leading Early Childhood Programs



## Long-Term Effects of Georgia Pre-K

Return for Each Dollar Spent on Georgia Pre-K





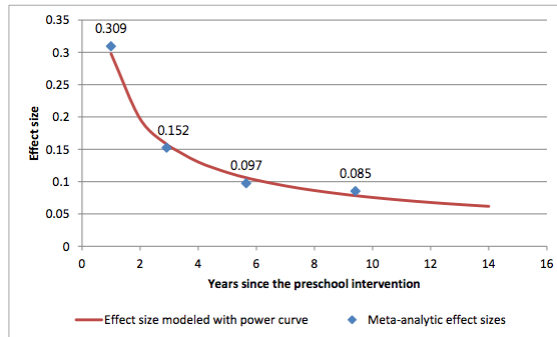
### Benefit-Cost Results: Early Childhood Education Programs for Low-Income Three- and Four-Year-Olds

	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.



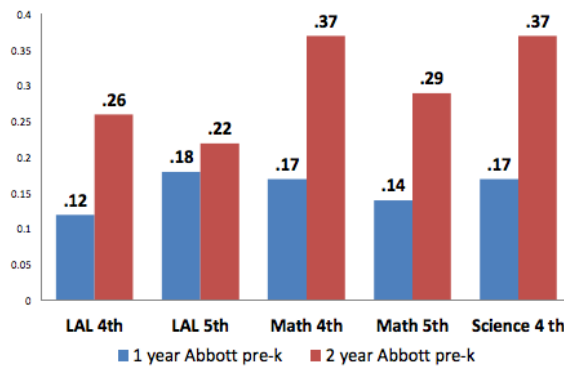
## Estimation of Test Score Fadeout: Meta-Analytic Results and Power Curve Model



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.

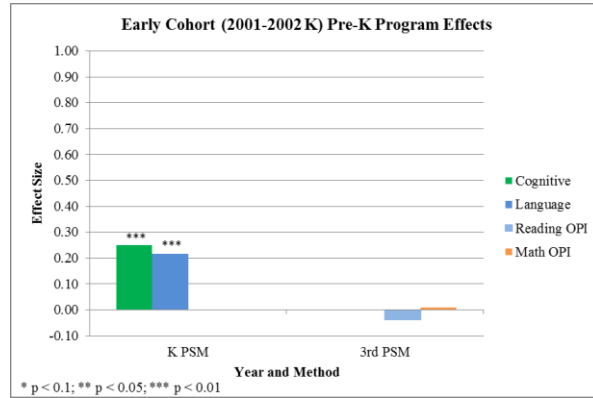
## Long-Term Effects of New Jersey Pre-K (Abbott Schools)

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

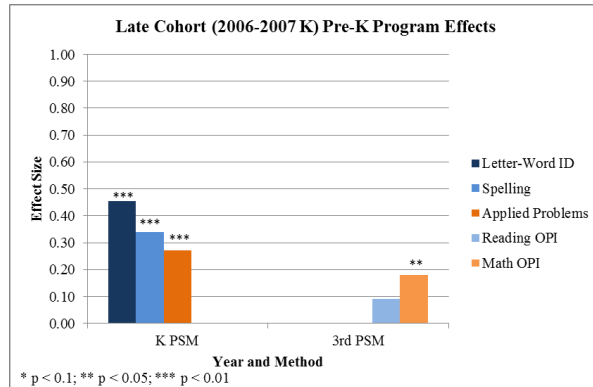


Source: Barnett et al., "Abbott Preschool Program Longitudinal Effects Study: Fifth Grade Follow-Up." NIEER Rutgers, 2013.

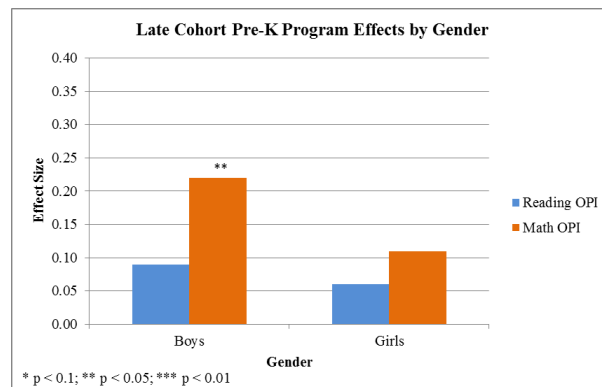
## Results: Early Cohort



## 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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