

The Economic Benefits of High-Quality Early Childhood Programs: What Makes the Difference? *Executive Summary*

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INTRODUCTION

The early childhood field is deeply indebted to three studies of high-quality early education programs that began in the 1960s, 1970s and 1980s and have continued to the present time—the High/Scope Perry Preschool Project, the Carolina Abecedarian Project and Chicago’s Child-Parent Centers (CPC)—because these studies provide strong evidence of the economic benefits of early childhood education.

This paper is written in response to the tendency of a number of people to use the findings from these three studies to justify any and all early childhood programs without trying to extrapolate what these three studies specifically did that made a difference in affecting children in such dramatic ways. Even those who argue for high quality are likely to mean very different things when they use these words. This paper reflects an effort to determine what exactly about these three early childhood programs made them so successful, relying, in part, on interviews with the principal investigators of the programs.

KEY ECONOMIC FINDINGS

- All three of these programs have shown very positive economic benefits that outweigh the program costs. Although the studies differed in their criteria for admission into the projects and the interventions they offered, all programs selected children who were at risk of school failure and then followed the children into their 20s and beyond, comparing the results of the children in the interventions and in the control and comparison groups over time. These benefits, calculated when the children were all of a similar age (in their 20s), are presented in Table 1.

Table 1: Costs and Benefits per Participant in 2002 Dollars

	High/Scope Perry Preschool Project (age 27)	Abecedarian Project (age 22)	Chicago Child-Parent Centers (age 21)
Total benefit for each \$1 invested (includes benefits to individual participants and to the public)	\$8.74	\$3.78	\$10.15
Public benefit for each \$1 invested	\$7.16	\$2.69	\$6.87

Source: J.A. Temple and A.J. Reynolds, in E. Zigler, W. Gilliam, and S. Jones (Eds.), *A vision for universal prekindergarten* (in press). New York: Cambridge University Press.

The researchers who conducted these studies have been able to calculate cost/benefit analyses because each collected data on most of the following outcomes for the children in their studies, both in the interventions and in the control or comparison groups. During the teen years, they collected data on special education services, grade retention, child maltreatment and juvenile arrests. When the children reached their 20s, they collected data on high grade completion rates, college attendance, employment status and monthly earnings. Overall, the children in the intervention groups significantly outperformed those in the control and comparison groups. For example, if one looks at special education placement in the teen years, 15% of the children in the Perry Preschool Project used special education compared with 34% of the children in the control group. In the Abecedarian project, the figures were 25% (intervention group) to 48% (control group); and in the Child-Parent Centers, they were 14% (intervention group) to 25% (comparison group).

- Overtime, the economic benefits continue to rise. For example, the High/Scope Perry Preschool Project has found a total cost/benefit ratio of \$17.07 for each \$1 invested in 2000 dollars when the children in their study reached the age of 40.

BACKGROUND

What do we know from the science of early development that can help explain why these three early childhood programs might have had such lasting effects?

The National Scientific Council on the Developing Child—a multi-disciplinary coalition of many of the nation’s leading scientists housed at Brandeis University—has formulated several principles of brain architecture that are useful in explaining why these three early education programs have had such dramatic long term benefits for these children at risk of school failure:

- Brains are built over a long period of time, through an ever-present interaction of genetics and experience.
- Genetics determine the when or the timetable for development, while experience determines the how or the actual construction of the brain circuits.
- The brain is built in a bottom up hierarchical way, where basic circuits are established first, and they form the foundation for more complex circuits. In other words, basic circuits create the foundation for increasingly complex skills.
- In the absence of positive and protective relationships for the children, toxic stress can affect brain architecture.

A major lesson from the study of the architecture of the brain is: “It’s better to get it right the first time than to try to fix it after the fact.”

PROBABLE CAUSES OF THE ECONOMIC IMPACT

What did each of these three early childhood programs do at the time that has been most important in contributing to their remarkable and enduring effects and return on investment?

The Basics

There are a few “overarching principles” that these three interventions had in common.

- They began early.

The Abecedarian Project began in the first months of life; and the Perry Preschool Project and the Child-Parent Centers began at age three.

- They had well-educated, well-trained, and well-compensated teachers—with resulting low staff turnover.

Most of the teachers either had at least a BA degree or a higher degree in education and they received many contact hours of in-service training. They were paid competitively with public school teachers and the resulting staff turnover in all three interventions was low.

- They maintained small class sizes and high teacher-child ratios.

The class sizes ranged from 12 (Abecedarian Project from infancy to preschool) to 17 (Chicago Child-Parent Centers) to 22 (Perry Preschool Project).

The ratios for infants in the Abecedarian Project for infants were 3 to 1 and for toddlers, 3.5 to 1. For preschoolers, the ratios ranged from 5.7 to 1 (Perry Preschool), 6 to 1 (Abecedarian) and 8.5 to 1 (Chicago Child-Parent Centers).

- They were intensive programs.

Intensity can be described in several ways, including the contact hours with the child in the program, work with parents, and extension into the school-age years.

Contact Hours

Each of these programs provided an intensive intervention, including many contact hours with the children, for more than a year (1.8 years for the Perry Preschool Project, 5 years for the Abecedarian Project, and 1.6 for the Chicago Child-Parent Centers).

Transition into the Early Elementary Years

Two of the three interventions went beyond the preschool years. The Abecedarian Project provided a “bridge” program where educators with degrees were hired to come into the schools and work with the teacher, the child and the parent from kindergarten through the second grade, while the Chicago Child-Parent Centers was a preschool through third grade intervention.

Parent Education/Support

Two of these programs worked intensively with parents, albeit in different ways. The High/Scope Perry Preschool Project worked with families in their homes for an hour and a half per week, essentially teaching them to observe children and then elaborate and extend their learning. In contrast, the Chicago Child-Parent Centers’ program was designed to bring the parents into the classrooms for half a day per week.

- They focused on children’s learning.

The curricular approaches in these three interventions were informed by the best available research on the children’s development and children’s learning.

Success Depends on More than the Basics

This was a major reason for writing this paper. Interestingly, as opposed to the basics above, the principles described below have much more to do with ways of thinking about and interacting with children, their families, and with colleagues, rather than with programmatic features that cost money.

- There was clarity of focus in each of these interventions. The leaders of these interventions were very intentional about what they wanted their programs to accomplish and built support among participants and in the larger community for accomplishing these goals.
- These interventions focused on the whole child—the child’s intellectual, social, emotional and physical growth and well-being.
- The relationship between the teacher and the child was seen as central to the child’s learning.
- The children in these programs were viewed as active and experiential learners.
- There was a mixture between responsive teaching that extended and elaborated on what the children were already learning and direct teaching, but the direct teaching was also designed to be engaging and to extend children’s learning. The curriculum was not set in stone, but was rather a framework for learning.
- Although the teachers were better educated, better trained, and better paid than the average early childhood teacher, there was also a strong focus on their ongoing learning. The model of adult learning was not one of pouring information into “an empty vessel,” but one of providing time and resources for the teachers to reflect on what the children were learning and on their own teaching to find ways to improve their teaching practice.

And so the societal question we face is: will we heed the neuroscience findings that tell us that “it’s better to get it right the first time than to try to fix it later?” This paper makes it clear that we have the knowledge to “get it right.”