EARLY CHILDHOOD EDUCATION: INVESTING IN THE FUTURE

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Family Impact Seminar
Indianapolis, Ind., November 18, 2014

"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

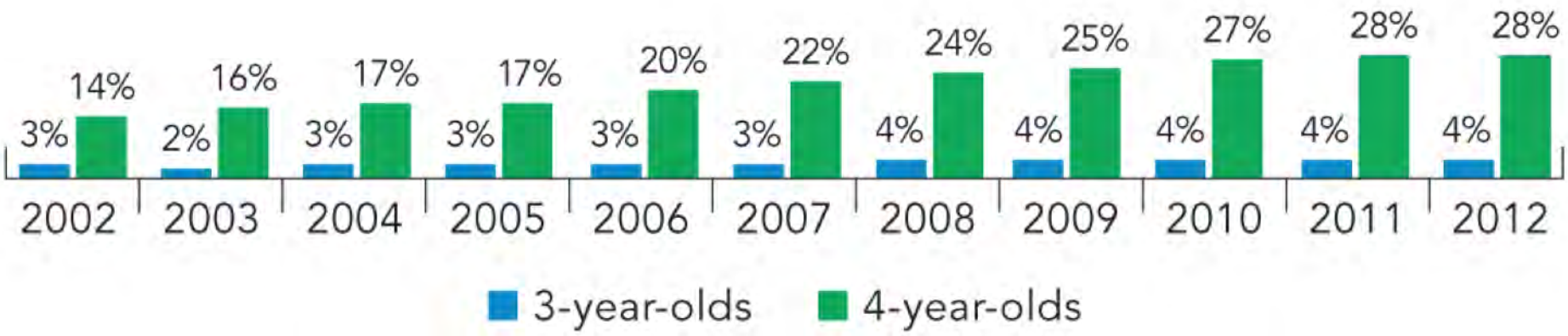
THE CASE FOR PRESCHOOL

- 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

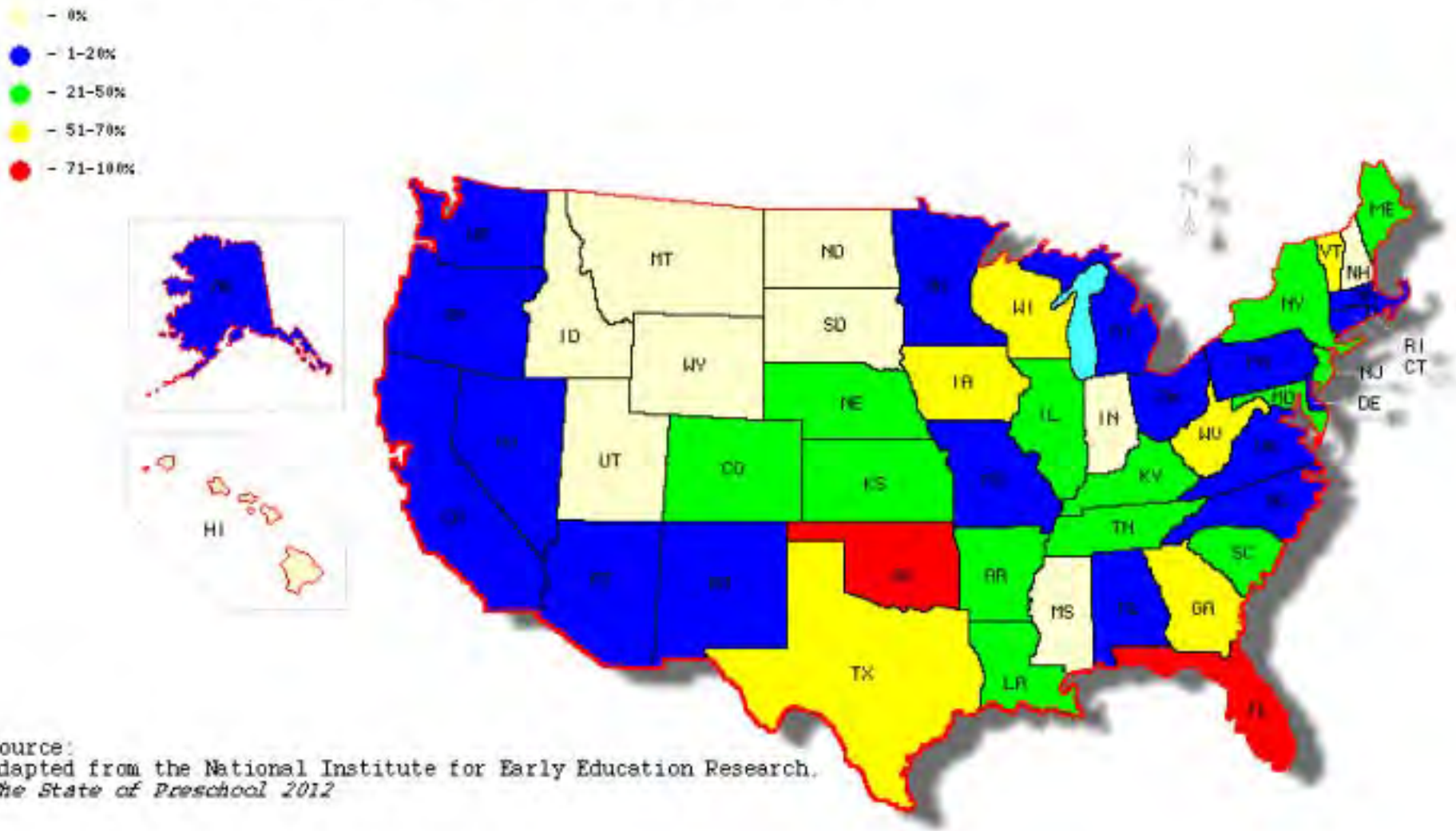
- Studies of day care centers and preschool show that quality matters
- High quality is especially important for disadvantaged children (e.g., vocabulary growth)
- We are becoming more sophisticated in our understanding of what quality looks like
- Effective interventions can reduce risks and improve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

Percent of National Population Enrolled in Pre-K



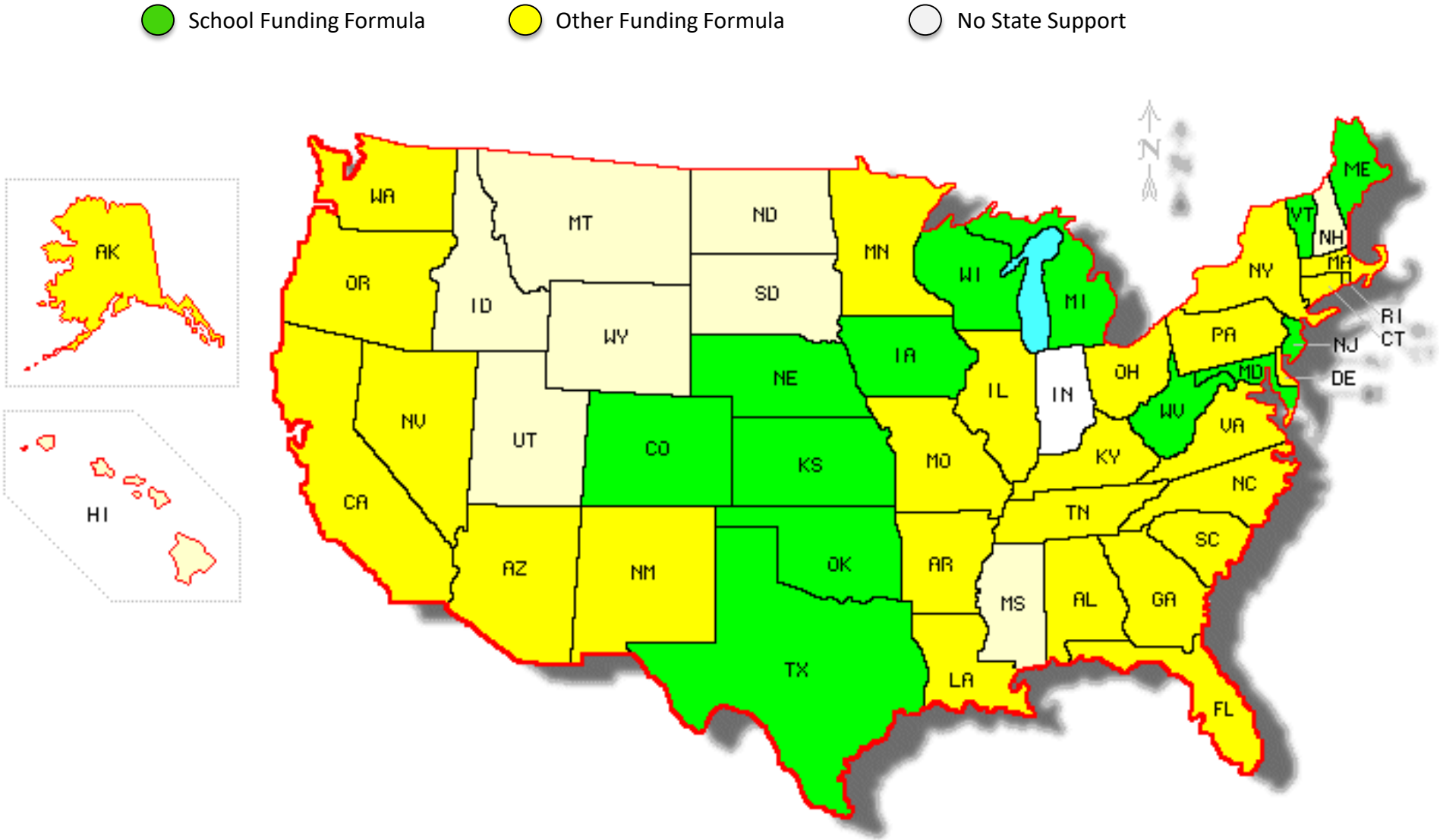
Source: National Institute for Early Education Research, *The State of Preschool 2012*

Percentage of 4-Year-Olds Served by State Pre-K



Source:
Adapted from the National Institute for Early Education Research.
The State of Preschool 2012

FUNDING MECHANISMS FOR STATE PRE-K



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 UPK 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 established universal pre-K initiative in 2014, with financial support from New York state
- Seattle, Washington voters approved UPK initiative in 2014, supported by Mayor + City Council, funded by property tax increase

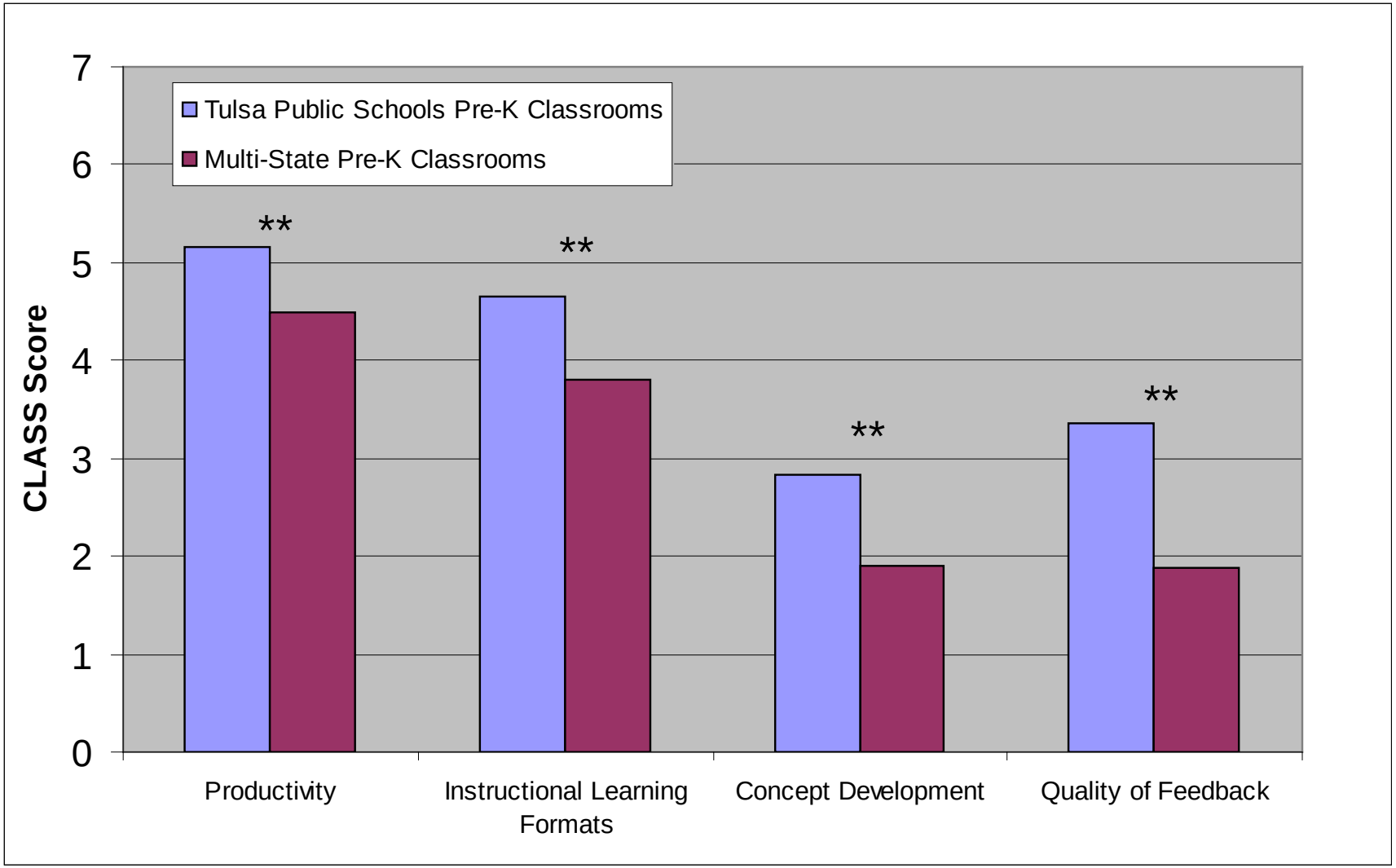
DOES PRE-K BOOST SCHOOL READINESS?

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

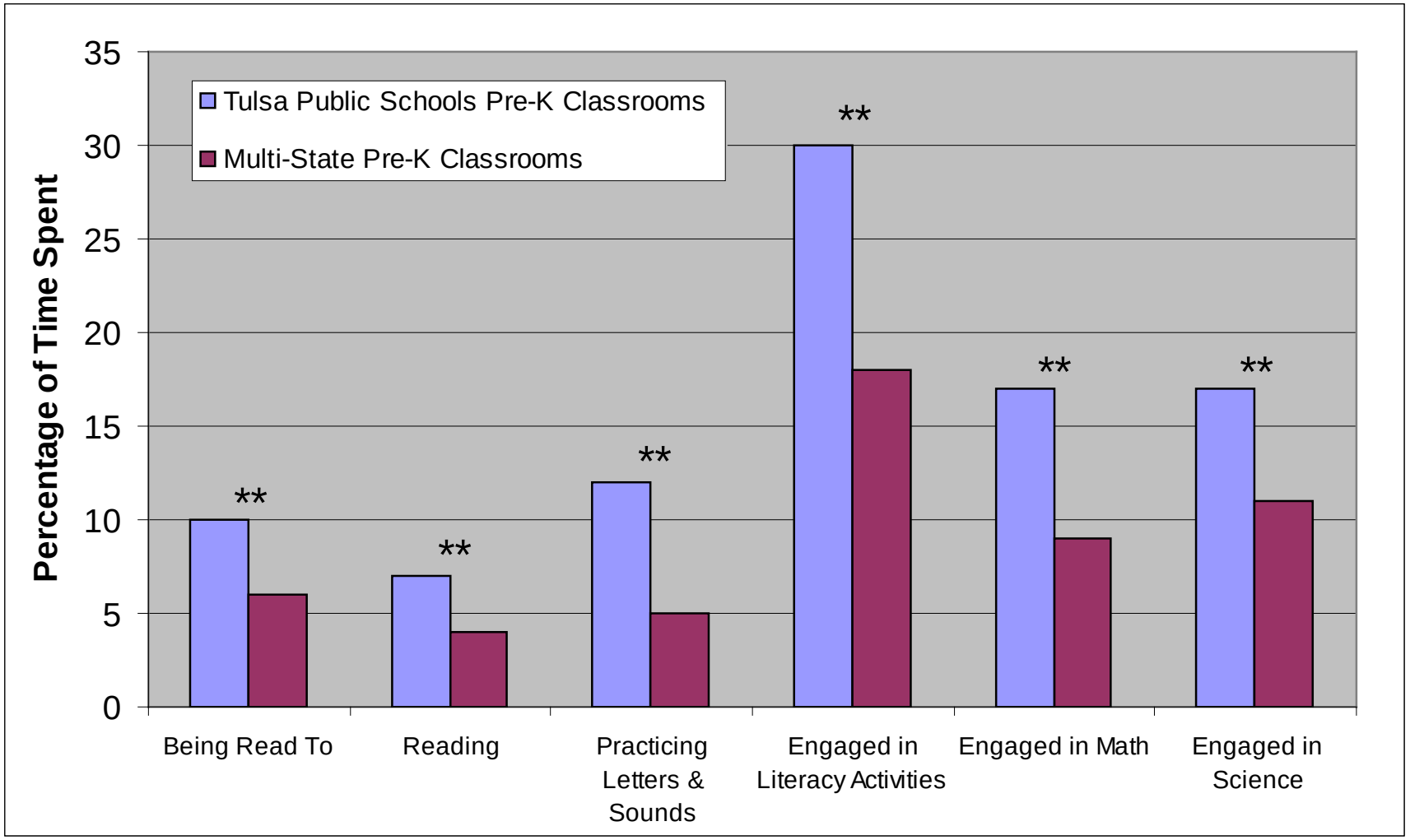
Oklahoma Pre-K: Tulsa

- Oklahoma established UPK in 1998
- Funded through school aid formula
- 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

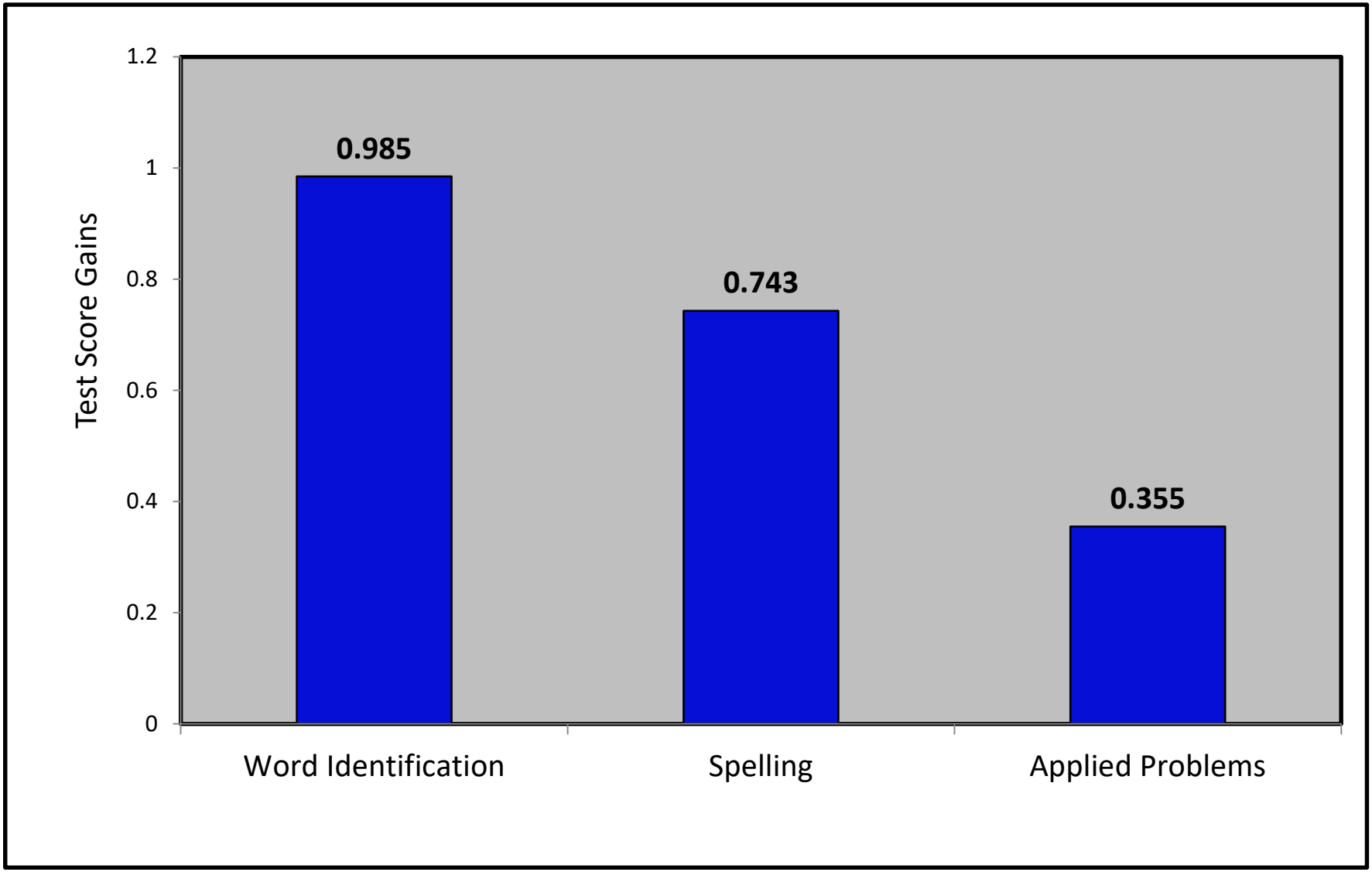
Mean Classroom Assessment Scoring System (CLASS) scores for Tulsa Public Schools pre-K classrooms (n = 71) and multi-state school-based pre-K classrooms (n = 241). †p < .10. *p < .05. **p < .01.



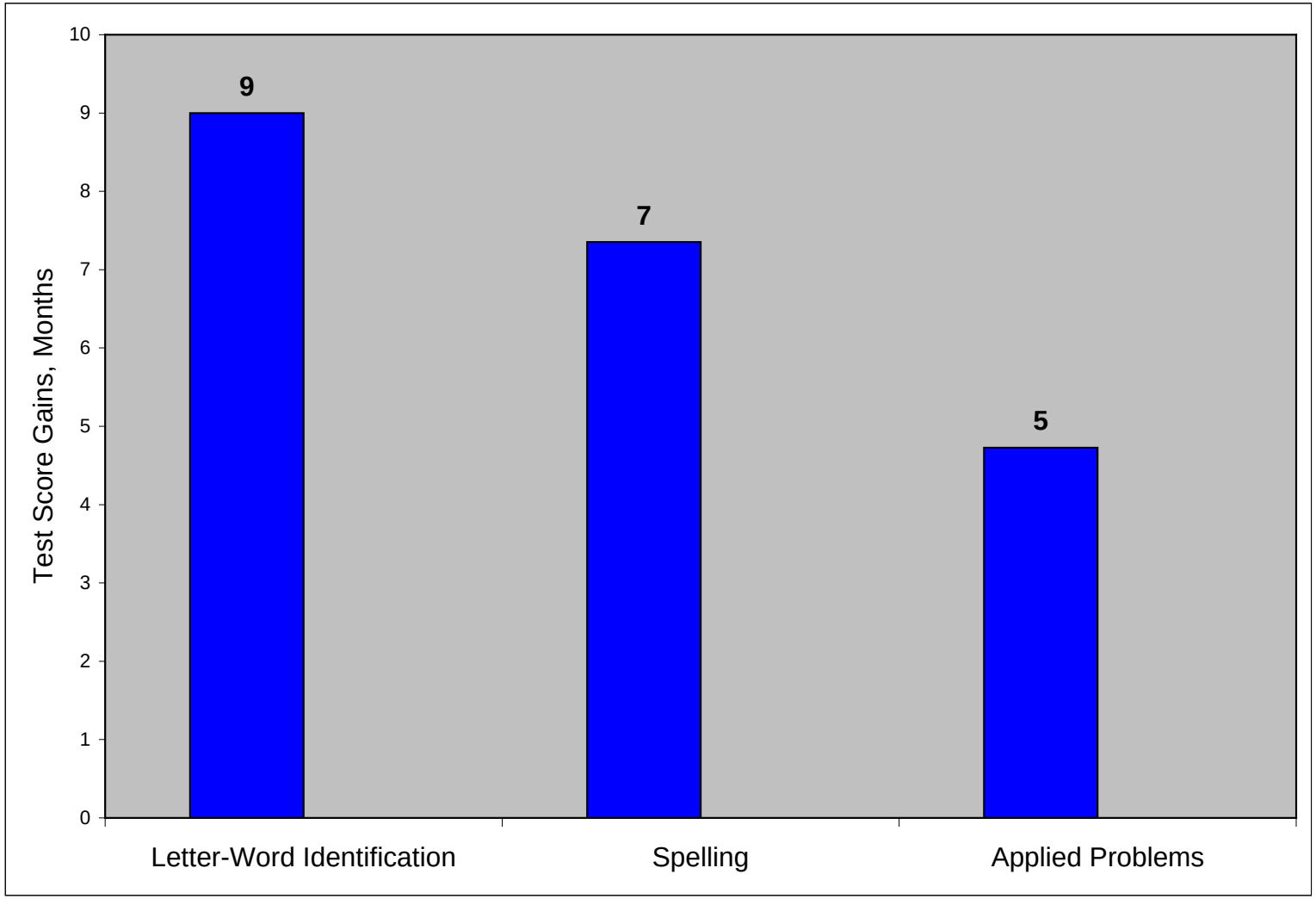
Mean Child Engagement scores from the Emerging Academics Snapshot (CE-EAS) for Tulsa Public Schools pre-K classrooms (n = 71) and multi-state school-based pre-K classrooms (n = 241). †p < .10. *p < .05. **p < .01.



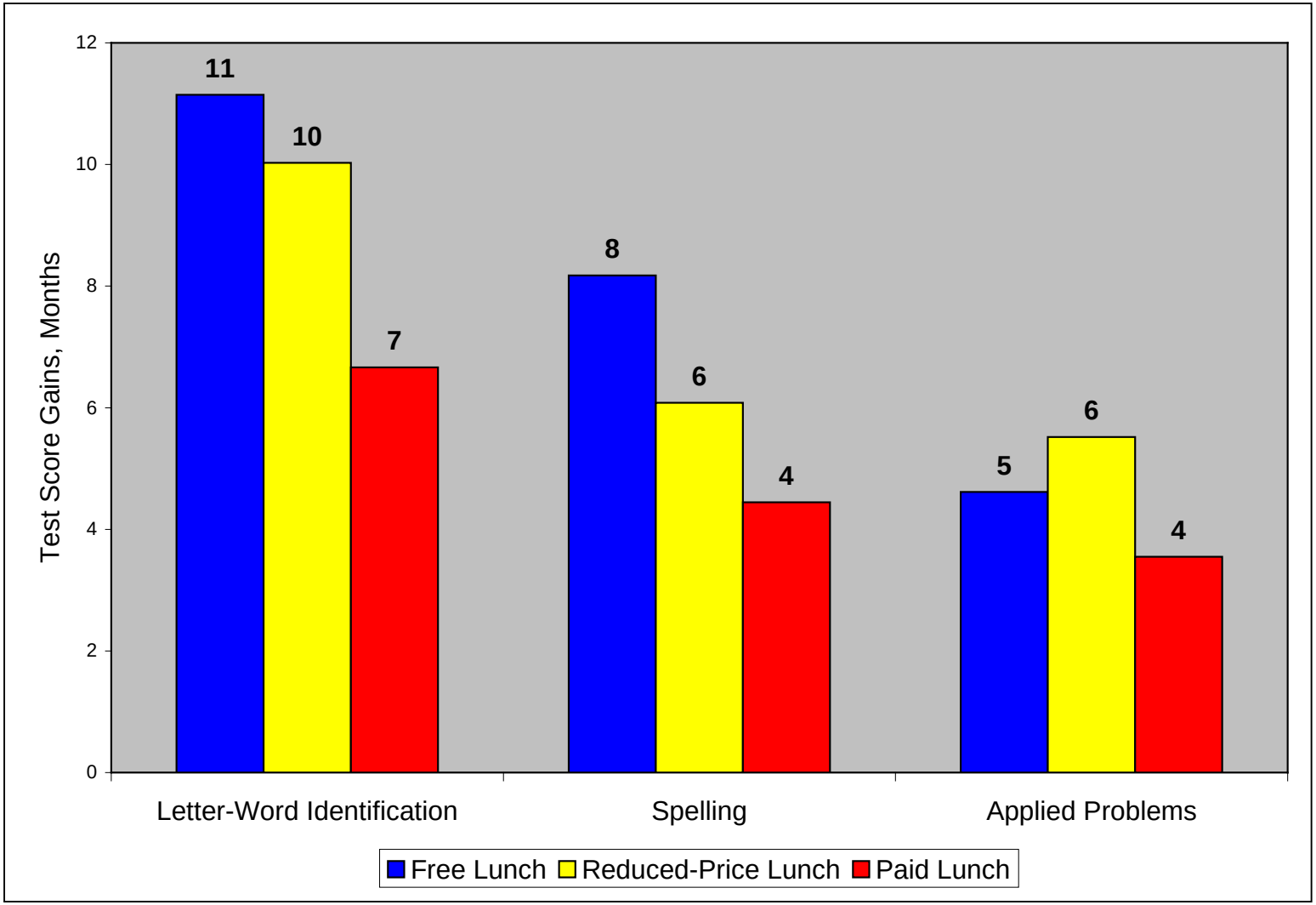
Effects of TPS Pre-K on Cognitive Development



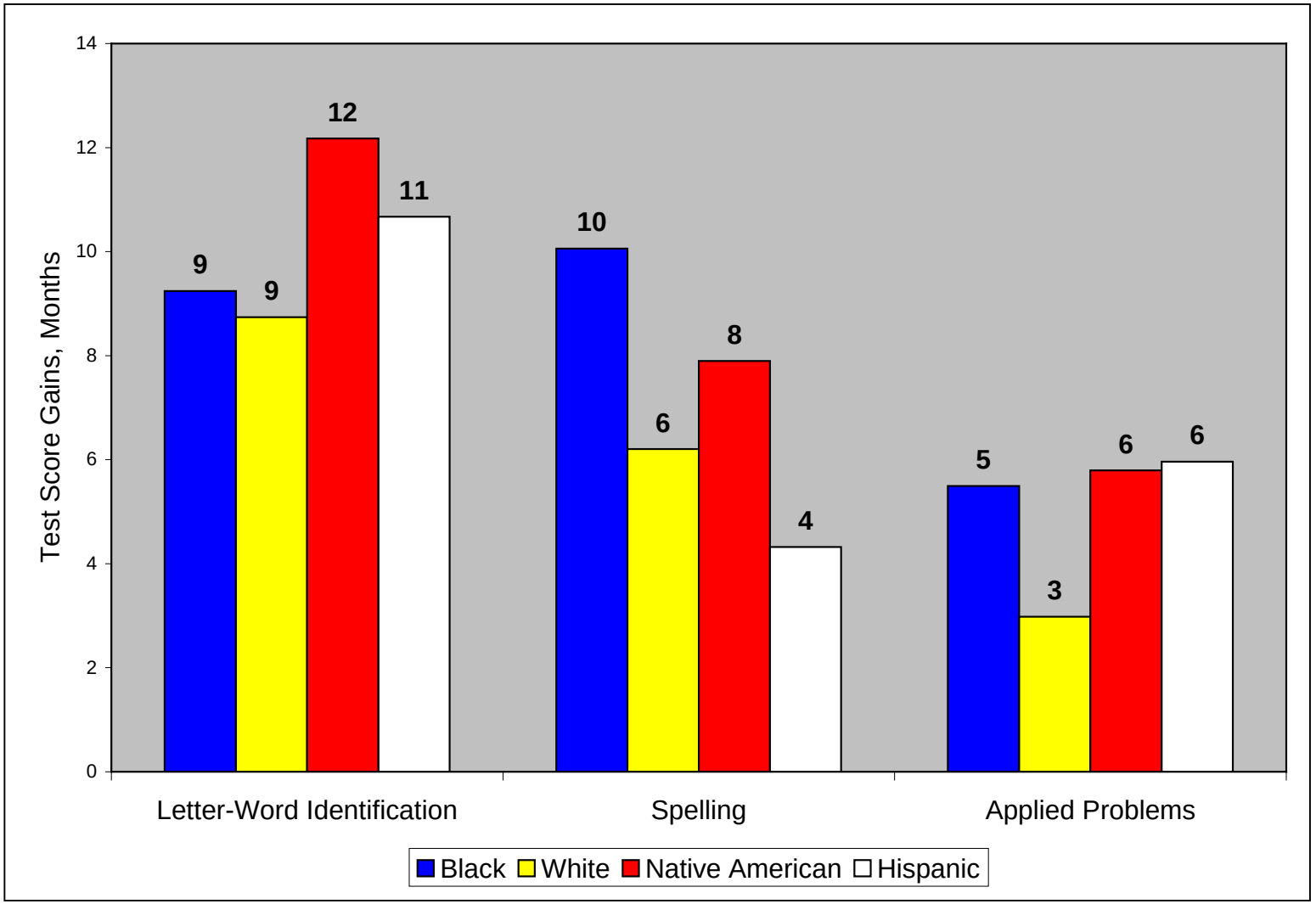
Effects of TPS Pre-K on Cognitive Development, in Months



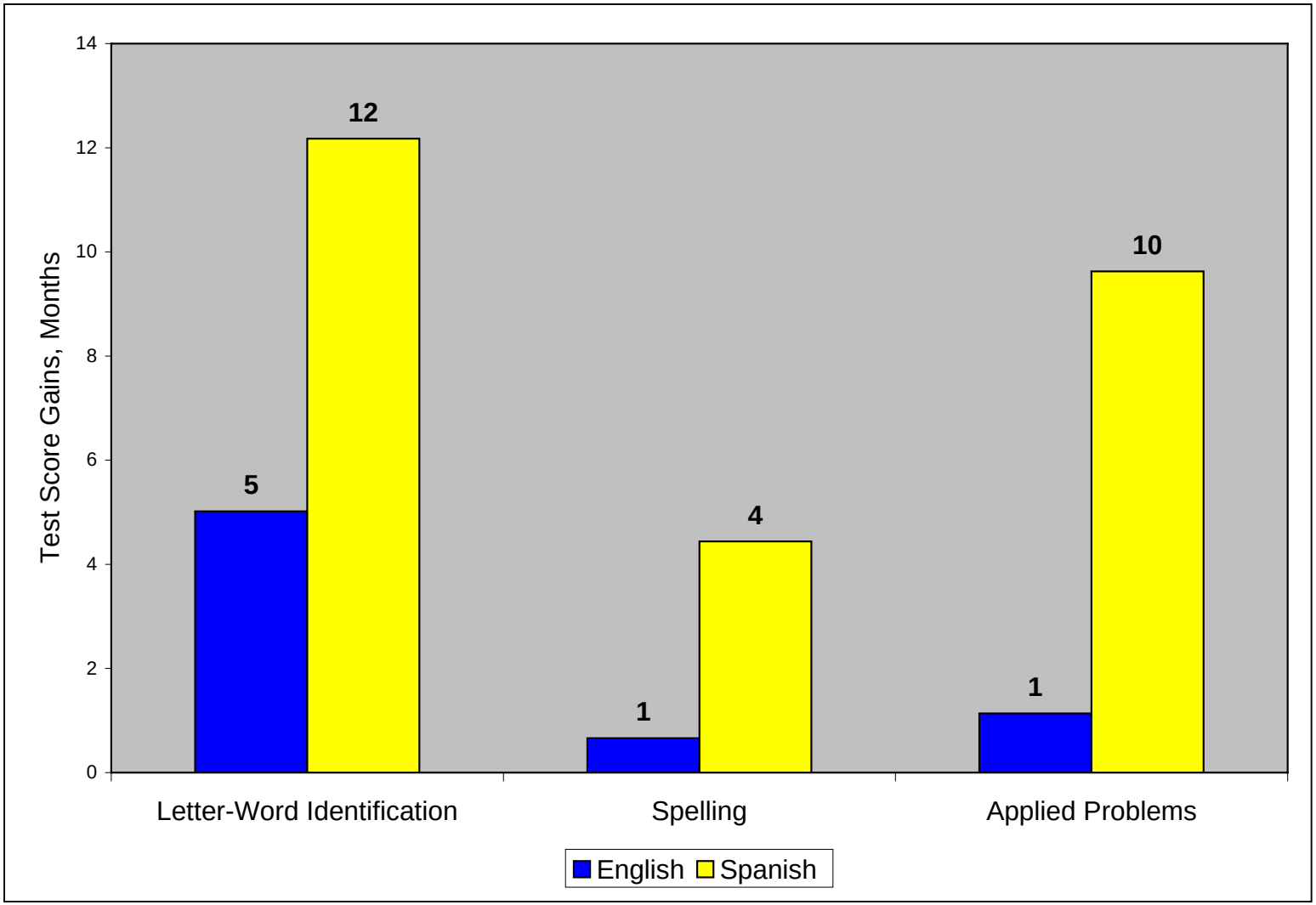
Effects of TPS Pre-K by Free Lunch Status, in Months



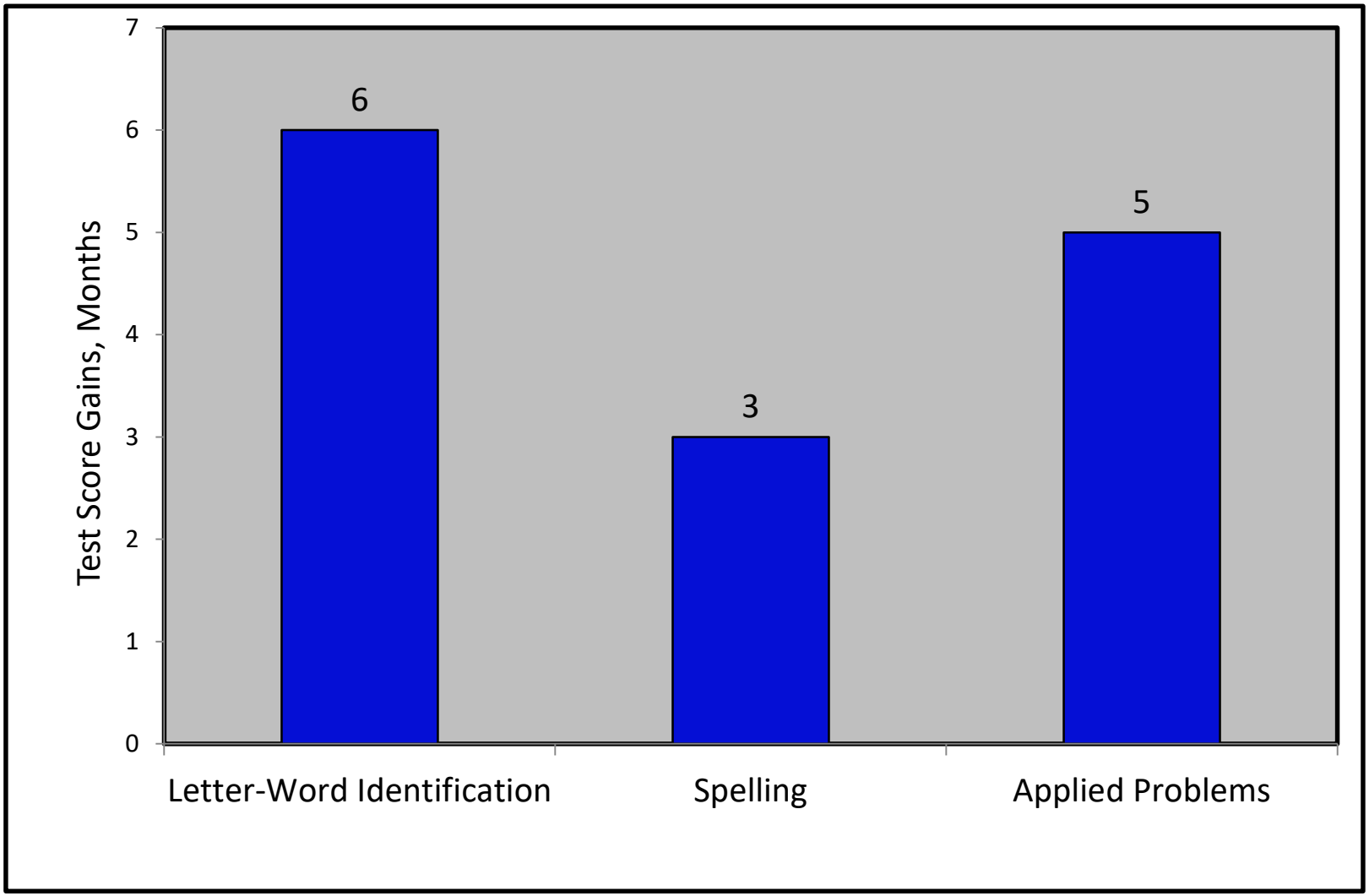
Effects of TPS Pre-K by Race/Ethnicity, in Months



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



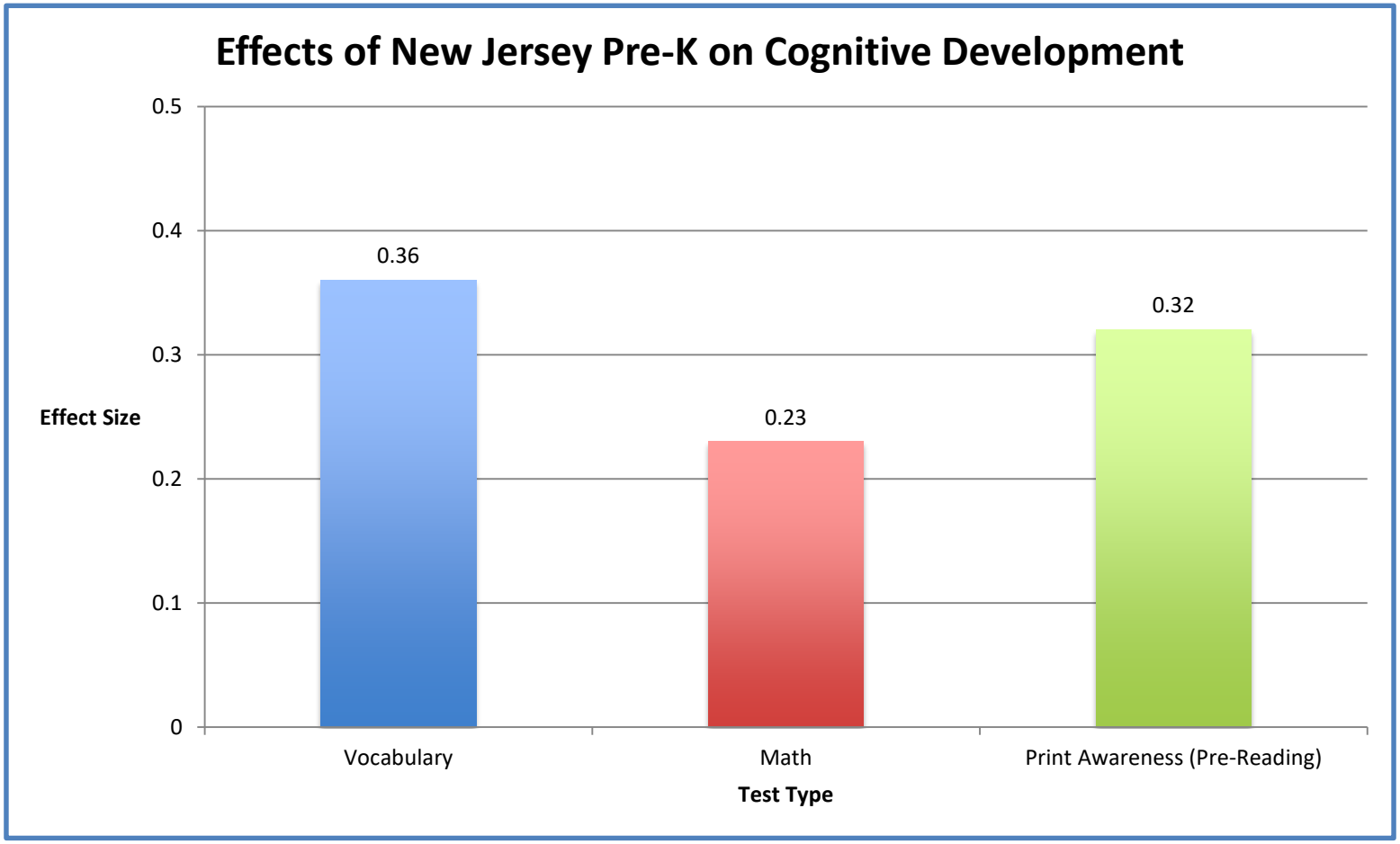
Effects of TPS Head Start on Cognitive Development, in Months



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)

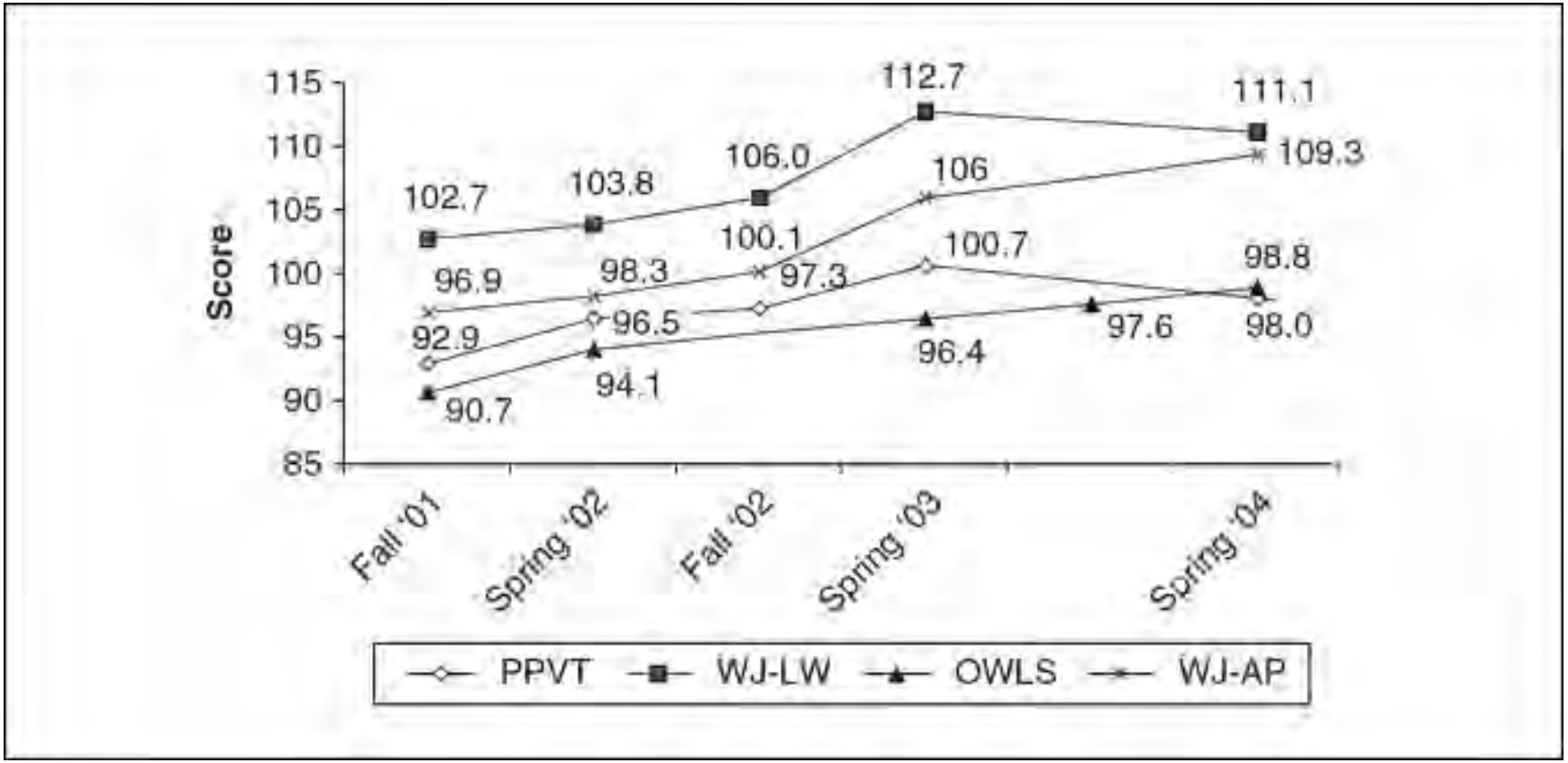


Source: Wong et al. 2007, "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs"

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



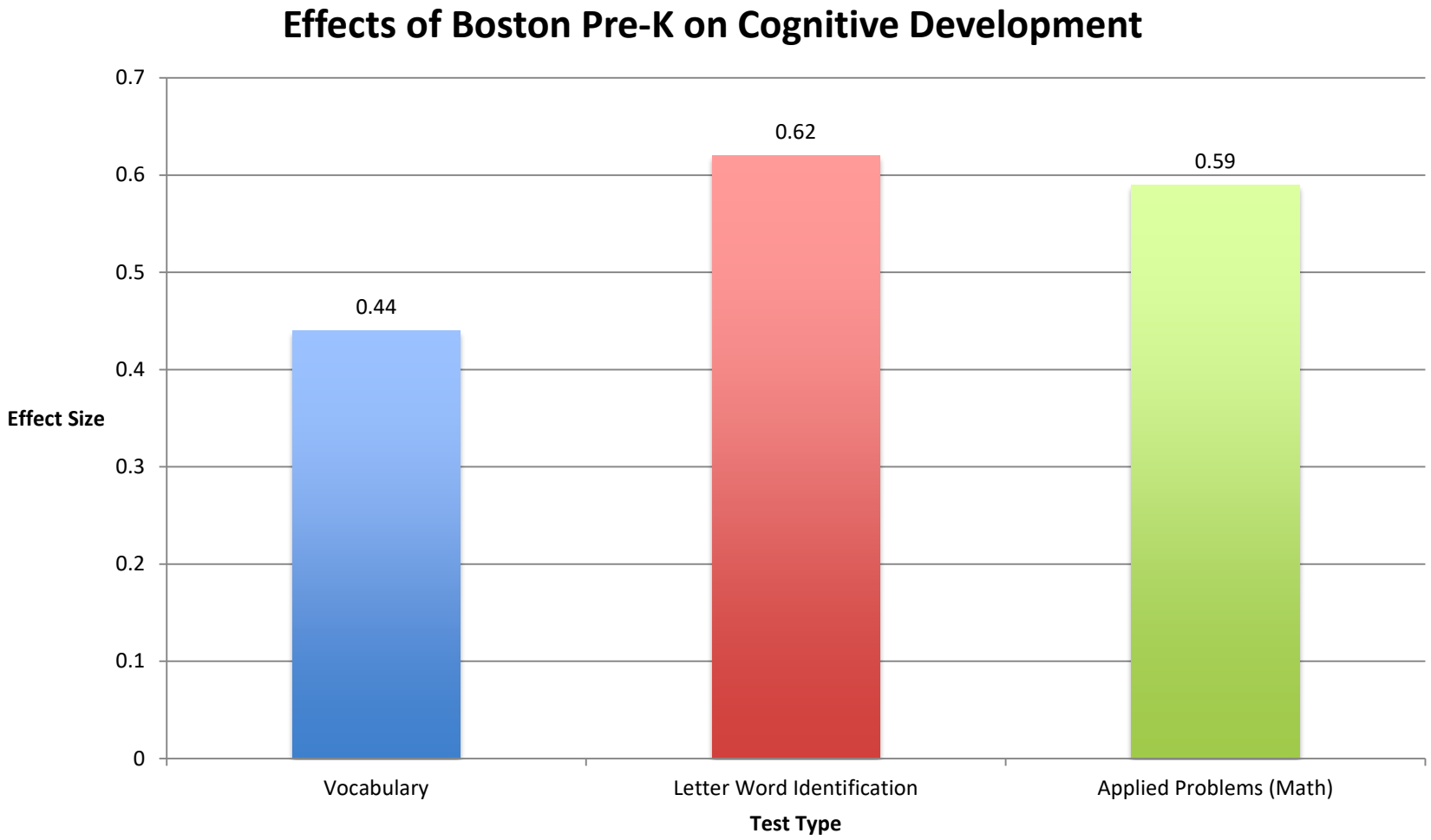
Source: Gary Henry and Dana Rickman, "The Evaluation of the Georgia Pre-K Program," Sage Publications, 2009.

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

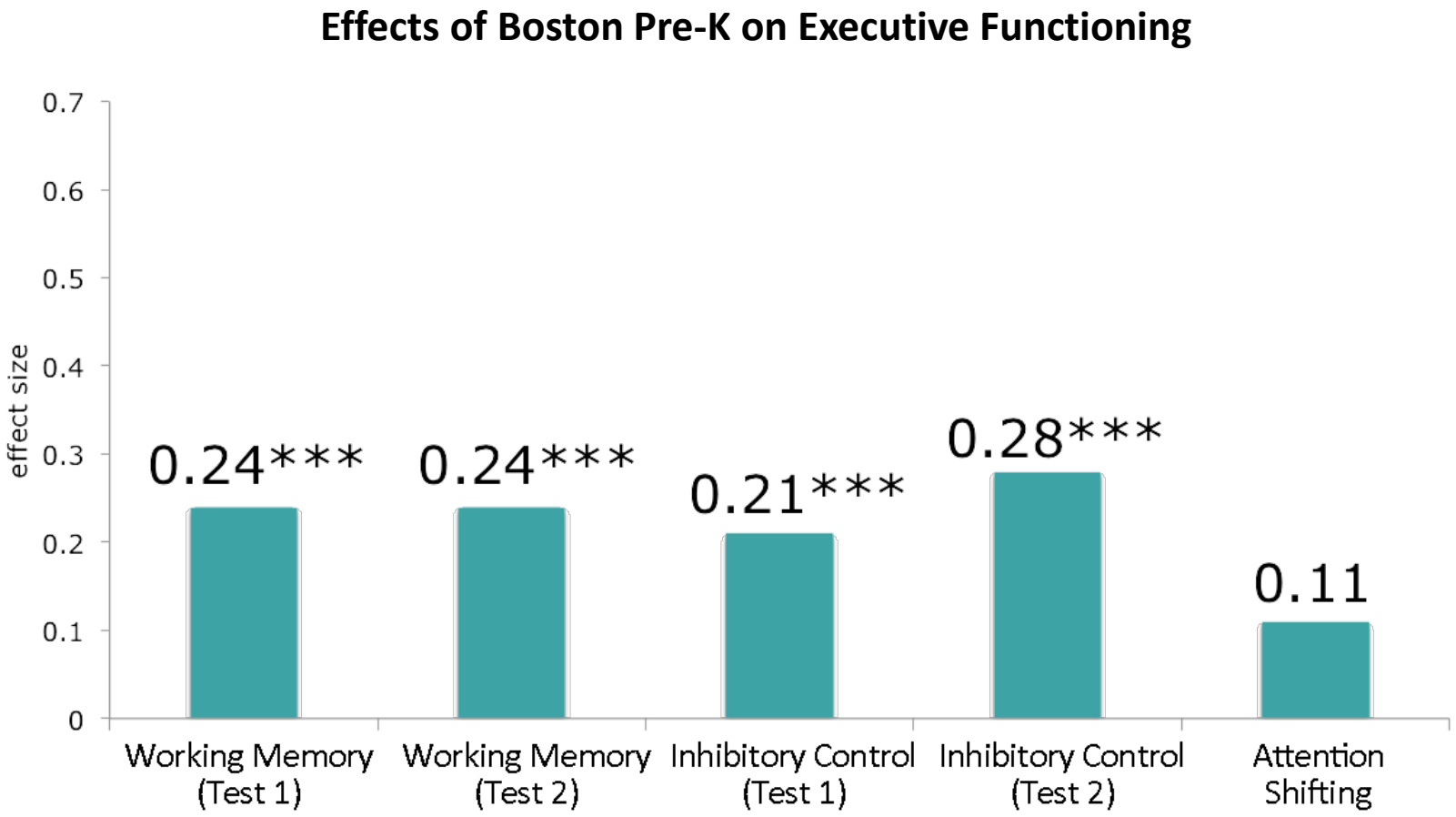
Massachusetts – Boston Public Schools



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

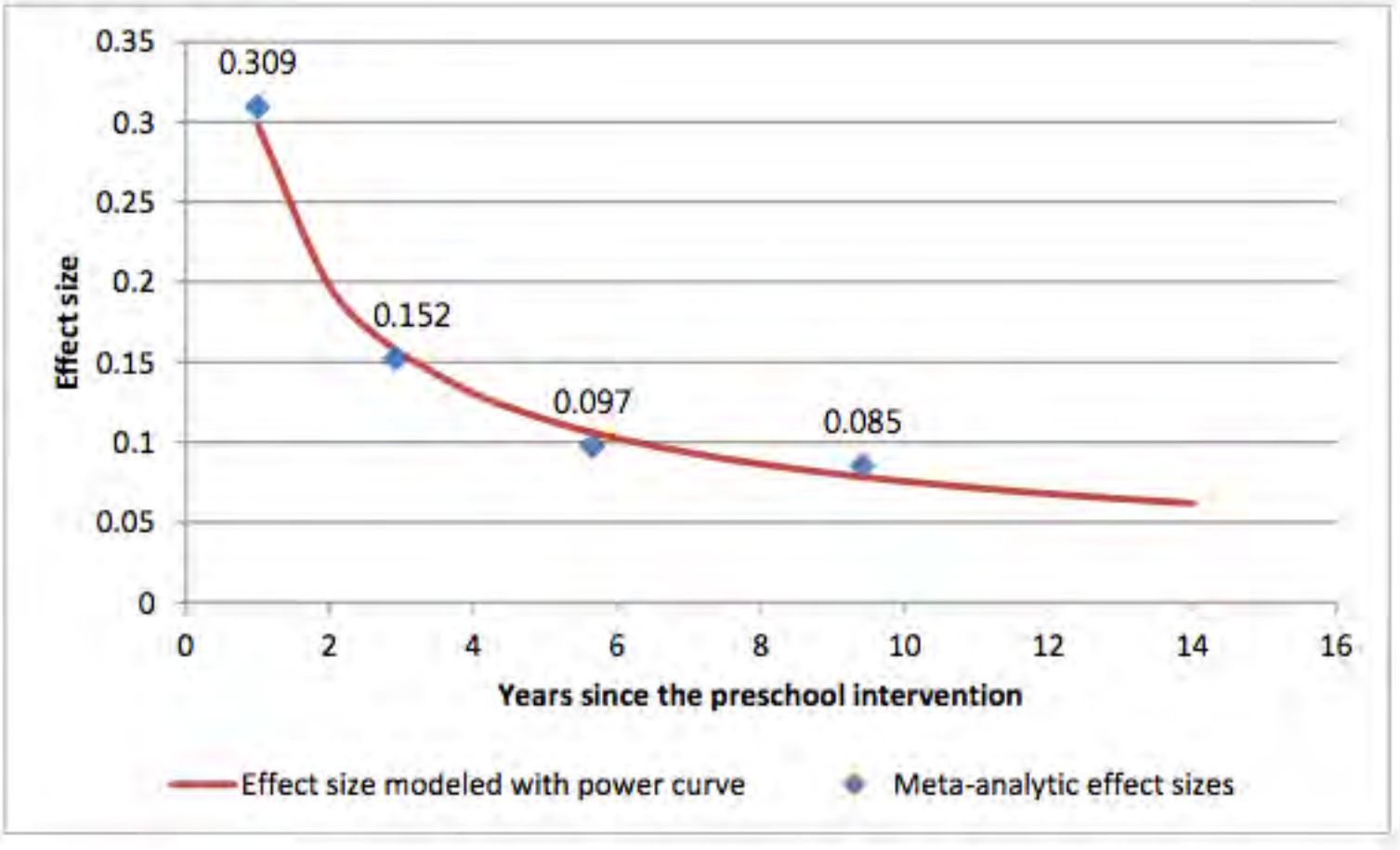


Source: Weiland, C. & Yoshikawa, H. (2013). "The impacts of an urban public prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills: Evidence from Boston." *Child Development*.

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

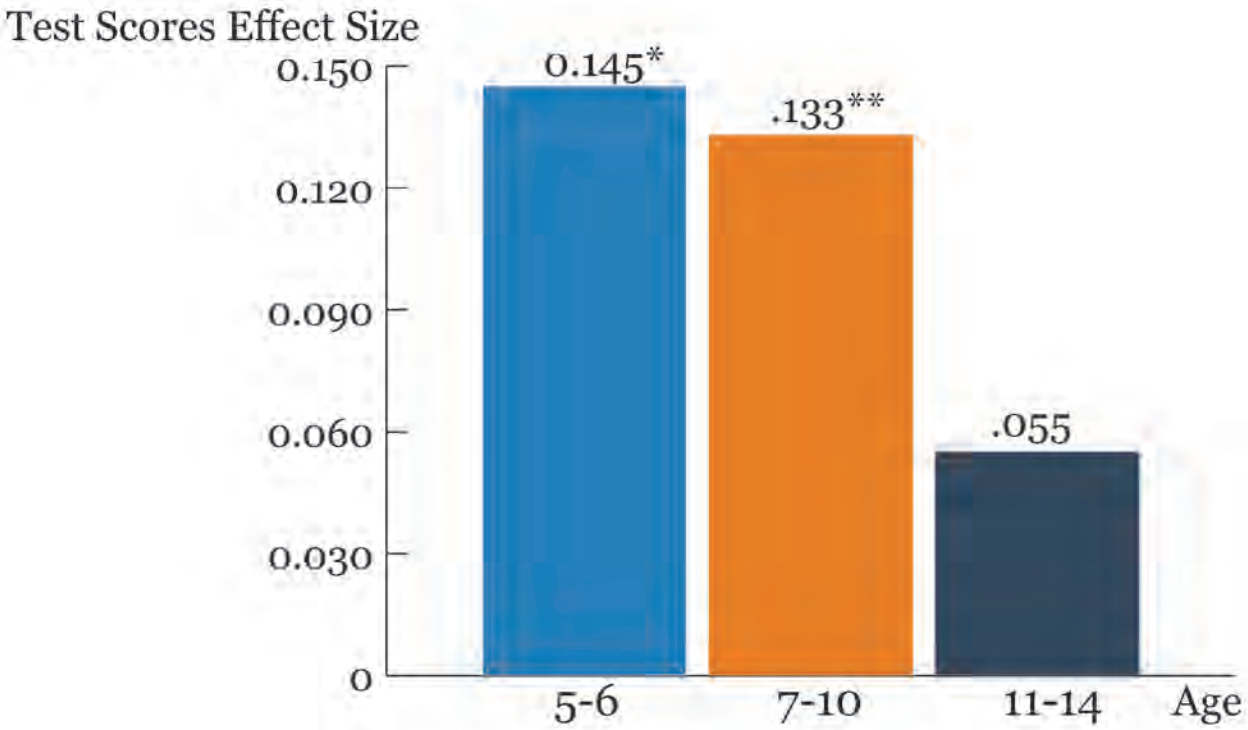
- Longitudinal Studies
- Benefit-Cost Analyses

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



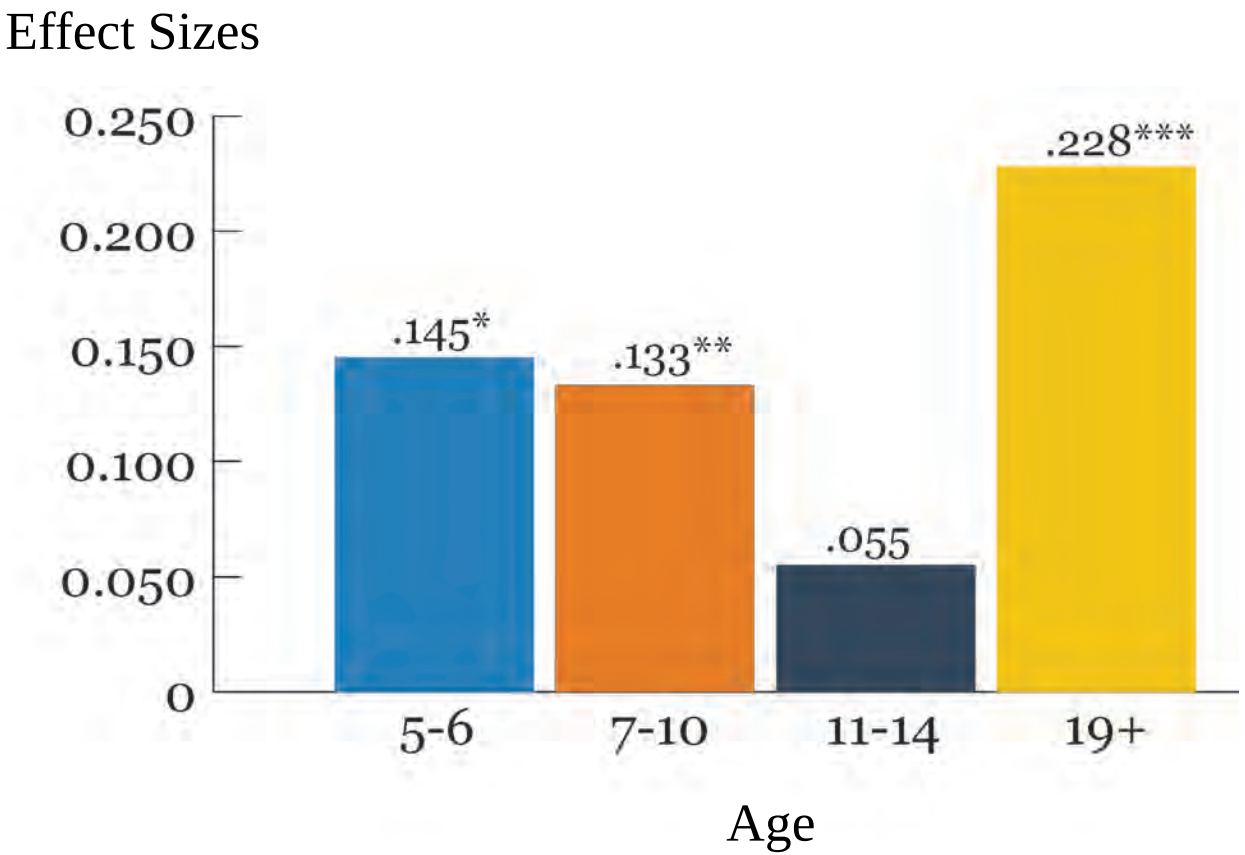
Source: “Early Childhood Education for Low-Income Students: A Review of the Evidence and Benefit-Cost Analysis” Washington State Institute for Public Policy. January 2014.

Head Start Effects: Sibling Comparison



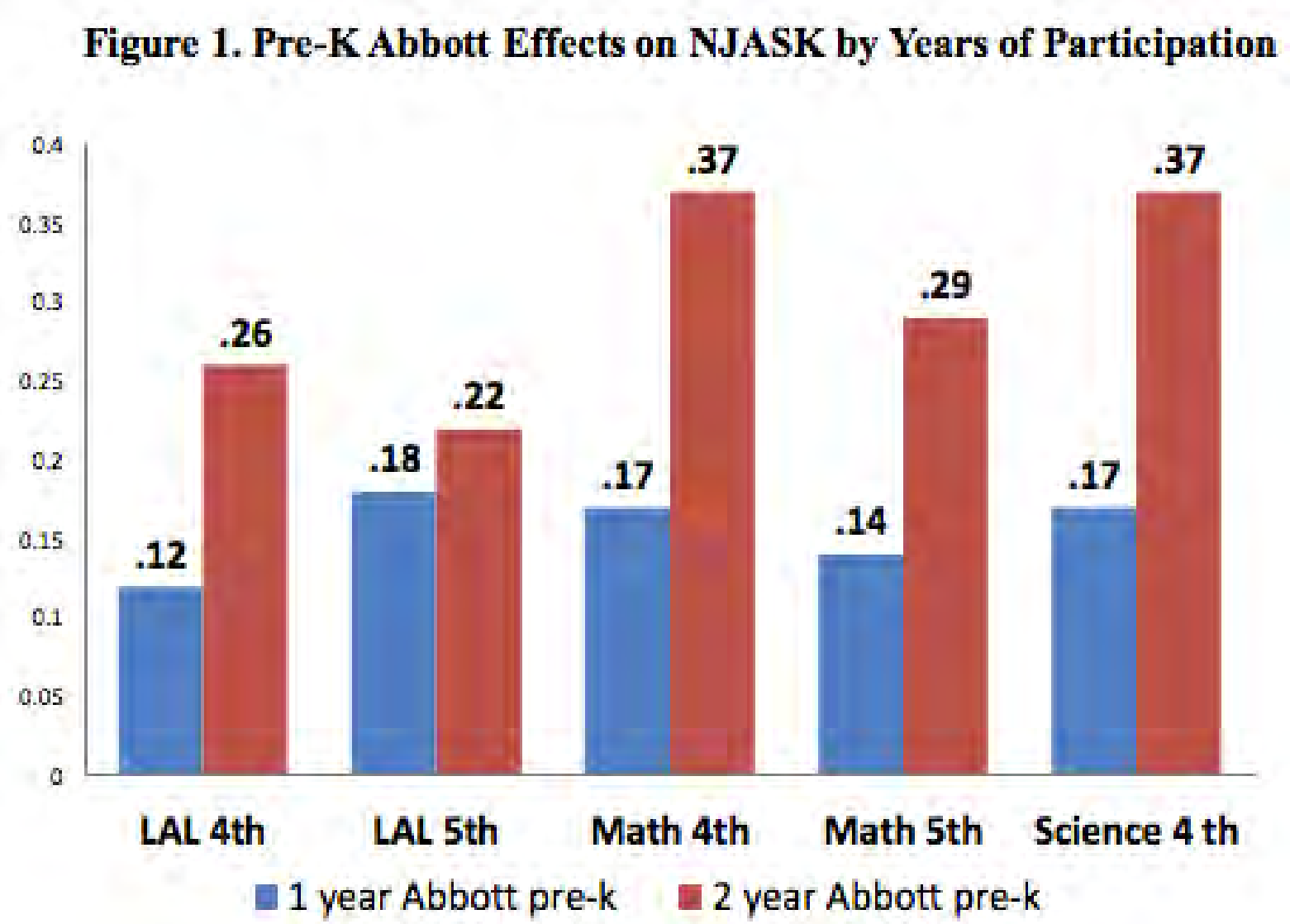
Deming. (2009). *American Economic Journal.*
**Significant at the 5 percent level.
*Significant at the 10 percent level.

Head Start Long-term Effects: Sibling Comparison



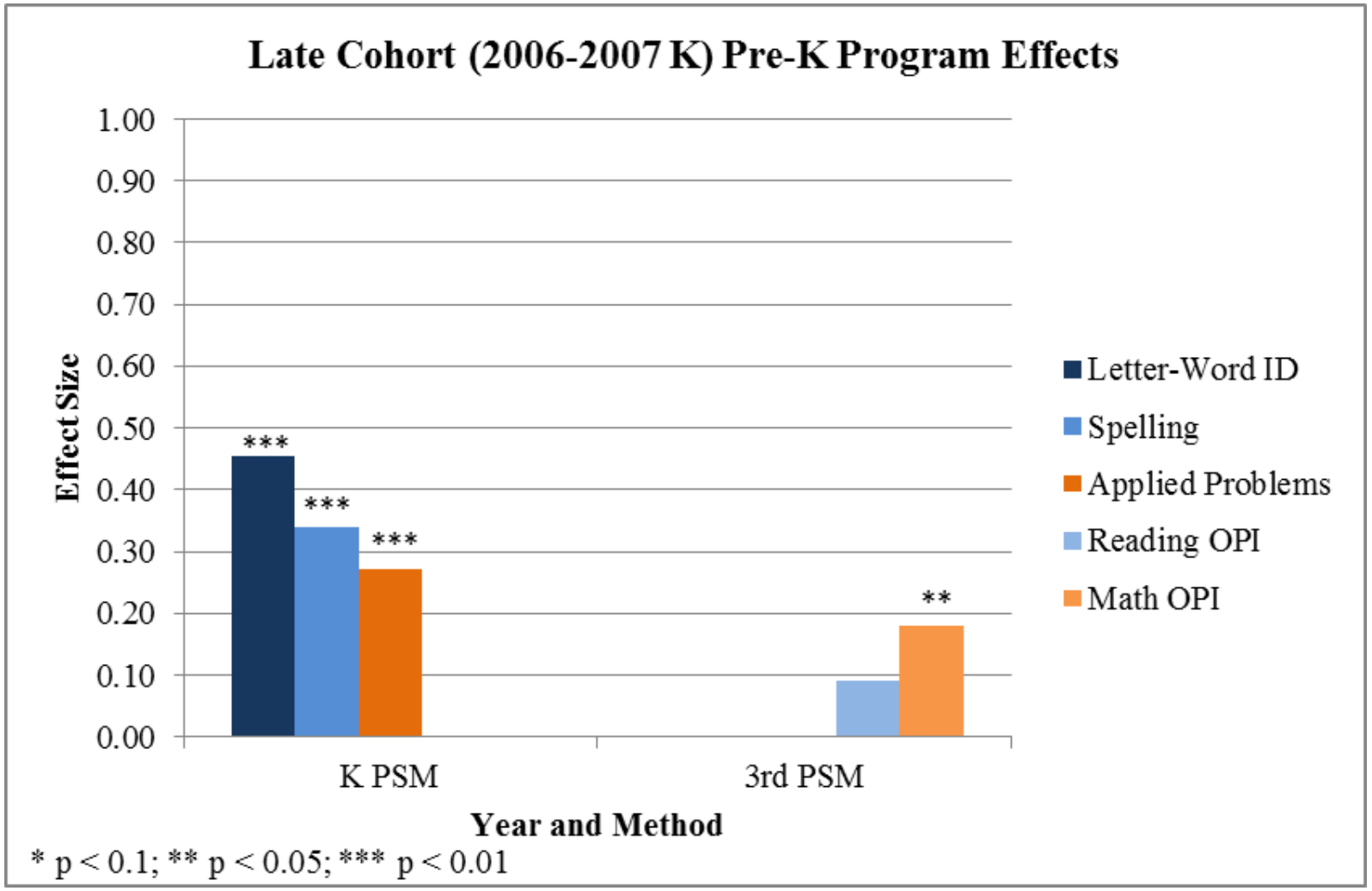
Deming. (2009). *American Economic Journal.*
***Significant at the 1 percent level.
**Significant at the 5 percent level.
*Significant at the 10 percent level.

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



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

Tulsa Results: Late Cohort



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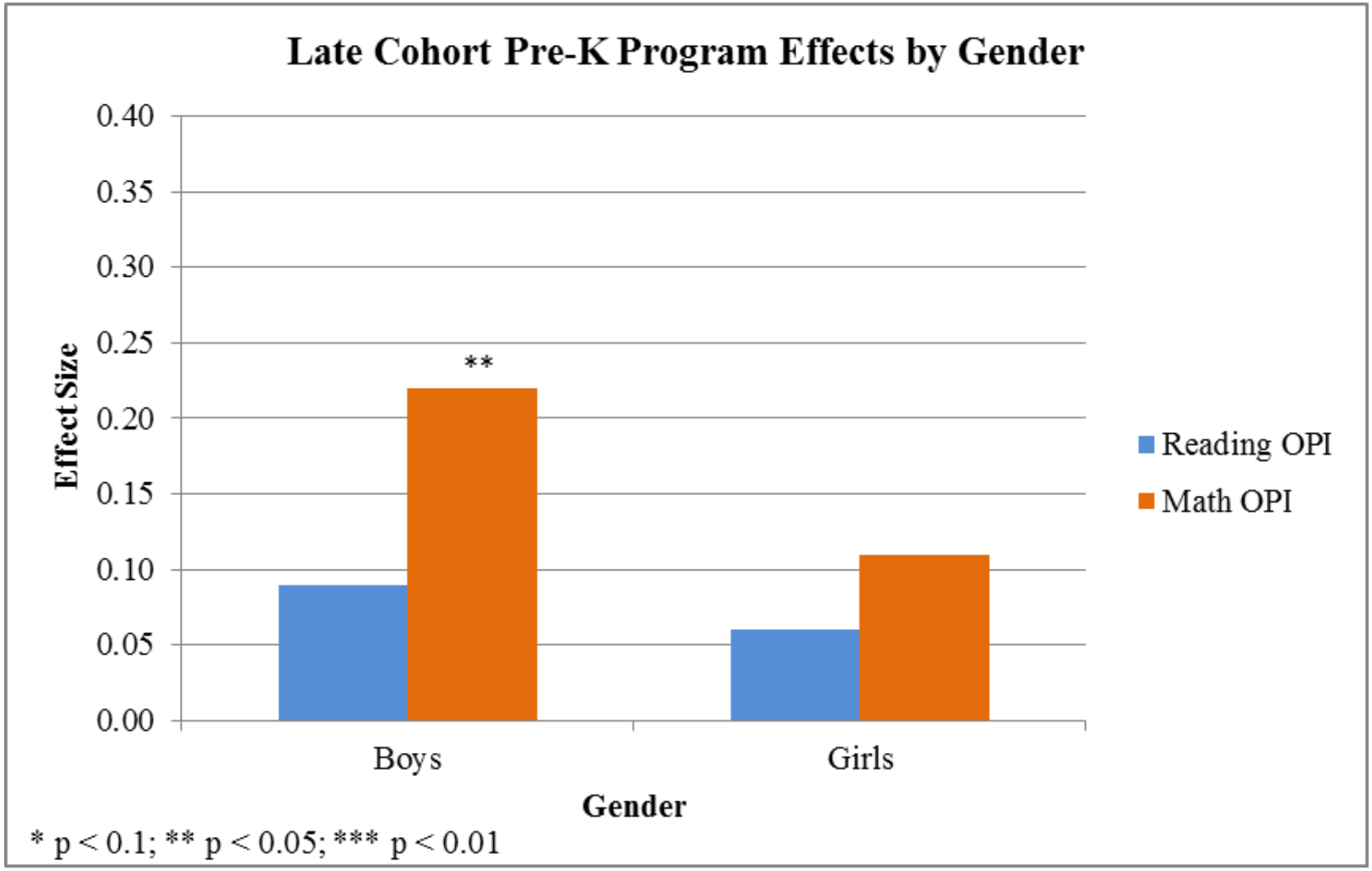
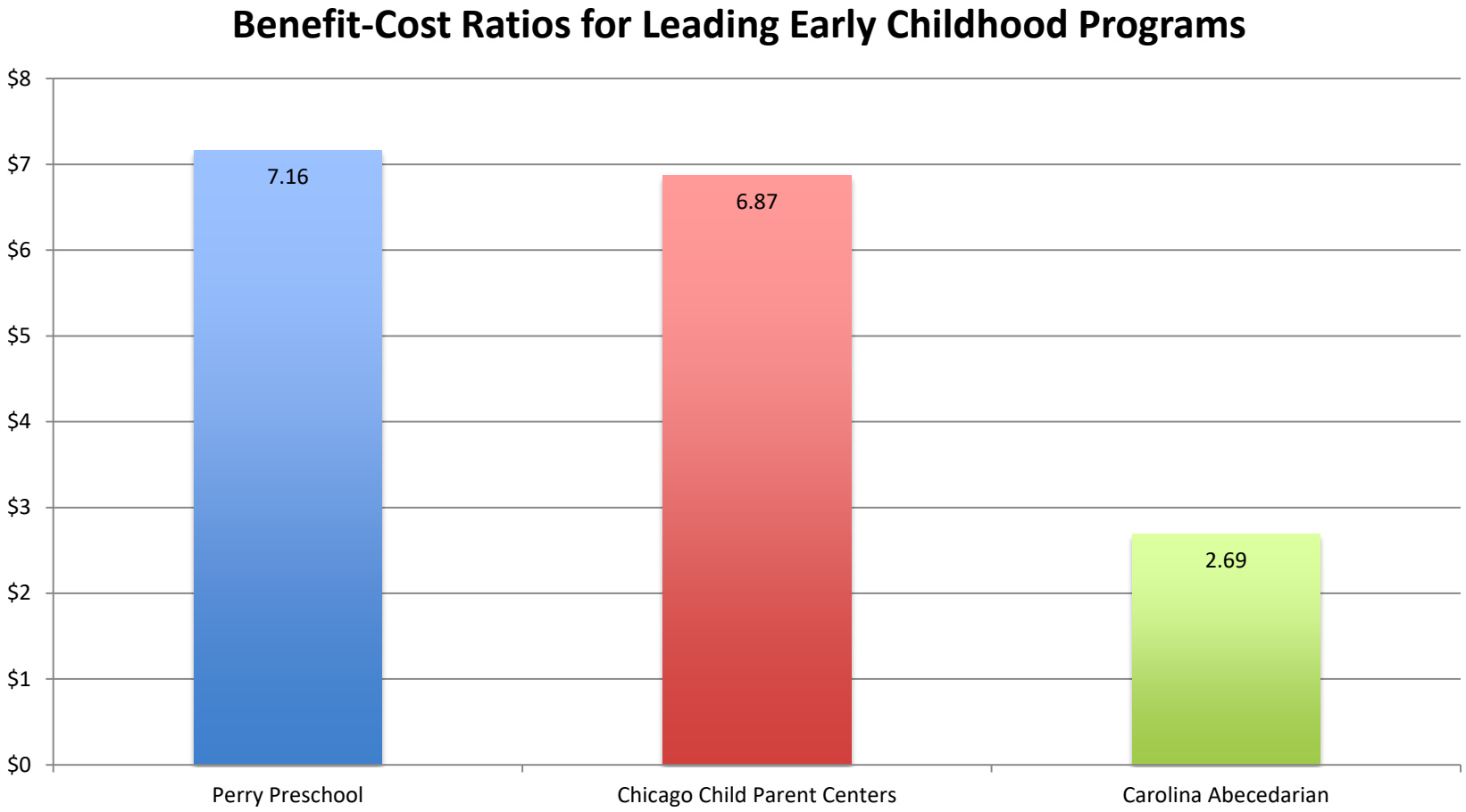
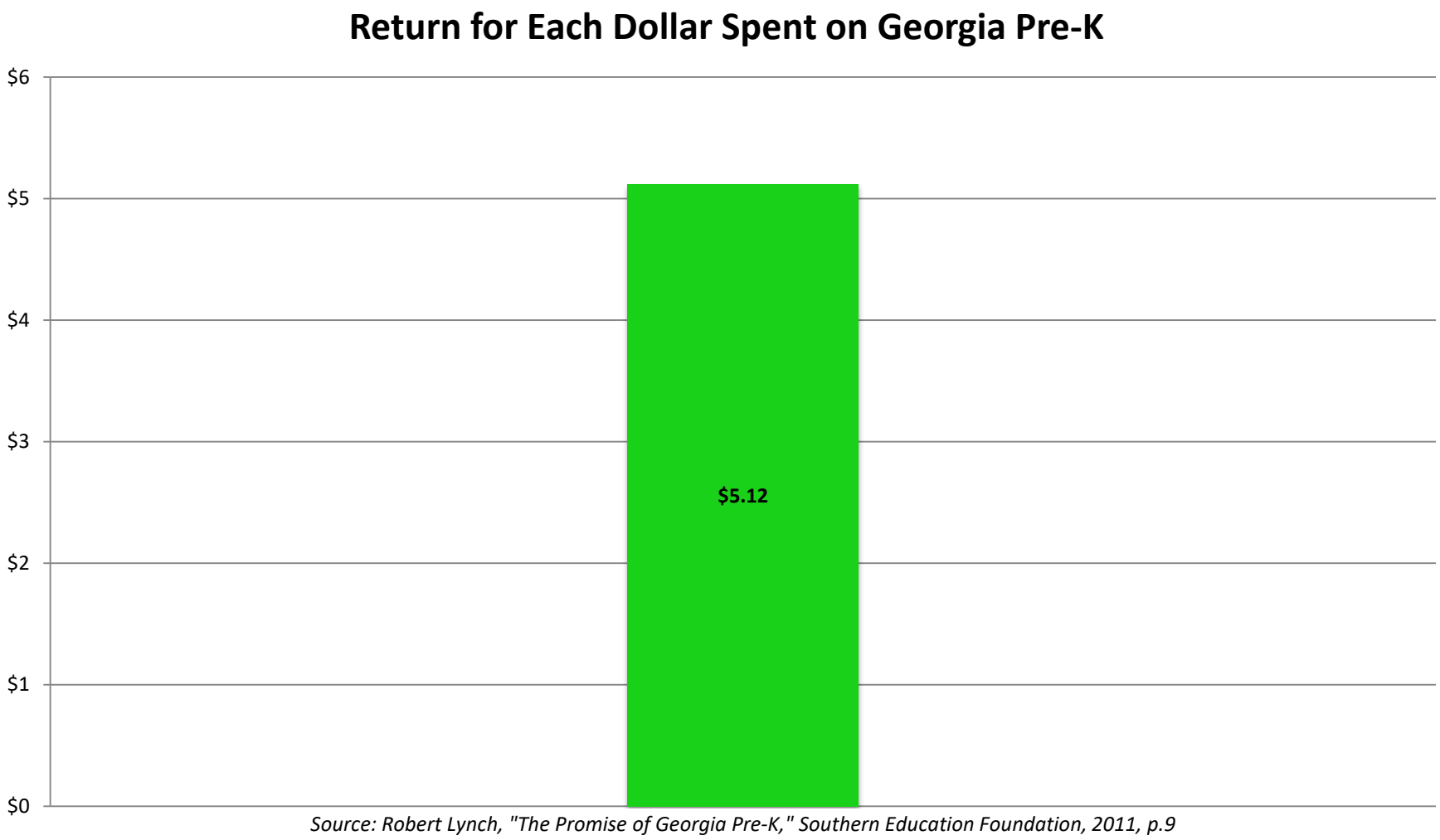


Long-Term Effects of Mature High-Quality Pre-K Programs



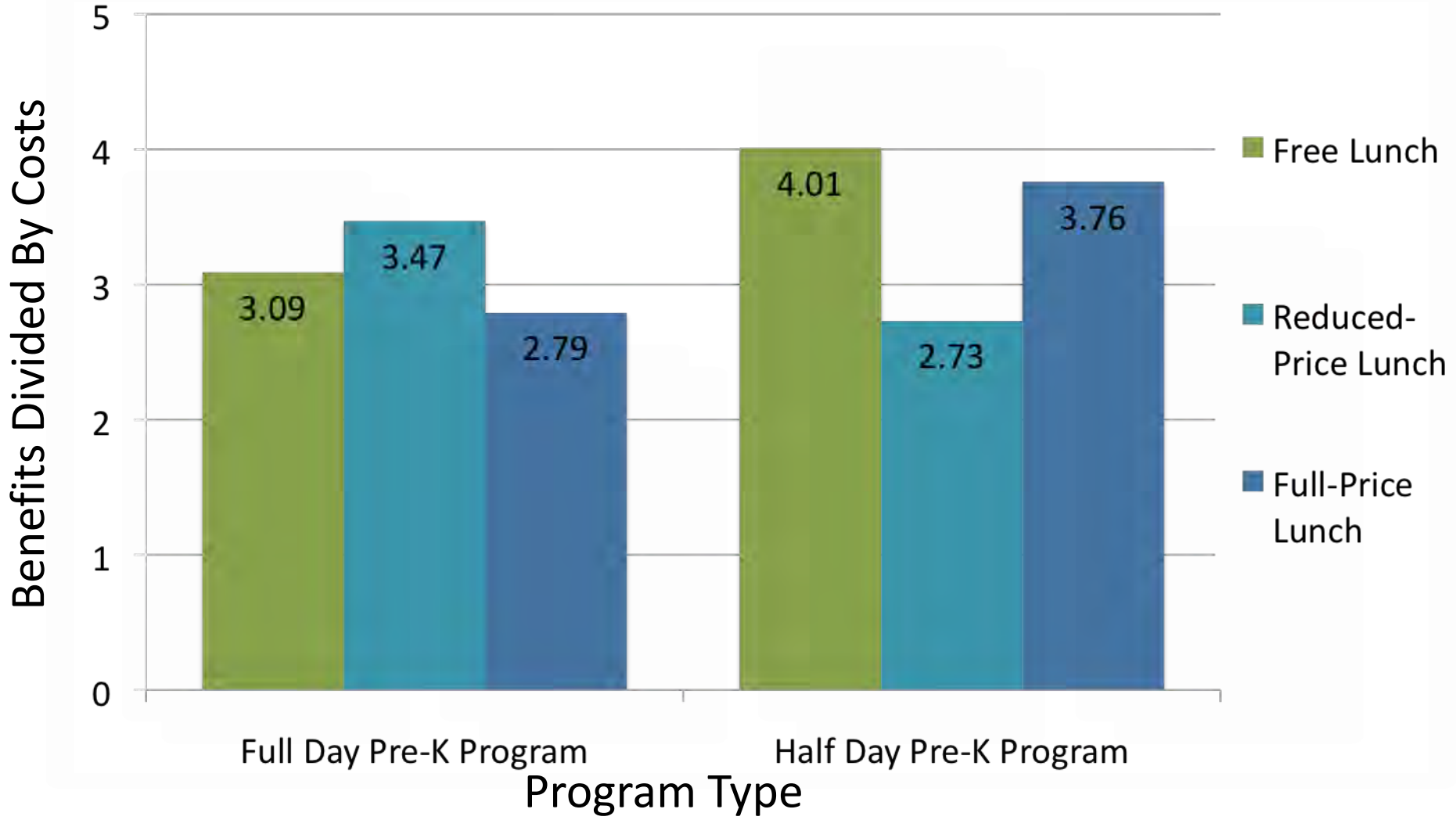
Source: Judy Temple and Arthur Reynolds, Economics of Education Review, 2007, p.132

Long-Term Effects of Georgia Pre-K



Source: Robert Lynch, "The Promise of Georgia Pre-K," Southern Education Foundation, 2011, p.9

Ratio of Expected Adult Earnings to Costs, Tulsa Pre-K Program



Source: Bartik, Gormley, & Adelstein, 2012

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.

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

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