

the retention in grade 2. And you'll see that, again, if children attended at age 3 and 4, versus none at all, their grade retention was cut in half.

So, one thing that I would really like to emphasize to you is that, within all four of these programs, while they were all different, they all had an emphasis on quality, in that they had teachers who were credentialed, they had a 4-year bachelor degree, as a minimum, teacher certification, small class sizes, lots of support for teachers, in terms of ongoing professional development and supervision. In that, for me, the takeaway message from this research, it is not so much that we want to expand access to pre-K to children for the sake of expanding access; we, at the same time, want to ensure that the programs young children have access to are of the highest quality, so that you will realize the returns that were demonstrated in these other research studies.

And I would conclude by saying that I realize that this type of program is not inexpensive, but that, to me, the cost of not providing a high-quality program is even more expensive than that.

Thank you very much.

[The prepared statement of Ms. Ackerman follows:]

PREPARED STATEMENT OF DEBRA ACKERMAN

Good afternoon. My name is Debra Ackerman and I am the associate director for research at the National Institute for Early Education Research, which is part of Rutgers University. Thank you for inviting me to testify today.

What I would like to share with you today is a brief overview of the compelling research base on the benefits of high-quality early learning programs. I will do this by highlighting the significant outcomes from research on four model early childhood education programs. In addition, outcomes are defined here as the effects on children and the economic returns to the larger communities they live in.

The evidence we have on the short- and long-term outcomes of high quality early childhood education come from a variety of rigorous research studies. However, the three most famous studies are those of the Abecedarian, Chicago Child-Parent Center, and High/Scope Perry Preschool programs.

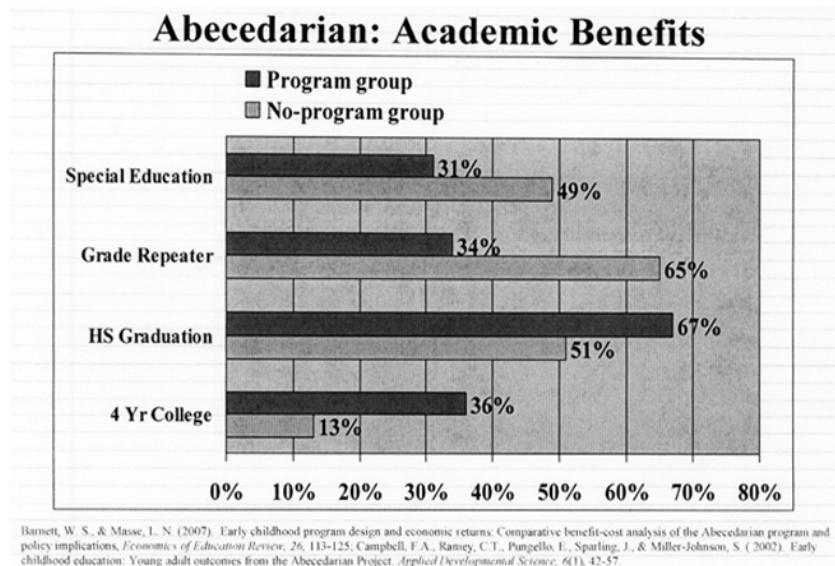
Three Benefit-Cost Analyses with Disadvantaged Children

	Abecedarian	Chicago CPC	High/Scope Perry
Location	Chapel Hill, NC	Chicago, IL	Ypsilanti, MI
Number Served	111	1,539	123
Ages Served	6 weeks-Age 5	Ages 3-4	Ages 3-4
Program schedule	Full-day Full year	Half-day School year	Half-day School year
Teacher Qualifications	BA, MA, or demonstrated skills	Min. BA & EC certification	Min. BA & Elem/Spec Ed certif.
Max Class Size	7 toddlers 12 preschoolers	17	13
<small>Barnett, W. S., & Masse, L. N. (2007). Early childhood program design and economic returns: Comparative benefit-cost analysis of the Abecedarian program and policy implications. <i>Economics of Education Review</i>, 26, 113-125. Temple, J. A., & Reynolds, A. J. (2007). Benefits and costs of investments in preschool education: Evidence from the Child-Parent Centers and related programs. <i>Economics of Education Review</i>, 26(1), 126-144. Schwabstark, J.-J., Morris, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nore, M. (2005). <i>Lifetime effects: The High/Scope Perry Preschool study through age 40</i> (Monographs of the High/Scope Educational Research Foundation, 14). Ypsilanti, MI: High/Scope Educational Research Foundation.</small>			

Each of these programs served children who were considered to be at-risk for school failure. The Abecedarian and Perry Programs were very small in comparison

to the Child-Parent Center Program, which was offered by the Chicago Public School. The programs also differed in terms of the ages served and whether they had a half- or full-day program. However, all three programs used highly qualified teachers. In addition, because classrooms were staffed by a teacher and assistant, their staff-child ratios were 1 to 8.5 or better.

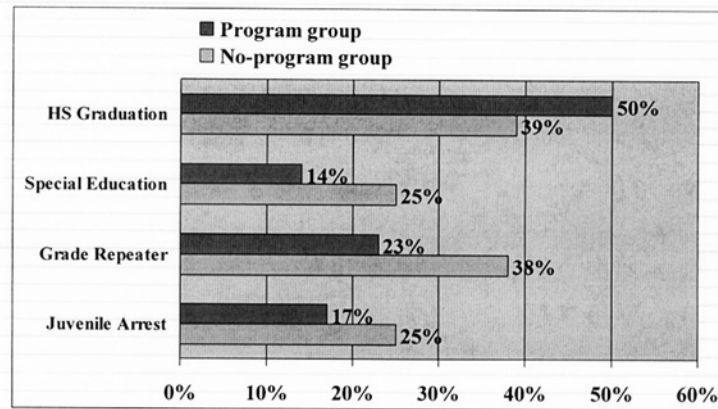
Despite the differences in schedule, each program has demonstrated remarkable academic benefits for enrollees in comparison to the outcomes for children who did not participate in the program. We begin with the small Abecedarian program. As can be seen from the slide, just one-third of enrollees were subsequently placed in a special education classroom, versus about half of the no-program group. In terms of grade repetition, again, about one third of enrollees repeated a grade in comparison to 65 percent of those who did not participate in the program.



The difference in high school graduation rates was 67 versus 51 percent. Finally, while a full third of participants went on to a 4-year college, only 13 percent of the no-program group had a similar outcome.

We see similar results when comparing academic outcomes for those enrolled in the large-scale Chicago Child-Parent Center program. Half of the program enrollees graduated from high school, versus 39 percent of the no-program group.

Chicago CPC: Academic & Social Benefits at School Exit

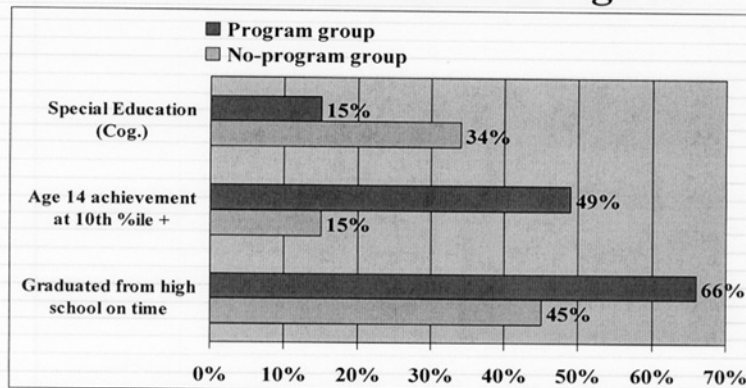


Temple, J. A., & Reynolds, A. J. (2007). Benefits and costs of investments in preschool education: Evidence from the Child-Parent Centers and related programs. *Economics of Education Review*, 26(1), 126-144.

Special education placement and the rate of in-grade repetition also were lower for those who participated in the program. Participation in the CPC program also had an effect on non-academic social outcomes. For example, we see that just 17 percent of enrollees experienced a juvenile arrest, versus one-quarter of the no-program group.

For the Perry Preschool Project, when looking at outcomes at age 19, we see rates of special education placement that are half as high for the program group in comparison to the no-program group.

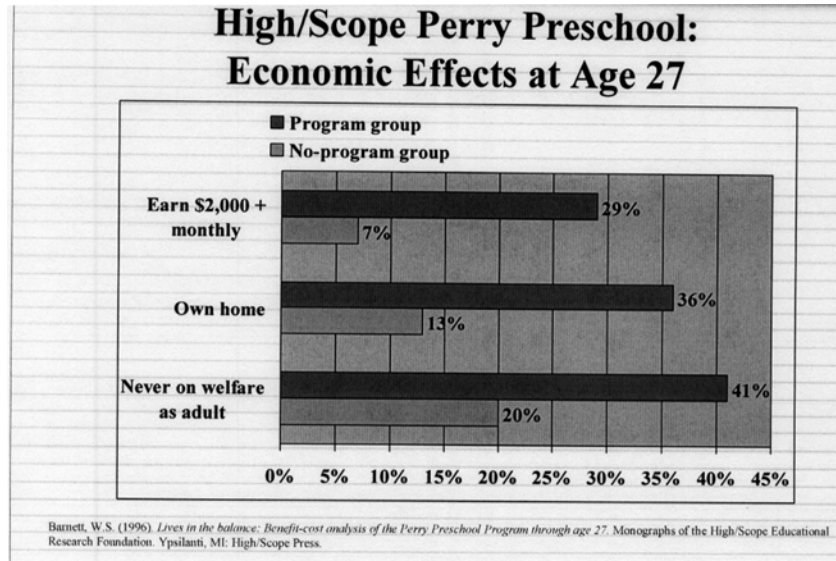
High/Scope Perry Preschool: Educational Effects at Age 19



Berrueta-Clement, J.R., Schweinhart, L.J., Barnett, W.S., Epstein, A.S., & Weikart, D.P. (1984). *Changed lives: The effects of the Perry Preschool Program on youths through age 19*. Ypsilanti, MI: High/Scope Press.

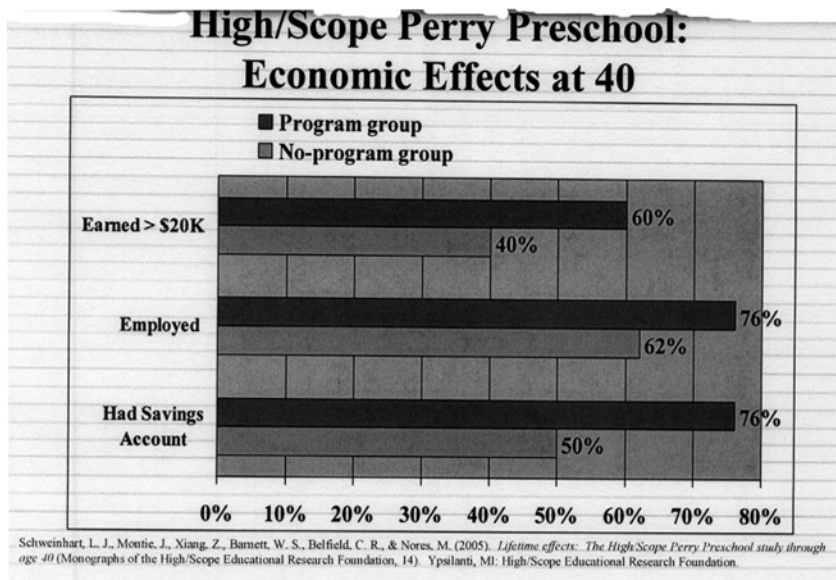
In addition, close to half of Perry enrollees had standardized test achievement levels that were at the 10th percentile or higher, versus only 15 percent of the non-enrollees. Finally, a larger percentage of the program group graduated from high school on time, as well.

The three slides I just showed are just brief examples of the individual school-age outcomes education stakeholders might expect for from access to high quality early childhood education programs. However, it's also important to talk about outcomes once children become adults.



For example, when examining several economic variables for 27-year olds who had previously participated in the Perry Pre-school program, we see that their rates of earning at least \$2,000 per month, owning their own home, or never having been on welfare as an adult are significantly higher in comparison to the no-program group.

By age 40, we still see differences in terms of income, employment rates, and such characteristics as having a savings account.



When talking about the potential outcomes from enrollment in early childhood education programs, it also is important to understand the economic returns of the larger community when schools have lower rates of special education placement and grade repetition, as well as higher high school graduation rates. Higher post-secondary employment and income rates also contribute to the larger community.

Each of these three programs had different per-child costs and benefits. But, perhaps the most compelling evidence for why high quality early childhood programs are a wise investment is the benefit/cost ratio from these programs.

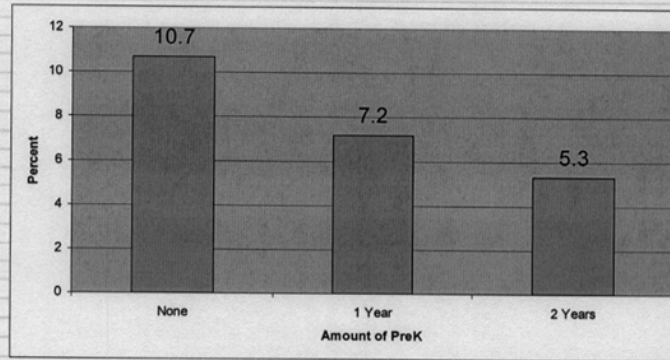
Economic Returns to EC Education for Disadvantaged Children (In 2006 dollars, 3% discount rate)			
	Per-child Cost	Benefits	B/C Ratio
▪ Abecedarian	\$70,697	\$176,284	2.5
▪ Chicago CPC	\$ 8,224	\$ 83,511	10
▪ High/Scope Perry	\$17,599	\$284,086	16

Barnett, W. S., & Masse, L. N. (2007). Early childhood program design and economic returns: Comparative benefit-cost analysis of the Abecedarian program and policy implications. *Economics of Education Review*, 26, 113-125; Belfield, C., Nores, M., Barnett, W.S., & Schweinhart, L.J. (2006). The High/Scope Perry Preschool Program. *Journal of Human Resources*, 41(1), 162-190; Temple, J. A., & Reynolds, A. J. (2007). Benefits and costs of investments in preschool education: Evidence from the Child-Parent Centers and related programs. *Economics of Education Review*, 26(1), 126-144.

The Abecedarian Program realized a 2.5 to 1 rate of return. The rate of return for the Chicago Child-Parent Center and High/Scope Perry programs are even higher. For every dollar invested in these programs, there was a \$10 and \$16 dollar return, respectively.

To share with you a more recent example, research on the effects of New Jersey's Abbott Pre-K Program through Grade 2 is showing similar promise for these types of academic outcomes.

NJ PreK Grade Retention at 2nd Grade



Source: Frede, E., Jung, K., Barnett, W. S., & Figueras, A. (2009). *The APPLS blossom: Abbott preschool program longitudinal effects study (APPLES) preliminary results through 2nd grade (Interim report)*. New Brunswick, NJ: NIEER.

In comparison to children who did not attend, we have found that enrollees experienced higher language, literacy, and math gains. By Grade 2, grade repetition is cut in half for children who attended at age 3 and 4 versus no enrollment at all.

We do not yet have the same type of longitudinal data for NJ's program to demonstrate the type of returns on the state's investment. However, what is important to note is that NJ's Abbott Pre-K shares many of the same high-quality program elements found in the Abecedarian, Chicago Child-Parent Center, and High/Scope Perry programs.

PROGRAM QUALITY MATTERS

- Well-designed;
- Balanced practices & curriculum;
- Implemented as designed;
- Strong staff;
- Strong supervision and monitoring; and
- Use data to inform policy & practice.

More specifically, the teachers in the program all have a minimum of a BA and a specialized early child education certification. The program uses a full-day schedule and also provides before- and after-school care, which results in higher participation rates. Class size is capped at 15 students. Teachers need to use a research-based, intentional curriculum, and their practice is guided by State program standards and expectations for what children should learn. In addition, both children and teachers have access to a variety of key supports. Teachers, in particular, have access to ongoing training and supervision, as well.

In summary, rigorous research demonstrates the potential outcomes of access to high-quality early childhood education programs. These outcomes include higher learning gains for children and lower rates of grade repetition and special education placement. Children have a better shot at graduating from high school and going on to become productive members of society, as well.

All of these outcomes benefit the larger community and present the potential to realize an economic return that beats what I'm currently getting at my local bank. However, we must also keep in mind the importance of program quality. It is not enough to merely identify classroom space and staff and begin to offer a program that serves young children. Instead, early education stakeholders must ensure that programs offer children the experiences and support they need to realize the short- and long-term outcomes highlighted today.

Thank you and I would be happy to answer any questions.

Senator CASEY. Thanks, Dr. Ackerman.