

Child-Parent Centers: An Exemplary Model of PK-3 Education

Arthur J. Reynolds
Director, Chicago Longitudinal Study
Co-Director, Human Capital Research Collaborative
University of Minnesota

March 31, 2011

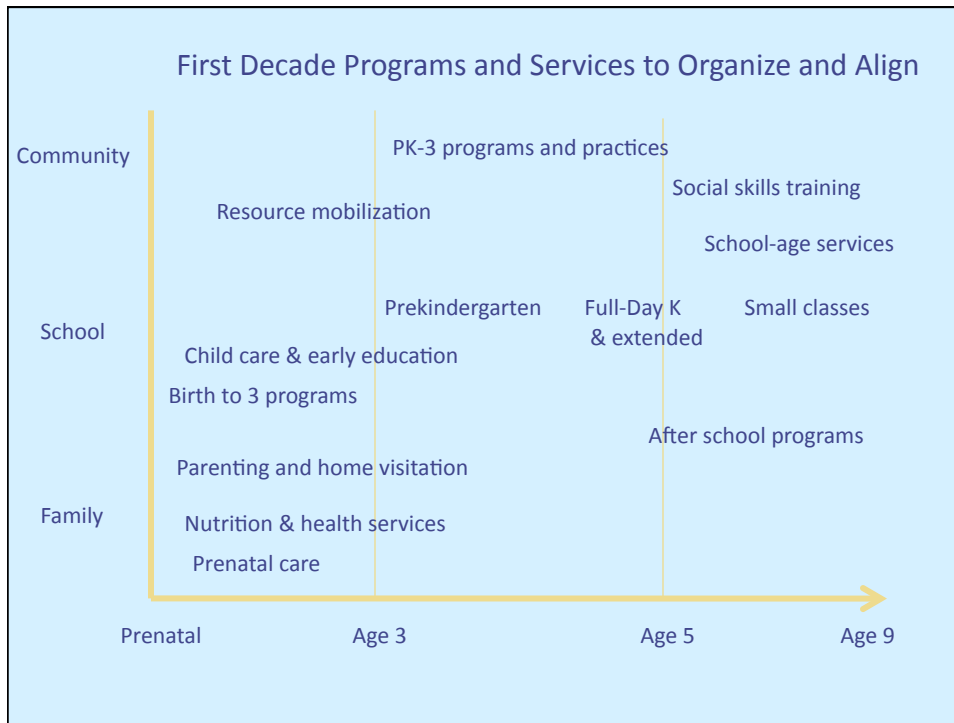
Major Policy-Relevant Findings

1. Overwhelming evidence that quality 0-5 programs have enduring effects.
2. In IL, 30% and 43% 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. 32% IL 4th gr. NAEP proficient in reading.
6. 74% IL 4-yr HS grad rate; 50% (low SES).
7. Breakdown in early school continuity.
8. Resource, organize and align services.

1. Background

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.
6. Positive evidence of effectiveness.

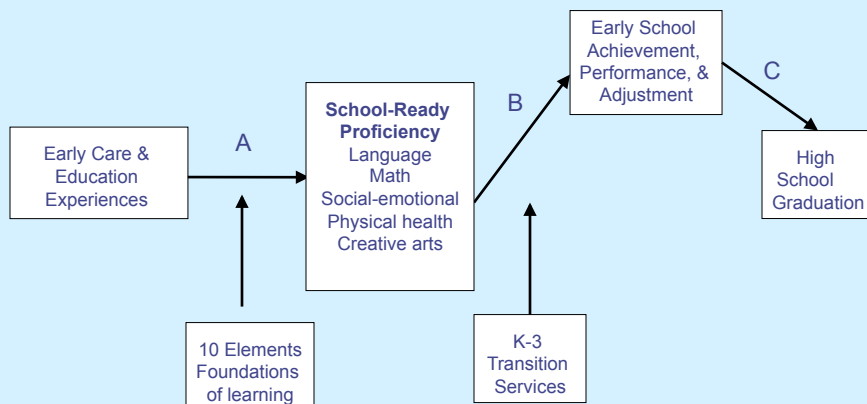


- Childhood Programs in the First Decade of Life, Cambridge Volume**
- Nutrition
- Home Visitation
- Birth to 3 interventions (Early Head Start)
- Child care and early education
- State-funded Prekindergarten
- Head Start and related Federal Programs
- Kindergarten
- Small classes in the early grades
- PK-3 programs and practices

High Costs of Social Problems

Area	Annual cost
School dropout	200 b
Mental health	90 b
Child abuse	90 b
Crime	175 b

Paths from Early Education to School Success





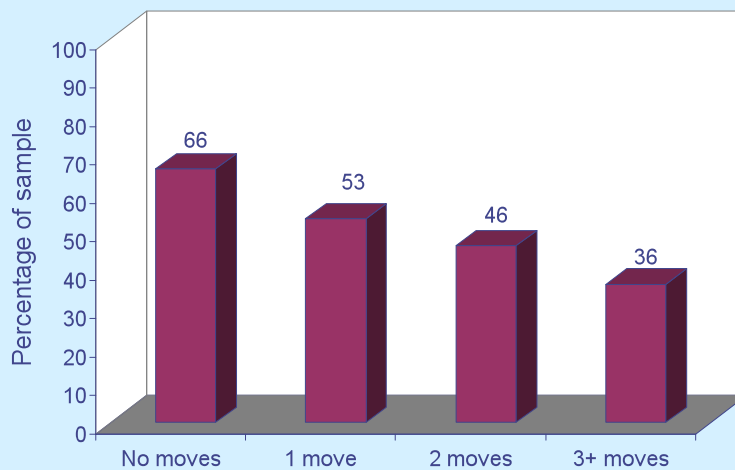
**Influences on Age 10 Math Ach.
(Large UK study)**

	Effect size
Mother education	.50
Home learning env	.40
Elementary school	.39
SES	.37
Preschool	.26
Birth weight	.12

Predictors of 3rd grade MCA Reading Scores, 2006 K cohort

Category	Exceeds	Meets or Exceeds
Girls vs. Boys	7.6%	4.1%
Parent HS grad vs. dropout	14.6%	5.5%
Title I school in K	-24.9%	-15.5%
Income <250% FPL	-6.2%	-2.5%
Proficient in K, 75% standard	12.5%	12.7%

Percent of 4th Graders at Basic or Above on NAEP Reading Test, 2000



Head Start Planning Committee, 1965

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).

2. 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.”

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

Classification	Example
Case Management	Head Start; Public School; Abecedarian Project
School Organizational	Small classes; PK-3 schools
Comprehensive Services	Child-Parent Centers; Proj. Devel. Continuity
Instructional Reforms	Follow-Through
Single Practices	Full- Day K; Parent Involvement

PK-3 Plus Models

Whole-School Reform	Example School Development P Success for All Full-service schools
Prenatal to Grade 3 +	Schools of 21 st Cent.

Summary of State PreK/Early Ed Evaluation Evidence

	Overall effect in SD	Minimum increase in proficiency
5-State Study (NIEER)	.22	9 pts.
7- State Study (Gilliam)	.36	14 pts.
Oklahoma, Tulsa (Gormley)	.58	22 pts.
New Mexico (NIEER)	.37	15 pts.
Arkansas (NIEER)	.30	13 pts.
New Jersey (NIEER)	.32	14 pts.
Oklahoma (NIEER)	.26	11 pts
National Head Start	.24	10 pts
Model Programs	.66	25 pts

3. Child-Parent Education Centers

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)

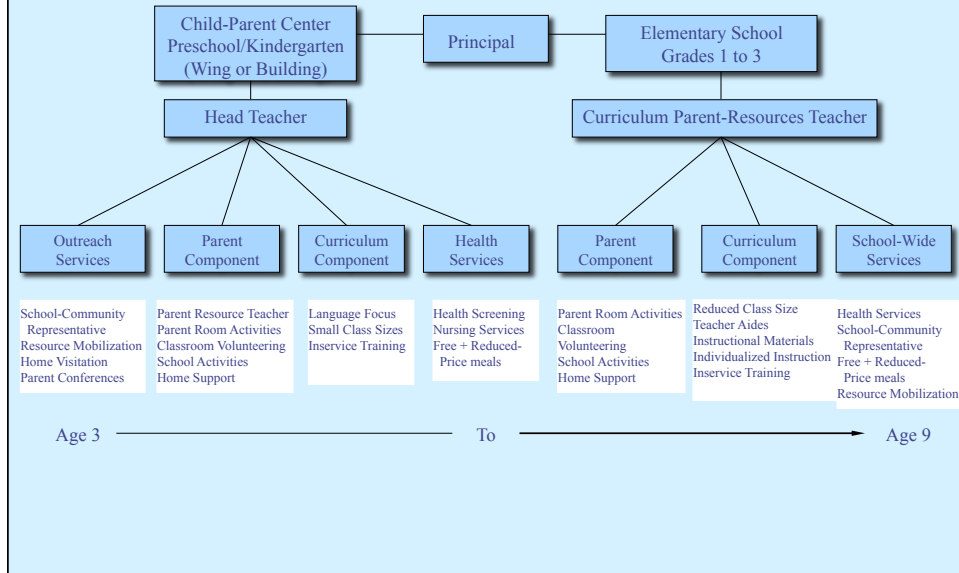
Goal

“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)

Program Philosophy

Child-Parent Centers blend an instructional philosophy of literacy and school readiness with intensive services for parents to strengthen the family-school relationship.

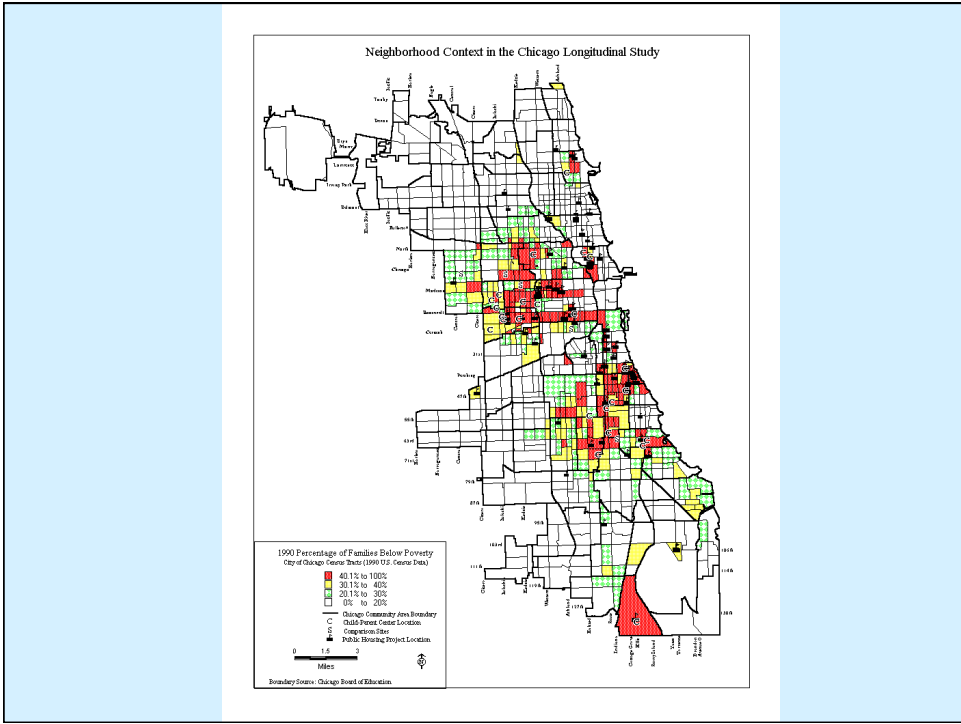
Child-Parent Centers



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 must 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.
- ◆ **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



Miller CPC



Dickens Child-Parent Center

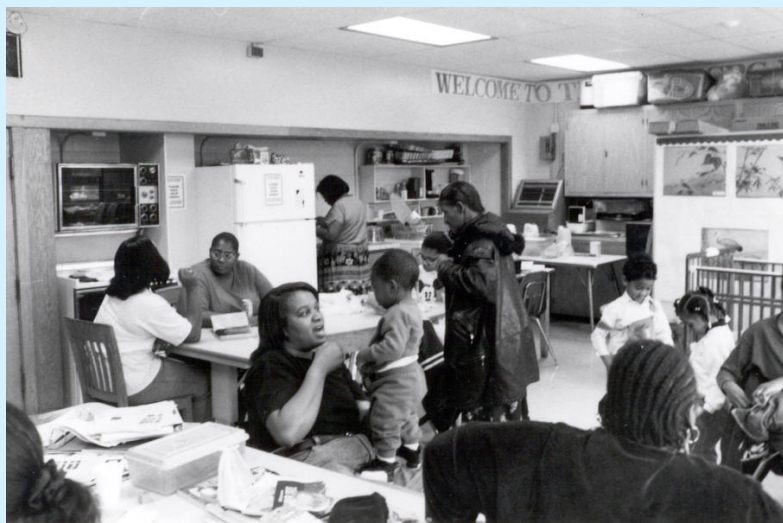


Johnson Child-Parent Center





Parent Resource Room



CPC Staffing

- ◆ Head Teacher
- ◆ Parent Resource Teacher
- ◆ School-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

Space Allocation

Preschool/Kindergarten
Head Teacher/Staff Offices
Preschool Classrooms
Kindergarten Classrooms
Parent Resource Room

School-Age (in elementary school)
Curriculum-Parent Resource Office
Classrooms (grades 1-2 or 1-3)
Parent Resource Room

CPC Major Foci

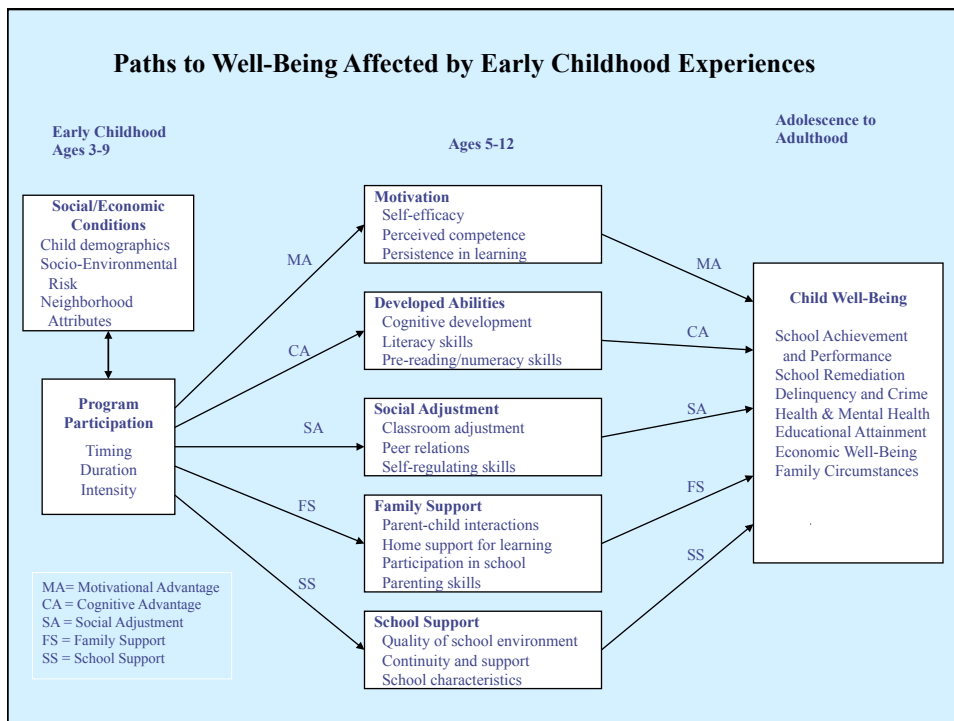
- ◆ Basic skills: Language, Numeracy, Listening
 - Structured Learning Activities
 - Language and literacy emphasis
 - Field Trips: Zoos, Museums, Libraries
- ◆ Parent Involvement
 - Classroom volunteering
 - Parent room activities
 - Educational workshops and training
 - Home visits and activities
- ◆ Organizational Structure
 - Staffing patterns and Coordination

Key Elements for Improving Well-Being

- ◆ Child language, numeracy, and social skills
- ◆ Continuity of learning experiences
- ◆ Family-school partnerships
 - Reduce social isolation
 - Increase school/residential stability
- ◆ Parenting practices
- ◆ Parents' attainments & economic well-being

Honors and Awards

- ◆ Included in What Works Registries
- ◆ Featured in White House Conference on Early Learning (2001)
- ◆ Title I Distinguished Schools National Recognition Program (1998)
- ◆ Exemplary Program, Joint Dissemination Review Panel, U. S. Office of Education (1976)



4. CLS Findings

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.

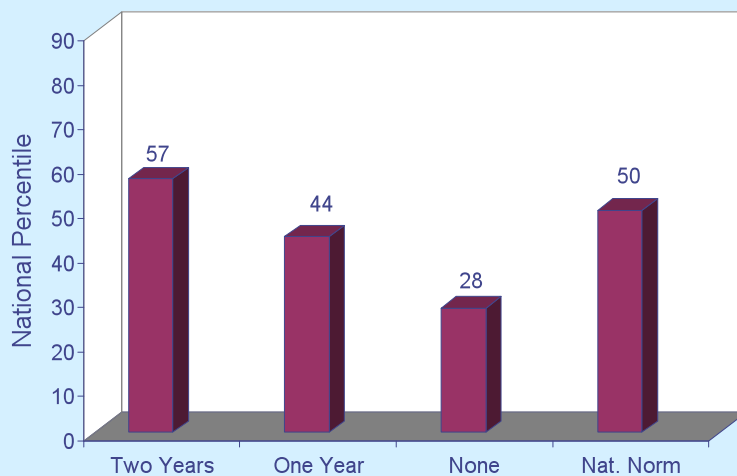
Program Groups

- ◆ 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. They matched on socioeconomic status.

Program and Comparisons from CPC's PK-3 program

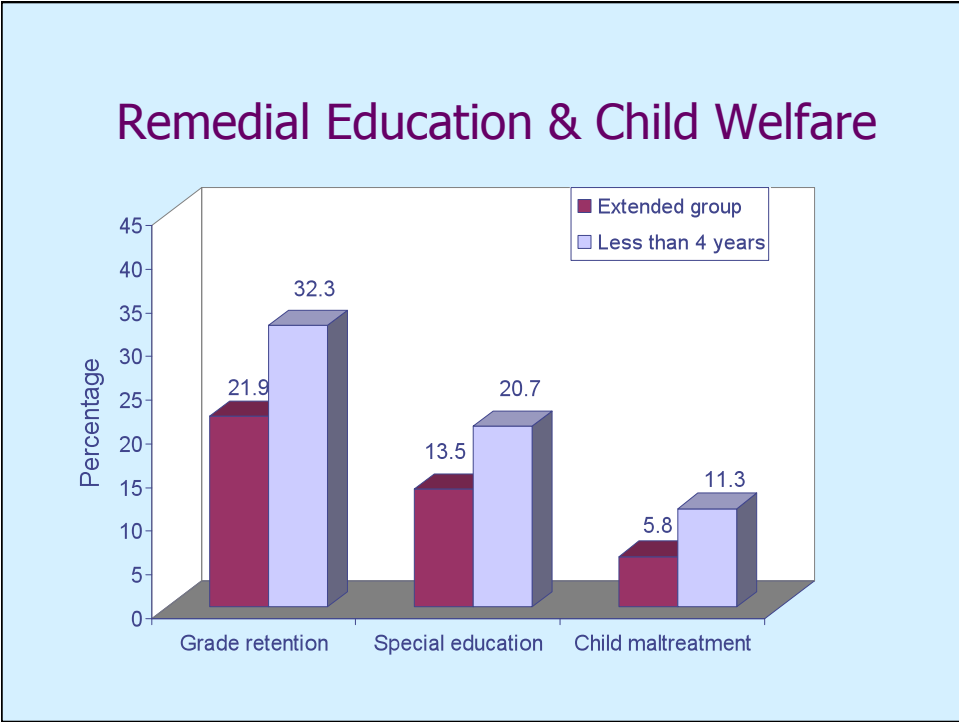
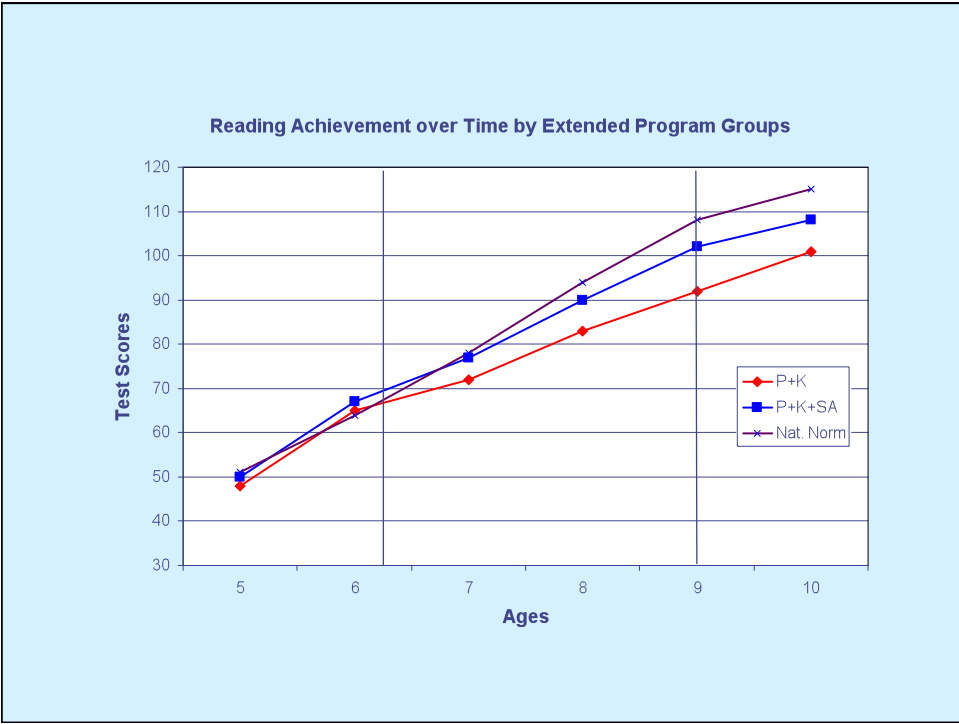
- ◆ 4 to 6 years of CPC from ages 3 to 9
- ◆ 0 years of CPC (Comparison 1)
- ◆ 1-3 years of any CPC (Comparison 2)
- ◆ 0-3 years of CPC (Comparison 3)
- ◆ P + K group only (Comparison 4)

CPC Preschool and Readiness



Key Impacts of Preschool, Age 28

	Program	Comparison
HS completion	82%	75%
4-year college att.	15%	11%
Private Health Ins.	49%	39%
SES index > 3	34%	29%
Substance abuse	14%	19%
Felony arrest	19%	25%
On-time HS grad	44%	37%

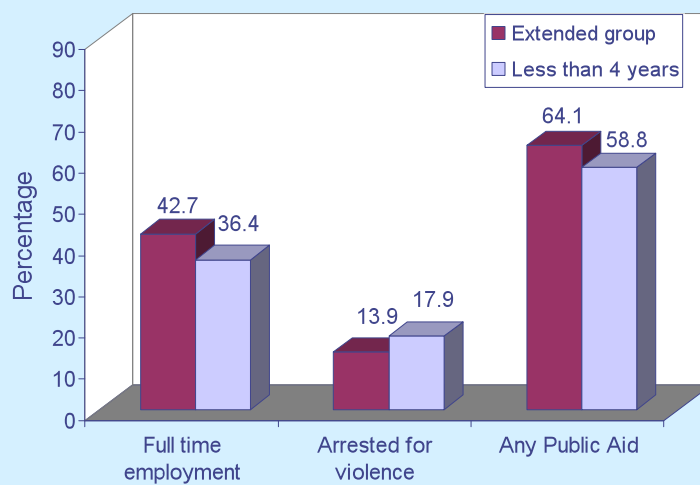


CPC Impacts on School Moves

Prog. Group	2+ moves grade 4-8	3+ moves grade 4-12
Extended	-13.8%	-9.9%
School-age	-5.8%	-6.7%
Preschool	-9.3%	-3.9%

Note. Marginal effects from probit regression. See Table 9 and Appendix E for model information.

Economic Well-Being, Health, and Crime Outcomes-Age 24



Key Impacts of PK-3 by Age 28

	Program	Comparison
SES > 3 (8 pt)	36%	30%
Private Health Ins.	52%	42%
HS completion	83%	77%
HS graduation	49%	31%

Extended-Program Length

Some evidence for Extended CPC:

	5/6 yr	4 yr
Arrest for violence	13%	21%
SES-27 (5+)	27%	23%
Priv. Insur	52%	43%

Preschool Program Length

No evidence that 2nd year of preschool impacts Economic Well-being

	2 yr	1 yr
Skilled job	33%	33%
SES-24	3.2	3.2
Food St, 2+ yrs	15%	12%

Gender Differences by Prek

	Males		Females	
	P	C	P	C
HS-comp, %	75	58	84	84
SES-24	2.7	2.1	3.3	3.2
Degree & work history, %	25	17	35	35
SES > 4, by 27	23	15	31	30

Parent Education by Prek

	< HS		HS grad	
	P	C	P	C
High grade	11.8	11.3	12.2	12.2
HS completion	77%	66%	87%	85%
SES-27	3.6	3.2	3.4	3.5
SES > 4, by 27	22%	15%	33%	33%

Cost-Benefit Analysis Results

- ◆ Reductions in expenditures for remedial services.
- ◆ Increases in lifetime earnings, compensation, and government tax revenues.
- ◆ Reductions in criminal justice system expenditures for youth and adult crime.
- ◆ Reductions in expenditures to victims of juvenile and adult crime.
- ◆ Reductions in expenditures for the child welfare system and victimization from maltreatment.
- ◆ Reduced substance abuse, depression, and risk of mortality associated with lower smoking.

CPC Economic Returns: Age 26

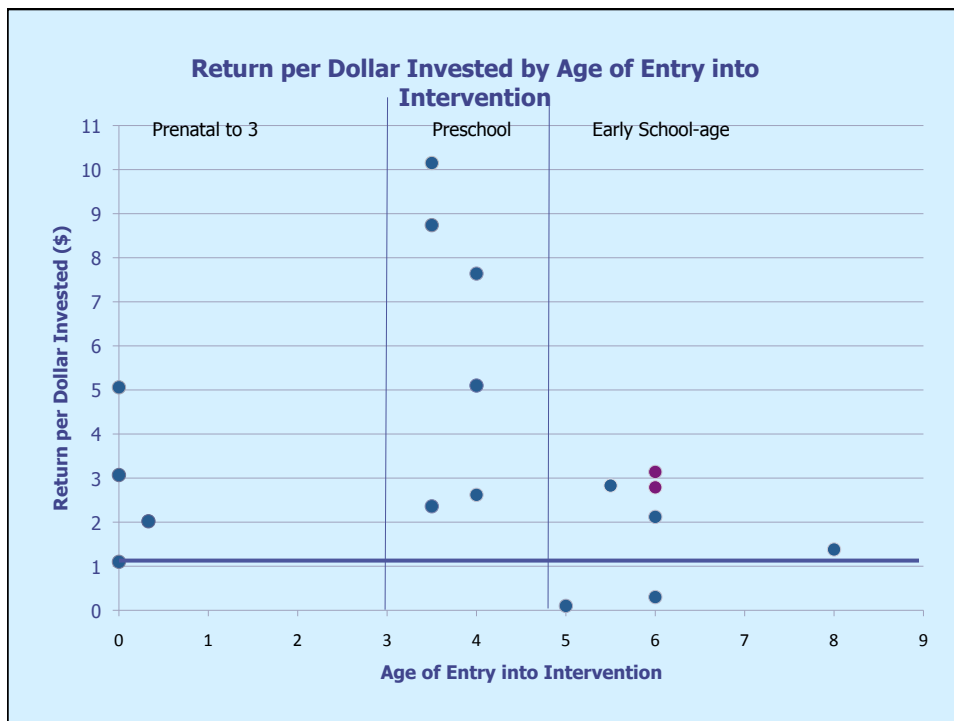
	Benefits \$ per child	Costs \$ per child	B/C Ratio	Ret. %
Prek	92,220	8,512	10.83	18
Gr 1-3	15,064	3,792	3.97	18
PK-3	42,520	5,163	8.24	10

Contributions by Outcome

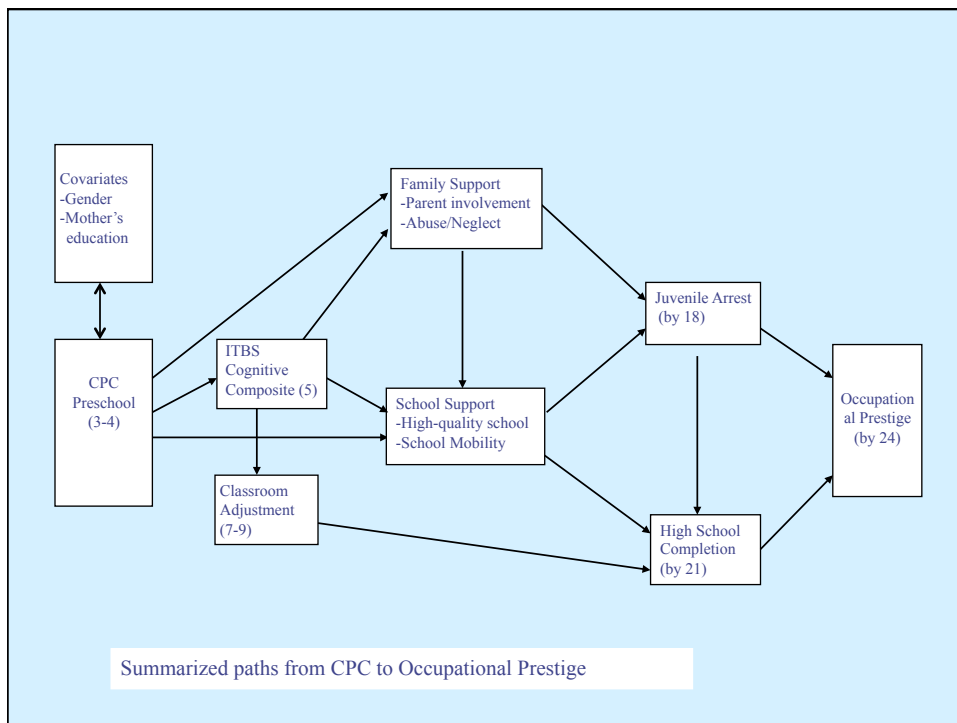
	Preschool	Extended
Crime	40%	36%
Earnings/Taxes	27%	33%
Remediation	6%	13%
Abuse/neglect	7%	14%
Child care	4%	4%
Subst. abuse	17%	1%

Benefit-Cost Ratios at Age 26

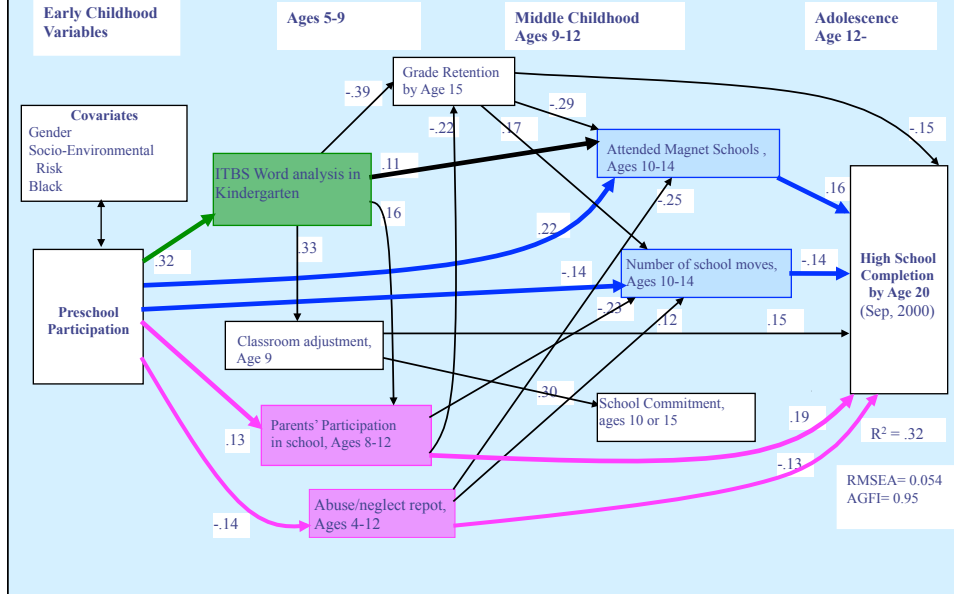
	Preschool	Extended
Total sample	10.83	8.24
Males	17.88	11.97
Females	2.67	3.66
Parent < HS	15.88	9.07
Parent HS grad	5.33	6.78
High risk	12.81	11.49
Lower risk	7.21	3.65



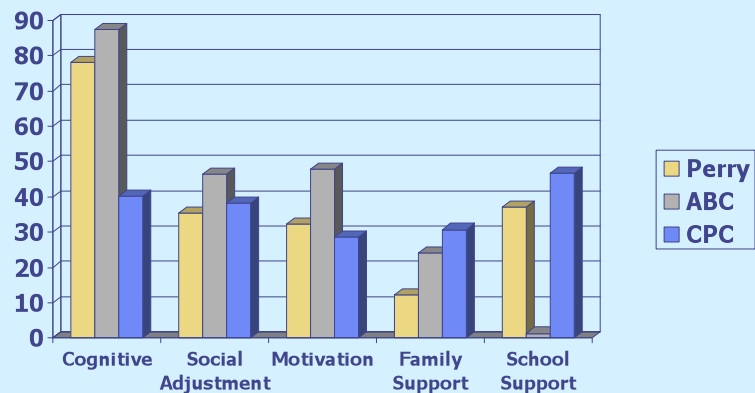
5. Program Elements & Processes



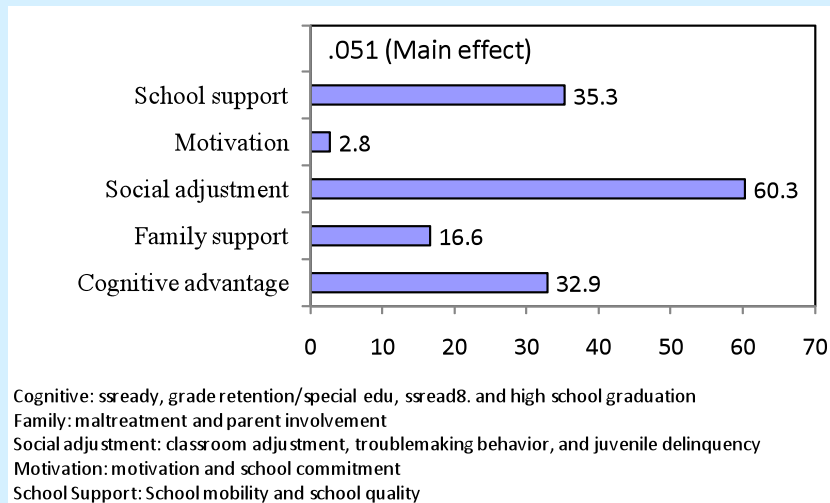
SEM Model for High School Completion: Coefficients are Standardized and Adjusted for Measurement Errors



Percent Reduction in Effects on Years of Ed Linked to 5 Factors



Incarceration/Jail



Class Size Reductions in Early Schooling

	Benefits	Costs	Ratio
Tenn. STAR	27,561	9,744	2.83
CPC Gr 1-3 (21)	8,089	3,792	2.12

STAR High School Graduation

- ◆ No link between small classes and graduation in total sample
- ◆ Link was found among low-income students with 3 and 4 years in small classes

Social Skills Training, Grades 1-6

	Benefits	Costs	Ratio
Skills, Opport. and Recog.	16,256	5,172	3.14

5. Conclusions & Recommendations

CPC PK-3 Strategies

- 1) Aligned curriculum focused on literacy:**
A **structured and diverse set of language-based instructional activities** designed to promote academic and social success.
- 2) Low student-teacher ratio:** 17: 2 in preschool and 25:2 in kindergarden
- 3) A multi-faceted parent program** under the supervision of the supervision of the Parent-Resource Teacher.

CPC PK-3 Strategies (continued)

- 4) **Outreach activities** coordinated by the School-Community Representative
- 5) On-going **staff development** for **all** center personnel
- 6) **Health and nutrition services**
- 7) **A comprehensive school-age program from first to third grade** supports children's transition to elementary school through
 - reduced class sizes (to 25 children)
 - teacher aides in each class
 - extra instructional supplies
 - coordination of instructional activities, staff development, and parent-program activities

PK-3 in Montgomery County Public Schools (Maryland)

PK-3 Practice	MCPS
Teacher Training	✓
Curriculum Alignment	✓
Teacher-Student Ratio	15:1 for K-3
Wrap Around Services (transportation, out-of-school activities, summertime learning)	✓
Evaluations of the Program	Limited
Parent Involvement	Encouraged; not mandatory
Resource Mobilization	✓
Funding	Through state funding formula
Co-Location	✓

PK-3 in Wisconsin

PK-3 Practice	4K, SAGE and WECCP
Teacher Training	SAGE, WMELS ✓
Curriculum Alignment	WMELS ✓
Teacher-Student Ratio	20:2 PK & 15:1 SAGE
Wrap Around Services (transportation, out-of-school activities, summertime learning)	WECCP ✓
Evaluations of the Program	Limited
Parent Involvement	WECCP ✓
Resource Mobilization	WECCP ✓
Funding	Federal & State
Co-Location	Often with 4K, but not always

Obstacles to Successful Implementation

- ◆ **Budgetary:** The CPC program has been under perpetual competition for resources within a school district that has many priorities.
- ◆ **Health and Family Services:** As key components, when these services are altered or ended, there is an adverse effect on the program's success.

Key Elements of Effectiveness for Early Education Programs

1. Include Children at Risk
2. Begin Early (by age 4)
3. Duration-More is Better
4. High Intensity of Services
5. Small Class Sizes and Child-Staff Ratios

Key Elements of Effectiveness

6. Highly Trained Teachers who are Compensated Well
7. Comprehensive Family Services
8. Compensatory Focus
9. Provide Transition Services into Kindergarten and early grades
10. Strong Accountability System

Michigan Great Start Readiness Program

Began in 1985 as State Pilot

Now serves 23,000 children

Funded through Mich. Dept of Ed

Focus on 4-year-olds

State funding per child is \$3,400

62% are half-day programs 4-5 days per week

Characteristics

Certified teachers

Class sizes of 18 and ratios of 8 to 1 (children to staff)

2 home visits and 2 parent-teacher conferences

Curricula include Bank Street, Highscope, and Creative Curriculum

On-going assessment

Findings (596 children)

Indicator	Program	Comparison
Pass state reading test, 4 th grade	44%	35.5%
Grade retention by 8 th grade	17.2%	25.8%
Special ed., 7 th gr.	No difference	
Achievement, 7 th gr.	No difference	

CPC Core Features

1. Head teacher & instructional leader
2. Within/close proximity to school.
3. Prek starting at age 3, 17 to 2 ratio
4. K to 3, 25 to 2 ratios
5. PRT in each site; Parent resource room.
6. SCRs, nurses and health services.
7. Curriculum PRT for school-age.
8. Instructional coordination & professional development

Recommendations

1. Implement CPC PK-3 more widely as an evidence-based program.
2. Increase investments in PK-3 services such as small classes, family support, and curriculum alignment.
3. Use cost-effectiveness research to better prioritize funding.

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).

Recommendations

7. States should 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 10% of Title I dollars go to preschool programs.
10. Require 10% of Title I go to evidence-based K-3 services that are linked to prek.

Criteria for Determining Evidence-based Programs

1. Conceptualization (e.g., dosage, intensity)
2. Study design
3. Study execution (e.g., missing data)
4. Fidelity of implementation
5. Validity of measures

Criteria for Determining Evidence-based Programs

6. Size of program impacts
7. Duration of effects in years
8. Identification of generative mechanisms
9. Economic benefits
10. Readiness for dissemination
11. Capacity for sustainability

Further Reading

Child-Parent Centers (PK-3)

Reynolds, A. (2000). Success in early intervention: The Chicago Child-Parent Centers. U of Nebraska Press.

Age-26 Cost-Benefit Analysis

Reynolds, A., Temple, J., White, B., Ou, S., & Robertson, D. (2010). Child Development, 82, 379-404.

Birth to 10

Reynolds, A., Rolnick, A., Englund, M., & Temple, J. (Eds.). (2010). Child programs and practices in the first decade of life: A human capital integration. Cambridge.