EARLY CHILDHOOD EDUCATION: INVESTING IN THE FUTURE

William T. Gormley, Jr.
Georgetown University
Southern Early Childhood Association Meeting
Williamsburg, Virginia, January 17, 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

Average Percentage of 4-year-olds Served by State Pre-K by Region

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

Effects of New Jersey Pre-K on Cognitive Development

- Vocabulary: 0.36
- Math: 0.23
- Print Awareness (Pre-Reading): 0.32

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

![Bar chart showing test score gains in months for different categories: Letter-Word Identification, Spelling, and Applied Problems. The gains are as follows: 9 months for Letter-Word Identification, 7 months for Spelling, and 5 months for Applied Problems.]
Effects of TPS Pre-K by Free Lunch Status, in Months

Test Score Gains, Months

Letter-Word Identification

Spelling

Applied Problems

Free Lunch
Reduced-Price Lunch
Paid Lunch
Effects of TPS Pre-K by Race/Ethnicity, in Months

- **Letter-Word Identification**
  - Black: 9
  - White: 9
  - Native American: 12
  - Hispanic: 11

- **Spelling**
  - Black: 10
  - White: 6
  - Native American: 8
  - Hispanic: 4

- **Applied Problems**
  - Black: 5
  - White: 3
  - Native American: 6
  - Hispanic: 6
Effects of TPS Pre-K on Hispanics by Primary Language Spoken at Home, in Months

The bar chart shows the test score gains in months for Letter-Word Identification, Spelling, and Applied Problems, categorized by English and Spanish. The gains are as follows:

- **Letter-Word Identification**:
  - English: 5 months
  - Spanish: 12 months

- **Spelling**:
  - English: 1 month
  - Spanish: 4 months

- **Applied Problems**:
  - English: 1 month
  - Spanish: 10 months
Figure 1. Impacts of Tulsa Pre-K and CAP Head Start on Behavioral Problems

(Significant at †p<.10; *p<.05; **p<.01)
Figure 2. Impacts of Tulsa Pre-K and CAP Head Start on Attentiveness

(Significant at †p<.10; *p<.05; **p<.01)
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 Boston Pre-K on Cognitive Development

**Effects of Pre-K Programs**

Massachusetts – Boston Public Schools

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**Effects of Boston Pre-K on Executive Functioning**

Effects of Pre-K Programs
Massachusetts – Boston Public Schools

Effects of Boston Pre-K on Emotional Development & Regulation

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

<table>
<thead>
<tr>
<th>Program</th>
<th>Benefit-Cost Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perry Preschool</td>
<td>7.16</td>
</tr>
<tr>
<td>Chicago Child Parent Centers</td>
<td>6.87</td>
</tr>
<tr>
<td>Carolina Abecedarian</td>
<td>2.69</td>
</tr>
</tbody>
</table>

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

Source: Bartik, Gormley, & Adelstein, 2012
Long-Term Effects of New Jersey Pre-K (Abbott Schools)

Figure 1. Pre-K Abbott Effects on NJASK by Years of Participation

Results: Early Cohort

Early Cohort (2001-2002 K) Pre-K Program Effects

* p < 0.1; ** p < 0.05; *** p < 0.01
Results: Late Cohort

Late Cohort (2006-2007 K) Pre-K Program Effects

* p < 0.1; ** p < 0.05; *** p < 0.01
Results: Late Cohort

Late Cohort Pre-K Program Effects by Gender

* p < 0.1; ** p < 0.05; *** p < 0.01
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