Promoting Skills by Boosting the Environments of Disadvantaged Children

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Education Commission of the States

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The challenges: inequality, social mobility, a divided society, and polarized leadership.
The effective way to alleviate poverty and inequality: promote skills, not income transfers.
Changes in Real Wage Levels of Full-time U.S. Workers by Education, 1963-2012, Males

Source: Autor 2014, Skills, Education, and the Rise of Earnings Inequality Among the “Other 99 Percent.”
Building skills produces agency and engagement in society.
Trends in the Intergenerational Correlation of Welfare Participation: Neither Transfers Nor Work Requirements Reduced Intergenerational Poverty

Note: Welfare participation includes AFDC/TANF, SSI, Food Stamps and Other Welfare.
Reduce inequality and promote inclusion and social mobility by promoting skills.
A skilled workforce is a flexible, adaptable, and productive workforce.
A comprehensive approach to skill development makes dollars and sense.
Fragmented solutions are often not the most effective ones—the problems and their causes are interrelated.
Should only the squeaky wheel get the grease?
The Pareto Principle

20% of the Actors Account for 80% of the Results.

Vilfredo Pareto, 1848-1923
• A high-need/high-cost population segment uses more than half of resources in multiple sectors.

• Most high-need/high-cost people in this segment share risk factors in the first decade of life;

• Factors that can be accurately assessed in the first years of life is important.

Seen in this way, targeting early-life risks seem important enough to warrant investment in early-years preventions.
Invest more in prevention and less in remediation and in creating a secure foundation to take the opportunities life offers.

Invest more in creating flourishing lives, rather than in correcting problems after they appear.
Families, Not Schools, Are the Major Producers of the Skills of Children
The importance of the early years: skills beget skills.
Help troubled American families to develop the skills of their children through voluntary programs.
Supporting families in engaging and nurturing their children is key to success in education and learning at all stages of a child’s life.
Sources of Rising Inequality
## Estimated Average Annual Percentage Change in Various Inequality Measures Accounted for by Factor Components, US 1979-2007

<table>
<thead>
<tr>
<th>Factor Component</th>
<th>Gini</th>
<th>P90/P10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td>0.4</td>
<td>0.82</td>
</tr>
<tr>
<td>Household Structure</td>
<td>23%</td>
<td>33%</td>
</tr>
<tr>
<td>Men's Employment</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Men's Earning Disparity</td>
<td>73%</td>
<td>50%</td>
</tr>
<tr>
<td>Women's Employment</td>
<td>-25%</td>
<td>-22%</td>
</tr>
<tr>
<td>Women's Earning Disparity</td>
<td>20%</td>
<td>29%</td>
</tr>
<tr>
<td>Assortative Mating</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>Other</td>
<td>-5%</td>
<td>-6%</td>
</tr>
</tbody>
</table>

**Note:** Household Structure: Marriage Rate, Men's Employment: Male Head Employment, Men's Earning Disparity: Male head earnings distribution, Women's Employment: Female Head Employment, Women's Earning Disparity: Female head earnings distribution, Assortative Mating: Spouses' earnings correlation.

The family is the cornerstone of effective skill development.
Yet American family life is under stress.
The challenges facing families impair their ability to foster the skills of their children.
Hart & Risley, 1995

Children enter school with “meaningful differences” in vocabulary knowledge.

1. Emergence of the Problem
   In a typical hour, the average child hears:

<table>
<thead>
<tr>
<th>Family</th>
<th>Actual Differences in Quantity of Words Heard</th>
<th>Actual Differences in Quality of Words Heard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welfare</td>
<td>616 Words</td>
<td>5 affirmatives, 11 prohibitions</td>
</tr>
<tr>
<td>Working Class</td>
<td>1,251 Words</td>
<td>12 affirmatives, 7 prohibitions</td>
</tr>
<tr>
<td>Professional</td>
<td>2,153 Words</td>
<td>32 affirmatives, 5 prohibitions</td>
</tr>
</tbody>
</table>

2. Cumulative Vocabulary at Age 3

<table>
<thead>
<tr>
<th>Cumulative Vocabulary at Age 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children from welfare families:</td>
</tr>
<tr>
<td>Children from working class families:</td>
</tr>
<tr>
<td>Children from professional families:</td>
</tr>
</tbody>
</table>
Per Capita Enrichment Expenditures on Children ($2008) Top Versus Bottom Quartile of Households

Source: Duncan and Murnane (2011)
Mean Achievement Test Scores by Age by Maternal Education

Each score standardized within observed sample. Using all observations and assuming data missing at random. Source: Brook-Gunn et al. (2006).
Early childhood programs substantially reduce achievement gaps and produce better child outcomes.
They work with and encourage parents.
In assessing them, we need proper measures of program output of life-relevant skills.
Perry Preschool Program: IQ, by age and treatment group

Source: Perry Preschool Program. IQ measured on the Stanford-Binet Intelligence Scale (Terman & Merrill, 1960). Test was administered at program entry and each of the ages indicated.
Despite “Fadeout,” 7-10% per annum rate of return.
Worked primarily through boosting social and emotional skills.
Hard evidence on the importance of “soft” skills.
a) Major advances have occurred in understanding which human capacities matter for success in life.

b) Cognitive ability as measured by IQ and achievement tests is important.

c) So are the **socio-emotional skills** – sometimes called character traits or personality traits:

- Motivation
- Sociability; ability to work with others
- Attention
- Self Regulation
- Self Esteem
- Ability to defer gratification
- Health and mental health
Develop cognition and character from conception, through birth and into school and career training.
Character and cognition are skills, *not* traits fixed at birth.
They can be fostered.
Developing multiple skills and abilities is the best way to solve the problems of economic and social inequality.
Intergenerational Effects of Perry Program
Selected Outcomes for All Children of the Perry Participants

- Completed high school: P = 0.0849
- In good health: P = 0.0624
- Employed full-time: P = 0.0548
- Never suspended: P = 0.0347
- Never arrested: P = 0.0792

Legend:
- Control group's mean
- Treatment effect (difference-in-means)

P: Worst-case randomization test-based exact p-value
Abecedarian shows healthy benefits from a comprehensive approach.
Starting Earlier (At Birth) Boosts IQ
• Improved parenting practices and child attachment
• Positive effect on behavior and mental health
• Higher educational attainment
• Higher employment rate
• Reduced criminal activity
• Better child and adult health
### Abecedarian Project, Health Effects at Age 35 (Males)

<table>
<thead>
<tr>
<th></th>
<th>Treatment Mean</th>
<th>Control Mean</th>
<th>Treatment p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Systolic Blood Pressure</strong></td>
<td>125.79</td>
<td>143.33</td>
<td>0.018</td>
</tr>
<tr>
<td><strong>Diastolic Blood Pressure</strong></td>
<td>78.53</td>
<td>92.00</td>
<td>0.024</td>
</tr>
<tr>
<td><strong>Pre-Hypertension</strong></td>
<td>0.68</td>
<td>0.78</td>
<td>0.235</td>
</tr>
<tr>
<td><strong>Hypertension</strong></td>
<td>0.10</td>
<td>0.44</td>
<td>0.011</td>
</tr>
<tr>
<td><strong>HDL Cholesterol</strong></td>
<td>53.21</td>
<td>42.00</td>
<td>0.067</td>
</tr>
<tr>
<td><strong>Cholesterol/HDL-C</strong></td>
<td>3.89</td>
<td>4.69</td>
<td>0.057</td>
</tr>
<tr>
<td><strong>Abdominal Obesity</strong></td>
<td>065</td>
<td>0.87</td>
<td>0.136</td>
</tr>
<tr>
<td><strong>Metabolic Syndrome</strong></td>
<td>0.00</td>
<td>0.25</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Source: Campbell, Conti, Heckman, Moon, Pinto, Pungello and Pan (2014).
Rate of return:

• Overall: 13.7% per annum
• Males: 14% per annum
• Females: 10% per annum
The enhanced income of mothers from providing childcare by itself pays for program costs.
Mechanisms
Enriches Home Lives of Children Outside of Childcare Center

Keeps Parental Engagement Active Long After the Children Leave Pre-K
The Importance of the Early Years: Skills Beget Skills

<table>
<thead>
<tr>
<th>Social-emotional Skills</th>
<th>Cognitive Skills, Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>(sit still; pay attention; engage in learning; open to experience)</td>
<td></td>
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<table>
<thead>
<tr>
<th>Health</th>
<th>Cognitive Skills, Social-Emotional Skills</th>
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<tr>
<td>(fewer lost school days; ability to concentrate)</td>
<td></td>
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<tr>
<th>Cognitive Skills</th>
<th>Produce better health practices; produce more motivation; greater perception of rewards, social-emotional skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>(child better understands and controls its environment)</td>
<td></td>
</tr>
</tbody>
</table>

Outcomes: increased productivity, higher income, better health, more family investment, enhanced social mobility, reduced social costs.
Returns to a Dollar Invested

Source: Heckman (2008)
• Substantial Returns on high quality programs for *disadvantaged* children.
• Advantaged children have other resources often much better than those from public programs.
Successful early childhood programs help parents grow their parenting skills, foster the skills and aspirations of their children, and make for engaged and inclusive communities, a more skilled workforce, and a healthier society.