What do we know about cost-effective pre-K?

68th Meeting of the Southern Legislative Conference
Little Rock, AR
July 28, 2014

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Societal Impacts of Quality ECE

Educational Success, Well-being and Economic Productivity

- Increased achievement
- Decreased school failure (special education and repetition)
- Increased educational attainment
- Decreased behavior problems, delinquency, and crime
- Increased employment, earnings, and economic success
- Decreased risky behavior (smoking, drug use, teen pregnancy)
- Better mental and physical health

Broad Societal Benefits

- Lower government costs for schools, social services, crime, health
- Higher rate of economic growth
- Fewer social problems including crime and inequality
Research on Quality and Effectiveness

• High quality preschool is rare
• Initial effects often are quite small
  • Program designs too weak to produce large gains
  • Implementation is too weak--no system to ensure continuous improvement and results
• Some fade-out is really convergence as schools help those behind catch up
• Effects do not entirely disappear in most studies
Preschool and Quality by Parental Education (ECLS-B, 2005)
Center Enrollment and Quality by Region at Age 4

Northeast

Midwest

South

West

In Any Prek

In Quality Prek as % of Total
WSIPP Meta-Analysis: 49 Rigorous Studies

Exhibit A2
Estimation of Test Score Fadeout: Meta-Analytic Results and Power Curve Model

Effect size vs. Years since the preschool intervention

- 0.309
- 0.152
- 0.097
- 0.085

- Effect size modeled with power curve
- Meta-analytic effect sizes
How can we produce larger gains?

- Intentional teaching
- Individualization & small groups
- Some approaches work better than others
  - State pre-K and Head Start highly variable
- Design programs to have short-term gains *twice* large as desired long-term gains
- Plan-Do-Review: data driven continuous improvement
Notable recent studies of pre-K effects

• Rhode Island RCT--pilot of pre-K for all
  – Positive gains for all, larger gains for low income children
• TN RCT--not yet a true randomized trial
  – But results are mixed and concerning
• RD studies--Boston, GA, AR, WV, SC, MI, CA, OK, NM, NJ, Results are mixed, some have large positive effects
• Long-term positive effects in TX, GA and NJ
  – TX has very small long-term gains but no limits on class size
  – NJ has much larger long-term effects, but max. of 15 per class
NJ’s Abbott Pre-K Program: A high quality example

- Universal: all children in 31 high poverty districts
- Two years beginning at age 3
- Teacher with BA & certification & asst. teacher
- Full-day/school yr (6 hour school day, 180 days)
- Maximum class size of 15 students
- Approved evidence-based curricula (5 models)
- Public private partnership (2/3 private)
- Continuous improvement system with strong PD (coaching)
Continuous Improvement Cycle

First Develop Standards

Measure and Assess Progress

Analyze and Plan

Implement - Professional Development and Technical Assistance
NJ Raised Quality in Public and Private

ECERS-R Score (1=minimal, 3=poor 5= good 7=excellent)

- 00 Total (N = 232)
- 08 Total (N = 407)
Abbott Pre-K Effects on NJASK by Years of Participation

![Bar chart showing the effects of Abbott Pre-K on NJASK scores by years of participation. The chart compares 1 year Abbott pre-k and 2 year Abbott pre-k for LAL 4th, LAL 5th, Math 4th, Math 5th, and Science 4th grades. The data indicates a higher effect on the 2 year Abbott pre-k program for most categories.](chart.png)
Abbott Pre-K Effects on Retention and Special Education

- Retention:
  - Abbott pre-K: 12%
  - No Abbott pre-K: 19%

- Special Education:
  - Abbott pre-K: 12%
  - No Abbott pre-K: 17%
What do we know about State Pre-K?

- Long-term trends
  - Enrollment more than doubled nationally in 10 years
  - Quality standards have improved
  - Spending increased, but did not keep up with enrollment

- Recession hit pre-K hard
  - Funding declined, especially per child
  - Quality standards wavered
  - Enrollment actually declined slightly

- States vary greatly, inequality increasing
  - From preschool for to all to none
  - High standards to no standards
  - Spending per child varies by a factor of 10
- Total state funding for pre-K programs increased by $30 million in real dollars, about 1%.
- State pre-K funding per child increased by $36 (inflation-adjusted) from the previous year, to $4,026.
Benchmarks, 01-02 to 12-13
Conclusions

• Quality early education can have high economic returns
• Benefits and effectiveness depend on quality
• Quality is generally low and variable within and among states
• Raising quality requires high standards, continuous improvement, adequate funding