EARLY CHILDHOOD EDUCATION:
INVESTING IN THE FUTURE

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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

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

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

*Significant at \( p < 0.1 \); \( \dagger p < 0.05 \); **\( p < 0.01 \)
Figure 2. Impacts of Tulsa Pre-K and CAP Head Start on Attentiveness

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 Pre-K Programs
Massachusetts – Boston Public Schools

Effects of Pre-K Programs
Massachusetts – Boston Public Schools

Effects of Boston Pre-K on Emotional Development & Regulation

- Emotion Labeling: 0.19*
- Positive Emotion: 0.03
- Impulse Control: 0.20


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

- Perry Preschool: $7.16
- Chicago Child Parent Centers: $6.87
- Carolina Abecedarian: $2.69


Long-Term Effects of Georgia Pre-K

Return for Each Dollar Spent on Georgia Pre-K

- $5.12

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

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Benefits Divided By Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Day Pre-K Program</td>
<td>3.09, 3.47</td>
</tr>
<tr>
<td>Half Day Pre-K Program</td>
<td>2.79, 4.01</td>
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</tbody>
</table>

Source: Bartik, Gormley, & Adelstein, 2012

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

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Benefits</th>
<th>Costs</th>
<th>Benefits minus costs (net present value)</th>
<th>Benefit to cost ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>State and district programs</td>
<td>$29,210</td>
<td>$6,974</td>
<td>$22,236</td>
<td>$4.20</td>
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<tr>
<td>Head Start</td>
<td>$22,452</td>
<td>$18,564</td>
<td>$3,888</td>
<td>$2.63</td>
</tr>
</tbody>
</table>

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


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

Results: Early 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!
CENTER FOR RESEARCH ON CHILDREN IN THE U.S. (CROCUS) WEBSITE

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