



Investing in the Economy by Investing in Preschool Education

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Impacts of Quality Early Education

Increased Educational Success and Adult Productivity

- Achievement test scores
- Special education and grade repetition
- High school graduation
- Behavior problems, delinquency, and crime
- Employment, earnings, and welfare dependency

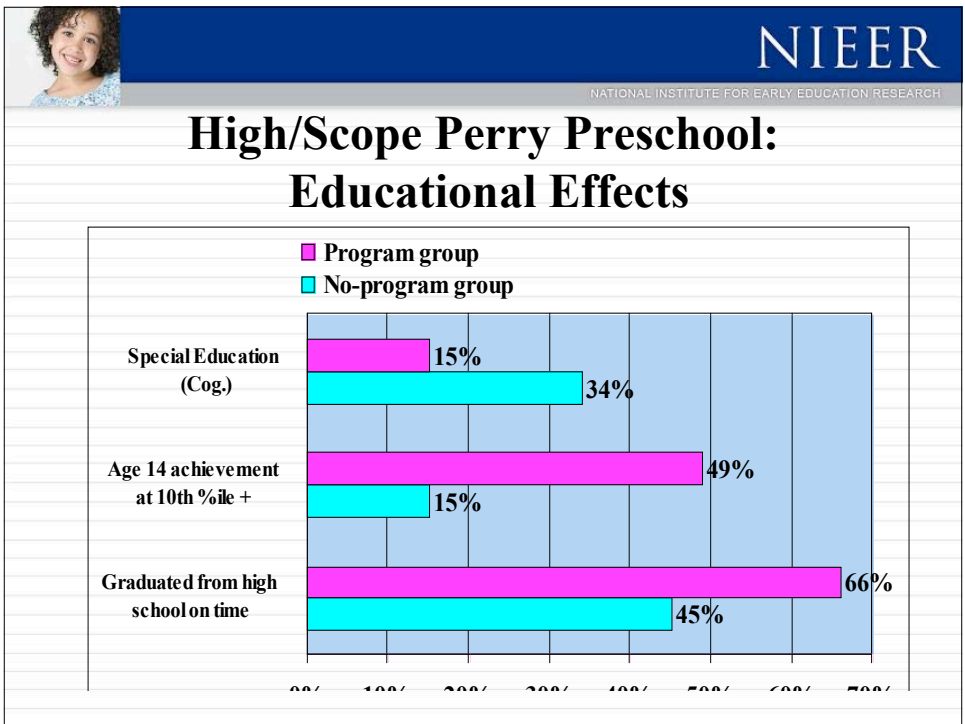
Decreased Costs to Government

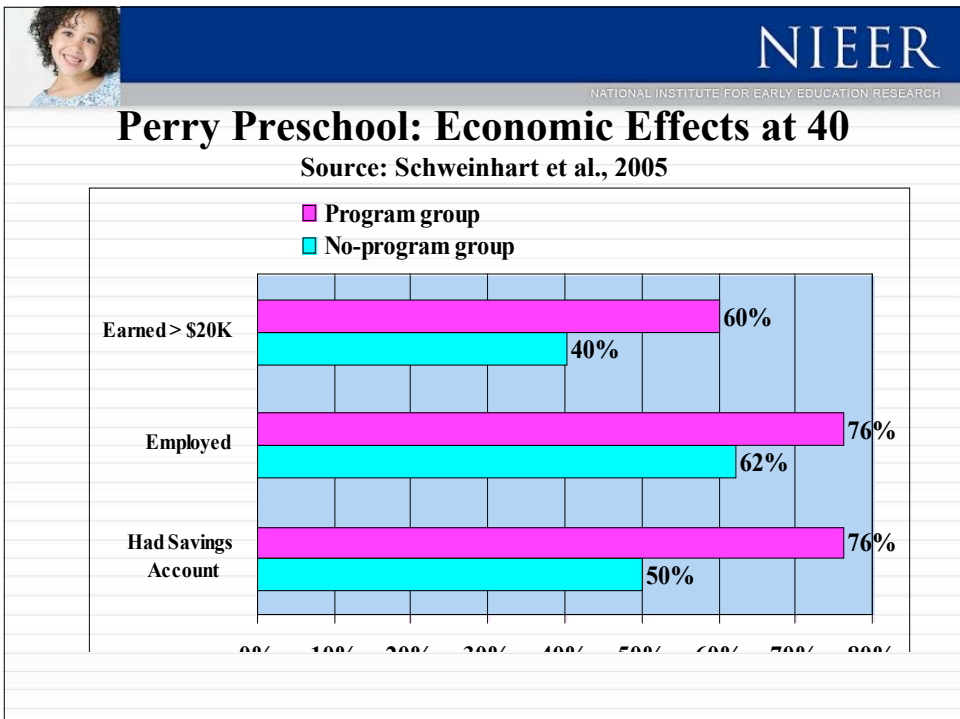
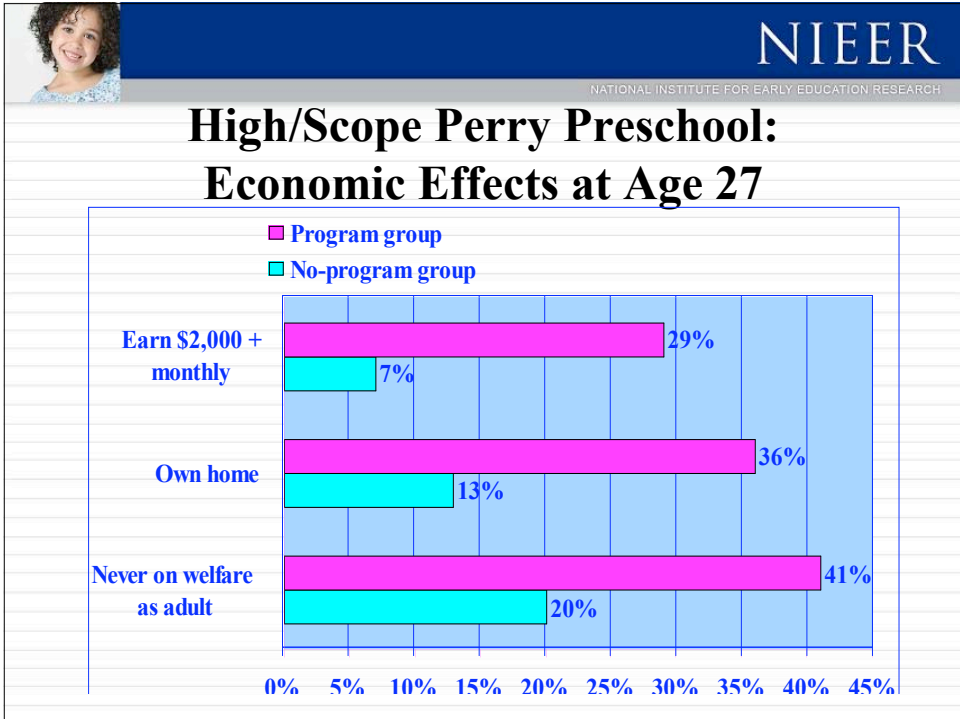
- Schooling costs
- Social services costs
- Crime costs
- Health care costs (teen pregnancy and smoking)

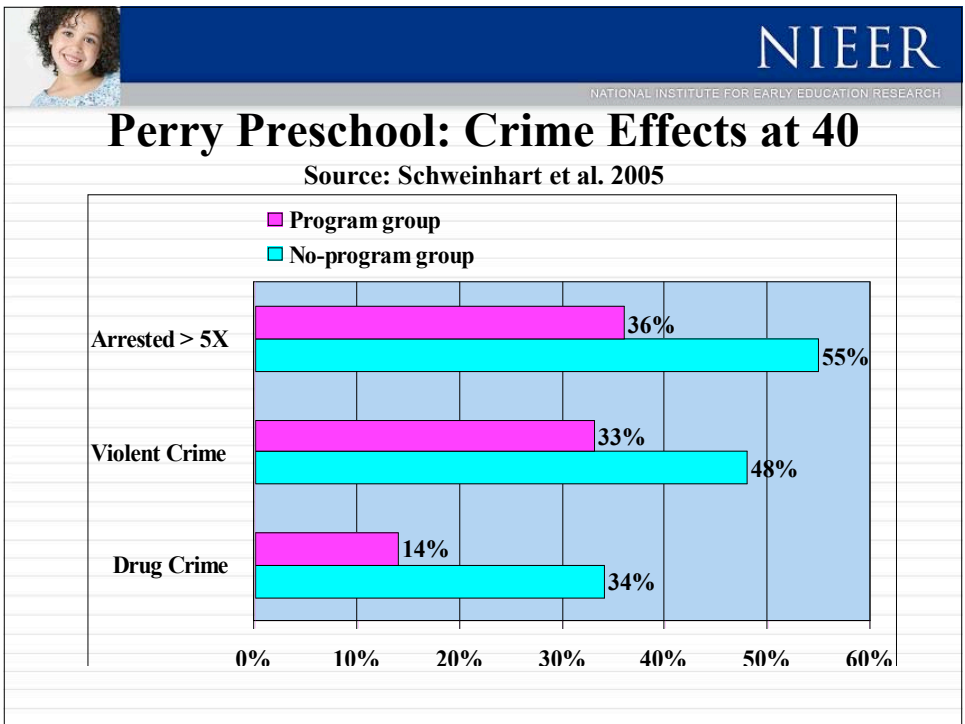
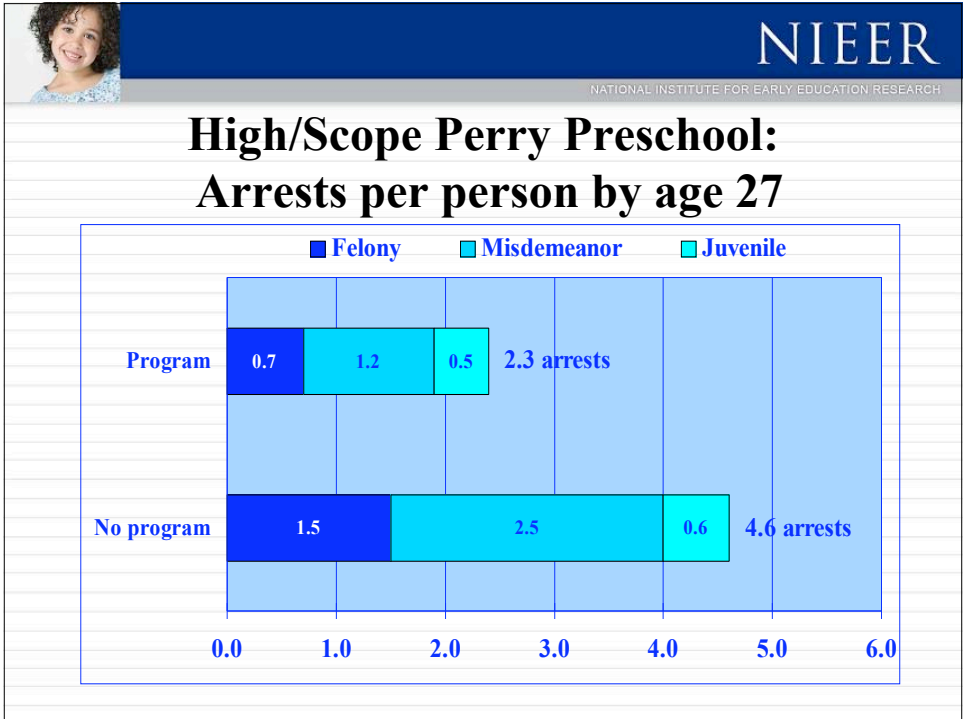


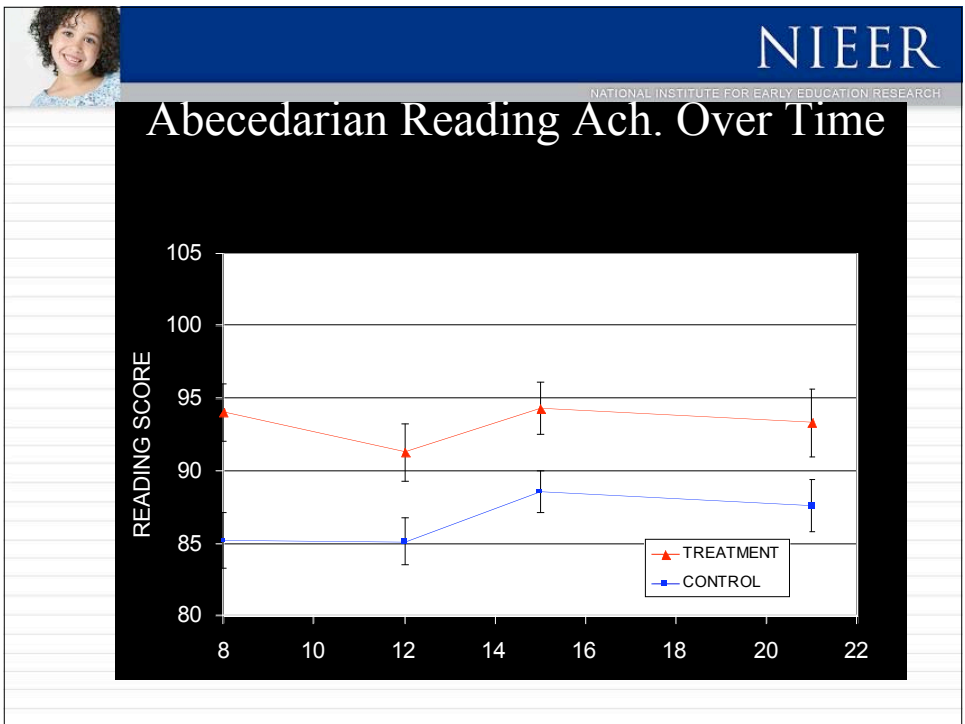
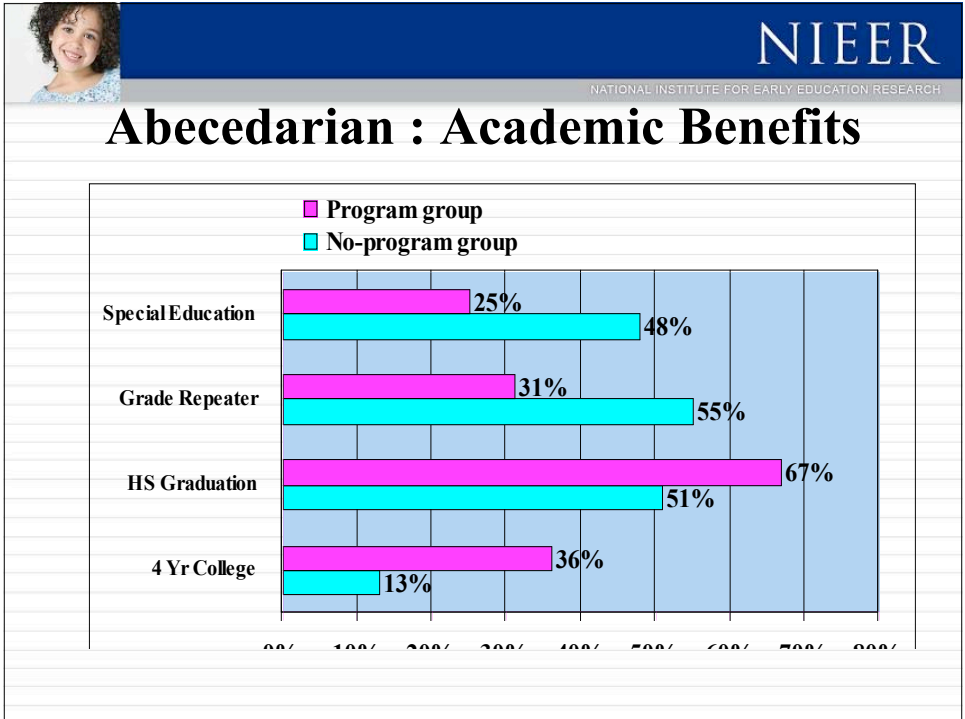
Three Benefit-Cost Analyses with Disadvantaged Children

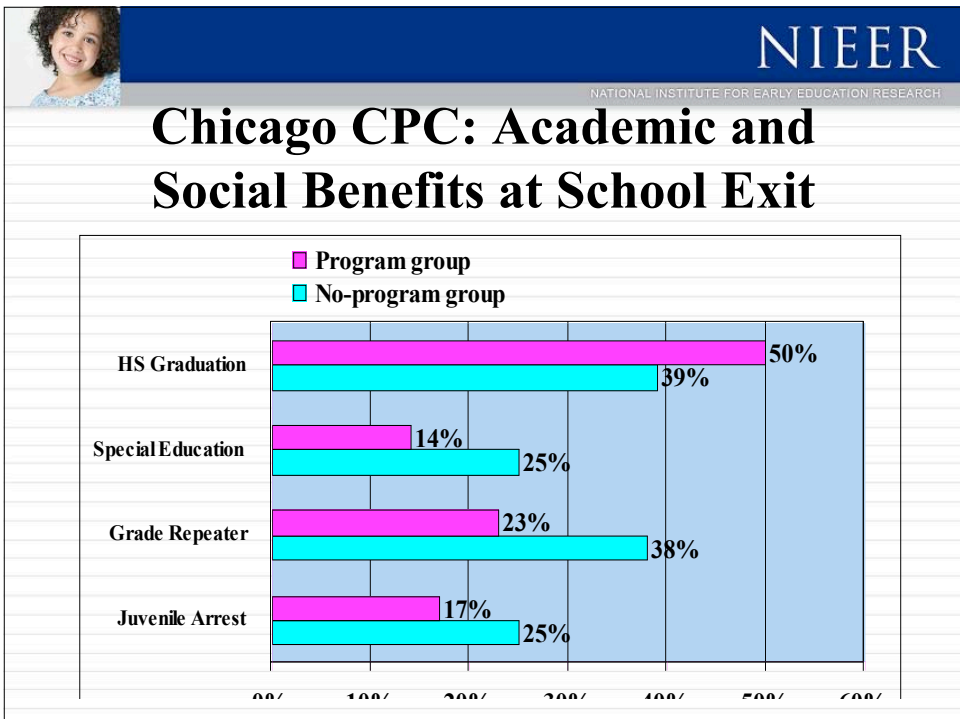
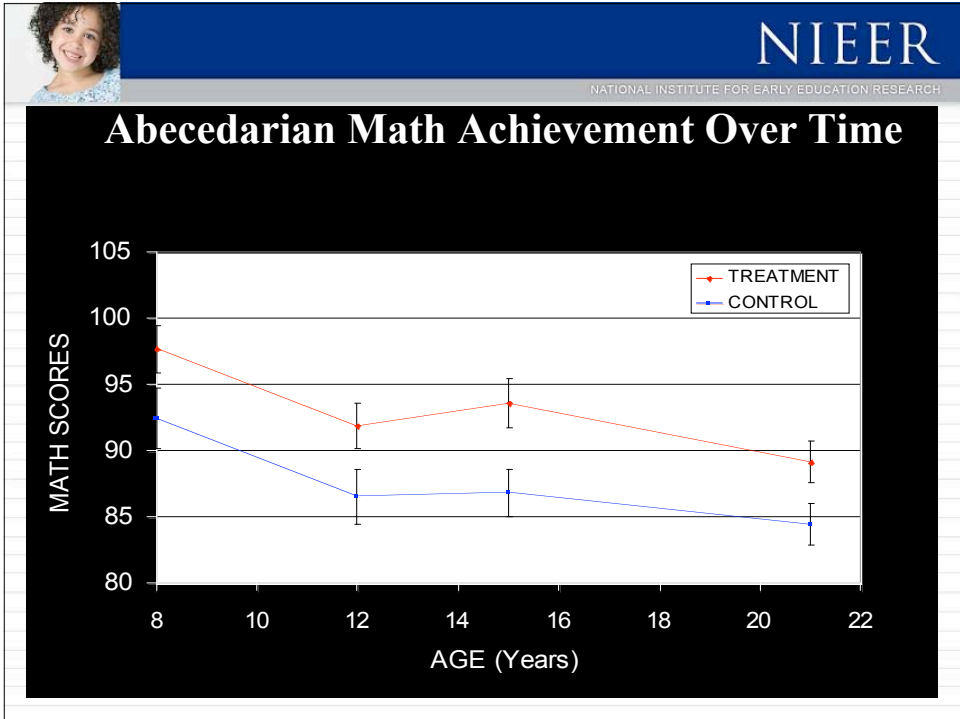
	Abecedarian	Chicago	High/Scope
Year began	1972	1985	1962
Location	Chapel Hill, NC	Chicago, IL	Ypsilanti, MI
Sample size	111	1,539	123
Design	RCT	Matched neighborhood	RCT
Ages	6 wks-age 5	Ages 3-4	Ages 3-4
Program schedule	Full-day, year round	Half-day, school year	Half-day, school year








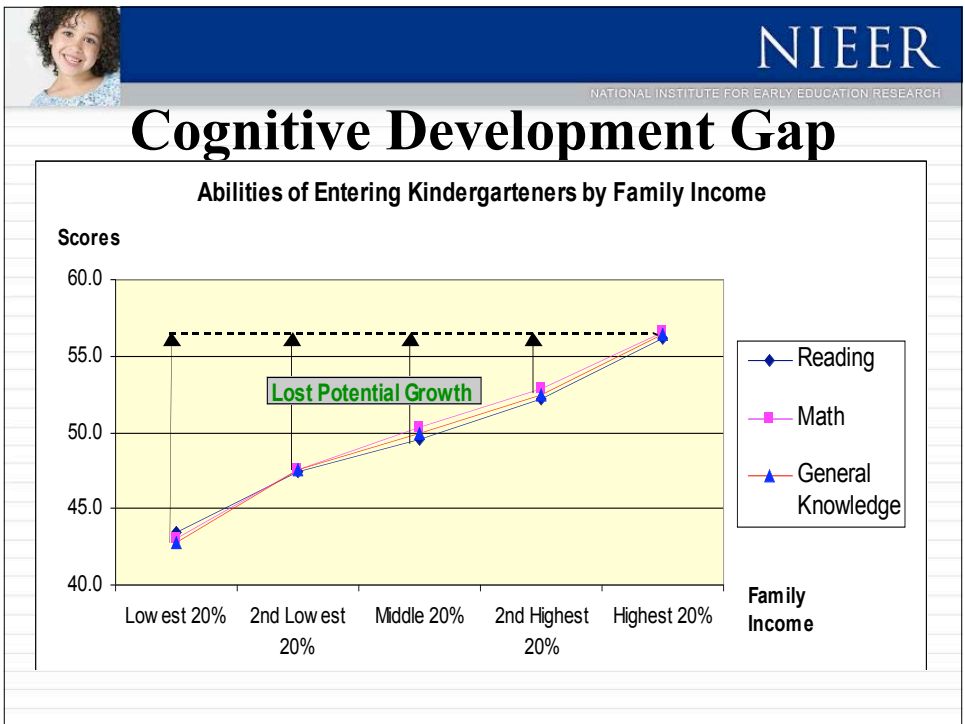


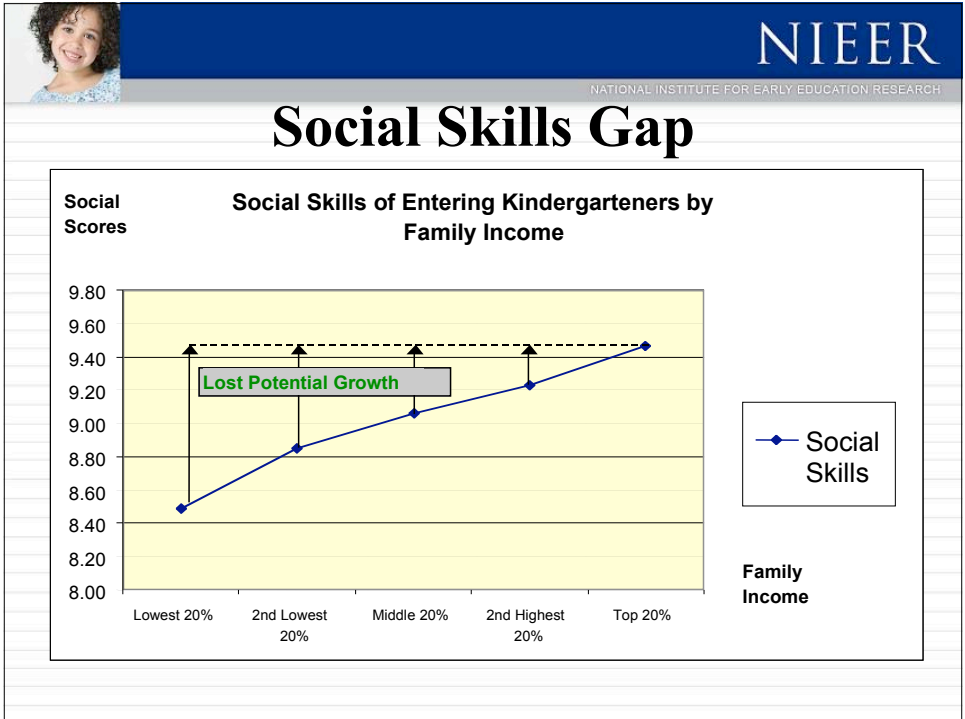




Economic Returns to Pre-K for Disadvantaged Children

	Cost	Benefits	B/C
▪ Perry Pre-K	\$16,264	\$277,631	17.07
▪ Abecedarian	\$36,929	\$139,571	3.78
▪ Chicago	\$ 7,417	\$ 52,936	7.14





School Failure and the Middle Class

Middle class children have fairly high rates of failure.
Reducing these problems could generate large benefits.

<u>Income</u>	<u>Retention</u>	<u>Dropout</u>
Lowest 20%	17%	23%
20-80%	12%	11%
Highest 20%	8%	3%

Source: US Department of Education, NCES (1997). Dropout rates in the United States: 1995. Figures are multi-year averages.



Effects of Today's Programs

- New rigorous studies
- Large scale public (Head Start & State)
- One year of quality public Pre-K at 4
- Effects of *policy* at entry to Kindergarten
- Universal and targeted programs
- Standardized tests
- Estimate effects by income and ethnicity



Oklahoma's Pre-K for All

- 3,028 children in Tulsa public schools
- Rigorous RD design
- Gains for all SES & ethnic groups
- Literacy and Math gains
 - Smaller than Perry and Abecedarian
 - Similar to CPC
- Larger gains for minority and poor children

Source: Gormley et al. (2004). CROCUS/Georgetown University



NIEER 6 State Pre-K Study

- Over 6,000 children in 6 States
- OK and WV are for all children
- NJ for all children in 31 districts
- AR, MI, & SC targeted
- Gains from Pre-K in all 6 states
- Gains in language, literacy & math
- All children gain, low-income gain more

Source: Barnett et al. (2005). NIEER/Rutgers University, plus new AR report.




State UPK Effects on Academics

	WV	OK	NJ
Vocabulary	.19	.30	.30
Print Awareness	.95	.60	.46
Math	.38	.10	.18

- Effects in standard deviations (sd). The difference between poor and median income is about .50 sd

Source: Barnett et al. (2005). NIEER/Rutgers University




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Oklahoma 4th Grade NAEP Scores Before and After Pre-K for All

YEAR	White	Black	Hisp.	Indian
2002 Reading	220	188	197	209
2003 Reading	220	195	200	206
2005 Reading	219	196	204	211
2000 Math	229	205	207	221
2003 Math	235	211	220	225
2005 Math	240	217	226	220

Reading gains are not statistically significant; math gains are statistically significant for Whites and Hispanics (2000-05).

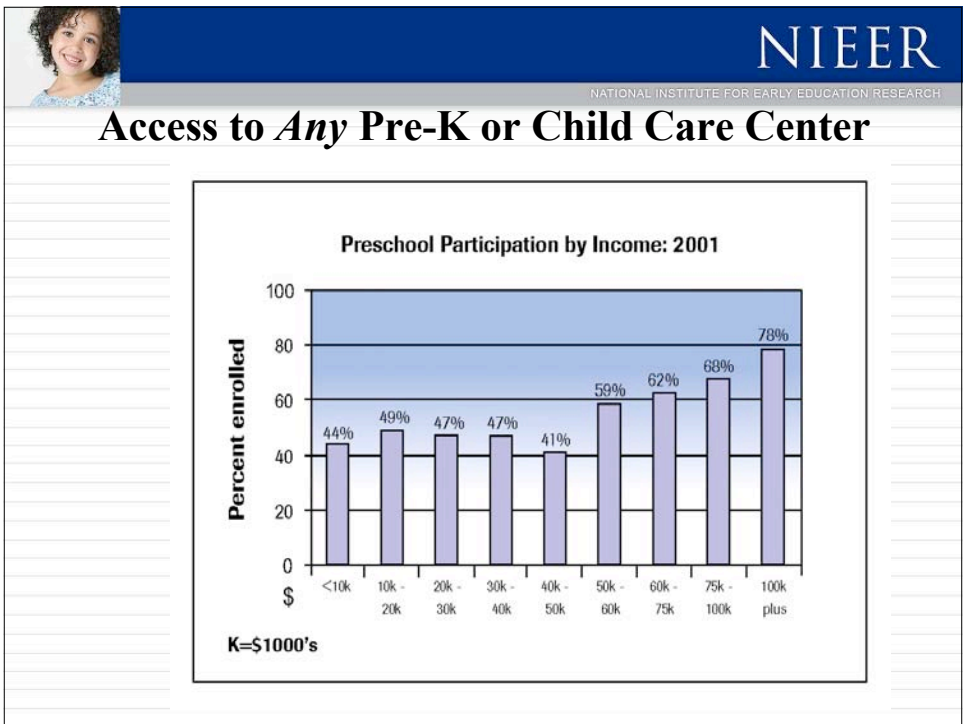
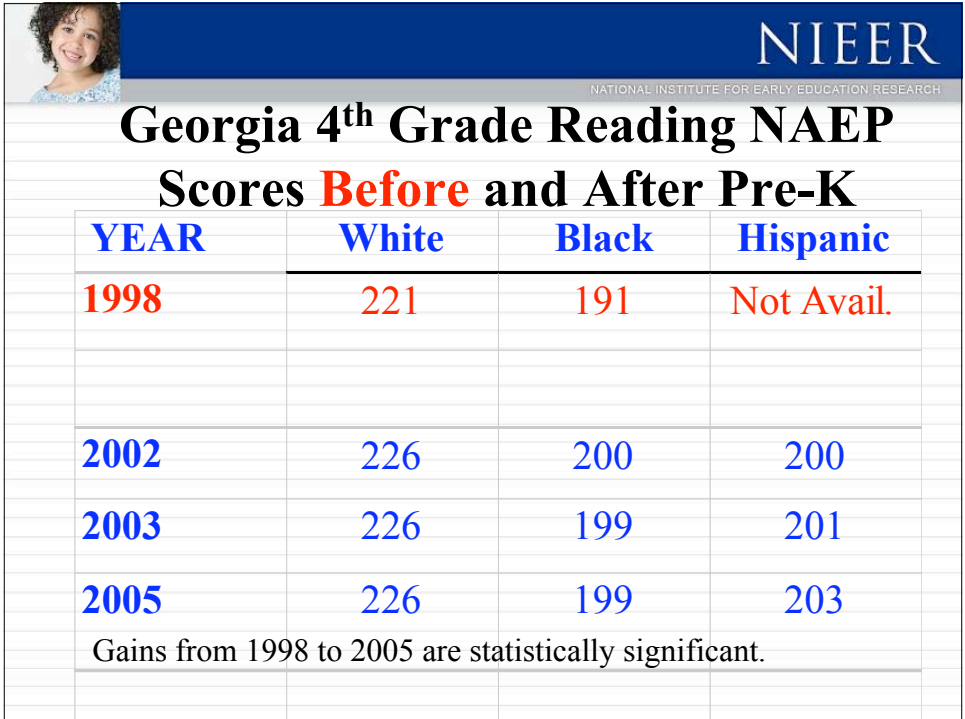


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Georgia 4th Grade Math NAEP Scores Before and After Pre-K

YEAR	White	Black	Hispanic
1996	224	201	205
2000	230	204	217
2003	241	217	219
2005	243	221	229

Gains from before to after UPK are statistically significant.





Is Targeting More Cost-Effective?

Targeting is costly and imperfect

- Poverty is a moving target
- Need is not defined by poverty alone
- Accurate identification is difficult

Benefits do not stop at the poverty line

- Middle class has similar problems
- Benefits decrease gradually with income



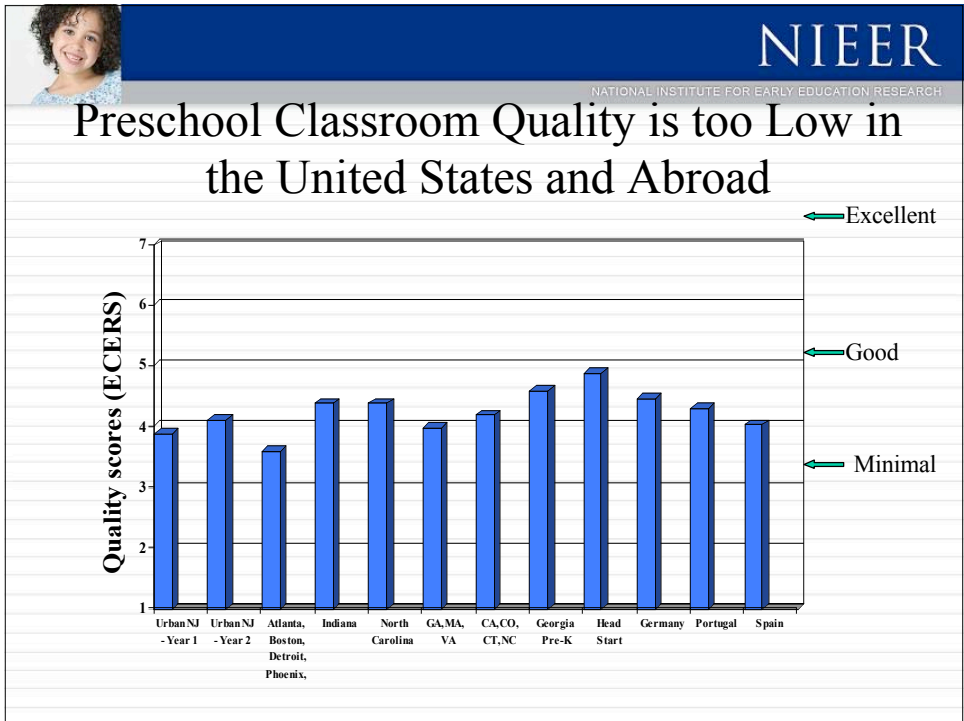
Comparing Targeted & Pre-K for All

Targeted Pre-K has Lower Cost

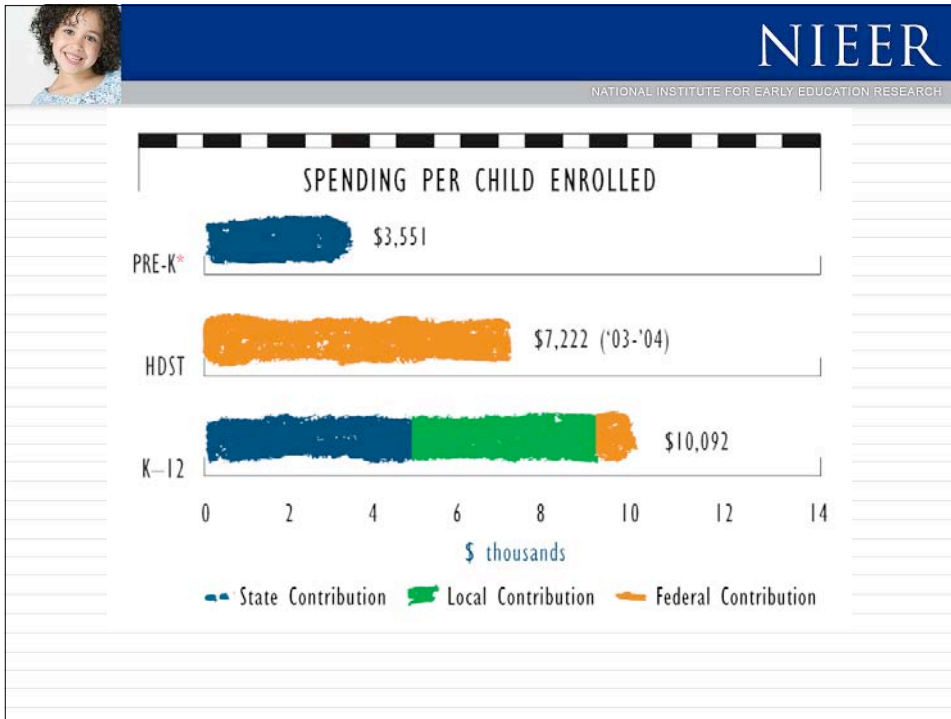
Pre-K for All Children:

- Reaches all disadvantaged children
- Produces larger gains for disadvantaged
- Produces good gains for children
- Yield larger *net* benefits

Source: Barnett (2004). Maximizing returns from pre-kindergarten education.
Federal Reserve Bank of Cleveland Research Conference.



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- ## Quality Standards Benchmarks
- Comprehensive early learning standards
 - Teacher has a BA
 - Teacher has specialized training in pre-K
 - Assistant teacher has a CDA
 - At least 15 hours/year of teacher in-service
 - Maximum class size 20 or lower
 - Staff-child ratio 1:10 or better
 - Vision, hearing, health screening/referral + family support
 - At least 1 meal/day provided
 - Site visits conducted



High Quality Preschool Programs Needed to Produce Benefits

- Well-educated, adequately paid teachers
- Good curriculum and professional development
- Small classes and reasonable teacher:child ratios
- Strong supervision, monitoring, and review
- High standards and accountability



Conclusions

- All children can benefit from good Pre-K
- High quality is needed for strong outcomes
- High standards and adequate resources
- Training and professional development
- Accountability and evaluation