Benefits of Preschool for All

Research on the Benefits of Preschool Education: Securing High Returns from Preschool for All Children

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www.nieer.org
Why Preschool for all Children?

- Investing early can yield high returns and is pro-growth
- School failure is not just a problem for children in poverty
- Universal programs are more cost-effective than targeted programs
Benefits of High Quality Pre-K

- Higher test scores
- Better social skills
- Less grade repetition & Spec. Ed.
- Higher graduation rates
- Increased earnings
- Less crime
- Less teen pregnancy, abortion, smoking

Three Benefit-Cost Analyses with Disadvantaged Children

<table>
<thead>
<tr>
<th></th>
<th>Abecedarian</th>
<th>Chicago</th>
<th>High/Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year began</td>
<td>1972</td>
<td>1985</td>
<td>1962</td>
</tr>
<tr>
<td>Location</td>
<td>Chapel Hill, NC</td>
<td>Chicago, IL</td>
<td>Ypsilanti, MI</td>
</tr>
<tr>
<td>Sample size</td>
<td>111</td>
<td>1,539</td>
<td>123</td>
</tr>
<tr>
<td>Design</td>
<td>RCT</td>
<td>Matched</td>
<td>RCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>neighborhood</td>
<td></td>
</tr>
<tr>
<td>Ages</td>
<td>6 wks-age 5</td>
<td>Ages 3-4</td>
<td>Ages 3-4</td>
</tr>
<tr>
<td>Program schedule</td>
<td>Full-day, year</td>
<td>Half-day, school</td>
<td>Half-day, school</td>
</tr>
<tr>
<td></td>
<td>round</td>
<td>year</td>
<td>school year</td>
</tr>
</tbody>
</table>

**Perry: Economic Effects at Age 27**

<table>
<thead>
<tr>
<th>Category</th>
<th>Program Group</th>
<th>No-program Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earn $2,000 + monthly</td>
<td>29%</td>
<td>7%</td>
</tr>
<tr>
<td>Own home</td>
<td>36%</td>
<td>13%</td>
</tr>
<tr>
<td>Never on welfare as adult</td>
<td>41%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Perry Preschool: Economic Effects at 40

Perry: Arrests per person by age 27

<table>
<thead>
<tr>
<th></th>
<th>Felony</th>
<th>Misdemeanor</th>
<th>Juvenile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>0.7</td>
<td>1.2</td>
<td>0.5</td>
<td>2.3</td>
</tr>
<tr>
<td>No program</td>
<td>1.5</td>
<td>2.5</td>
<td>0.6</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Perry Preschool: Crime Effects at 40

Abecedarian : Academic Benefits

Abecedarian Reading Ach. Over Time

CPC: Academic and Social Benefits at School Exit

## Economic Returns to Pre-K for Disadvantaged Children

<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>$16,264</td>
<td>$277,631</td>
<td>17.07</td>
</tr>
<tr>
<td>Abecedarian</td>
<td>$36,929</td>
<td>$139,571</td>
<td>3.78</td>
</tr>
<tr>
<td>Chicago</td>
<td>$7,417</td>
<td>$52,936</td>
<td>7.14</td>
</tr>
</tbody>
</table>

Why not Target Pre-K?

- Targeting is costly and imperfect
  - Head Start misses most poor children
  - About half of Head Start children not poor
- Benefits do not stop at the poverty line
  - Many non-poor have similar problems
  - Benefits decrease gradually with income
  - Georgetown study of UPK in OK
- Benefits greater when all children exposed to Pre-K

Could universal Pre-K produce similar benefits for the middle class?

Middle class children have fairly high rates of the problems that preschool reduces for low-income children.

Reducing these problems could generate large benefits.

<table>
<thead>
<tr>
<th>Income</th>
<th>Retention</th>
<th>Dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest 20%</td>
<td>17%</td>
<td>23%</td>
</tr>
<tr>
<td>20-80%</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>Highest 20%</td>
<td>8%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Cognitive Readiness Gap

Abilities of Entering Kindergarteners by Family Income--National Data, Fall 1998 (reported by NIEER from ECLS-K)

Is State Pre-K/UPK Effective?

- Two new rigorous studies
- Large scale, state wide programs
- One year of quality public Pre-K at 4
- Effects at entry to Kindergarten
- Universal and targeted programs
- Standardized tests
- Look at effects by income
Oklahoma’s Universal Pre-K

- 3,028 children in Tulsa public schools
- Rigorous RD design
- Gains for all SES & ethnic groups
- Literacy and Math gains
  - Smaller than Perry and Abecedarian
  - Similar to CPC
- Larger gains for minority and poor children

NIEER Evaluation of 5 State Pre-K Programs

- 5,071 children in 5 States
- OK and WV are universal
- MI, NJ, & SC targeted
- Gains from Pre-K in all 5 states
- Gains in language, literacy & math
- All children gain, low-income gain more

Extra Benefits from Serving All

- Disadvantaged children found to gain more when they have mixed SES peers in Pre-K
- Positive peer effects in kindergarten and beyond will be larger if all attend Pre-K

High Quality Preschool Programs Needed to Produce Benefits

- Well-educated preschool teachers
- Adequate teacher compensation
- Small classes and reasonable teacher:child ratios
- Strong supervision
- High standards and accountability

# Comparison of Plausible Returns to Targeted and Universal Pre-K

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
<th>Benefits</th>
<th>NPV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targeted</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50% accur.</td>
<td>$12.5</td>
<td>$ 79.9</td>
<td>$ 67.4</td>
</tr>
<tr>
<td>80% accur.</td>
<td>$12.5</td>
<td>$ 96.0</td>
<td>$ 83.5</td>
</tr>
<tr>
<td><strong>Universal</strong></td>
<td>$62.4</td>
<td>$213.2</td>
<td>$150.8</td>
</tr>
<tr>
<td>(80% enrolled)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

- Quality Pre-K is pro-growth
- Quality Pre-K is effective response to NCLB
- All children can and should benefit
- UPK more cost-effective than targeting
- Must be intensive, quality program