

# Making Informed Decisions: A Guide to Understanding Early Education Research

QRIS National Learning Network

February 24, 2016

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Center on Enhancing Early Learning Outcomes/  
National Institute for Early Education Research



# Agenda

- How to Identify Good Research
- What Research Tells Us: Selected Issues
- Turning Research into Action
- Resources for Administrators
- Q & A

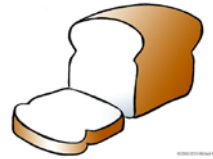


# Have you ever heard . . .

- For every dollar spent on early education, the public will save \$7 or more?
- Studies show Head Start doesn't work?
- Retaining children who have difficulty in school will harm them?
- A teaching degree in child development or early education makes no difference?
- Universal preschool does not benefit children; targeted preschool does?
- Direct instruction of young children is developmentally inappropriate and ineffective?



# Research on bread indicates. . .



1. More than 98 percent of convicted felons ate bread as children.
2. Half of all children who grow up in bread-consuming households score below average on standardized tests.
3. More than 90 percent of violent crimes are committed within 24 hours of eating bread.
4. Primitive tribal societies that have no bread exhibit a low incidence of cancer, Alzheimer's, Parkinson's disease, obesity, diabetes, and osteoporosis.
5. Bread is a "gateway" food item, associated with alcohol and drug abuse. 100% of drug abusers ate bread as children and adolescents.
6. Newborn babies can choke on bread.
7. More Americans are killed in automobile accidents while eating bread than talking on cell phones.
8. Most American bread eaters are utterly unable to distinguish between significant scientific fact and meaningless statistical babbling.



# Research-based Policies on Bread

In light of research-based evidence, it has been proposed that the following policies be established:

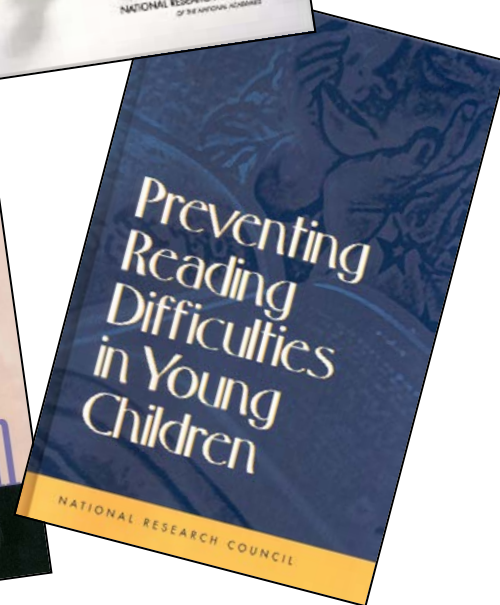
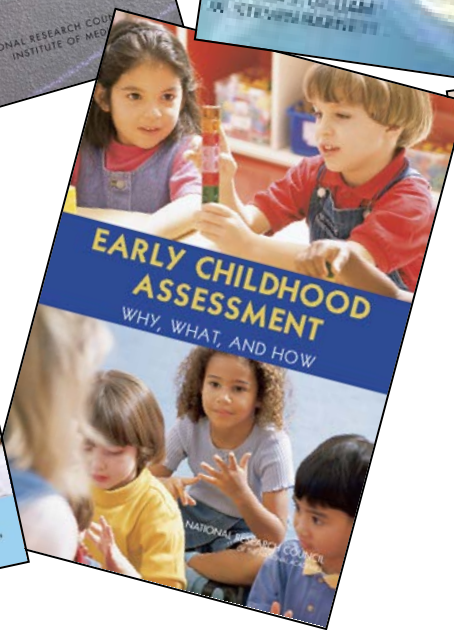
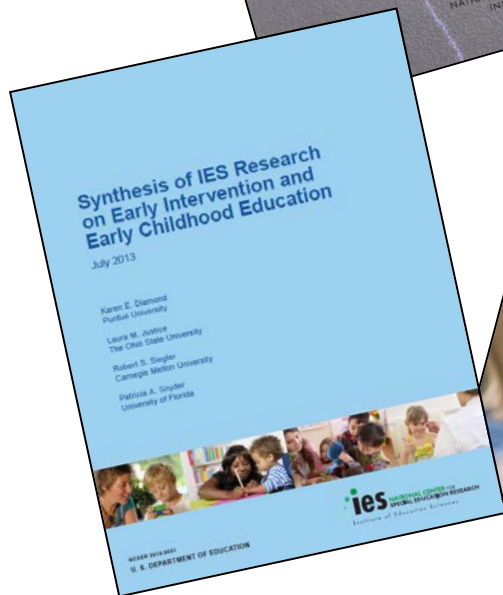
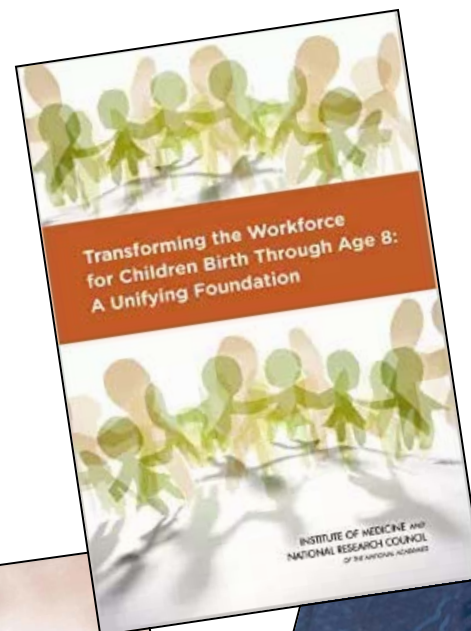
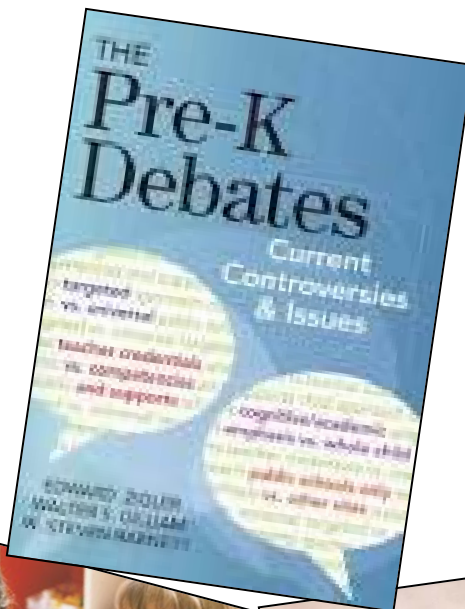
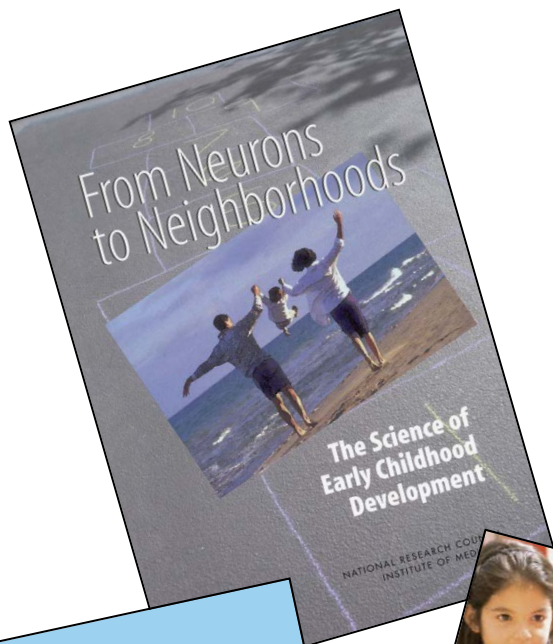
1. No sale of bread to minors.
2. The establishment of "Bread-free" zones around schools.
3. Health insurance policies must cover rehabilitation clinic costs up to 30 days for bread addicts.
4. A 300 percent federal tax be levied on all bread to pay for all societal ills associated with bread.
5. Driving under the influence of bread (DUIB) is punishable by law, including mandatory loss of license for 30 days and community service.
6. Any person convicted of a bread-related offense shall be ineligible to join US armed forces, local law enforcement, or teach in public schools.



“One striking fact is that the complex world of education — unlike defense, health care, or industrial production — does not rest on a strong research base. In no other field are personal experience and ideology so frequently relied on to make policy choices, and in no other field is the research base so inadequate and little used.” (p. 1)

National Research Council. (1999). [Improving Student Learning: A Strategic Plan for Education Research and Its Utilization](#). Washington, DC: Author.





# Evidence-Based Understanding



# What questions are you facing about QRIS and quality early childhood education?

- What are the characteristics of quality?
- If there are shared, research-based criteria for quality, why are state systems different?
- What is the impact of QRIS on cognitive and social/emotional development?
- Does QRIS really measure quality? Is the difference between 2 - 3 Stars equal to the difference between 3 - 4 Stars?
- Does QRIS consider special features of models for child care, Head Start, pre-K, out-of-school care in its criteria?
- How important are the results of an external assessment (ECERS, CLASS, other) on a program's QRIS rating?
- What evidence shows the higher the quality rating, the better the outcomes for children and families?



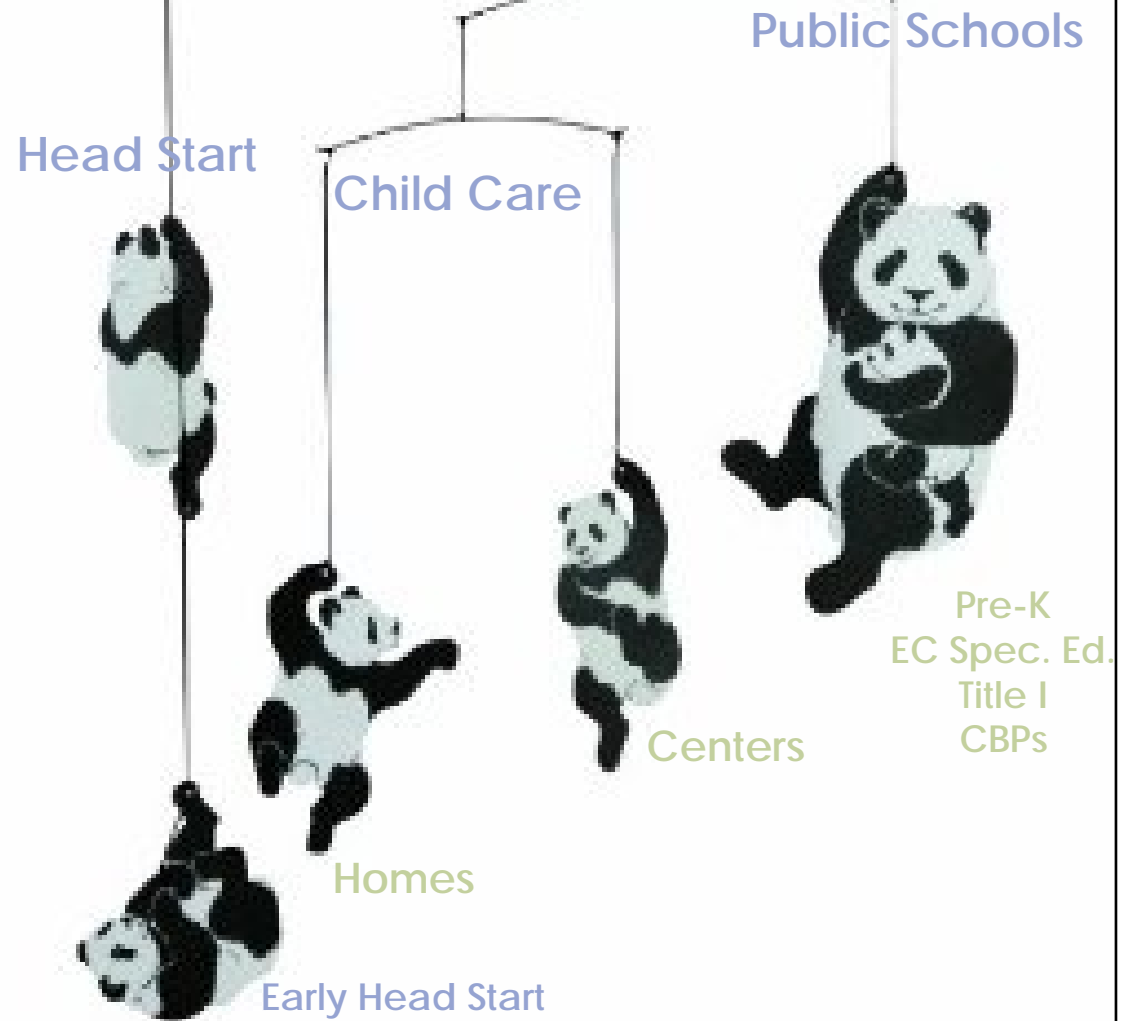
# Ten questions to ask when someone says: "A new study shows that..."

1. Are the results generally applicable to our issues? What do we know about the people or programs which were studied?
2. Was the number of programs or people studied large enough to see an outcome?
3. Was there a comparison group, and if so, how was it chosen?
4. Did the researchers follow people or programs long enough to observe all the important results?
5. What measures were used in assessing the outcomes?
6. Can we be certain that the "cause" actually occurred before the "effect?"  
Can we be certain the "effect" is attributed to the "cause?"
7. Was the effect/outcome observed large?
8. Is this the first study to report these findings?
9. Who funded the study?
10. Were the results first published in a well-respected scientific journal?

Adapted from James Hyde (Emeritus Associate Professor of public health at the Tufts University School of Medicine).



# Early Care and Education



# Issues

- Realizing every child's potential
- Defining characteristics of quality
- Teacher/administrator qualifications
- Rating level as a prerequisite for state funding
- What research says about QRIS
- Supports necessary to improve and maintain quality



# Does QRIS Consider Reducing Achievement Gap

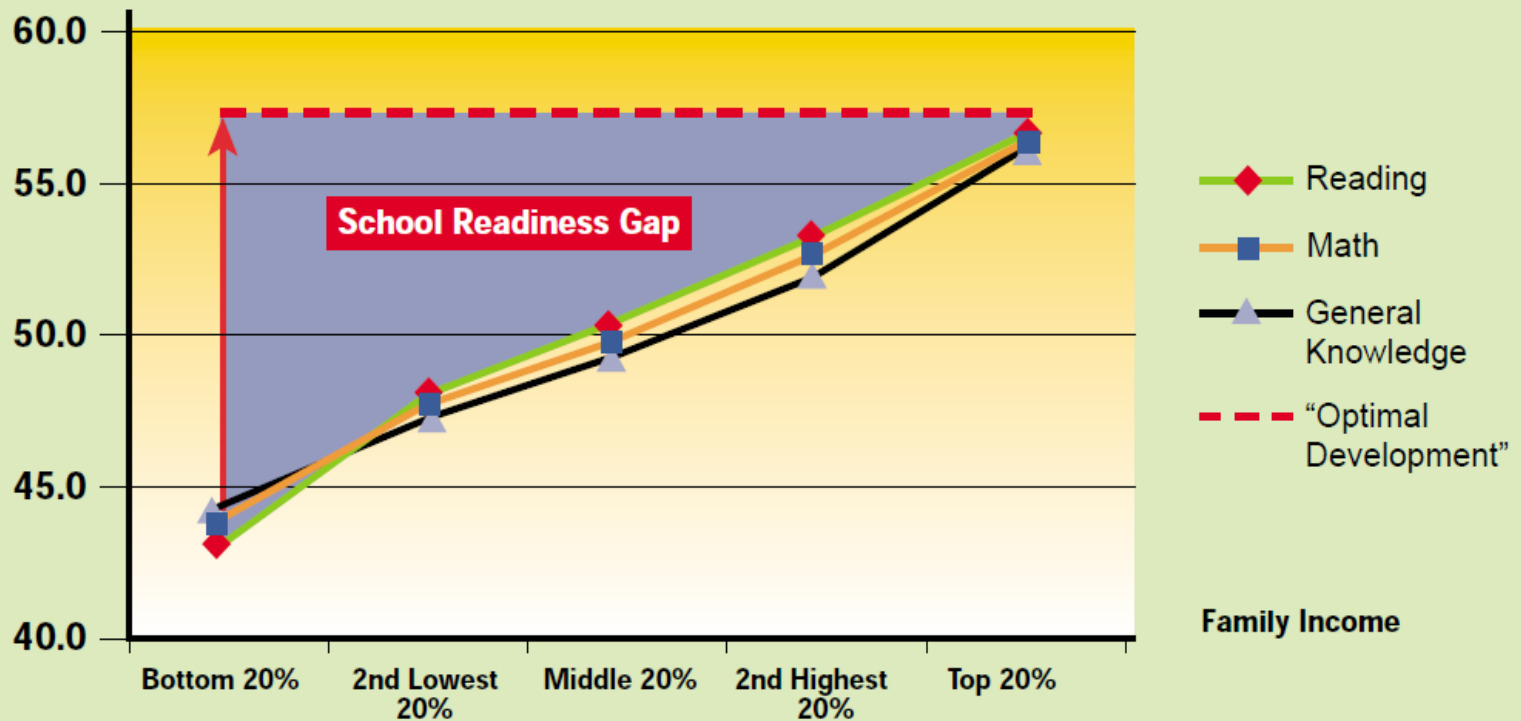
- Is there an achievement gap?
- Who does it affect?
- When does it appear?
- Can the achievement gap be prevented or remediated?
- Are there adequate QRIS policies, infrastructure, and resources to address the gap?



# Achievement Gap at Kindergarten

**Figure 2. Academic Abilities of Entering Kindergarteners by Family Income**

Academic Ability Scores



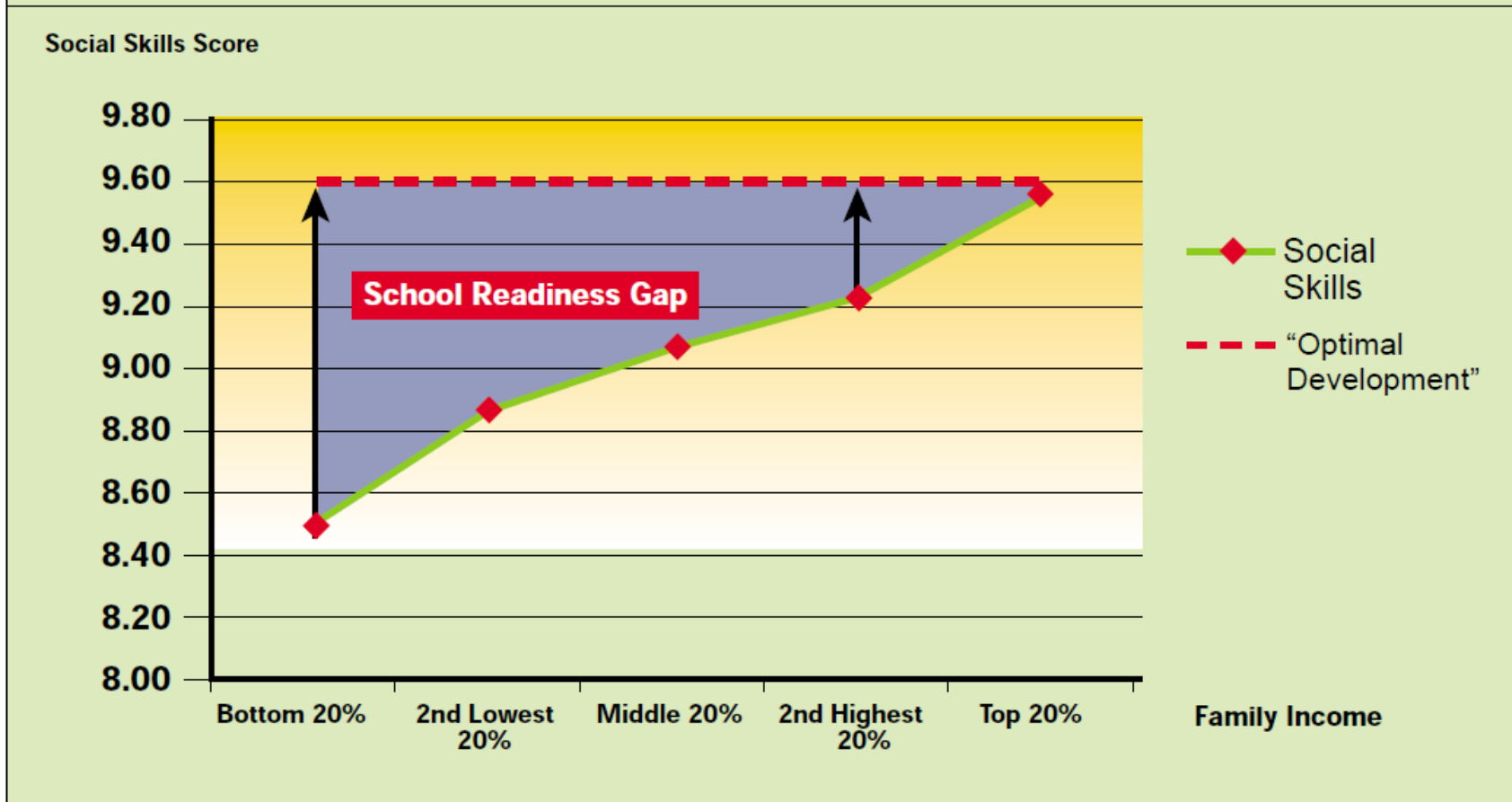
Source: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998.

Barnett et. al.(2004).The Universal vs. Targeted Debate.



# Achievement Gap at Kindergarten

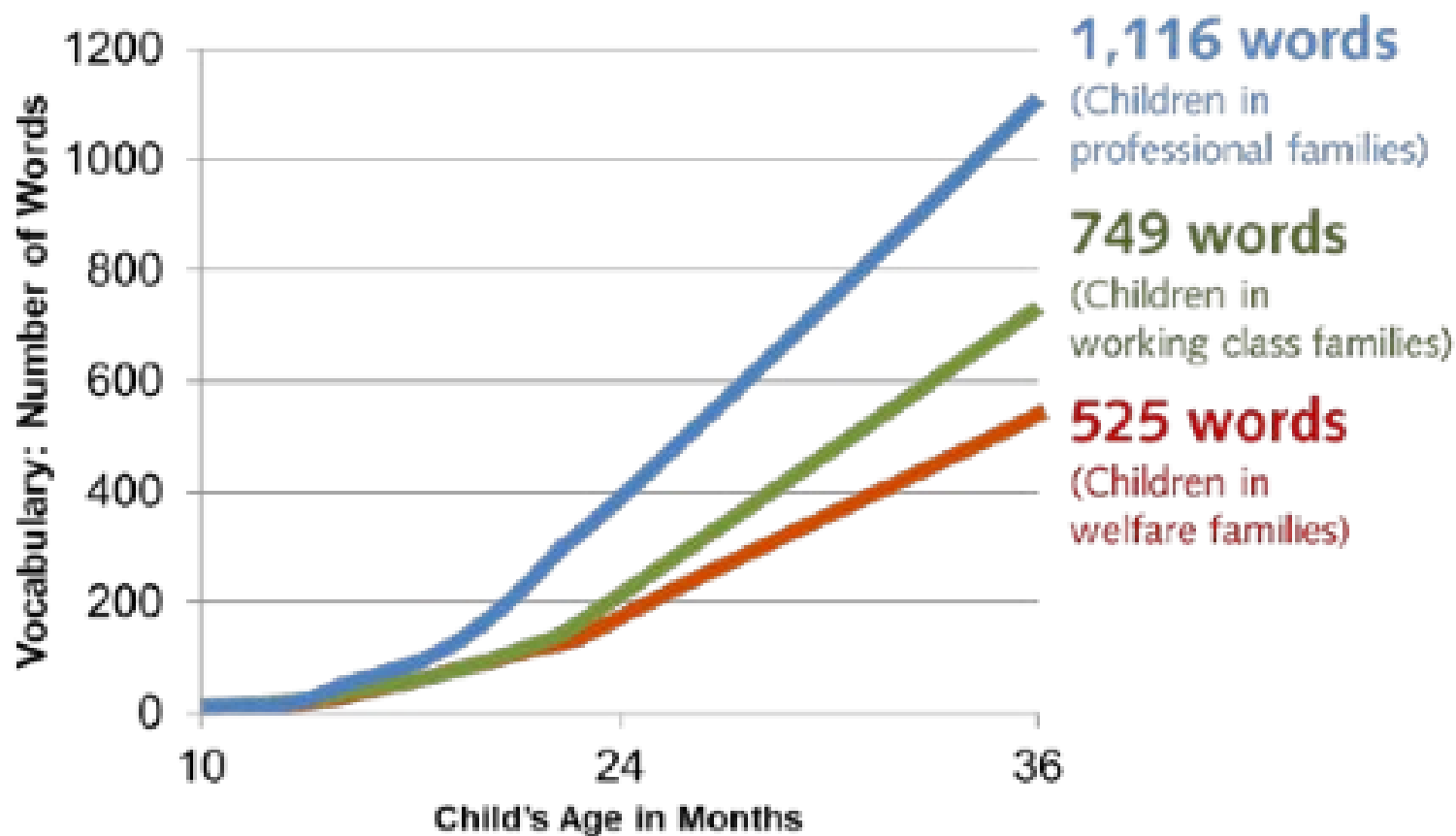
**Figure 1. Social Skills of Entering Kindergarteners by Family Income**



*Barnett et. al.(2004).The Universal vs. Targeted Debate.*



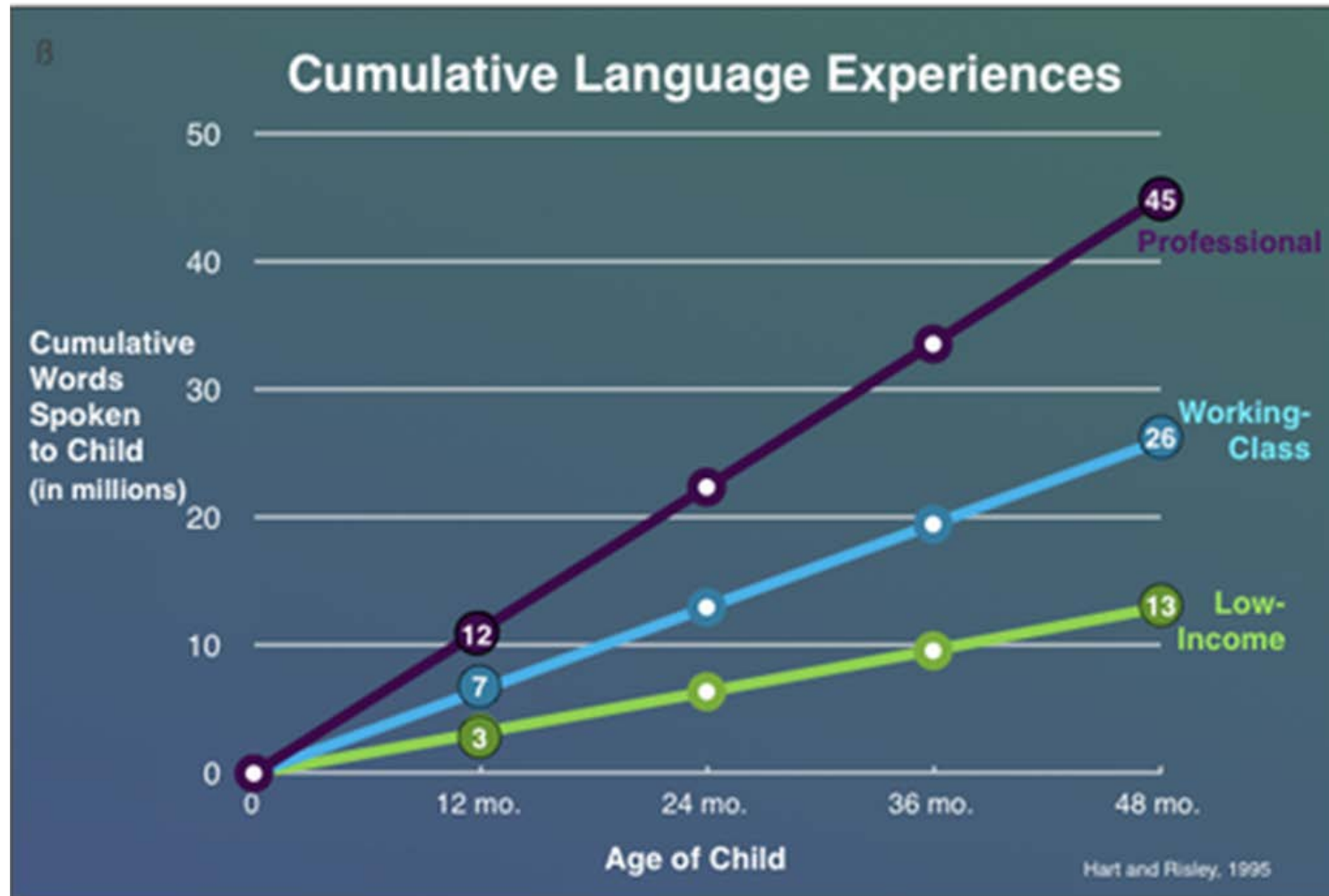
## The Achievement Gap Starts Early



Hart, B. & T. Risley. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Brookes Publishing.

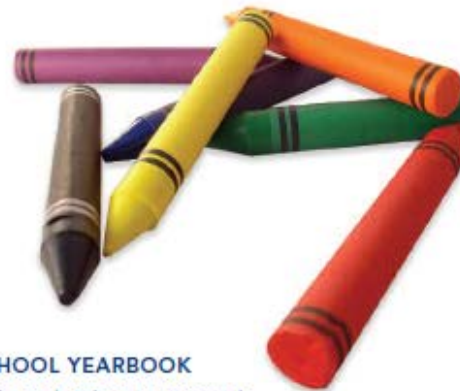


# 30 Million Word Gap



NIEER

# The State of Preschool 2014

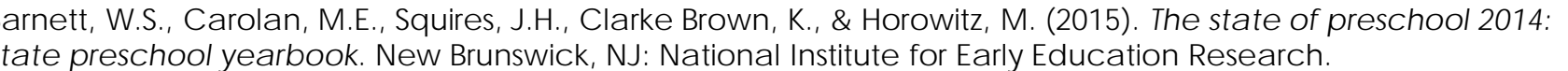


STATE PRESCHOOL YEARBOOK  
The National Institute for Early Education Research

RUTGERS  
Graduate School of Education



Center on Enhancing Early Learning Outcomes | [www.ceelo.org](http://www.ceelo.org)



# Does Early Education Work?

- Improved school performance & behaviors
- Reduced special education interventions
- Higher graduation rates, including college
- Increased earnings
- Lower reliance on public assistance
- Healthier behaviors
- Lower rates of criminal activity
- Taxpayer savings (\$1 spent = \$7.16 saved for Perry Preschool)

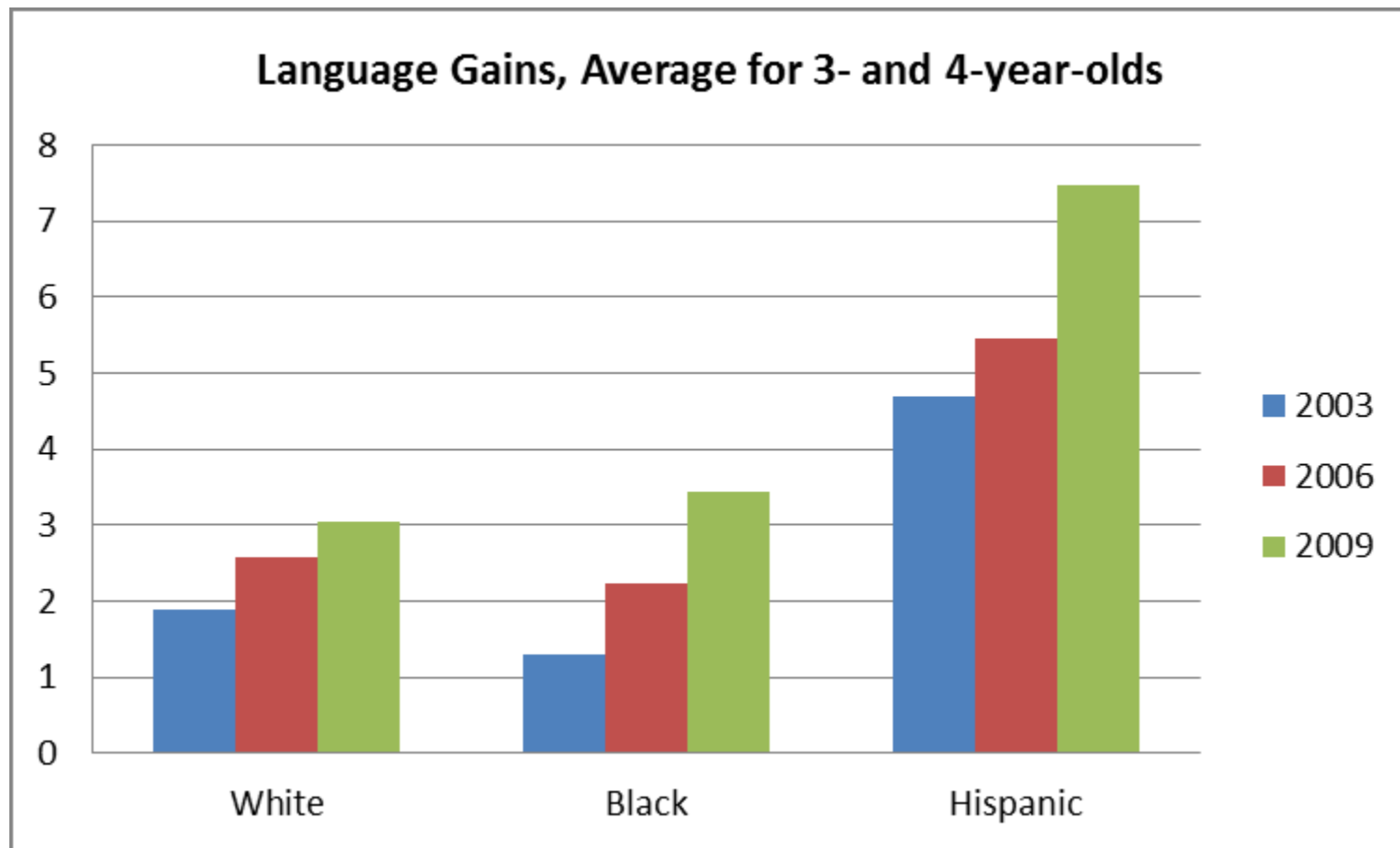


# Does Head Start Work?

- National randomized trial in 2002 found modest initial effects and failed to detect lasting impacts
- Since then Head Start has been subject to reform, including a Bush Administration emphasis on improving literacy and more teachers with college degrees.
- Data collected in 2003, 2006 and 2009 show larger increases in the size of Head Start children's language and literacy gains between 2003 and 2009.



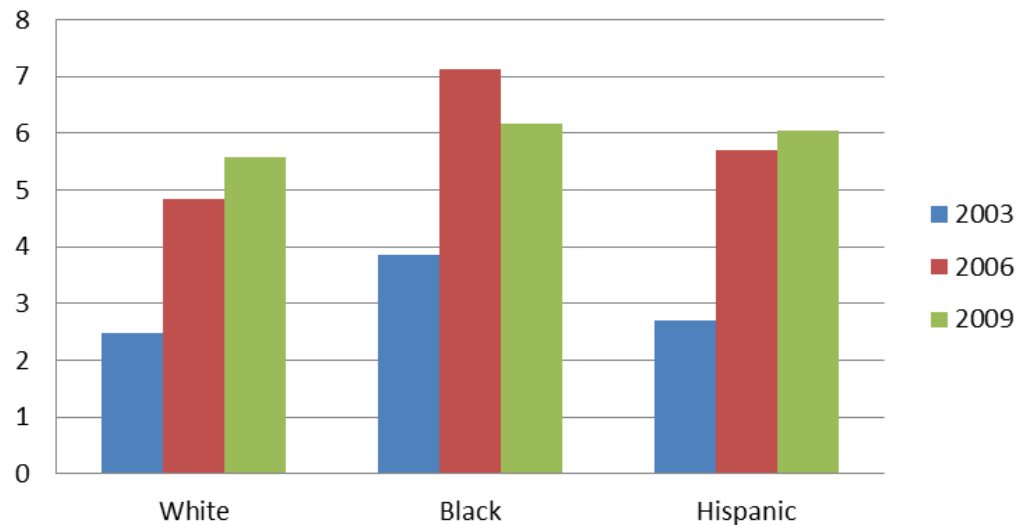
# Head Start Reports Its Results



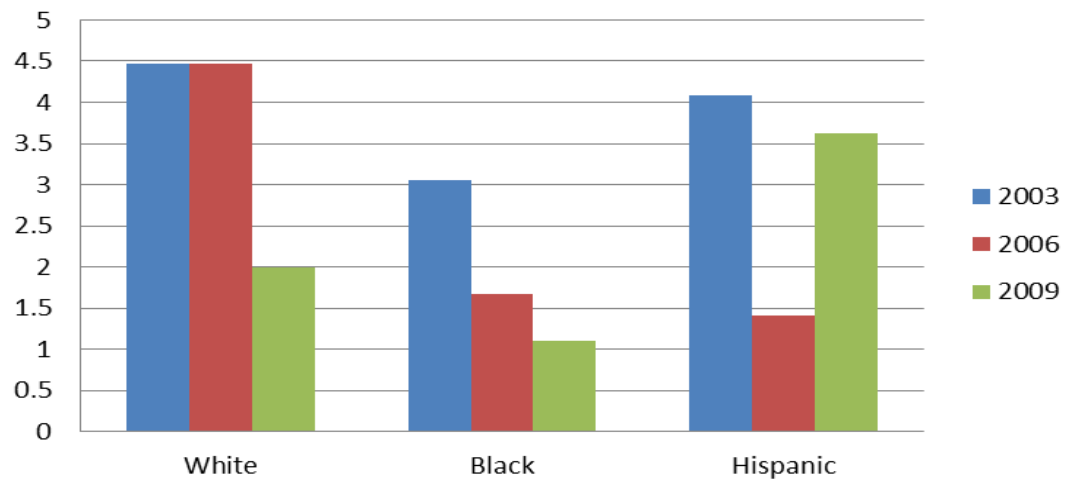
Language Gains in Head Start FACE Studies, Average for 3- and 4-year-olds



**Literacy Gains, Average for 3- and 4-year-olds**

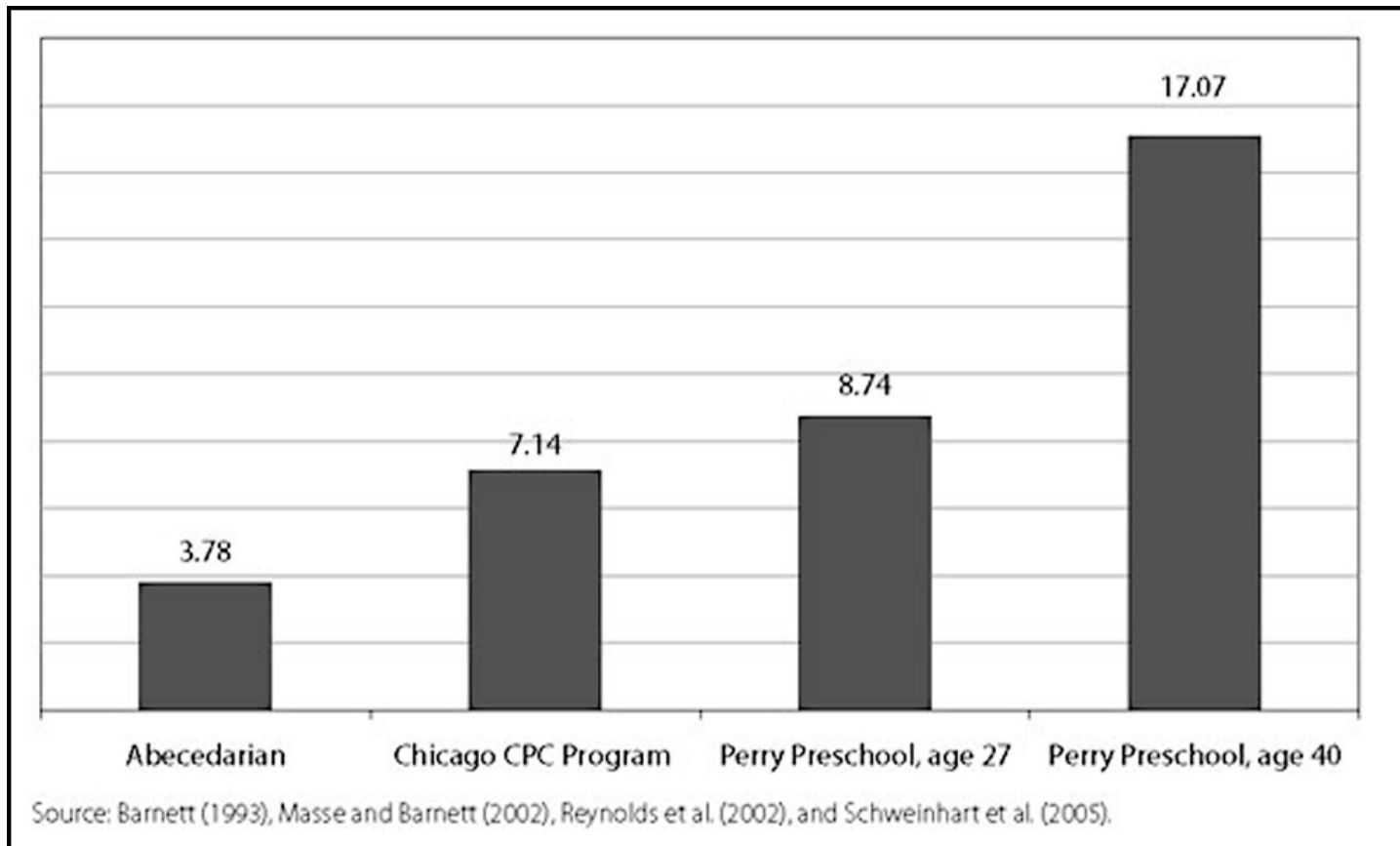


**Math Gains, Average for 3- and 4-year-olds**



# Is Early Education a Smart Investment?

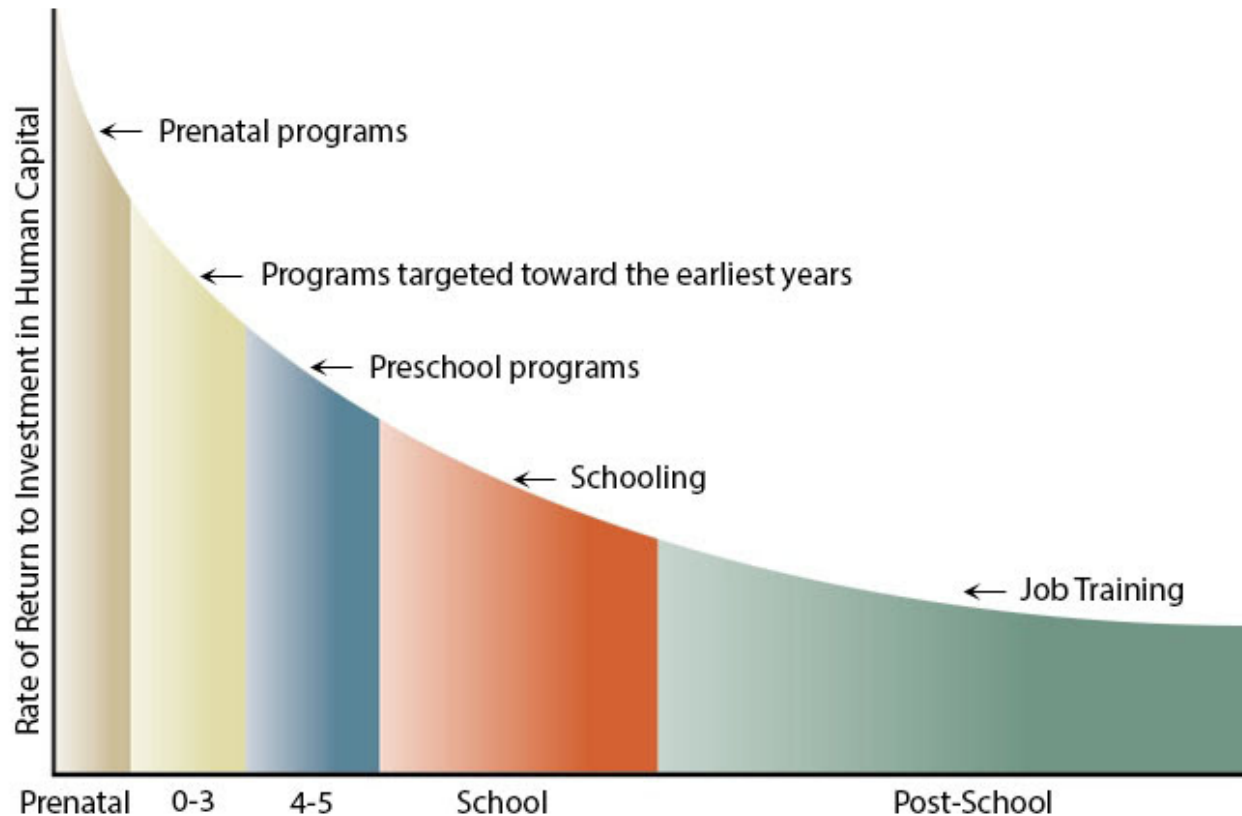
## Benefit – Cost Ratio



Lynch, R. (2007). *Enriching children, enriching the nation: Public investment in high-quality prekindergarten*. Washington, DC: Economic Policy Institute



# Returns to a Unit Dollar Invested



Source: Heckman (2008)



# The Research is Compelling



# What Makes An Effective Early Learning Program?

- Staff-child ratios and group size
- Staff qualification level and specialized training
- Staff gender and diversity
- Staff compensation
- Program duration
- Curriculum
- Physical environment

*Organisation for Economic Co-operation and Development (OECD). 2012.  
Starting Strong III: A quality toolbox for early childhood education and care.*



# Essential Elements of High Quality

## Enabling Environment

- Political leadership and/or judicial mandate and ongoing support
- Compelling vision coupled with strong leadership

Minervino, J. (2014). *Lessons from Research and the Classroom: Implementing High-Quality Pre-K that Makes a Difference for Young Children*. Seattle: Bill & Melinda Gates Foundation.



# Essential Elements of High Quality

## Rigorous Program Policies

- BA and specialized training compensated on par with K-3
- Class composition
- Learning time/dosage
- Two adults in a classroom
- Early learning standards (bidirectional)
- Proven curriculum with fidelity and results
- Special Education
- DLL support



# Essential Elements of High Quality

## Strong Program Practices

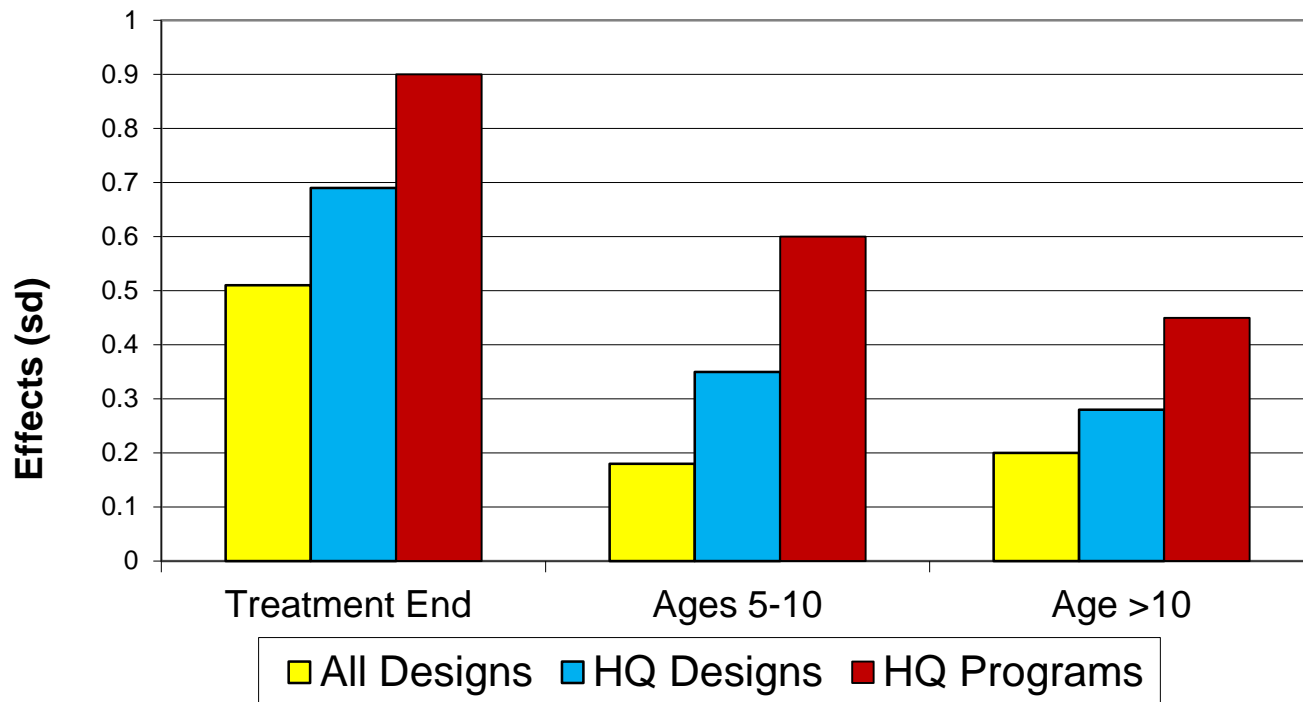
- Teachers delivering high-quality instruction
- Assessment and independent program evaluation
- Data driven system and practices
- Professional development
- Integrated system (standards, curriculum, assessment, instruction, PD, data)



# Does Early Education Last: Fade Out, Sleeper Effect, or Convergence?



# Preschool Programs in the US Produce Long-term Gains (123 studies since 1960)



Camilli, G., Vargas, S., Ryan, S. & Barnett, S.. 2010. Meta-Analysis of the Effects of Early Education Interventions on Cognitive and Social Development.



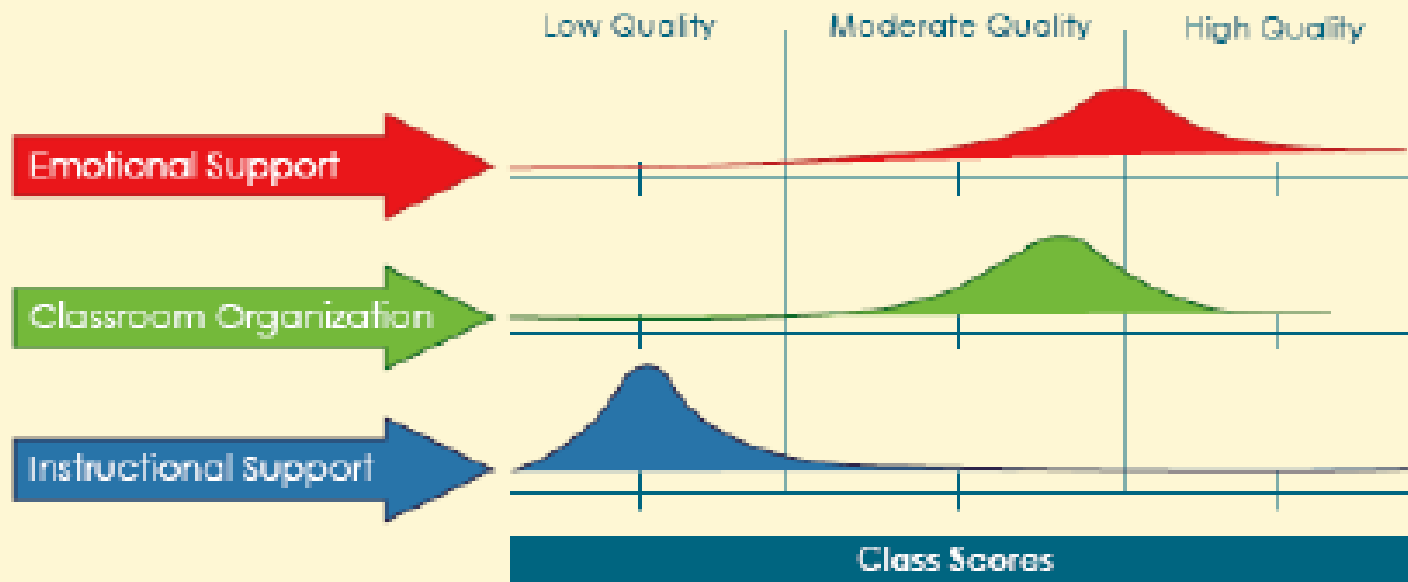
“Consistent evidence obtained by different researchers surveying slightly different but overlapping outcome literatures confirms that preschool programs have statistically significant and practical long-term preventive impact.”

- Direct instruction in preschool programs had an immediate effect on children’s cognitive development. With developmentally appropriate practice becoming the conventional wisdom, there are fewer examples of curricula that used direct instruction as the main pedagogical method in the 1990s and beyond.
- “Individualized” instruction had a positive impact on cognitive and school outcomes.
- Smaller groups and lower staff ratios provide more opportunity for teachers to match content to children’s particular developmental levels so that they are able to learn various academic concepts.



# Measuring Quality

## Average Ratings of Interactions in Pre-K - 3rd Classrooms

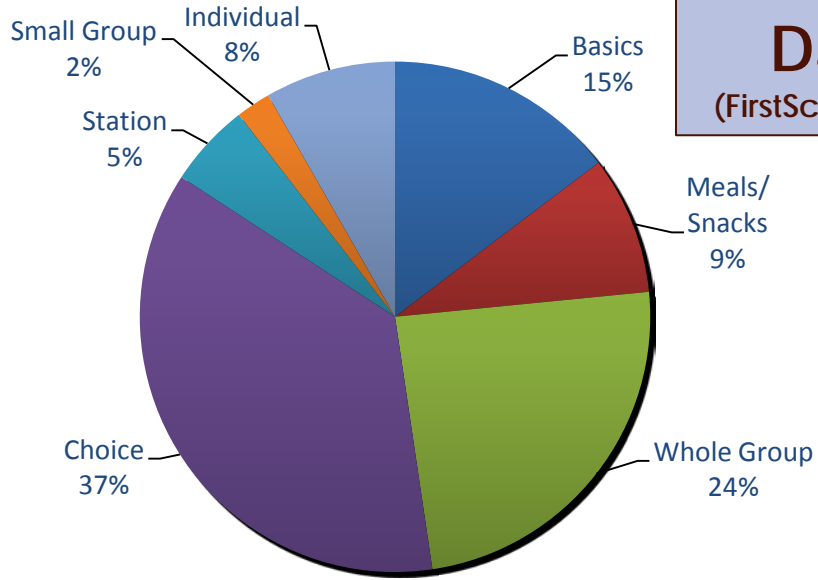


Hamre, B. et al. (2009) Measuring and improving classroom interactions in early childhood settings.  
Charlottesville, VA: Center on Advancing Student Teaching and Learning/UVA.

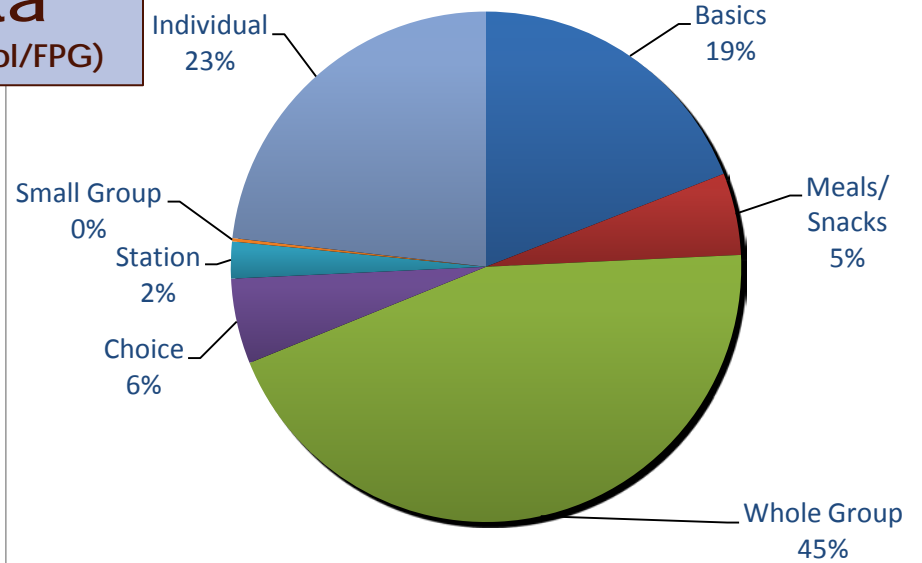


# Snapshot Data (FirstSchool/FPG)

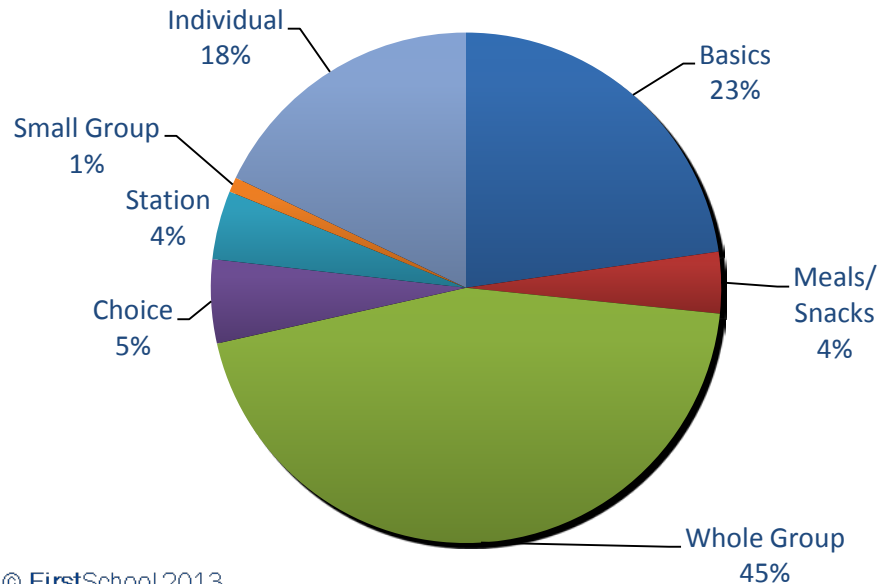
## Activity Setting - Pre K



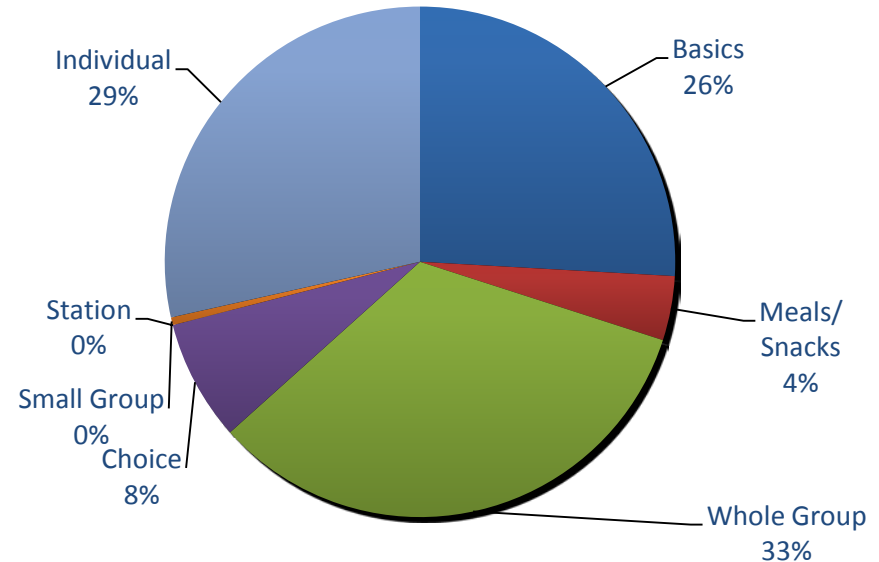
## Activity Setting - K



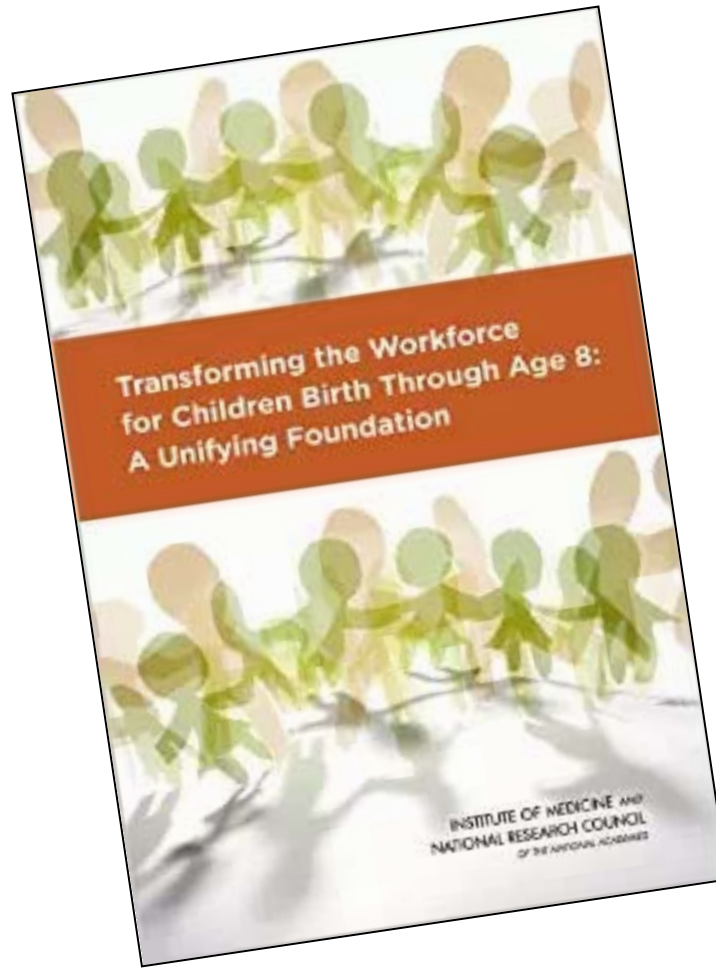
## Activity Setting - 1st Grade



## Activity Setting - 2nd Grade



# Do Credentials Matter?



# Teacher Qualifications

- “Available studies alone are insufficient to enable conclusions as to whether a bachelor’s degree alone improves the quality and effectiveness of educators, whether for early childhood settings or for K-12 schools.”
- “Studies conclude that college education or a specialization in early childhood education alone is not a guarantee of better instruction and improved child outcomes.”
- “The quality of teachers’ prior learning experiences in higher education and the quality of their ongoing professional learning and working environments all play important roles in enabling effective teaching and learning.”



# Teacher Qualifications

- “Lower educational expectations for early childhood educators than for elementary school teachers perpetuates the perception—and policies that reflect the perception—that educating children before kindergarten requires less expertise than educating K-3 students.”

“Lead educators who support the development and early learning of children from birth through age 8 should have at a minimum a bachelor’s degree and specialization in the knowledge and competencies needed to serve as a care and education professional.”



# Administrator Qualifications

- “The importance of leadership is unequivocal, yet the expectations for leaders in settings for children aged 0-8 do not (align) with the responsibilities of these leaders for fostering early learning and development.”
- “Current expectations and policies for education and certification of elementary school principals are not well aligned with the interests of early elementary teachers and students and the need to understand childhood development research and best practices in instruction in preschool and the primary grades.”
- “Current education and certification requirements and expectations for directors in early childhood settings outside of school systems are inconsistent across states, credentialing is largely voluntary, and do not adequately reflect the knowledge and competencies needed.”



# Translating Research into Practice



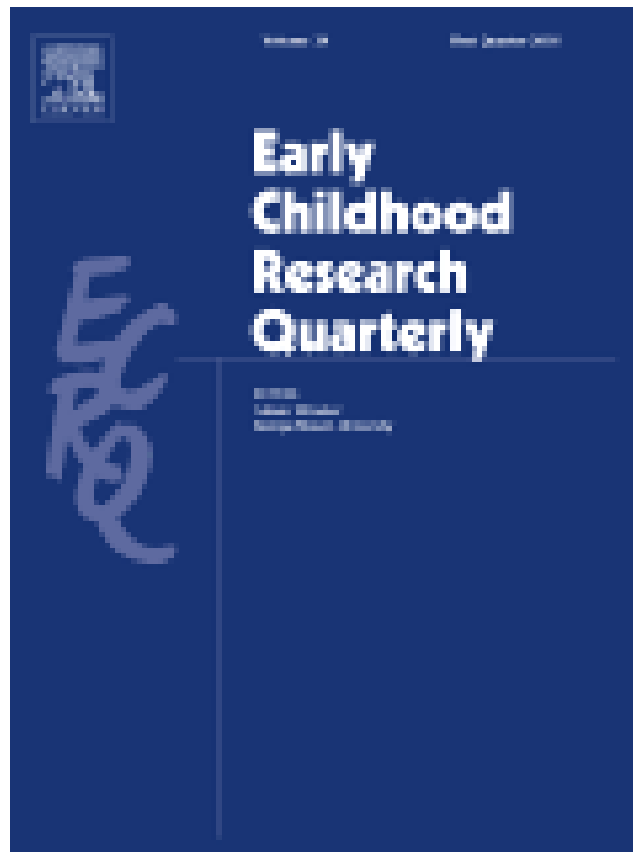
# Reliable, trustworthy sources for information on early education

The screenshot displays a web browser window with the URL [www.researchconnections.org/content/childcare/understand/](http://www.researchconnections.org/content/childcare/understand/). The page features a blue header with the text "Child Care & Early Education RESEARCH CONNECTIONS". To the right of the header, there are social media icons for email, Facebook, and Twitter, along with a search bar labeled "search the collection" and a "search tips" link. Below the header, a navigation bar contains three buttons: "Find Data & Resources", "Understand Research", and "Make Connections". The main content area is titled "Understand Research" and includes several links and descriptions:

- [Assessing Research Quality](#): This section contains information on how to evaluate the quality of social science and policy research.
- [Research Methods](#): This section contains information about data collection methods commonly used in child care policy and other social science research. It is designed to give users a general orientation to methodologies to aid in understanding the child care research indexed on our website.
- [Research Glossary](#): This glossary defines terms used in conducting social science and policy research, for example those describing methods, measurements, statistical procedures, and other aspects of research.
- [Child Care & Early Education Glossary](#): This glossary defines terms used to describe aspects of child care and early education practice and policy.
- [Faculty Teaching Modules](#): Resources for early childhood faculty to help undergraduate students understand, find, reflect on, and use research.

On the right side of the main content area, there is a small image of a smiling baby's face. At the bottom of the page, there are logos for NCCP (National Center for Children in Poverty), ICPSR (Inter-university Consortium for Political and Social Research), and OPRE (Office of Planning, Research and Evaluation). Below these logos, there are links for "Contact Us" and "About Us". At the very bottom, a small text block states: "Research Connections is supported by grant #90YE0104 from the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. The contents are solely the responsibility of the National Center for Children in Poverty and the Inter-university Consortium for Political and Social Research and do not necessarily represent the official views of the Office of Planning, Research and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services." The footer also includes the copyright notice "© 2013 The Regents of the University of Michigan".





## Quality Rating and Improvement Systems (QRIS) as Change Agents.

Edited by W. Steven Barnett, Stacie G. Goffin and Kimberly Boller

*Early Childhood Research Quarterly*

*Volume 30, Part B, Pages 179-342 (1st Quarter 2015)*

Available for purchase from

<http://www.sciencedirect.com/science/journal/08852006/30>



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### Supporting Excellence in Early Education Research

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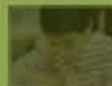
Research Highlight



Yearbook



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### Browse NIEER Research

Access	Quality and Curriculum
Assessment	Special Education
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Outcomes	Universal and Targeted

### What's New

- Jul 13 2015  
Preschool becoming more important to student success
- Jul 13 2015  
Sen. Casey pushing for universal preschool
- Jul 13 2015  
Quality preschool is a win for everyone
- [More News & Events](#)



 VIEW STATE PROFILES

 CREATE A REPORT

 TOP TEN

Search Profiles

# A Catalog and Comparison of Quality Rating and Improvement Systems (QRIS)

to promote thoughtful design, analysis and ongoing improvement in early care and education systems building.

MORE ABOUT US



Find answers to common questions about QRIS.



Access a wealth of comprehensive data about each



Compare data for the QRIS in different states or



Comp Center Contacts x GSE - Calendar - Even x QRIS National Learnin x

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Looking for something?

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Home > Resource Libraries

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## Browse National Resource Library

The National Resource Library contains resources on a variety of QRIS focus areas. You can search resources by topic, author, date and/or type.

Select a Topic [Advanced Search](#)

 Advocacy & Early Childhood Systems Building	 Culture, Language & Race In QRIS	 Data Collection & Data Systems	 Engagement & Outreach
 Evaluation & Research	 Financing & Financial Incentives	 Leadership & Professional Development	 Monitoring & Accountability

Start QRIS National L... Bring Math Proble... Research for Admi... 4:21 PM



## ECE Consensus Letter for Researchers



As policymakers debate investing in quality early childhood education programs, they should note the widespread agreement among researchers about the value of such programs. An extensive body of research in education, developmental psychology, neuroscience, medicine and economics shows that quality early childhood education programs produce better education, health, economic and social outcomes for children, families, and the nation. As researchers, we urge policymakers to make decisions based on the full body of scientific knowledge about early education and child development.

If you are a scholar or researcher, please click on this [link](#) to add your signature.

**Quality early childhood education can reduce the achievement gap.** Too many American children start school inadequately prepared to succeed. Gaps in cognitive, linguistic, social, and emotional skills due to unequal opportunities become evident well before children enter kindergarten. The resulting achievement gap widens as children progress through school, despite strong efforts at remediation. The long-term consequences include high rates of school failure, grade repetition, inappropriate special education placements, and dropout; involvement in risky behaviors and crime; and, even higher risk for adult chronic disease including hypertension, heart disease, obesity and diabetes. These problems are not limited to the poor: many children who fail a grade and drop out are from middle-income families. The costs of remediation, social dependency,

### Founding Signatories

J. Lawrence Aber

W. Steven Barnett

Daphna Bassok

William Beardslee

David Berliner

Karen Bierman

Clancy Blair

Barbara Bowman

Pia Britto

Jeanne Brooks-Gunn

Laurie Miller Brotman

Margaret Burchinal

Douglas Clements



# ECE Consensus Letter for Researchers

- Quality early childhood education can **reduce the achievement gap**.
- **Access** to quality early childhood education is essential.
- Develop the **whole child** with quality programs.
- Quality programs include **health and home**.
- Quality programs can be **brought to scale**.
- Quality programs produce quality **life outcomes**.
- Quality early childhood education benefits children from **diverse family backgrounds and circumstances**.
- Investing in quality early childhood education **pays off**.
- Critics of greater investment **ignore the full body of evidence**.



# Discussion

- How do you apply this conversation about research in your discussions with policymakers about QRIS? Families? Administrators?
- Does your state have a research foundation behind its QRIS quality?



# Parting Comments

- Research results should shape beliefs, not vice versa.
- Be evaluative of ALL research claims. Be prepared. Someone will always find a reason to disagree.
- Research evolves. It should spawn on-going, inter-related changes in “The System” with its programs, policies, practices, & resources.
- We don’t know everything, but we know more than we did before. By addressing new research questions today, we’ll know even more tomorrow to the benefit of children, families, professionals, and communities.





Center on Enhancing  
Early Learning Outcomes

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