

# Early Childhood Programs: Lasting Benefits and Large Returns



NJSBA May 4, 2018

Amy Hornbeck

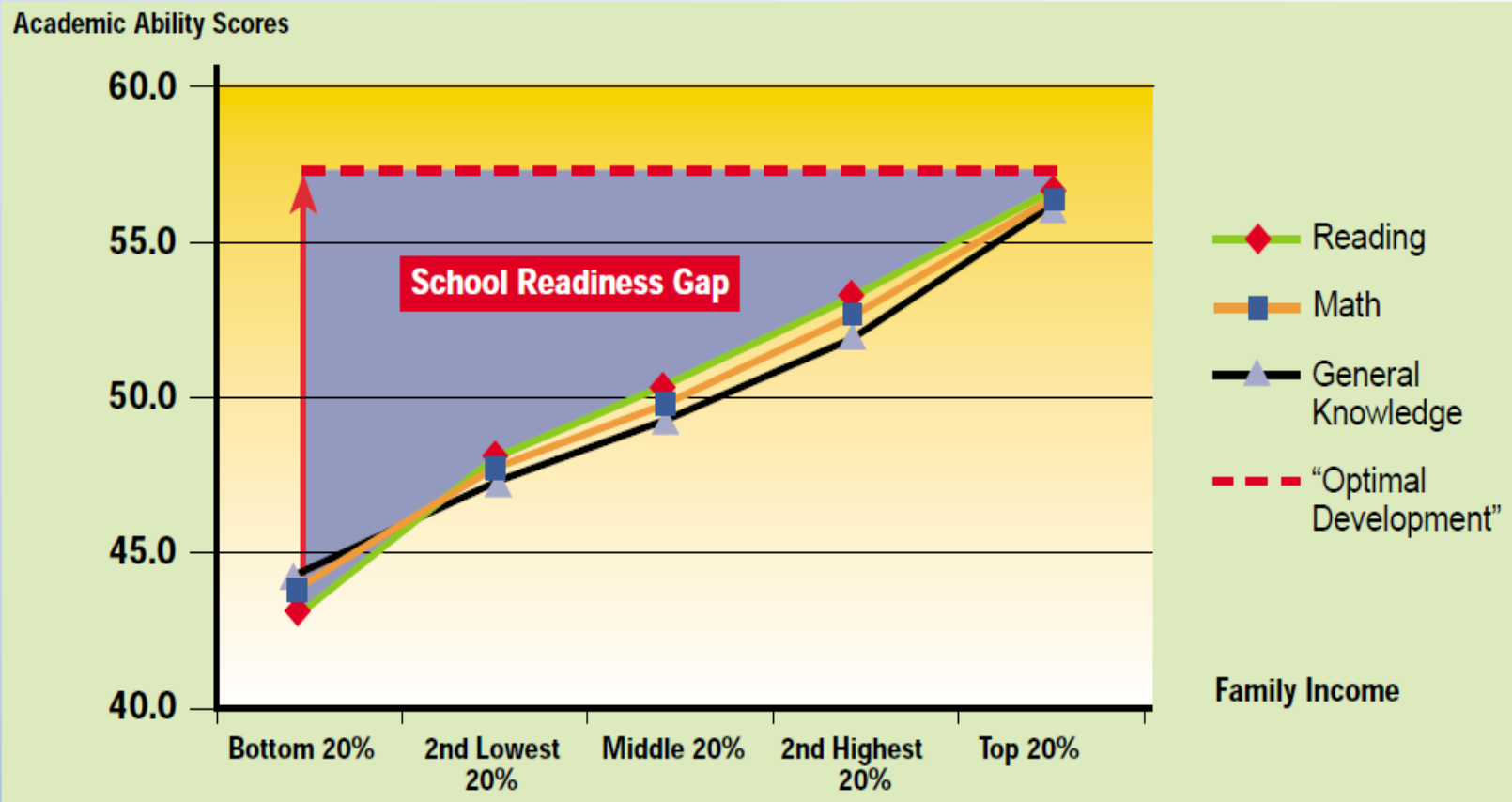
**RUTGERS**  
Graduate School of Education

# Brain development

- First 5 years are a time of rapid brain development
- Early experience influences brain building for better or worse
- Adverse early impacts on the brain affect physical & mental health

**ECE PROGRAMS CAN STIMULATE BRAIN DEVELOPMENT  
AND INCREASE ACHIEVEMENT**

# Achievement Gaps Exist at Many Income Levels

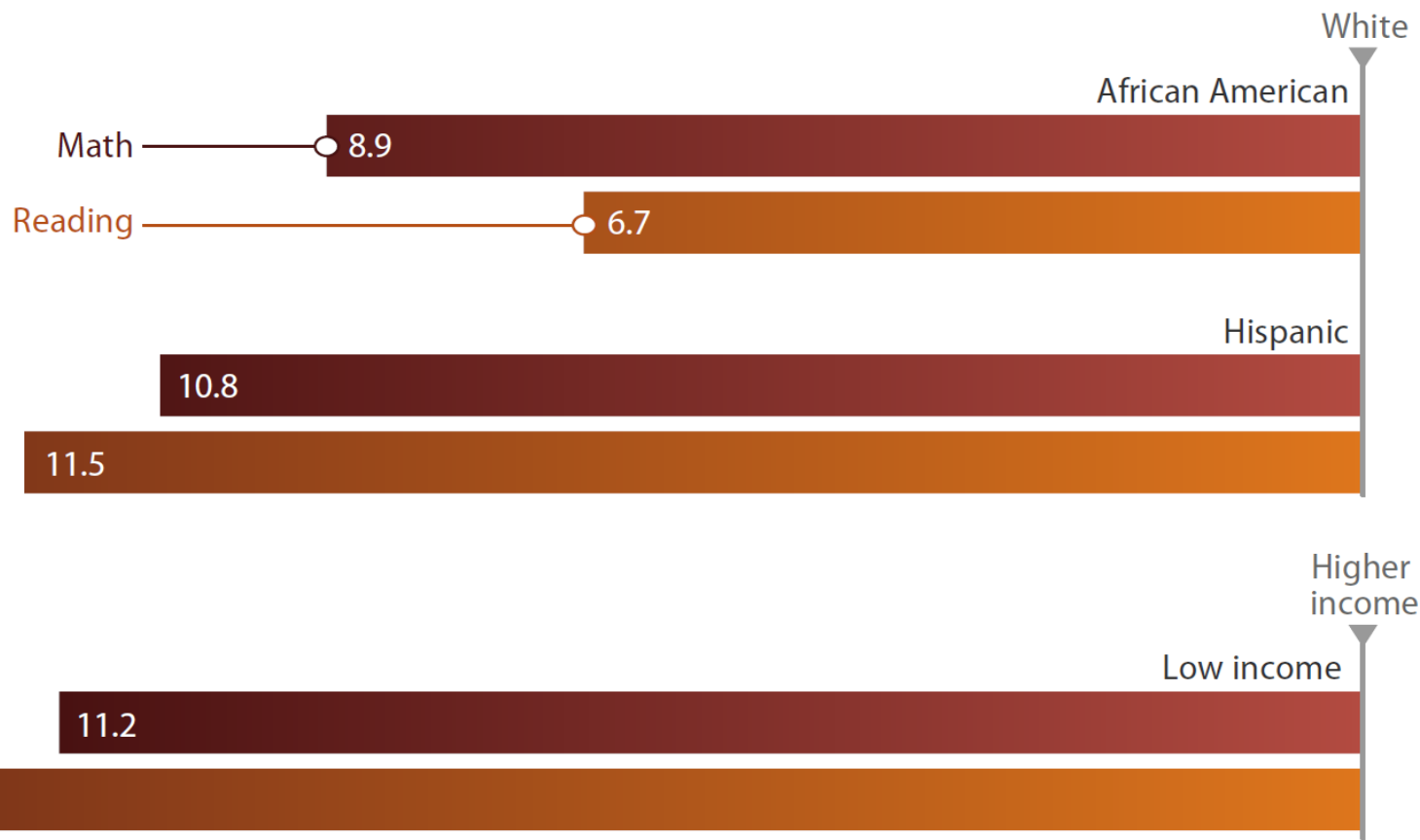


Barnett, W. S. (2007). Original analysis of data from the US Department of Education, National Center for Educational Statistics, ECLS-K Base Year Data files and Electronic Codebook (2002).

# What do we know about Achievement Gaps?

**African American, Hispanic, and low-income children lag behind their white and more affluent peers in math and reading at kindergarten entry**

Kindergarten achievement gaps in months of learning by subgroup, 2010



# Benefits of High-Quality ECE

## Direct Impacts on Children

- Increased school readiness and success
- Decreased special education and grade repetition
- Improved social and emotional development
- Decreased risky behavior and better health

## Impacts on Parents

- Increased employment and earnings

## Impacts on Society

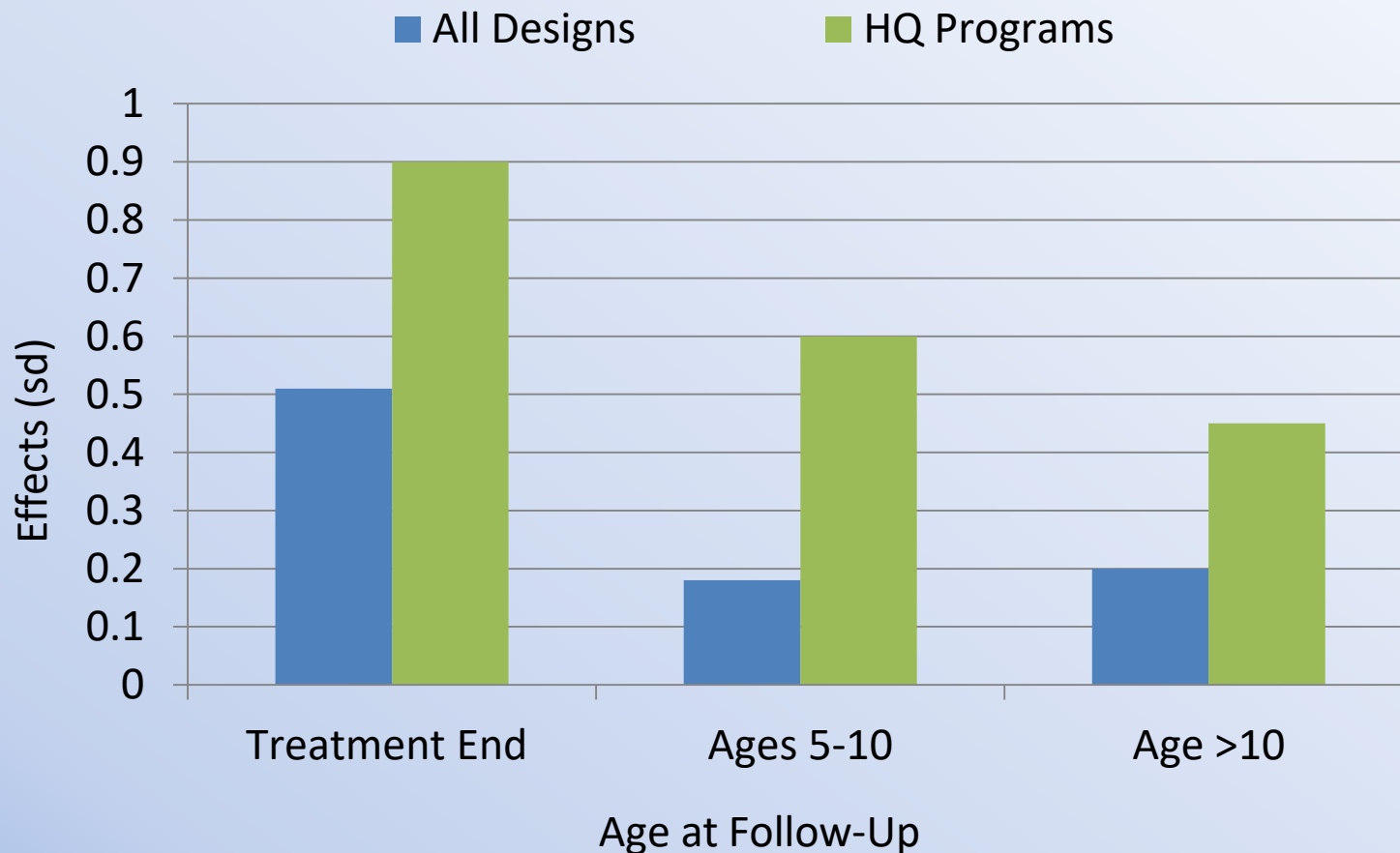
- Lower costs of school, social services, crime, health care
- Higher productivity, earnings & economic growth
- Less educational, social and economic inequality

# Economic Returns to Pre-K

Program	Cost	Benefits	B/C
Perry Pre-K	\$20,854	\$179,446	8.6
Chicago CPC	\$9,719	\$105,294	10.8
State Pre-K	\$5,719	\$30,491	5.3

Source: Ramon, I., Chattopadhyay, S. K., Barnett, W. S., Hahn, R. A., & Community Preventive Services Task Force. (2018). Early Childhood Education to Promote Health Equity: A Community Guide Economic Review. *Journal of Public Health Management and Practice*, 24(1), e8-e15.

# What does all the evidence say: Cognitive gains from 0-5 ECE in the US (123 studies since 1960)



Note: 1 sd = achievement gap, so High Quality preschool closes

nearly half the achievement gap





**Among young children who are low income,  
few have access to *high quality* pre-K**

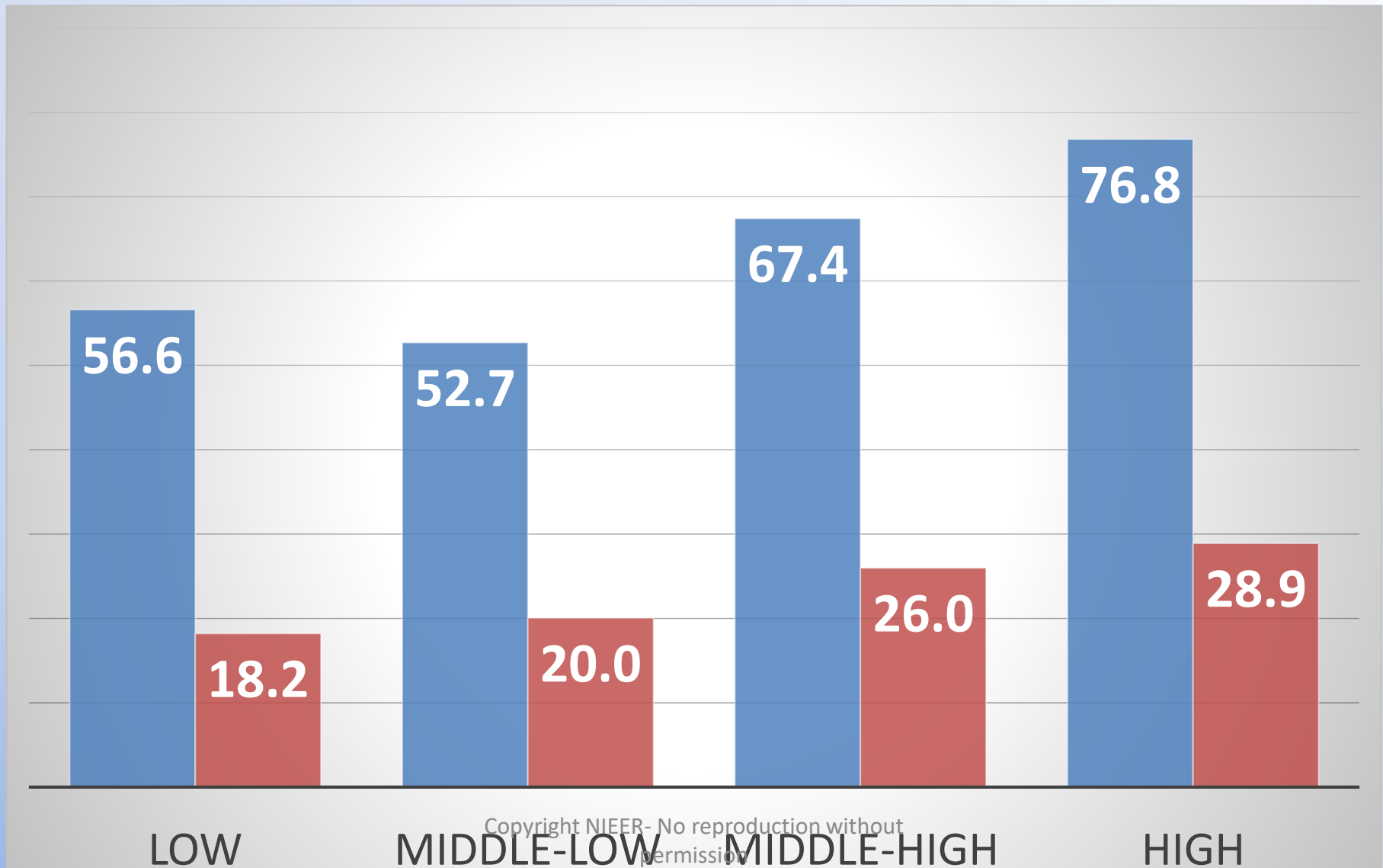
Copyright NIEER- No reproduction without  
permission



# Pre-K Access by Income (Age 4)

Any

High-Quality



# What is High Quality Pre-K?

- Intentional, artful, and scientific teaching
- Responsive and individualized
- Strong curriculum integrating all domains:  
strong hearts & strong minds
- Emphasizing *unconstrained* skills, especially  
rich language interactions
- Partnering with parents and community
- First steps in a coherent P-3 education

# NJ Court Ordered Pre-K Model: 31 Cities

- Early learning standards and program guidelines
- Teachers w/ BA degree and specialized training
- Maximum class size of 15 children
- Two years from age 3, 6 hrs. + wrap around
- Maximum class size of 15 children
- Evidence-based curriculum
- In-class coaching for all teachers
- Tools to measure progress and plan improvement
- Part of systemic reform of P-3 education

# How Do We Get High Quality?

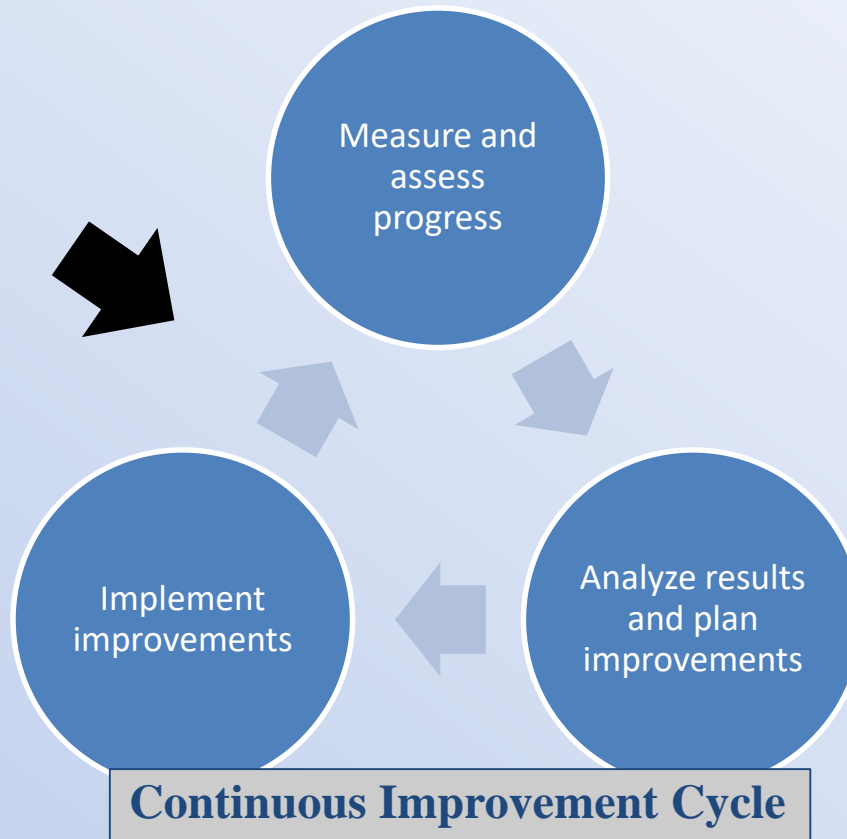
- High expectations
- Adequate funding
- Strong teachers
- Small classes
- Full day
- Other supports for children and teachers
- Continuous Impr.



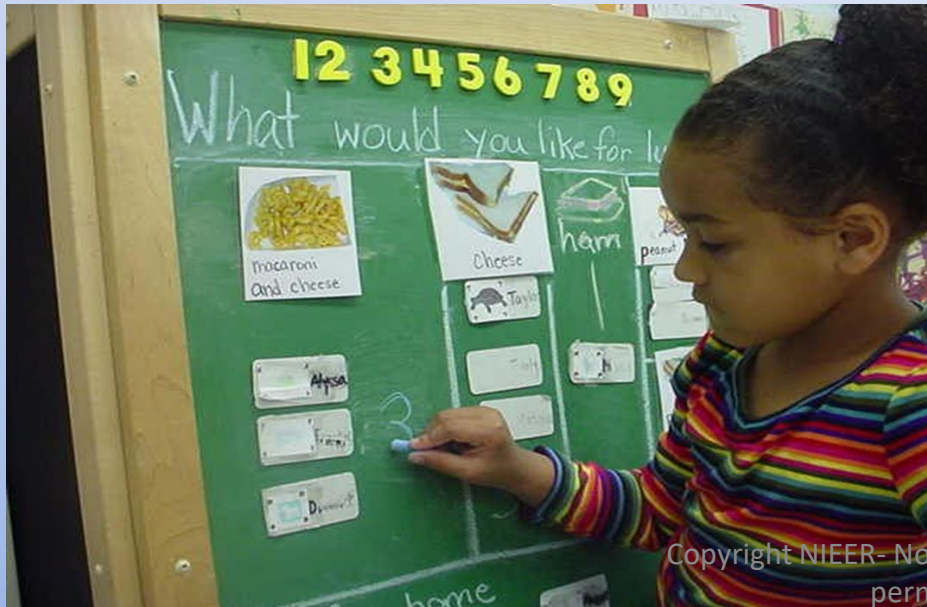
Copyright NIEER- No reproduction without permission

# Continuous Improvement is a Key to Quality

Set learning and program standards



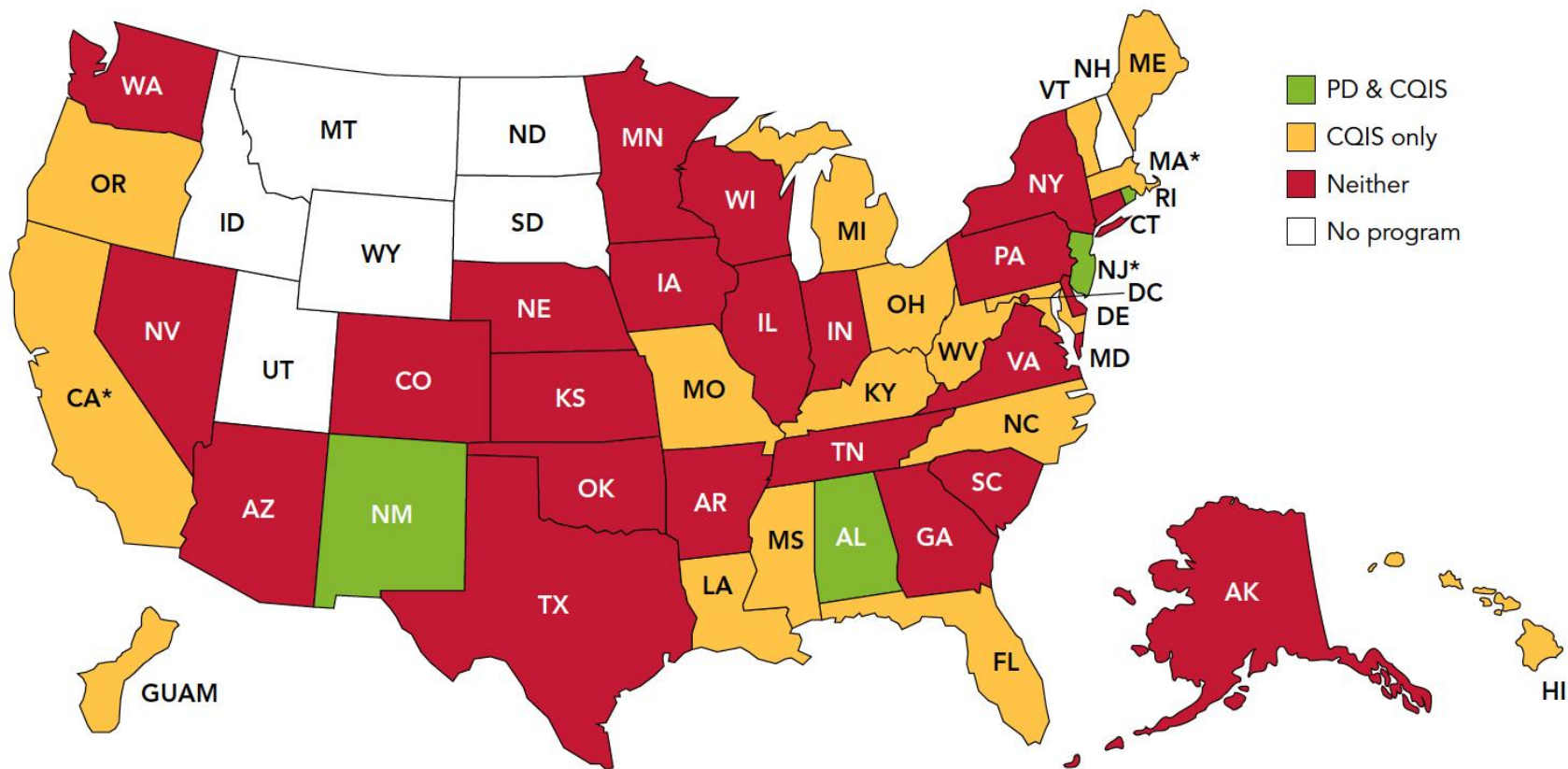






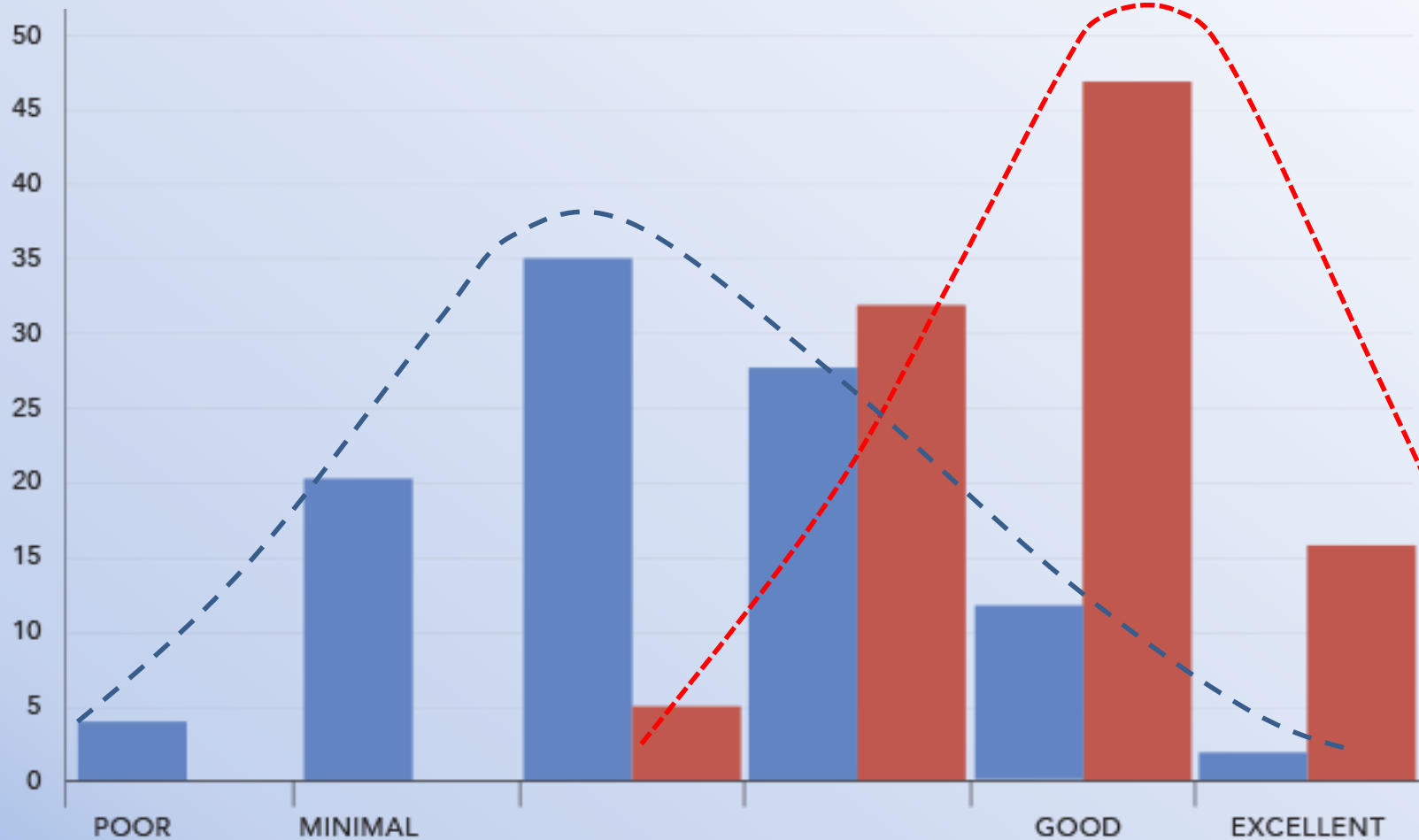


# Professional Development and Continuous Quality Improvement

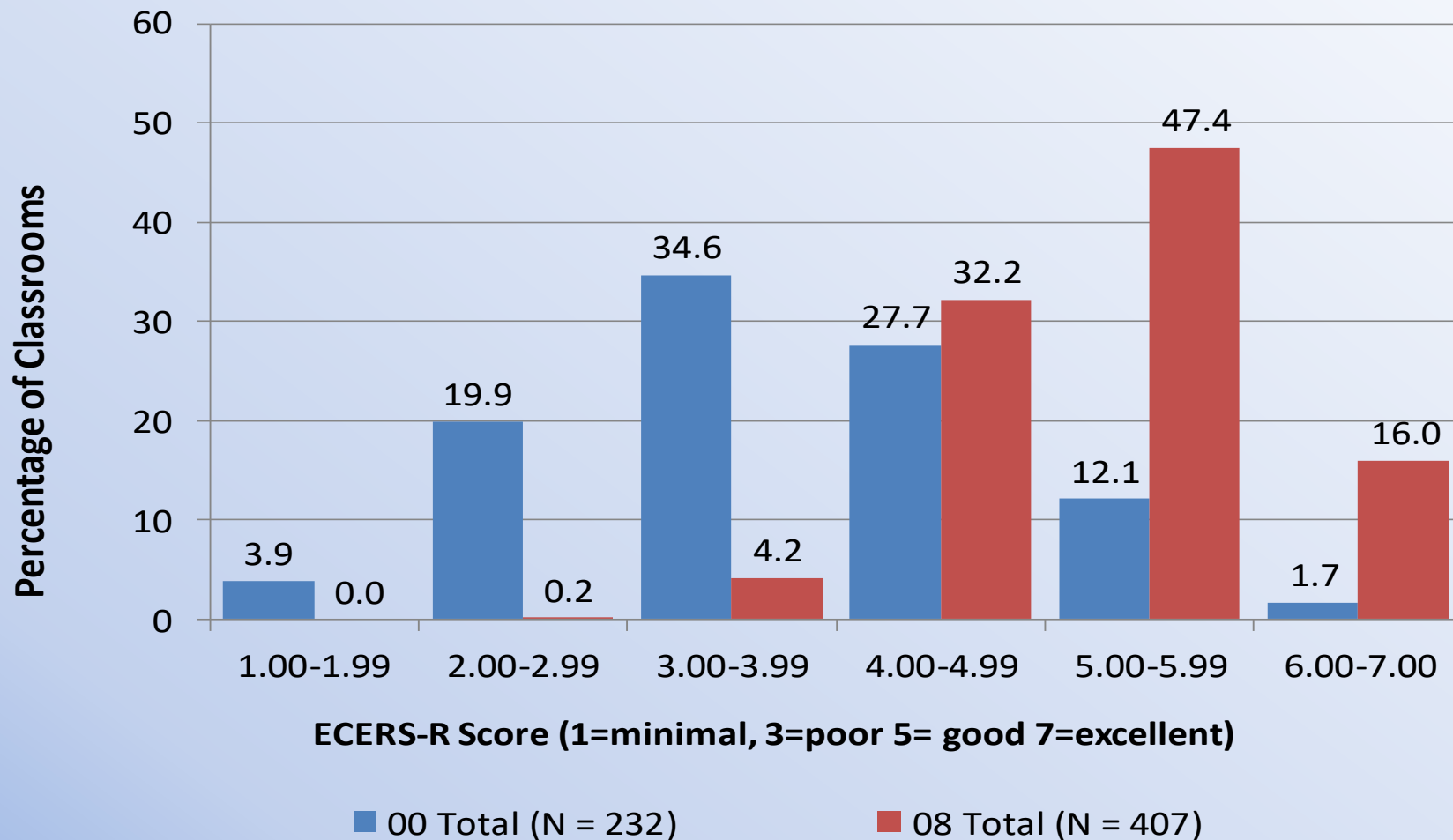


\* These multi-program states have programs with different quality standards. Data displayed on the map reflect quality standards benchmarks in the largest program in the state.

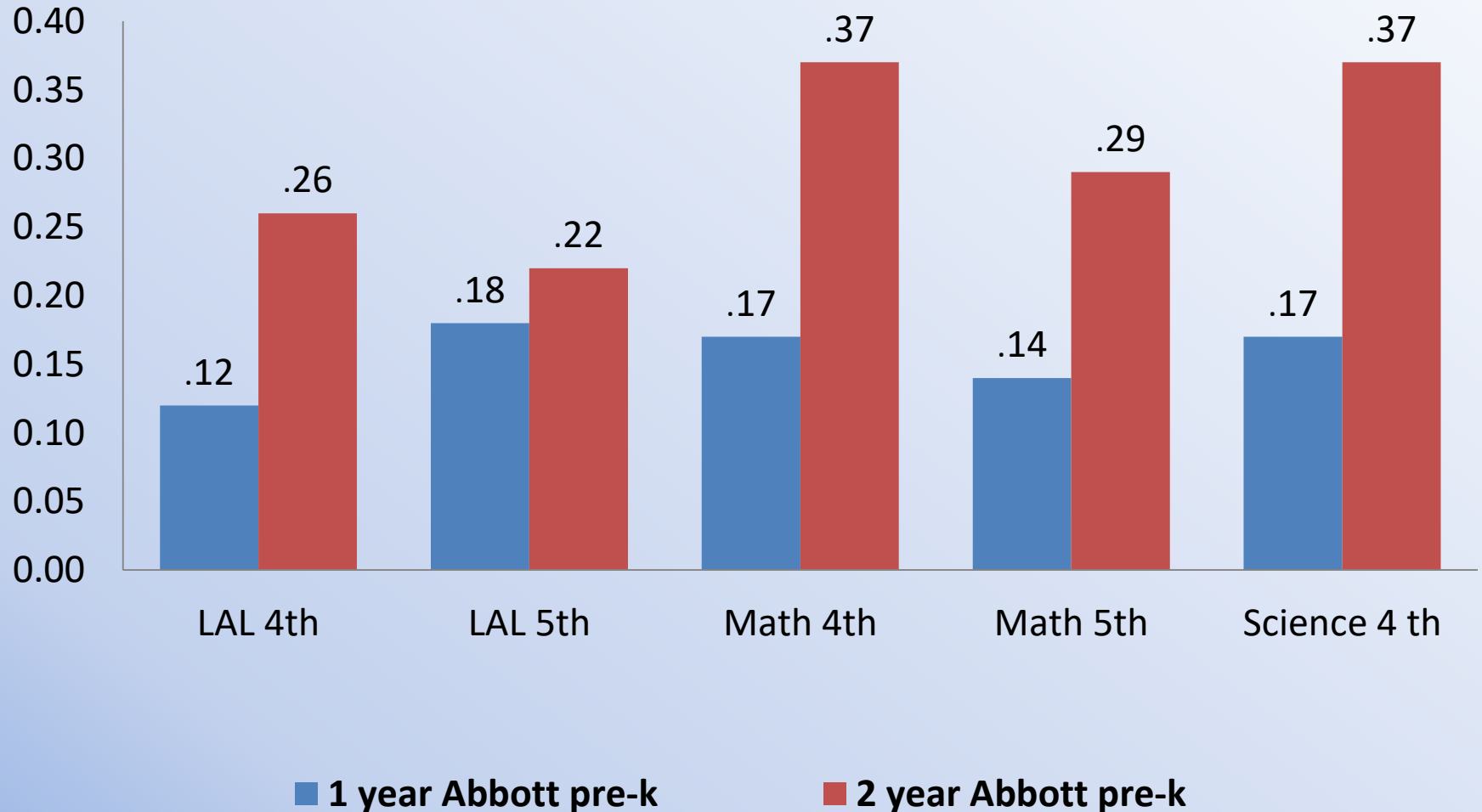
# NJ Model Transformed Pre-K Quality



# NJ Raised Quality in Public and Private

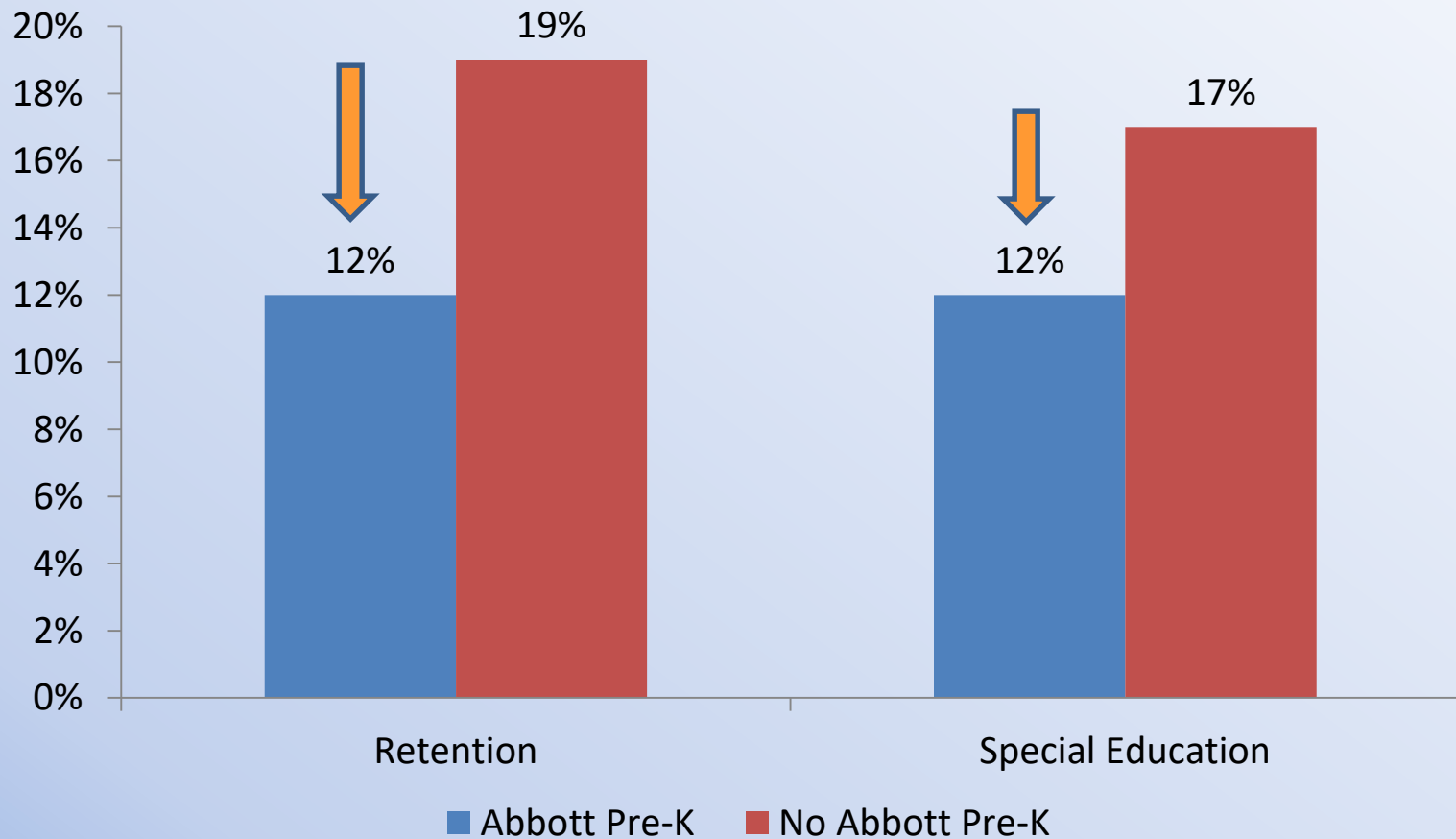


# NJ Model Raised Achievement (Grades 4 and 5)



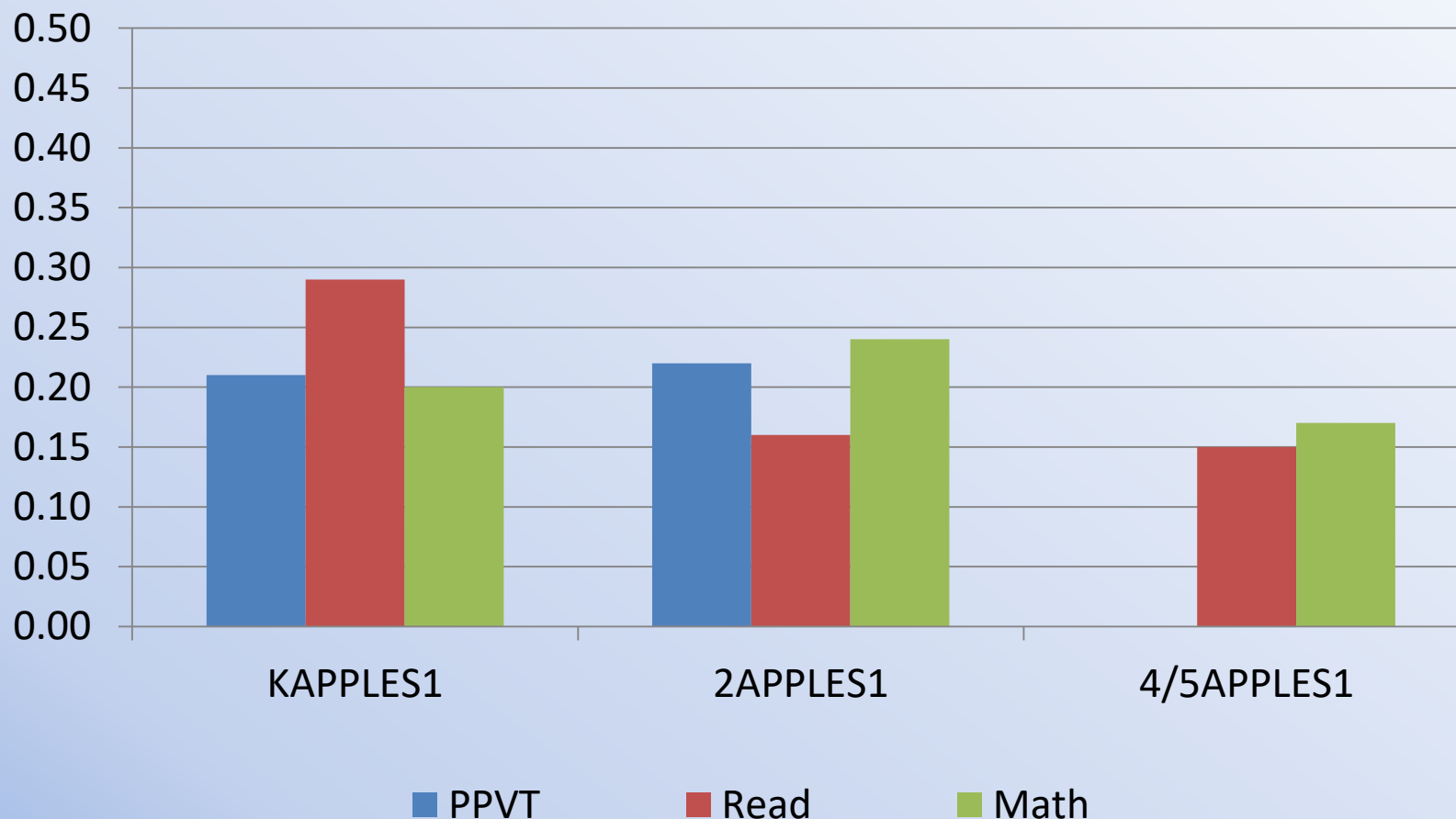


# NJ Pre-K Cut Retention & Special Ed. (Grade 5)

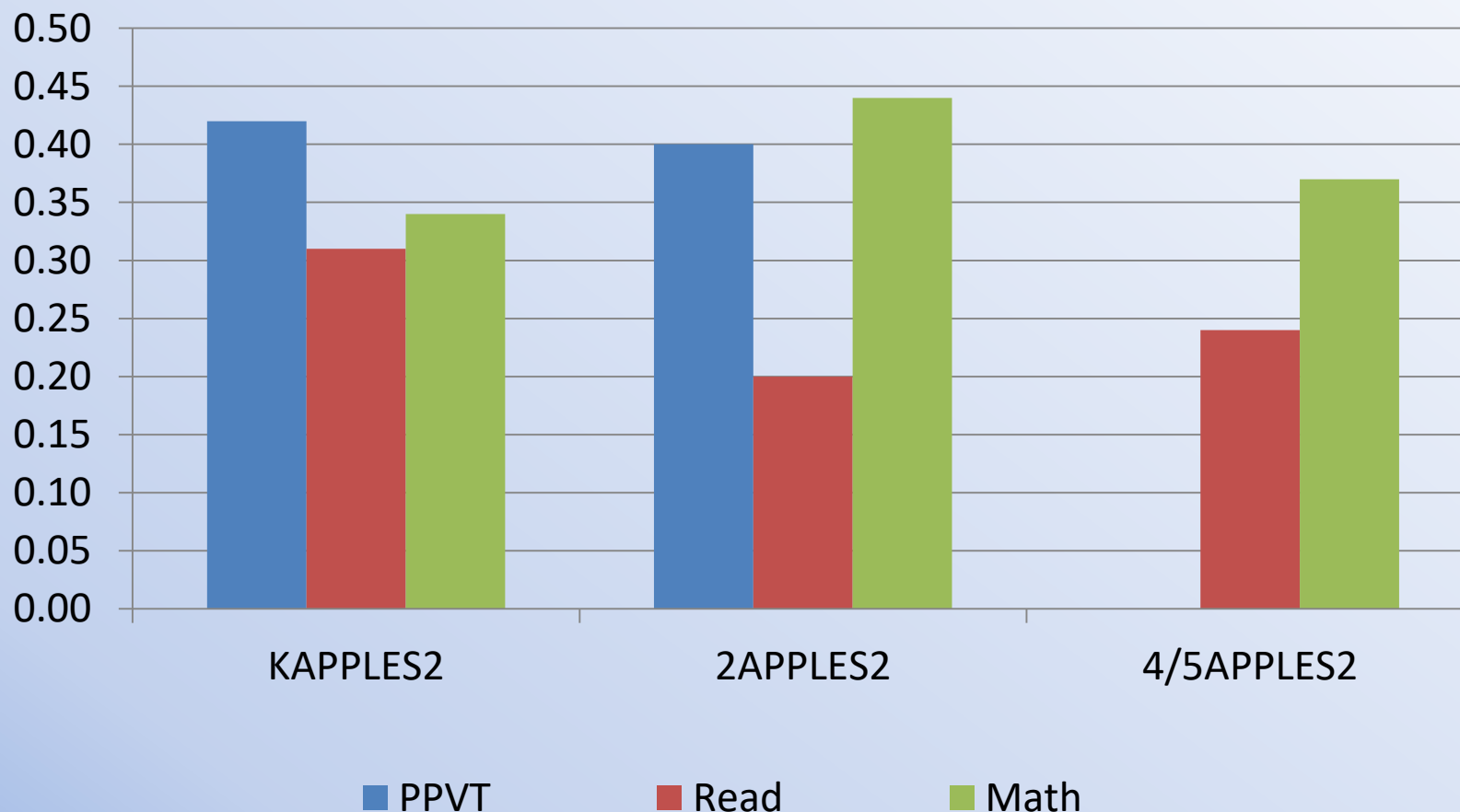




# 1 Year of NJ Abbott Pre-K: Effects Over Time



## 2 Years of Abbott Pre-K Effects Over Time



# Increased Quality in NJ Pre-K Improved Education Outcomes

- Gains in language, literacy, math
- 2 years have twice the effect of 1
- 2 years closed 40% of the *achievement gap*
- Effects sustained through 2<sup>nd</sup> grade
- Grade repetition cut in half by 2nd grade

# What can you do in your district?

- **Make sure Pre-K is on the radar of administrators in your district.**
- **Begin planning now for how you would expand in your district should funding become available.**
- **Ensure that everyone understands the benefits of collaborating with child care and head start programs.**
- **Push your superintendent to ensure that principals or other administrators that supervise Pre-K have specialized training.**

# Takeaway Lessons

1. High Quality programs have shown persistent effects across various cognitive and behavioral domains.
2. Pre-K varies in initial and long-term effects—can only expect persistent gains from large initial gains, and that requires quality.
3. Proper design, high standards, adequate funding, and evaluation can ensure high cost/benefits
4. Essence of quality is strong individualized teacher-child interaction, especially 1:1 and in small groups.
5. High-quality preschool benefits both low- and middle income children, with substantial effects on both groups, but greater impact on children living in or near poverty and/or DLLs
6. ECEC **can** be a strong public investment: Increased educational achievement and attainment, Decreased economic and educational inequality and fewer social problems and Job and GDP growth (local and national).



**Will *you* choose quality pre-K  
for all?**

**“Two roads diverged in a wood,  
and I - I took the one less traveled by,  
and that has made all the difference.”**

**Robert Frost**