Early Care and Education in America: Why Pre-K for All is Sound Economic Policy

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Steve Barnett, PhD

Rutgers Graduate School of Education
What do we know about Pre-K impacts over time?

- First 5 years are a time of rapid brain development and early experience has effects with life-long consequences.
- Pre-K produces short- and long-term positive impacts.
- These gains are not uniform but vary in important ways.
- Schools largely build on abilities of students at entry, but can erase modest initial differences.
American Schools Have Been Getting Better for Decades

- NAEP scores are up
  - Math 1990 to 2011
    - 4 grade math up 29 points for W & H, 36 points for Black students
    - 8th grade math up 23-35 points for all groups, most for Black students
  - Reading 1992 to 2011
    - 4th grade reading up 7 -13 points (Black students most)
    - 8th grade reading up 7 -12 points (Blacks students most)
- But, this does not mean we don’t need to improve and close gaps
Preschool programs 0-5 in the US: Impacts in 123 studies since 1960

Effects (1sd) = percent of achievement gap

- All Designs
- HQ Designs
- HQ Programs

Age at Follow-Up:
- Treatment End
- Ages 5-10
- Age >10
What determines cognitive gains?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of Follow-Up</td>
<td>Negative</td>
</tr>
<tr>
<td>Research Design Quality</td>
<td>Positive</td>
</tr>
<tr>
<td>Intentional Teaching</td>
<td>Positive</td>
</tr>
<tr>
<td>Individualization</td>
<td>Positive</td>
</tr>
<tr>
<td>(small groups and 1 on 1)</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Services</td>
<td>Negative</td>
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</tbody>
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n= 123 Studies
Cognitive Effects Matter and Do Not All Fade Out Over Time

[Bar chart showing cognitive effects over time in PPVT, Read, and Math skills from Age 5 to Age 14.]
Potential Gains from Pre-K Investments

Educational Success and Economic Productivity
- Achievement test scores
- Special education and grade repetition
- High school graduation
- Behavior problems, delinquency, and crime
- Employment, earnings, and welfare dependency
- Smoking, drug use, depression

Decreased Costs to Government
- Schooling costs
- Social services costs
- Crime costs
- Health care costs (teen pregnancy and smoking)
Chicago CPC: Academic and Social Benefits at School Exit

### Economic Returns to Pre-K for Disadvantaged Children

(In 2006 dollars, 3% discount rate)

<table>
<thead>
<tr>
<th>Program</th>
<th>Cost</th>
<th>Benefits</th>
<th>B/C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perry Pre-K</td>
<td>$17,599</td>
<td>$284,086</td>
<td>16</td>
</tr>
<tr>
<td>Abecedarian</td>
<td>$70,697</td>
<td>$176,284</td>
<td>2.5</td>
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<tr>
<td>Chicago</td>
<td>$ 8,224</td>
<td>$ 83,511</td>
<td>10</td>
</tr>
</tbody>
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Results Depend on Quality

Large scale public programs sometimes fail to deliver the promised results and not just Head Start.

These large scale public programs have not been designed to duplicate the models successful in research, but to be cheaper.

Proper design, high standards, adequate funding, are a start but more is required to be “good”

Few children have access to good pre-K
Initial Effects of 1 Year at Age 4: NJ and Other Programs

<table>
<thead>
<tr>
<th></th>
<th>CPC</th>
<th>Tulsa</th>
<th>NJ</th>
<th>8 St</th>
<th>Head St</th>
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</thead>
<tbody>
<tr>
<td>PPVT</td>
<td>NA</td>
<td>NA</td>
<td>.28</td>
<td>.26</td>
<td>.13</td>
</tr>
<tr>
<td>Math</td>
<td>.33</td>
<td>.36</td>
<td>.36</td>
<td>.32</td>
<td>.18</td>
</tr>
<tr>
<td>Literacy</td>
<td>NA</td>
<td>.99</td>
<td>.56</td>
<td>.80</td>
<td>.34</td>
</tr>
</tbody>
</table>

Effects in standard deviations. Head Start adjusted for crossovers in randomized trial.
Good Preschool is the Exception Regardless of Parental Education (ECLS-B)
State Pre-K Enrollment Pause

- Enrollment growth stopped well short of the goal
- 23 states enrollment declined or remained unchanged
- 17 states increased enrollment
Total pre-K funding by states fell $548 million (adjusted for inflation)
State funding per child fell $442 to just $3,841
Funding per child is now $1,000 below its level a decade ago
State funding per child declined in 27 of 40 states with programs
In 13 states per-child spending fell by 10 percent or more
Quality Standards

- 4 states met all 10 benchmarks
- 7 states lost ground on 9 benchmarks, 5 for site visits
- 42 percent of children in programs that met fewer than 5
Results of Universal Pre-K in the US

• Rhode Island Randomized Trial
  – Positive gains for all, larger gains for low income children

• Boston RDD
  – Gains in language, literacy, math, executive function

• Oklahoma (multiple studies)
  – Gains for all, larger gains for the lowest income children
  – Grade 3 gains on attention and academic achievement, BUT caution because comparison group is not comparable long term

• Also Georgia, West Virginia, New Jersey have studies
  – GA and NJ, long-term positive effects
  – BCA in GA, earnings gains alone may exceed cost
Effects of Pre-K for All Globally

OECD test scores higher and more equal as access approaches 100%

France: Ecole Maternelle increased income

Norway: universal child care increased earnings and employment

Arg. Uru. and UK: universal pre-K raised long-term achievement

Denmark, Quebec: universal child care care null or negative effects on children--quality matters
NJ’s Urban ECE Transformation

• Teacher with BA & Cert. + asst. in each class;
• Full-day (6 hour educational day), 180-day program, plus extended day/full year;
• Access to all 3 and 4 yr. olds in 31 school systems
• Maximum class size of 15 students;
• Evidence-based curricula;
• Early learning standards and program guidelines;
• Support for potential learning difficulties;
• Professional development for key staff;
• Part of systemic reform P-12
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

- LAL 4th: 0.12, 0.26
- LAL 5th: 0.18, 0.22
- Math 4th: 0.17, 0.37
- Math 5th: 0.14, 0.29
- Science 4th: 0.17, 0.37

Legend:
- Blue: 1 year Abbott pre-k
- Red: 2 year Abbott pre-k
Abbott Pre-K Effects on Retention and Special Education

- Retention: 12% for Abbott pre-K, 19% for no Abbott pre-K
- Special Education: 12% for Abbott pre-K, 17% for no Abbott pre-K
Continuous Improvement Cycle

First Develop Standards

Measure and Assess Progress

Analyze and Plan

Implement - Professional Development and Technical Assistance
Why Offer *Universal* High-Quality Public Pre-K?

- All children gain from high quality pre-K
- Targeting is ineffective and inefficient
- Disadvantaged children benefit more
  - Higher coverage
  - Peer effects
  - Scale effects
- Pre-K for all has a larger net benefit
- Can’t afford to leave the middle class behind
Conclusions

• Overall, pre-k produces long-term gains in cognitive and other domains

• Substantive persistent gains require large initial effects

• Stronger public programs do have long-term gains

• Few preschool programs are strong enough

• Universal programs produce gains for all children and stronger gains for disadvantaged children

• High standards, adequate funding, and continuous improvement system needed to produce results