



# How Do We Know 21C Works?

Through both process and outcome evaluations at several 21C sites, the Yale School of the 21<sup>st</sup> Century Program has gathered ample evidence of the efficacy of the (21C) model. Moreover, 21C builds on individual components that have been successfully evaluated on their own. The findings from both sources provide compelling evidence that 21C benefits children, parents, and the school as a whole.

## FINDINGS OF SCHOOL OF THE 21<sup>st</sup> CENTURY EVALUATIONS

The following benefits of 21C are based on findings from:

- the first phase of a longitudinal outcome evaluation conducted by the Yale 21C Program in Independence, MO, the first school district to implement 21C
- an independent study of the 21C program in Leadville, Colorado, and
- implementation evaluations of the CoZi program (a variation on 21C which combines James Comer's School Development Program and Edward Zigler's 21C model) in schools in Norfolk, VA and Bridgeport, CT.

## BENEFITS FOR CHILDREN

- Children participating in 21C for at least three years evidenced higher scores in mathematics and reading achievement tests than children in a control, non-21C school.
- Children who participated in 21C beginning at age three started kindergarten ready to learn as evidenced by their scores on kindergarten screening tests.
- According to teachers, the 21C preschool program helped identify and address children's special learning needs early in the educational process.
- Availability of 21C child care services enabled parents to provide consistent adult supervision and high-quality out-of-home care, vital factors in healthy child development.

## BENEFITS FOR PARENTS

- Parents in 21C schools, in comparison to parents in non-21C schools, reported that:
  - they experience significantly less stress, as measured by the Parental Stress Index
  - they spend less money on child care, and
  - they miss fewer days of work.
- According to teachers, 21C programs helped parents form an early and positive relationship with the school.
- Parents gave their school higher marks for academic focus, caring and sensitivity, school-community relations and collaborative decision-making than did parents at the comparison school.

## BENEFITS FOR THE SCHOOL

- Principals in 21C schools report:
  - substantial reduction in school vandalism
  - increased parental involvement and parent appreciation for the school
  - changes in teaching practices in first and second grade to reflect developmentally appropriate practice and provide greater individual attention, and
  - positive public relations because of the expanded services offered by the school.
- In the first year evaluation from the CoZi site in Norfolk, VA, teachers reported significantly higher school climate levels than their counterparts at the non-CoZi school on almost every dimension of school climate (i.e. leadership, achievement, motivation, collaborative decision-making, parent involvement in decision-making, teacher involvement, school-community relations, staff expectations and teacher collaboration). Research shows that there is a strong correlation between school climate and academic performance: students are more likely to do well academically if they are in schools rated as having a positive climate.

## RELATED RESEARCH

Substantial research has been conducted on many of the components of the 21C model. The following is a brief summary of some of the findings of these independent evaluations:

### BENEFITS OF QUALITY PRESCHOOL

- The best long-term study of preschool effects to date, the Perry Preschool Project, has revealed that for every dollar spent on preschool programs, taxpayers reap a benefit of over seven dollars. Participants are more likely to be employed and married, and less likely to be delinquent or to have committed a crime. Another major benefit is the reduction in the number of special education placements.

Schweinhart, L.J., Barnes, H.V., Weikart, D.P. Significant benefits: The High/Scope Perry Preschool study through age 27. Monographs of the High/Scope Educational Research Foundation. 1993.

- Numerous other studies attesting to the benefits of preschool are reviewed in *Starting Points: Meeting the Needs of Our Youngest Children*, a 1994 report by the Carnegie Corporation of New York.

### GUIDANCE & SUPPORT FOR NEW PARENTS

- At age 3, children who had participated in Parents As Teachers were found to be significantly more advanced in language and social development, as well as problem solving and other intellectual tasks than comparison children.

Pfannenstiel, J., and Seltzer, D. Evaluation Report: New parents as teachers project. Overland, KS: Research & Training Associates, 1985.

- Another study examined whether Parents As Teachers augments the effects of Head Start and Title I prekindergarten. Results showed that the Parents As Teachers children had significantly higher cognitive, language, social and motor skills than non-participants. These higher skills led to lower remedial and special education costs for first grade. The Parents As Teachers participants also had substantially reduced welfare dependence and half the number of child abuse and neglect cases.

Drazen, S., and Haust, M., Increasing children's readiness for school by a parental education program. Binghamton, NY: Community Resource Center, 1994.

## BENEFITS OF SCHOOL-AGE CHILD CARE

- Several studies have shown that high-quality school-age child care programs which offer structured, developmentally-appropriate activities for children have positive outcomes for both children and families including improved social skills, reduced problem behavior, and increased academic performance.

Preventing Problem Behaviors and Raising Academic Performance in California Children: The Impact of School Age Child Care Programs Supported by the University of California Cooperative Extension, (1993).

- A study of school-age child care which examined whether formal after-school programs have a beneficial effect on low-income children in comparison to other types of after-school settings (parental care, informal adult supervision, and self-care) indicated that structured after-school programs do have positive impacts on academic achievement and social adjustment in comparison to other types of after-school care. Moreover, a greater degree of contact time in after-school programs is more beneficial than superficial contact.

Posner, J.K., & Vandell, D.L. (1994). Low-income children in after-school care: Are there beneficial effects of after-school programs? *Child Development* 65(2), 440-456.

- Research has shown that after-school programs reduce vandalism and juvenile crime and are associated with improvements in academic performance and behavior among children who participate.

Fight Crime, Invest in Kids, 1332 G Street, NW, Suite B, Washington, DC, 20005.

- Children in after-school programs are less likely than those who are unsupervised to abuse drugs and alcohol.

Richardson, J. L., et al, Substance use among eighth-grade students who take care of themselves after school. *Pediatrics*, (1989)

### SCHOOL OF THE 21st CENTURY

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