Preschool to Third Grade Programs for Sustainable Effects

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Policy-relevant Findings & Issues

1. Strong evidence that high-quality 0-5 programs have enduring effects.
2. 14% and 41% of 3- and 4-yr-olds enroll in public-financed preschool.
3. Up to half of children enter K not fully ready.
4. Half of achievement gap in 3rd gr. exists in K.
5. 34% 4th gr. NAEP proficient in reading.
6. 73% 4-yr HS grad rate; 50% (low SES).
8. Resource, organize and align services.
Overview

I. Background and significance

II. History of Pk-3

III. CPC program and approach

IV. Findings and implications

V. Midwest expansion
I. Background & Significance
Why Preschool to Third Grade?

1. Encourage continuity in learning.

2. Promote excellence in school performance.

3. Help prevent drop-off in effects of preschool.

4. Comparatively realistic and manageable.

5. Positive evidence of effectiveness.
First Decade Programs and Services to Organize and Align

Community
- Prenatal care
- Resource mobilization

School
- Child care & early education
- Birth to 3 programs
- Parenting and home visitation
- Nutrition & health services
- Prekindergarten
- Full-Day K & extended
- Social skills training
- School-age services
- Small classes
- After school programs

Family
- Prenatal care

Age
- Prenatal
- Age 3
- Age 5
- Age 9
<table>
<thead>
<tr>
<th>Prevalence of Pk-3 Elements, U.S.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public preschool</td>
<td>41</td>
</tr>
<tr>
<td>Begin at age 3</td>
<td>14</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>11</td>
</tr>
<tr>
<td>Pk-3 services</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>
Paths from Early Education to School Success

Early Care & Education Experiences → A → School-Ready Proficiency
- Language and literacy
- Math
- Social-emotional
- Physical health
- Arts

B → K-3 Transition Services

C → Early School Achievement, Performance, & Adjustment
→ High School Graduation

Quality & Elements of Learning
ECLS-K Reading Learning by SES: K to 3rd Grade

![Graph showing the relationship between Ages and Test Scores for Lower and Higher SES groups. The graph indicates an increase in test scores with age for both SES groups, with Higher SES showing consistently higher scores.]
<table>
<thead>
<tr>
<th>Variable</th>
<th>Effect size</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prekindergarten</td>
<td>.26</td>
<td>Variable</td>
</tr>
<tr>
<td>Full-day K</td>
<td>.17</td>
<td>Short</td>
</tr>
<tr>
<td>Small classes, K-3</td>
<td>.19</td>
<td>Short</td>
</tr>
<tr>
<td>Parent involvement</td>
<td>.20- .40</td>
<td>Variable</td>
</tr>
<tr>
<td>Parent expectations</td>
<td>.40- .50</td>
<td>Variable</td>
</tr>
<tr>
<td>Frequent school moves</td>
<td>.30</td>
<td>&gt; 2 yrs</td>
</tr>
</tbody>
</table>
Percent of 4th Graders at/above Proficient on NAEP Reading by School Moves, 2000

- **No moves**: 35%
- **1 move**: 22%
- **2 moves**: 17%
- **3+ moves**: 12%
# 4th Grade NAEP Proficiency, 2011

<table>
<thead>
<tr>
<th>Category</th>
<th>Reading</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
<td>34%</td>
<td>40%</td>
</tr>
<tr>
<td>&gt; 185% Poverty</td>
<td>48%</td>
<td>57%</td>
</tr>
<tr>
<td>&lt; 130% Poverty</td>
<td>17%</td>
<td>23%</td>
</tr>
<tr>
<td>Parent, HS Dropout</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>Parent, some Coll</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Parent, Coll Grad</td>
<td>45%</td>
<td>47%</td>
</tr>
</tbody>
</table>

Note. Parent education is based on 8th grade results. (Not asked in 4th grade)
Addressing Myths in Prevention and Human Capital Programs

1. The earlier that interventions begin, the more effective they will be.
2. The later that interventions begin, the more cost-ineffective they will be.
3. The source of long-term effects of preschool is “non-cognitive” or socio-emotional skills.
4. Investment equals impact.
5. Pk-3 approaches are interchangeable.
Figure 9: Rates of Return to Human Capital Investment at Different Ages: Return to an Extra Dollar at Various Ages

Source: Heckman (2007), Investing in Disadvantaged Young Children Is Good Economics and Good Public Policy.
Return per Dollar Invested by Age of Entry into Intervention

- Prenatal to 3
- Preschool
- Early School-age

Age of Entry into Intervention

Return per Dollar Invested ($)
## Birth-5 Maltreatment Findings

<table>
<thead>
<tr>
<th>Program</th>
<th>Prog</th>
<th>Comp</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF-New York</td>
<td>5.1%</td>
<td>4.8%</td>
<td>Prenatal</td>
</tr>
<tr>
<td>HF-Alaska</td>
<td>16%</td>
<td>17%</td>
<td>Prenatal</td>
</tr>
<tr>
<td>Hawaii HS</td>
<td>1.1%</td>
<td>1.5%</td>
<td>Birth</td>
</tr>
<tr>
<td>NFP</td>
<td>24.0%</td>
<td>32.0%*</td>
<td>Prenatal</td>
</tr>
<tr>
<td>Teen PAT</td>
<td>0.0%</td>
<td>2.4%*</td>
<td>Birth</td>
</tr>
<tr>
<td>Prenatal &amp; PHS</td>
<td>9.2%</td>
<td>6.6%</td>
<td>Prenatal</td>
</tr>
<tr>
<td>CPC</td>
<td>7.8%</td>
<td>14.7%*</td>
<td>3 years</td>
</tr>
</tbody>
</table>
Child Parent Centers

**Covariates**
- *Mother's Education*
- *Family Composition*
- *Sex Parent Involvement (1st-3rd grades)*

**Preschool Participation**

**Social Emotional Maturity (1st – 3rd grades)**

**Parent Involvement (1st-3rd grades)**

**Cognitive Measures at school entry (5 yrs)**

**Academic Achievement (14/15 years)**

**Retention or Special Education by age 14**

**Academic Motivation (K/1st grade)**

**School Mobility**

**Juvenile arrests**

**Educational Attainment Last Grade Completed (age 21)**

**School Quality**
Perry Preschool Study

Covariates
*Mother's Education
*Family Composition
*Sex

Parent Involvement (1st – 3rd grades)

Cognitive Measures at school entry (5 yrs)

Academic Motivation (K/1st grade)

Social Emotional Adjustment (1st – 3rd grades)

Preschool Participation

Retention or Special Education by age 14

Academic Achievement (14/15 years)

School Mobility

Educational Attainment Last Grade Completed (age 21)

Juvenile arrests

Correlations:
- Mother's Education: 0.58
- Family Composition: 0.42
- Sex Parent Involvement (1st – 3rd grades): 0.19
- Parent Involvement (1st – 3rd grades): -0.35
- Academic Motivation (K/1st grade): 0.42
- Social Emotional Adjustment (1st – 3rd grades): -0.28
- School Mobility: 0.32
- Retention or Special Education by age 14: -0.21
- Academic Achievement (14/15 years): 0.42
- Educational Attainment Last Grade Completed (age 21): -0.16
- Juvenile arrests: -0.43
II. The PK-3 Field
What is PK-3 Education?

**Programs**
Planned interventions and services beginning during any of the first 5 years of life and continue up to third grade

**Practices**
Elements of PK-3 programs such as preschool, full-day kindergarten, class sizes, curriculum alignment, parent involvement.
Key Principles of PK-3 Programs

- **Continuity**
  - Consistency in learning environments

- **Organization**
  - Staffing, leadership, services

- **Instruction**
  - Aligning curriculum, encouraging communication

- **Family support services**
PK-3 Program Goals

- Promote continuity in learning
- Improve school transition
- Enable synergy of preschool, kindergarten, and early school experiences
- Help prevent fade in effect of preschool
Rationale

“The foundation for school success is facilitated by the presence of a stable and enriched learning environment during the entire early childhood period (ages 3 to 9) and when parents are active participants in their children’s education.”
Program vision:

“It is clear than successful programs of this type must be comprehensive, involving activities associated with the fields of health, social services, and education. Similarly, it is clear that the program must focus on the problems of the child and parent and that these activities need to be carefully integrated with programs for the school years” (from Richmond, 1997, p. 122).
History of PK-3 programs and studies

Follow Through, 1968

Chicago Child-Parent Centers, 1968

Project Developmental Continuity, 1974

Carolina Abecedarian Project, 1977

Head Start-Public School Transition Project, 1991
## Classifications of PK-3 Approaches

<table>
<thead>
<tr>
<th>Classification</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Management</td>
<td>Head Start &amp; Transition P; Abecedarian Project</td>
</tr>
<tr>
<td>School Organizational</td>
<td>Small classes; PK-3 schools</td>
</tr>
<tr>
<td>Comprehensive Services</td>
<td>Child-Parent Centers; Proj. Devel. Continuity</td>
</tr>
<tr>
<td>Instructional Reforms</td>
<td>Follow-Through</td>
</tr>
<tr>
<td>Single Practices</td>
<td>Full- Day K; Parent Involvement</td>
</tr>
</tbody>
</table>
## Follow Through Estimates

<table>
<thead>
<tr>
<th>Method</th>
<th>Age 8-9</th>
<th>Age 12-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Instruction</td>
<td>.50</td>
<td>.22</td>
</tr>
<tr>
<td>(n = 2,004)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High/Scope</td>
<td>.29</td>
<td>--</td>
</tr>
<tr>
<td>(n = 807)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Street</td>
<td>.26</td>
<td>.07</td>
</tr>
<tr>
<td>(n = 61)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Abecedarian Project Estimates (N = 49)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 8 reading/math</td>
<td>.25</td>
</tr>
<tr>
<td>Age 15 math</td>
<td>.10</td>
</tr>
<tr>
<td>Special education</td>
<td>.24</td>
</tr>
<tr>
<td>High school completion</td>
<td>.03</td>
</tr>
</tbody>
</table>
Fuerst & Fuerst, 1993

Examined 684 children of the original 6 CPCs with 4 or more years vs. 2 different control schools

Grade 8 reading/math achievement  .33

High school graduation (62% vs 49%)  .33
Limitations of Evidence

1. Inconsistent control group definitions
2. Insufficient assessment of added value
3. Attrition and group comparability not fully assessed
4. Limited longitudinal follow up to high school
5. Tested programs had low comprehensiveness and dosage
## Summary of State PreK/Early Ed Evaluation Evidence

<table>
<thead>
<tr>
<th>Study Description</th>
<th>Overall effect in SD</th>
<th>Minimum increase in proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-State Study (NIEER)</td>
<td>.22</td>
<td>9 pts.</td>
</tr>
<tr>
<td>7- State Study (Gilliam)</td>
<td>.36</td>
<td>14 pts.</td>
</tr>
<tr>
<td>Oklahoma, Tulsa (Gormley)</td>
<td>.58</td>
<td>22 pts.</td>
</tr>
<tr>
<td>New Mexico (NIEER)</td>
<td>.37</td>
<td>15 pts.</td>
</tr>
<tr>
<td>Arkansas (NIEER)</td>
<td>.30</td>
<td>13 pts.</td>
</tr>
<tr>
<td>New Jersey (NIEER)</td>
<td>.32</td>
<td>14 pts.</td>
</tr>
<tr>
<td>Oklahoma (NIEER)</td>
<td>.26</td>
<td>11 pts</td>
</tr>
<tr>
<td>National Head Start</td>
<td>.24</td>
<td>10 pts</td>
</tr>
<tr>
<td>Model Programs</td>
<td>.66</td>
<td>25 pts</td>
</tr>
</tbody>
</table>
III. CPC Program and Approach
Goal of Title I Act of 1965:

“Employ imaginative thinking and new approaches to meet the educational needs of poor children.”
Title I History

Chicago first district to use Title I for preschool (1967)

District 8 Superintendent Lorraine Sullivan developed program with much local collaboration

Today 3% of Title I goes to preschool (400 million of 14 billion dollars)
4 Child-Parent Education Centers

Cole (4346 W. Fifth on May 12, 1967)

Dickens (605 S. Campbell)

Hansberry (4059 W. Grenshaw)

Olive (1335 S. Pulaski)
Goal

“The Child-Parent Education Centers are designed to reach the child and parent early, develop language skills and self-confidence, and to demonstrate that these children, if given a chance, can meet successfully all the demands of today’s technological, urban society.” (Sullivan, 1968)
Child-Parent Centers

Child-Parent Center
Preschool/Kindergarten
(Wing or Building)

Principal

Elementary School
Grades 1 to 3

Curriculum Parent-Resources Teacher

Head Teacher

Outreach Services

Parent Component

Curriculum Component

Health Services

Parent Component

Curriculum Component

School-Wide Services

School-Community Representative
Resource Mobilization
Home Visitation
Parent Conferences

Parent Resource Teacher
Parent Room Activities
Classroom Volunteering
School Activities
Home Support

Language Focus
Small Class Sizes
Inservice Training

Health Screening
Nursing Services
Free + Reduced-Price meals

Parent Room Activities
Classroom Volunteering
School Activities
Home Support

Reduced Class Size
Teacher Aides
Instructional Materials
Individualized Instruction
Inservice Training

Health Services
School-Community Representative
Free + Reduced-Price meals
Resource Mobilization

Age 3

To

Age 9
Eligibility for CPC

In order to enroll in a CPC, students must:

- Reside in school neighborhoods that receive Title I funding
- Not be enrolled in another preschool program
- Parents agree to participate in the program.
Timeline

**1966:** General Superintendent of the Chicago Public Schools asked Dr. Lorraine Sullivan to report on ways to improve attendance and achievement in her district.

**1967:** CPC centers were implemented in four sites.

**1975:** 24-25 CPCs were in operation.

**1977:** Funding of school-age component through State of IL

**1985:** Start of Chicago Longitudinal Study

**2005:** 8 CPCs are closed.

**2011:** 11 CPCs in operation.
Wheatley CPC
Johnson Child-Parent Center
Parent Resource Room
CPC Staffing

- Head Teacher
- Parent Resource Teacher
- School-Community Community Representative
- Teachers and aides
- School nurse, psychologist, social worker
- Preschool class size was 17 to 2
- Kindergarten, school age was 25 to 2
- School-age program had coordinator called curriculum-parent resource teacher
CPC Core Features

1. Head teacher & instructional leader
2. Within/close proximity to school.
3. Small classes throughout.
4. Emphasis on language/math skills.
5. PRT in each site; Parent resource room.
6.SCRs and health services.
7. Curriculum PRT for school-age.
8. Instructional coordination & professional development
Paths to Well-Being Affected by Early Childhood Experiences

Early Childhood
Ages 3-9

Social/Economic Conditions
Child demographics
Socio-Environmental Risk
Neighborhood Attributes

Program Participation
Timing
Duration
Intensity

Motivation
Self-efficacy
Perceived competence
Persistence in learning

Developed Abilities
Cognitive development
Literacy skills
Pre-reading/numeracy skills

Social Adjustment
Classroom adjustment
Peer relations
Self-regulating skills

Family Support
Parent-child interactions
Home support for learning
Participation in school
Parenting skills

School Support
Quality of school environment
Continuity and support
School characteristics

Child Well-Being
School Achievement and Performance
School Remediation
Delinquency and Crime
Health & Mental Health
Educational Attainment
Economic Well-Being
Family Circumstances

Adolescence to Adulthood

MA = Motivational Advantage
CA = Cognitive Advantage
SA = Social Adjustment
FS = Family Support
SS = School Support
IV. CLS Findings & Implications
Chicago Longitudinal Study

1. Effects of CPC program for a cohort of 1,539 born in 1979-80

2. Test timing and duration of impacts at ages 3 to 9

3. Influences on life-course development

4. Identify generative mechanisms from the early years to midlife
CLS Sample Description

Cohort of 1,539 Kindergartners born in 1979-1980 who attended publicly funded early childhood programs for children at risk in Chicago public schools.

Data collected annually from many sources with 90% or higher recovery into adulthood. Mobility measured starting in K from school records and supplemented with parent/student reports.
Program Groups

- 989 complete cohort of children graduating from Child-Parent Centers in kindergarten; they participated from 2 to 6 years. Centers are located in the highest poverty areas of Chicago.

- 550 children enrolled in an alternative early childhood program in kindergarten in five randomly selected schools serving low-income families and in six CPC sites. They matched on socioeconomic status.
## Characteristics of CPC Groups

<table>
<thead>
<tr>
<th></th>
<th>CPC Intervention</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample</strong></td>
<td>Complete cohort</td>
<td>Random sample of K sites + 6 CPC areas</td>
</tr>
<tr>
<td><strong>Recovery, by age 27</strong></td>
<td>893 of 989 (90%)</td>
<td>480 of 550 (87%)</td>
</tr>
<tr>
<td><strong>Key attributes</strong></td>
<td>Reside in highest poverty areas</td>
<td>Reside in high poverty areas</td>
</tr>
<tr>
<td></td>
<td>Over 80% of children enroll</td>
<td>Had school-based enrichment</td>
</tr>
<tr>
<td></td>
<td>Mean no. of risks = 4.5; 73% with 4 or more risks</td>
<td>Mean no. of risks = 4.5; 71% with 4 or more risks</td>
</tr>
<tr>
<td></td>
<td>Parent ed &gt; than compar.</td>
<td>Area poverty &gt; than prog.</td>
</tr>
<tr>
<td><strong>Intervention levels</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preschool</td>
<td>100% 1 or 2 years</td>
<td>15% in Head Start</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>60% full day</td>
<td>100% full day</td>
</tr>
<tr>
<td>School age</td>
<td>69% 1 year</td>
<td>7% 1 year</td>
</tr>
<tr>
<td></td>
<td>56% 2-3 years</td>
<td>23% 2-3 years</td>
</tr>
</tbody>
</table>
CPC Preschool and Readiness

Bar chart showing National Percentile for:
- Two Years: 57
- One Year: 44
- None: 28
- Nat. Norm: 50
### Effect Sizes, Preschool Relative to No Preschool

<table>
<thead>
<tr>
<th>Outcome</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive composite, K</td>
<td>.63</td>
</tr>
<tr>
<td>Grade 3 achievement</td>
<td>.26</td>
</tr>
<tr>
<td>Grade 6-8 achievement</td>
<td>.29</td>
</tr>
<tr>
<td>Remediation by Grade 8</td>
<td>-.42</td>
</tr>
<tr>
<td>High school graduation</td>
<td>.28</td>
</tr>
<tr>
<td>High school completion</td>
<td>.18</td>
</tr>
</tbody>
</table>
Program Comparisons

- 4 to 6 years of CPC from ages 3 to 9
- 0 years of CPC (Comp 1)
- 1-3 years of any CPC (Comp 2)
- 0-3 years of CPC (Comp 3)
- P + K group only (Comp 4)
- P + K group and < 2 moves (Comp 5)
Reading Achievement over Time by Extended Program Groups

![Reading Achievement over Time by Extended Program Groups](image_url)
<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade retention</td>
<td>21.9</td>
</tr>
<tr>
<td>Special education</td>
<td>13.5</td>
</tr>
<tr>
<td>Child maltreatment</td>
<td>5.8</td>
</tr>
</tbody>
</table>

**Diagram Description:**
- **Extended group** and **Less than 4 years** are compared for Grade retention, Special education, and Child maltreatment.
## Effect Sizes, Pk-3 Relative to 3 or Fewer Years of Service

<table>
<thead>
<tr>
<th>Educational Outcome</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 3 achievement</td>
<td>.52</td>
</tr>
<tr>
<td>Grade 6-8 achievement</td>
<td>.38</td>
</tr>
<tr>
<td>Remediation by Grade 8</td>
<td>-.31</td>
</tr>
<tr>
<td>High school graduation</td>
<td>.35</td>
</tr>
<tr>
<td>High school completion</td>
<td>.14</td>
</tr>
</tbody>
</table>
## CPC Impacts on School Moves

<table>
<thead>
<tr>
<th>Prog. Group</th>
<th>2+ moves grade 4-8</th>
<th>3+ moves grade 4-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended</td>
<td>-13.8%</td>
<td>-9.9%</td>
</tr>
<tr>
<td>School-age</td>
<td>-5.8%</td>
<td>-6.7%</td>
</tr>
<tr>
<td>Preschool</td>
<td>-9.3%</td>
<td>-3.9%</td>
</tr>
</tbody>
</table>

*Note.* Marginal effects from probit regression. See Table 9 and Appendix E for model information.
<table>
<thead>
<tr>
<th></th>
<th>Program</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES &gt; 3 (8 pt)</td>
<td>36%</td>
<td>30%</td>
</tr>
<tr>
<td>Private Health Ins.</td>
<td>52%</td>
<td>42%</td>
</tr>
<tr>
<td>HS completion</td>
<td>83%</td>
<td>77%</td>
</tr>
<tr>
<td>HS graduation</td>
<td>49%</td>
<td>32%</td>
</tr>
<tr>
<td>BA/AA degree</td>
<td>10%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>
Extended-Program Length

Some evidence for Extended CPC:

<table>
<thead>
<tr>
<th></th>
<th>5/6 yr</th>
<th>4 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrest for violence</td>
<td>13%</td>
<td>21%</td>
</tr>
<tr>
<td>SES-27 (5+)</td>
<td>27%</td>
<td>23%</td>
</tr>
<tr>
<td>Priv. Insur</td>
<td>52%</td>
<td>43%</td>
</tr>
</tbody>
</table>
Preschool Program Length

No evidence that 2\textsuperscript{nd} year of preschool impacts economic well-being or educational attainment.

Positive effects in the school-age years were found.
Estimates from ECLS-K, 3rd grade

<table>
<thead>
<tr>
<th>No Pk-3 elements</th>
<th>Disadv Read Ret.</th>
<th>All Read Ret.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pk+FDK+stable</td>
<td>45 11%</td>
<td>50 7%</td>
</tr>
<tr>
<td>+ PI, instruc., &amp; certified teach.</td>
<td>48 9%</td>
<td>52 4%</td>
</tr>
</tbody>
</table>
Summarized paths from CPC to Occupational Prestige
Conceptual Framework, Age-35 Project

- **Covariates**
  - Gender
  - Maternal education
  - Family risk status

- **CPC Participation**
  - Preschool
  - School-age Extended

- **Social Adjustment**
  - Classroom behavior
  - Juvenile arrest
  - Peer social skills/values

- **Family Support**
  - Parent inv in school
  - Abuse/neglect
  - Parenting practices

- **Cognitive Advantage**
  - Cognitive composite
  - Remedial services
  - Reading/math achievement

- **Motivational Advantage**
  - School Commitment
  - Educational expectations
  - Self-efficacy/control beliefs

- **School/Community Support**
  - Quality of sch environments
  - Continuity in settings
  - Community participation

- **Early Adult Outcomes**
  - Educational attainment
  - SES
  - Adult crime

- **Adult Well-Being Age 30-35**
  - Health status & behavior
  - Career & economic success
  - Psychological well-being/mental health
  - Family outcomes & behavior
  - Social behavior & crime

MA = Motivational Advantage
CA = Cognitive Advantage
SA = Social Adjustment
FS = Family Support
SS = School/Comm Support
Implications/Recommendations

1. Implement CPC PK-3 more widely as an evidence-based program.

2. Increase investments in PK-3 research and services (e.g., family support, and curriculum alignment).

3. Use cost-effectiveness research to better prioritize funding.
Implications/Recommendations

4. Develop funding mechanisms to support timely implementation of proven program and practices.

5. Establish key principles of effectiveness to guide program development and funding priority.

6. Link funding at different levels to registries of effectiveness (there are many).
Implications/Recommendations

7. States could consider issuing bonds to fund early education that follows principles of cost effectiveness.

8. Develop cross-agency funding plans for programs and approaches that impact broader well-being.

9. Require at least 5% of Title I dollars go to preschool programs.

10. Require a similar percentage go to K-3 services based on a coordinated plan.
V. Midwest Expansion
# CPC Project Sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Type</th>
<th>Project schools</th>
<th>Children served</th>
<th>CPC attributes</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>Preschool</td>
<td>K-3</td>
</tr>
<tr>
<td>Chicago</td>
<td>Large urban</td>
<td>17</td>
<td>1500</td>
<td>4100</td>
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<tr>
<td>Evanston</td>
<td>Metro</td>
<td>4</td>
<td>103</td>
<td>309</td>
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<tr>
<td>Normal</td>
<td>Urban</td>
<td>1</td>
<td>65</td>
<td>195</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>Large urban</td>
<td>1</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>Saint Paul</td>
<td>Mid urban</td>
<td>6</td>
<td>310</td>
<td>930</td>
</tr>
<tr>
<td>Virginia, MN</td>
<td>Rural</td>
<td>1</td>
<td>54</td>
<td>162</td>
</tr>
</tbody>
</table>
Goals

1. Implement CPC model with high levels of quality using established principles.

2. Assess the quality of implementation.

3. Evaluate the impact of the model using a rigorous and multi-faceted design.
Goals

4. Assess impact by child, family, and program attributes.

5. Determine initial cost-effectiveness.

6. Implement a sustainability plan to facilitate maintenance and expansion.
Key Paths of CPC PK-3 Model Promoting Educational Success: School Entry to Graduation

CPC program participation

Preschool ———— 3rd grade

Early Childhood Experience, Ages 3 to 4

School-Ready Proficiency
- Language
- Math
- Social-emotional
- Physical health
- Creative arts

Timing
- Duration
- Intensity
- Lang & literacy
- Family supp.

Early School Achievement, Performance, & Adjustment

K-3 services
- Coordination
- Small classes
- Family supp.
- Prof. devel.

High School Graduation
Research Design (SRI)

30 program schools in six districts will implement starting in fall 2012. Primarily Title I schools in high-need areas. 2,400 preschool participants will be followed to third grade.

30 control schools will be matched to program schools based on propensity scores of school, family, and child attributes.

Assessments of children will be in preschool, kindergarten, and up to third grade.
Logic Model for Evaluation

Intervention Components
- High-quality preschool
- Language, activity-based and aligned curriculum
- Comprehensive family services
  - Small class size/co-location
  - Shared leadership
  - Professional development

Parent Outcomes
- Increased parent education
- Improved school involvement
- Improved home support for learning

Student Outcomes
- Improved school readiness skills
- Improved early school achievement

Formative Assessment Tools
- School (principal) surveys
- Parent participation logs
- Classroom implementation checklists
- Program cost data

Summative Assessment Tools
- WJ-AP TCRS
- WJ-LWI Parent surveys
- Exploratory Assessment Tool
  - MWSS
Management Plan

HCRC
University of Minnesota

Management Team
Steering Committee
Co-Directors
Project Manager
Sites managers (districts)

Advisory Group

Evaluation Team
SRI

LEA Program Implementers

Scale-up and Dissemination Team
Illinois State University
Erikson Institute
Outreach coordinator

Implementation Sites
Illinois
(20 schools)

Implementation Sites
Minnesota
(7 schools)

Implementation Sites
Wisconsin
(6 schools)
Further Reading

Child-Parent Centers (PK-3)

Age-26 Cost-Benefit Analysis

Birth to 10
Further Reading

Age-28 Follow up

Mechanisms Study

Review of Pk-3 programs
Annual Review of Clinical Psychology (2008), 4, 109-139
Children and Youth Services Review (2010), 32, 1121-1131.