Sustaining Early Childhood Learning Gains: Program, School, & Family Influences (Cambridge, 2019)

Arthur Reynolds & Judy Temple, Editors

HCRC Talk

February 5, 2019
Sustaining Early Childhood Learning Gains
Program, School, and Family Influences
Edited by Arthur J. Reynolds and Judy A. Temple

Foreword by Karen Hanson, Provost

15 chapters

Cambridge, 2019
HCRC Conference Volume, 2014: Cambridge U Press

Health and Education in Early Childhood
Predictors, Interventions, and Policies
Edited by Arthur J. Reynolds, Arthur J. Rolnick, and Judy A. Temple

2nd Volume from 2010 Conference
15 chapters
Theme: The reciprocal roles of education and health in promoting early well-being.
Why Sustaining Gains are More Important than Ever

1. Enhance impact of existing programs and investments.
2. Reduce the risk of drop-off in effects.
3. Reduce 3rd grade and later gaps.
4. Increase ROI.
Defining EC Scope

“We adopt a broad definition of early childhood as the entire first decade of life...This would include through the 3rd grade year as a general endpoint. The historical convention of the preschool period from ages 3 to 5 as defining early childhood has encouraged an unfortunate separate classification of programs and experiences that limit integration. The focus on the continuum of experiences supports a more complete spectrum of services and research approaches.”

“As an operationalization of this continuum, P-3 reinforces the need to optimize learning environments as children grow.” (p. 13)
Healthy People Goal

“Increase the proportion of children who are ready for school in all five domains of healthy development.” (Healthy People 2020)
Figure 1. Percentage of U. S. Four-Year-Olds in Early Education 2005-06 vs. 2015-16

- Any nonparental care: 78.9% (2005-06) vs. 80.5% (2015-16)
- State Prek/Head Start/Special Ed: 34.6% (2005-06) vs. 43% (2015-16)
- Any center-based preschool: 66.2% (2005-06) vs. 65.9% (2015-16)
- Full-day preschool: 49.3% (2005-06) vs. 54% (2015-16)
“This means that nearly half the preschool children of poverty will get a head start on their future. Five and six year old children are inheritors of poverty's curse and not its creators...Unless we act these children will pass it on to the next generation, like a family birthmark” (May 18, 1965).
History: 1960 New models of early ed

Early Training Project
Perry Preschool Project
Project Head Start
Bank Street Curriculum
DISTAR and Direct Instruction
Child-Parent Education Centers
Follow Through
1970s: Does early ed work?


Early Training Project (Gray & Klaus, 1970)

Head Start studies, reanalysis, interpretations (Bronfenbrenner, 1974; Zigler & Trickett, 1978)

National Day Care Study, 1979
1980s: Cognition to Competence, Longer-term effects

1983 Cornell Consortium book “As the twig is bent” shows benefits for different projects on school competencies

1980/1984 Perry Preschool follow ups at age 15 (Schweinhart & Weikart) and 19 (Berrueta-Clement et al.)

1987 first comprehensive CBA of Perry (Barnett)

Crime prevention and social competence comes to the forefront
1990s: Expansion, growing evidence

State Prek Program Growth


Evidence on longer-term effects from CPC (Reynolds & Temple), Abecedarian (Campbell & Ramey), NFP (Olds), IHDP (Ramey et al)

Program quality movement

Early Head Start established

Planning for national impact studies of Head Start

Emerging P-3 studies and concepts
2000s: ROI, for whom, what, how?

Many cost–benefit analyses and reports

  CPC program (Reynolds, Temple, et al., 2002)

  National and state analyses (Lynch, 2007; RAND, 2005)

  Committee for Economic Development, 2002

  Perry age 40 follow up (Schweinhart, 2005) and reanalysis (Heckman, 2010)

Early Head Start and Head Start evaluations show mixed evidence

Positive evidence in State Prek evaluations (OK, MI, NJ)
2010s: Preschool for all but all do not benefit

Continued Prek and Head Start expansion but mixed effects in public programs

SOTU Address and Preschool for All Initiative, 2013

Preschool Development Grants

Systems improvement with Early Childhood Challenge Grants

New financing for scaling through Pay for Success (Utah, Chicago, SC)

Investing in Innovation, RTTT, and Promise Neighborhoods

Head Start impact study and others (e.g. TN prek) show no sustained effects through 3rd grade
“I propose working with states to make high-quality preschool available to every child in America. Every dollar we invest in high-quality early education can save more than seven dollars later on – by boosting graduation rates, reducing teen pregnancy, even reducing violent crime.”
(President Obama)
## Sources for Economic Returns

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Public Ret.</td>
<td>$7.20</td>
<td>$7.16</td>
</tr>
<tr>
<td>Total Ret.</td>
<td>$7-11</td>
<td>$4-16</td>
</tr>
<tr>
<td>Cost (2017)</td>
<td>$9,999</td>
<td>$21,454</td>
</tr>
<tr>
<td>Scale</td>
<td>Large</td>
<td>One site</td>
</tr>
</tbody>
</table>
2020s?: Universal Participation, Quality, Continuity

Building and maintaining systems of support, leadership, training, and financing

Key drivers of effectiveness
P-3 Continuity Focus

““Although the importance of P-3 and the continuum of early learning is well-documented, systems of support at the local, state, and national levels are only now being built. More integrative programs, policies, and practices are being implemented in many communities. The goal now is to ensure that all children have the opportunity to benefit from these advances and that supportive services for children, families, and schools can be sustained for future generations.” (Reynolds & Temple, p. 24).
“What has happened since “Eager to Learn”? There is good news and bad news. Among the discouraging aspects are the increased gap in wealth and education without any serious effort to confront the elephant in the room: poverty.” Further bad news: early childhood education programs that can help ameliorate some of the effects of poverty have not increased substantially in number and quality.”

On the good news side, we have had small successes. There have been increases in the number of children participating from both advantaged and low-income families, and more efforts toward improving the quality of programs....Programs are paying more attention to what and how they teach and parents are paying more attention to the care and education of their children. There is also greater emphasis on alignment....” (pp. 312-313)
Cornell Consortium for Longitudinal Studies (1983)

“As the Twig is Bent...Lasting effects of Preschool Programs”

11 projects of diverse programs including 3,676 children and followed from early childhood to adulthood
Processes of Effects in the Cornell Consortium for Longitudinal Studies

- Early childhood programs
  - Sex
  - Preprogram IQ score
  - Family background

- IQ test scores age 6

- Early achievement

- Special education placement or Grade retentions

- High school graduation
“There begins a system of mutual reinforcement between the parent and child, the teacher and child, and the combination that ‘teaches’ that academic success is valuable. It is this continuing mutual reinforcement that could be responsible for the long-term effects: a reinforcement system that is started by the child’s participation....and that changes parent aspirations for the child. This ‘feedback’ loop can be initiated as easily in a home-based program as at a center-based preschool” (Lazar, 1983).
Common Paths of Influence Across Three Studies

Note. Perry, Abecedarian, and CPC studies. Covariates include mothers’ education and gender.
Short-term Effects

Order: Perry, ABC, CPC

Note. Covariates include mother’s education and gender.
Common Elements in Landmark Studies

1. Child to Staff Ratios no higher than 17:2

2. Intensive focus on readiness skills within a developmental philosophy

3. Comprehensive family services

4. Teachers with at least BAs or compensation competitive with public schools

5. Frequent monitoring and feedback for improvement

6. Well-supported organizational context
Key Principles, Ramey & Ramey 1998

1. Developmental timing

2. Program intensity

3. Direct provision of learning experiences

4. Program breadth and flexibility

5. Individual differences in program benefits

6. Ecological dominion & Environmental maintenance of development
<table>
<thead>
<tr>
<th>Feature</th>
<th>Gates</th>
<th>CPC</th>
<th>NIEER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max class size</td>
<td>22</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Classroom staff</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Teacher has BA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Specialized training</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Compensation equiv to K-12</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Assistant has CDA</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Learning time per day</td>
<td>6-6.5h</td>
<td>3-7h, &gt;1yr</td>
<td>N/A</td>
</tr>
<tr>
<td>Intensity specified</td>
<td>Yes</td>
<td>Yes, in detail</td>
<td>No</td>
</tr>
<tr>
<td>Specific supports</td>
<td>DLL, special needs</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Proven</td>
<td>Evidence-based</td>
<td>Learning Stand.</td>
</tr>
<tr>
<td>Frequent monitoring</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
1. Program Quality and Dosage
Synthesis of preschool dosage (Wasik)

Teacher influences (Camilli)

Preschool curriculum (Nguyen, Duncan)

State of the art programs (Meloy et al.)
SG Volume

2. Continuity, Preschool to 3rd grade
Head Start, PreK to K (Mashburn et al.)

Quality and quantity of experience (Stipek)

Child-Parent Center P-3 reform (Reynolds)

State policies and learning (Bornfreund)
3. School and Family Processes
Processes to long-run effects (Reynolds et al)

Lessons from Perry (Schweinhart)

Sustaining gains in Abecedarian (Campbell)

Lessons from IHDP (Chaparro et al)
4. Synthesis and Guiding Principles
Enhancing children’s outcomes since “Eager to Learn” (Bowman)

12 Hallmarks of strategies to attain and sustain early childhood gains (Ramey & Ramey)
Synthesis of preschool dosage: quantity, quality and content by Wasik and Snell

• How much preschool: Full day vs. half, # of years (1 or 2)

• Findings: some aspects of dosage have positive effects on learning.

• But more information is needed from the studies they reviewed about how the time is being used.

• Concludes: increased dosage can make a difference especially if programs are of high quality.
Quality and continuity in early educational experiences by Stipek

What dimensions of policy and practice continuity are most likely to matter for children’s learning and development?

• Quality educational experiences (socio-emotional, academic skills, motivation and engagement, and family communication and involvement)

• State policies: why do prek standards include academic skills and socio-emotional goals but early elem standards focus more on academic skills? Also, need for clear alignment of development trajectory goals across prek – 3rd grade.

• District and school policies: more support for teachers to work collaboratively across grades and be able to use info from student assessment to better tailor instruction to build on existing knowledge.

• Acknowledges difficulty when prek and k-3 are offered in different settings.

• Note: author co-wrote a 2016 report “Prek-3 alignment in California’s Education system: Obstacles and Opportunities”
Multiple chapters addressed early education programs that improve quality of parenting

- Reynolds et al. research from the Child-Parent Centers suggests that one mechanism for long-term effects is the engagement and improved parenting quality offered by the parent involvement portion of the intervention.

- Chapparo, Sojourner, Huey’s work on pre-term or LBW children enrolled in IHDP in mid 1980s who were offered during ages 1-3 up to 40 hours per week of free care (average of 16 hours) plus home visits. Research shows that the intervention had greater effects for children of low-wage mothers and one explanation for the enduring effects is that the treatment lead to improvements in the quality of maternal care.
Child Parent Centers P-3 (CPC)

An improvement model that provides comprehensive and continuous system of services from preschool to 3rd grade to support child, family, and school well-being.

Developed at Univ. of Minnesota in collaboration with Districts and Partners
Reading Advantage of CPC

![Graph showing test scores for different age groups and CPC levels.]
Educational Attainment at 35

<table>
<thead>
<tr>
<th>Education Level</th>
<th>0-3 yrs CPC</th>
<th>4-6 yrs CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ Associate degree</td>
<td>12.5</td>
<td>18.5</td>
</tr>
<tr>
<td>≥ Bachelors degree</td>
<td>8.2</td>
<td>14.3</td>
</tr>
<tr>
<td>AA+/credential</td>
<td>18.1</td>
<td>25</td>
</tr>
</tbody>
</table>

Note. Rates are adjusted.
Annual income at 35

Note. Average annual wages from ages 30-35 from administrative records and self-reports on the age 35 survey all in 2015 dollars. Rates are adjusted.
CPC PreK and Age 35 BMI by Birthweight

Effect Size BMI (SD), Absolute Value

- Lowest
- 2nd Birthweight Quartile
- 3rd Birthweight Quartile
- Highest
Midwest CPC

Collaborative Leadership
Aligned Curriculum
Continuity and Stability

Early Ed

P

K

1-3

Achievement

Well-Being

Effective Learning Experiences
Professional Development
Parent Involvement & Engagement
CPC P-3 Program Manual

Child-Parent Center Preschool-3rd Grade Program

Human Capital Research Collaborative
University of Minnesota
Humphrey School of Public Affairs
301 19th Ave. South
Minneapolis, MN 55455

www.humancapitalrc.org
Child-Parent Centers

The Child-Parent Center preschool to 3rd grade (CPC P-3) model is a school reform effort currently in three Midwestern states. The program aims to strengthen overall well-being and achievement of preschool through elementary school-aged children from low-income families.

Who's involved in running a CPC P-3 site? Learn more here.

CPC P-3 ROLES & RESPONSIBILITIES
Gates Foundation Project

Identify program elements linked to sustained gains in achievement.

Validate Gates and CPC frameworks

Assess longer-term effects of CPC expansion.
Midwest Child-Parent Center Expansion

Scale up of CPC program revised as a P-3 school reform model over 2012-2017

Four districts: Chicago (1,724), Saint Paul (312), Normal (85), and Evanston (230)

Matched comparison groups of children in district programs based on propensity scores from SRI International

Analysis focused on CPC participants in Chicago and Saint Paul in prek year (2012-13)

17 CPC schools in Chicago and 5 in Saint Paul plus one child care center

District assessments used as outcomes in analyses collected as part of the expansion
# Effective Learning Experiences

1) **Full day program**
   - Program provides full-day preschool (6+ hours/day)

2) **Low class size**
   - Program classes have no more than 17 students

3) **Task-oriented classroom**
   - Instruction is sensitive to student needs, and structured in a way that supports child engagement, focus on learning, and active participation.

4) **Time in key domains**
   - Program provides diverse learning experiences, including ample time in literacy, math, and science.

5) **Balance of child- and teacher-driven instruction**
   - Program provides a mix of activities allowing for independent child exploration and activities directed by the teacher.
# Year 1 School Readiness Outcomes: CPC, Chicago

<table>
<thead>
<tr>
<th>Score</th>
<th>Any CPC</th>
<th>Control</th>
<th>Diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Norm, (4+ scales)</td>
<td>70%</td>
<td>52%</td>
<td>18p</td>
</tr>
<tr>
<td>Literacy</td>
<td>78%</td>
<td>57%</td>
<td>21p</td>
</tr>
<tr>
<td>Socio-emot.</td>
<td>67%</td>
<td>46%</td>
<td>21p</td>
</tr>
</tbody>
</table>

Note. Adjusted for baseline differences. Readiness norm is from Teaching Strategies GOLD, Spring 2013.
## Spring of PreK
### PALS Upper Alpha Breakdown

<table>
<thead>
<tr>
<th>Group</th>
<th>Fall to Spring</th>
<th>Gain</th>
<th>Year</th>
<th>Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPC</td>
<td>8 to 21</td>
<td>13</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>Control</td>
<td>10 to 19</td>
<td>9</td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

Note. Number of children was 192 (CPC) and 87 (control). Adjusted for differences in child/family demographics and baseline performance.
Impacts of CPC Effective Learning Elements in meeting TSGOLD norms

![Bar chart showing percentage point increase in meeting TSGOLD norms.](chart-image)
Impacts of Class Size Compared to 17 and smaller

Percentage point increase in meeting TS GOLD national norm

Class Size 18 (n=270)  Class Size 19 (n=114)  Class Size 20 (n=160)  Class Size 21 (n=105)  Class Size 22+ (n=158)

- Literacy
- SEM
- Total
CPC elements by treatment and control: CLT, AC and ELE

- Highly engaged principal
- Head Teacher provides active...
- Complete collaborative leadership team
- Cross-grade collaboration
- Curriculum covers core domains
- Consistent learning experiences from...
- Task-oriented instruction
- Balance of child- and teacher-driven...
- Teacher education (Bachelor’s degree...)
- Full day instruction (6+ hours per day)
- Small class size (≤ 17)
CPC elements by treatment and control: PI, PD and C&S

- PI opportunities address parent needs
- Ample, diverse opportunities for PI
- PRT and SCR outreach worker present
- Parent resource room
- Review of online PD modules
- Site mentors support Head Teachers
- In-person and online coaching support
- At least 80% school-wide retention rate
- Consistent leadership team
- Guaranteed enrollment policy

Control

CPC
Gates Elements by treatment and control

Public commitment
Strong leadership
Integrated systems
Professional development
Data-driven decision making
Proven curriculum
Age-appropriate learning standards
Support for students with special needs
Support for DLLs
Learning Time
Formative assessments
Teacher-child interactions focused on learning
Two adults in the classroom
Adult-child ratios
Education and compensation

Control  CPC
## CPC and Gates Elements

<table>
<thead>
<tr>
<th></th>
<th>CPC</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td># of CPC indicators met</td>
<td>14.3</td>
<td>6.8</td>
</tr>
<tr>
<td># of Gates indicators met</td>
<td>11.9</td>
<td>10.4</td>
</tr>
</tbody>
</table>
## CPC PreK elements associated with sustained gains

<table>
<thead>
<tr>
<th></th>
<th>Effect Size on School Readiness</th>
<th>% increase in 3rd grade reading</th>
<th>% increase in 3rd grade math</th>
<th>% reduction in 3rd grade SES achievement gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-day PreK</td>
<td>Large</td>
<td>33 percent</td>
<td>59 percent</td>
<td>28 percent</td>
</tr>
<tr>
<td>Class Size of 17 or less</td>
<td>Large</td>
<td>15 percent</td>
<td>23 percent</td>
<td>16 percent</td>
</tr>
<tr>
<td>Task-Oriented Classroom</td>
<td>Large</td>
<td>13 percent</td>
<td>13 percent</td>
<td>8 percent</td>
</tr>
<tr>
<td>Parent Resource Room</td>
<td>Medium</td>
<td>n/a</td>
<td>30 percent</td>
<td>22 percent</td>
</tr>
<tr>
<td>Continuity between PreK/K</td>
<td>Medium</td>
<td>32 percent</td>
<td>30 percent</td>
<td>22 percent</td>
</tr>
</tbody>
</table>

Note. Values are percentage change over no element present averaged across districts and adjusted for baseline factors in PreK. Ns = 2,101 to 3,200. A large effect size is an increase in proficiency of at least 30% (medium is 20% to 30%). Full-day is Chicago only. Achiev gap = 32 points. Gates data-driven decisions linked to positive achievement gains in Saint Paul but not Chicago. PD modules/coaching linked to gains in Chicago.
## Gates PreK elements associated with sustained gains

<table>
<thead>
<tr>
<th>Effect Size on School Readiness</th>
<th>% increase in 3rd grade reading</th>
<th>% increase in 3rd grade math</th>
<th>% reduction in 3rd grade SES achievement gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Learning Time</td>
<td>Large</td>
<td>34%</td>
<td>42%</td>
</tr>
<tr>
<td>Teacher with B.A./Comp</td>
<td>Large</td>
<td>45%</td>
<td>36%</td>
</tr>
<tr>
<td>Integrated Systems Approach</td>
<td>Large</td>
<td>47%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Note: Values are percentage change over no element present averaged across districts and adjusted for baseline factors in PreK. Ns = 2,101 to 3,200. A large effect size is an increase in proficiency of at least 30% (medium is 20% to 30%). Full-day is Chicago only. Achiev gap = 32 points. Gates data-driven decisions linked to positive achievement gains in Saint Paul but not Chicago. PD modules/coaching linked to gains in Chicago.
Implications for the State

Assess the impacts of current PreK programs.

Align quality rating system with metrics most linked to effectiveness & long-term effects.

Investigate the impact of metrics for Gates and CPC with state and district data.

Ensure scaling to universal access implements highest quality programs.
End

Some extra slides
Classroom Activity Report (CAR)

Completed by teachers monthly to assess use of class time

- **Part I:** How class time during the previous week was divided across instructional domains

  4) Time in Key Domains

  More than 65% of class time is spent on language, math, science

- **Part II:** What percentage of time in Language/Literacy, Math, and Science was spent on child-initiated vs. teacher-directed activities

  5) Balance of child- and teacher-driven instruction

  Of class time spent on language, math, and science, between 35 and 65% is child-initiated
Classroom Learning and Activities Checklist (CLAC)

• Classroom observation tool that measures student task orientation and the instructional practices that support it
• Observers spend 25-30 minutes in the classroom, then score instructional activities and student behavior using a standardized rubric
• Two factor scores:
  • Instructional responsiveness
  • Student engagement

3) Task-oriented classroom
   Scored above the school district average on one or both factors
CLAC in the Child-Parent Centers (CPCs)

- Used as a fidelity measure for CPC element- Effective Learning Experiences
- Random sample of CPC and comparison classrooms in from 2013 (PK) through 2017 (3rd grade).

| Percentage of Classrooms Rated Moderately- High to High in Overall Task Orientation |
|---------------------------------|--------------------------------|----------------|----------------|
|                                 | PK (Y1)*                        | Kindergarten (Y2)* | 1st Grade (Y3) | 2nd Grade (Y4) |
|                                 | (n = 72)                        | (n = 91)           | (n = 83)       | (n = 86)       |
| CPC                             | 81%                             | 82%                | 86%            | 71%            |
| Control                         | 50%                             | 56%                | 59%            | 55%            |

* Note: Original 1-5 scale: High Task Orientation= 4,5. New scale 1-7: Moderately High/ High Task Orientation= 5,6,7.
CPC P-3 Classroom Activity Report (CAR) Pre-K & K

Name: ______________________  Classroom #_____  School Name: ______________________  Date: ______

Grade Level (circle one):  PK / Kindergarten  Timeframe:  ___ Fall  ___ Winter  ___ Spring

Purpose: To determine the specific amount and type of teaching children have received over the year. Report the actual time spent, not the scheduled time.

Directions: Complete this report, noting the average percentage of instructional time spent in each domain. For an activity that overlaps with multiple domains, choose the main purpose and use that domain to categorize the activity. If no time was spent in a domain, please leave the line blank for that domain.

<table>
<thead>
<tr>
<th>DOMAIN and ACTIVITY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. LANGUAGE (expressive and receptive language)</td>
<td></td>
</tr>
<tr>
<td>B. LITERACY (phonological awareness, phonics, comprehension, writing)</td>
<td></td>
</tr>
<tr>
<td>C. MATH (formal math instruction, math games, informal math activities)</td>
<td></td>
</tr>
<tr>
<td>D. SCIENCE (formal science teaching, hands-on experiences, integration of science into daily routines)</td>
<td></td>
</tr>
<tr>
<td>E. SOCIAL and EMOTIONAL LEARNING (self-regulation, identifying &amp; expressing emotions)</td>
<td></td>
</tr>
<tr>
<td>F. ART and MUSIC</td>
<td></td>
</tr>
<tr>
<td>H. LARGE MOTOR ACTIVITY</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 100%

Of the time spent in each content domain below, determine the percentage of instructional time that is spent in Teacher-directed and Child-initiated experiences with the total equaling 100% in each domain.

Definitions: Teacher-directed activities are approaches to instruction where the teacher takes the lead in defining learning goals and methods and includes individual and small group formal skill instruction and large group instructional activities, including story reading and discussion time.
Child-initiated activities are ones that provide opportunities for free choice and informal learning, and include field trips and learning centers.

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>% Teacher-directed</th>
<th>% Child-initiated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANGUAGE/LITERACY</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>MATH</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>SCIENCE</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>SOCIO EMOTIONAL</td>
<td></td>
<td></td>
<td>100%</td>
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</tbody>
</table>
How are CPC classrooms doing?

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Chicago (1,724 students)</th>
<th>Saint Paul (317 students)</th>
<th>Total (2,041 students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Full day</td>
<td>23.7%</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>2) Low class size</td>
<td>64.6%</td>
<td>40.4%</td>
<td>60.8%</td>
</tr>
<tr>
<td>3) Task-oriented classroom</td>
<td>68.5%</td>
<td>82.3%</td>
<td>70.7%</td>
</tr>
<tr>
<td>4) Time in key domains</td>
<td>90%</td>
<td>100%</td>
<td>91.6%</td>
</tr>
<tr>
<td>5) Balance of instruction</td>
<td>76.3%</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Average # of indicators met</strong></td>
<td><strong>3.23</strong></td>
<td><strong>3.23</strong></td>
<td><strong>3.23</strong></td>
</tr>
<tr>
<td><strong>Met 3 or more indicators</strong></td>
<td><strong>79.8%</strong></td>
<td><strong>82.3%</strong></td>
<td><strong>80.2%</strong></td>
</tr>
<tr>
<td><strong>Met 4 or more indicators</strong></td>
<td><strong>40.5%</strong></td>
<td><strong>40.4%</strong></td>
<td><strong>40.5%</strong></td>
</tr>
</tbody>
</table>
CPC Impacts

Greater School Readiness Skills, School Performance and Achievement, and Higher Rates of School Completion.

Reduced Need for Special Education and Grade Retention; Greater Socio-emotional Learning and Parental Involvement & Family Support

Reduced incidence of Child Abuse and Neglect;

Reduced Juvenile Arrest, Adult Felony Arrest and Incarceration; and Reduced Arrests for Violence

Reduced Substance Use in Adulthood

Greater Economic Well-Being, including Annual Income, Job Skills, and College Attainment