Arguments to Support Investment in Early Childhood

Support Material 2.1a
Module 2: Investing in Early Childhood
Session 2.1 Investing in Early Childhood
Early Childhood

Conception to age eight

• This timeframe is consistent with the understanding within developmental psychology of the ways in which children learn

• Including the ages of 6-8 allows educators and planners to address children's needs for an adequate transition from early care and education settings to primary school
Development

The *process of change* in which the child comes to master more and more complex levels of moving, thinking, feeling, and interacting with people and objects in the environment. Physical growth, mental, social, emotional and spiritual growth are crucial in a child’s overall development.
Six Reasons for Investment in Early Childhood

- Human Rights
- Scientific Rationale
- Economic Benefits
- Social Equity
- Social Mobilization
- Achieve International Goals
Human Rights

Convention on the Rights of the Child (CRC) – Most ratified convention

Children have the Right to survive and to thrive, beginning with those most likely to falter
Scientific Rationale

- The first year lasts forever!
- Most of adult mental ability is formed in the first three years of life – about half of that before birth (80% of brain growth)
- Prenatal to age 3 is the most important time.
Healthy Brain

This PET scan of the brain of a normal child shows regions of high (red) and low (blue and black) activity. At birth, only primitive structures such as the brain stem (center) are fully functional; in regions like the temporal lobes (top), early childhood experiences wire the circuits.
An Abused Brain

This PET scan of the brain of a Romanian orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivation in infancy. The temporal lobes (top), which regulate emotions and receive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems.
Scientific Rationale:

- Internationally 1/10 has a deficiency/delay - many could have been avoided
- Malnutrition and anemia reduce learning ability
- Integrated/holistic early childhood programmes can have an enduring impact
Integrated/Holistic

Programmes that attend to children's

- Physical development
- Cognitive/mental development
- Nutrition
- Social, emotional development
- Spiritual development

In the context of family and community
Interventions with stunted children in Jamaica

Grantham-McGregor et al, 1991
Growth Retardation and Development
Jamaica

- Stimulation and supplements normalized development by 2 years
- Age 11 - Benefits of stimulation still present but not supplementation

Grantham-McGregor
Benefits are sustained: Benefits at 17-18 years from early childhood stimulation in stunted children.

Benefits at 17-18 years from stimulation in early childhood in stunted children

- Anxiety: P value 0.01
- Depression: P value 0.02
- Self-esteem: P value 0.04
- Antisocial: P value 0.04
- Attention deficit: P value 0.04
- Inattention: P value 0.1
- Hyperactivity: P value
- Oppositional behaviour: P value

Standard scores range from 0 to 0.5.
Economic Benefits

- Prevention is less expensive than Treatment
- Appropriate health care for women improves birth outcomes
- Preventive care reduces costs of health care throughout life
Economic Benefits cont.

Investment in quality early childhood programmes
- prepares the child for the school and costs less than high dropout and repetition rates
- leads to increased school and workplace productivity.
Economic Benefits cont.

• Early stimulation
  - supports the child’s development now and throughout life
  - helps break the intergenerational transmission of poverty – a step in Poverty Alleviation
Rates of Return to Human Development Investment Across all Ages

Pre-school Programs

School

Job Training

Return Per $ Invested

Pre-School

School

Post School

Age

Pedro Carneiro, James Heckman, Human Capital Policy, 2003
Effect sizes of ECD Interventions on cognitive development scores

- All Bolivia
- All Phil
- C Vietnam
- C Guinea
- P Turkey
- HV Brasil
- HV Jamaica2
- HV Jamaica1

0 0.5 1 1.5 2
Effects of ECD on school entry and retention

![Bar chart showing effects of ECD on school entry and retention in Turkey, Myanmar, and Nepal. The chart compares intervention and control groups.](chart.png)
High/Scope Perry Preschool Study

- 123 young African-American children, living in poverty and at risk of school failure
- Randomly assigned at ages 3 and 4 to initially similar program and no-program groups
- Daily High/Scope classes emphasizing child-planned learning activities and weekly home visits to families
Major findings over time

- **Ready for school at 5**
  - No-program group: 28%
  - Program group: 67%

- **Committed to school at 14**
  - No-program group: 38%
  - Program group: 61%

- **Basic achievement at 14**
  - No-program group: 15%
  - Program group: 49%

- **High school graduate**
  - No-program group: 60%
  - Program group: 77%

- **Earned $20K+ at 40**
  - No-program group: 40%
  - Program group: 60%

- **Arrested 5+ times by 40**
  - No-program group: 36%
  - Program group: 55%
More children intellectually ready to learn

Only 1 out of 3 of these poor children would have been ready for school intellectually; high-quality preschool made 2 out of 3 ready.
Higher achievement, more graduating

- Program group
- No-program group

Grade 8 basic achievement (10th percentile +)
- Program group: 49%
- No-program group: 15%

Graduated from high school
- Program group: 66%
- No-program group: 45%
More employed, higher earnings

Program group
No-program group

Age 40
- Program group: 76%
- No-program group: 62%

Age 27
- Program group: 69%
- No-program group: 56%

Age
- Program group: $20,800
- No-program group:
  - Age 40: $15,300
  - Age 27: $12,000, $10,000

$8,000 $16,000 $24,000
Additional tax revenues

% Earning $2,000 or More per Month

<table>
<thead>
<tr>
<th></th>
<th>No Program Group</th>
<th>Program Group</th>
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<tbody>
<tr>
<td>30%</td>
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<tr>
<td>20%</td>
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<tr>
<td>10%</td>
<td></td>
<td></td>
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<tr>
<td>0%</td>
<td></td>
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</tr>
<tr>
<td>7%</td>
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<tr>
<td>29%</td>
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Added revenues per participant

$8,847
Justice system savings

% with 5 or More Adult Arrests

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<tr>
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<th>No-program group</th>
<th>Program group</th>
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<tr>
<td>31%</td>
<td></td>
<td>7%</td>
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Savings per participant

$12,796
Return on taxpayer investment

Program Benefits Versus Cost

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<td>$88,433</td>
<td>$12,356</td>
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Return on the dollar invested

$7.16

1992 dollars, 3% annual discount rate
**ECD Cost-Benefit Analysis**

<table>
<thead>
<tr>
<th>Program</th>
<th>Cost</th>
<th>Total Benefits</th>
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<tbody>
<tr>
<td>PIDI</td>
<td>$1</td>
<td>Up to $3.7</td>
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<tr>
<td>PEIP (high risk)</td>
<td>$1</td>
<td>$5.1</td>
</tr>
<tr>
<td>Head Start*</td>
<td>$1</td>
<td>$8.74</td>
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<tr>
<td>Abecedarian</td>
<td>$1</td>
<td>$4</td>
</tr>
<tr>
<td>Chicago Child Parent Center</td>
<td>$1</td>
<td>$7.14</td>
</tr>
<tr>
<td>Perry Preschool</td>
<td>$1</td>
<td>$7</td>
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**Sources:**
Large return on investment
(Per participant in 2000 constant dollars discounted 3% annually)

Total return = $258,888; $17.07 per dollar invested:
$12.90 to the public, $4.17 to participants
For every $1 spent on QUALITY early childhood programmes there is a $17.01 return in cost-savings. 12.90 to the public; 4.17 to the individual
Quality preschools contribute to higher access, retention and survival rates in primary school. The savings to the system cover up to 87% of the costs of formal preschools by benefits in primary education -- and community preschools cost 1/3 as much as formal preschools
Social Equity

- Interventions help disadvantaged groups most
  - Nepal - preschool had greater impact on girls’ school attendance
  - Guatemala - all effects of early food supplementation were on girls
Entry point for Social Mobilization

Young children are focal point of community development - ECCD programmes mobilize the whole community (e.g., Madrasa Preschools - East Africa)

• Socialization perpetuates cultural values and beliefs
Achieve International Goals

A holistic approach is key in meeting development targets

• Global Movement for Children
  - ensuring a good start in life for every child, caring for every child, investing in children.
Millenium Development goals:

- Survival
  reducing MMR, malaria deaths, malnutrition, and increasing access to safe drinking water
- Completion of 5 years of school
- Reduction in poverty and hunger
Education for All - Jomtien 1990

EFA Framework for Action states:

- Learning begins at birth
- The preconditions for educational quality, equity and efficiency are set in the early childhood years, making attention to early childhood care and development essential to the achievement of basic educational goals.

- Expanded early childhood care and education
- Access - completion of free primary education
- Life-skills for youth and adults
- Adult literacy
- Gender equity
- Enhanced Quality of education
Review in 133 Countries

Completion

• Completion rates average 50% in the absence of preschool; the completion rate is 80% where children have access to some sort of preschool

Repetition

• Without preschool, on average there is a 25% repetition rate;
• Where 45% of the children enrol in preschool the repetition rate is 12%.
Conclusions from programme evaluations

• Early Child Development Interventions are effective in a variety of developing countries
• Effects are greater when the programmes begin earlier
• Effects are greater for more disadvantaged or at risk children – up to a point
• The most effective interventions: parenting component, health and nutrition, early learning, and social and emotional development
• Intensity and quality of the intervention matters
"We cannot afford to postpone investing in children until they become adults nor can we wait until they reach school - a time when it may be too late to intervene."

Heckman, J., 2001  
(Nobel Prize Economics, 2000)