



NIEER

NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH

Linking ECD to the Schools: An Investment in the Nation's Future

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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
- Smoking, drug use, depression

Decreased Costs to Government

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



Caution: Science in Action





Meta-Analysis of Research Since 1960

IQ, Achievement and Language

.50 sd initial effect **.70---****.90 max**

.20 sd at ages 5-10 **.35---****.60 max**

.20 sd at age >10 **.30---****.45 max**

Higher quality studies es .27 sd larger

Social-Emotional & Behavior

.16 sd, no sig. decline over time

Schooling (grade repetition, spec. ed., grad.)

.15 sd, no sig. decline over time



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

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; 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; Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool study through age 40* (Monographs of the High/Scope Educational Research Foundation, 14). Ypsilanti, MI: High/Scope Educational Research Foundation.



Economic Returns to Pre-K for Disadvantaged Children

(In 2006 dollars, 3% discount rate)

	Cost	Benefits	B/C
▪ Perry Pre-K	\$17,599	\$284,086	16
▪ Abecedarian	\$70,697	\$176,284	2.5
▪ Chicago	\$ 8,224	\$ 83,511	10

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.



Why Pre-K for All ?

To reach all disadvantaged children

Larger gains for the disadvantaged

Most school failure is middle class

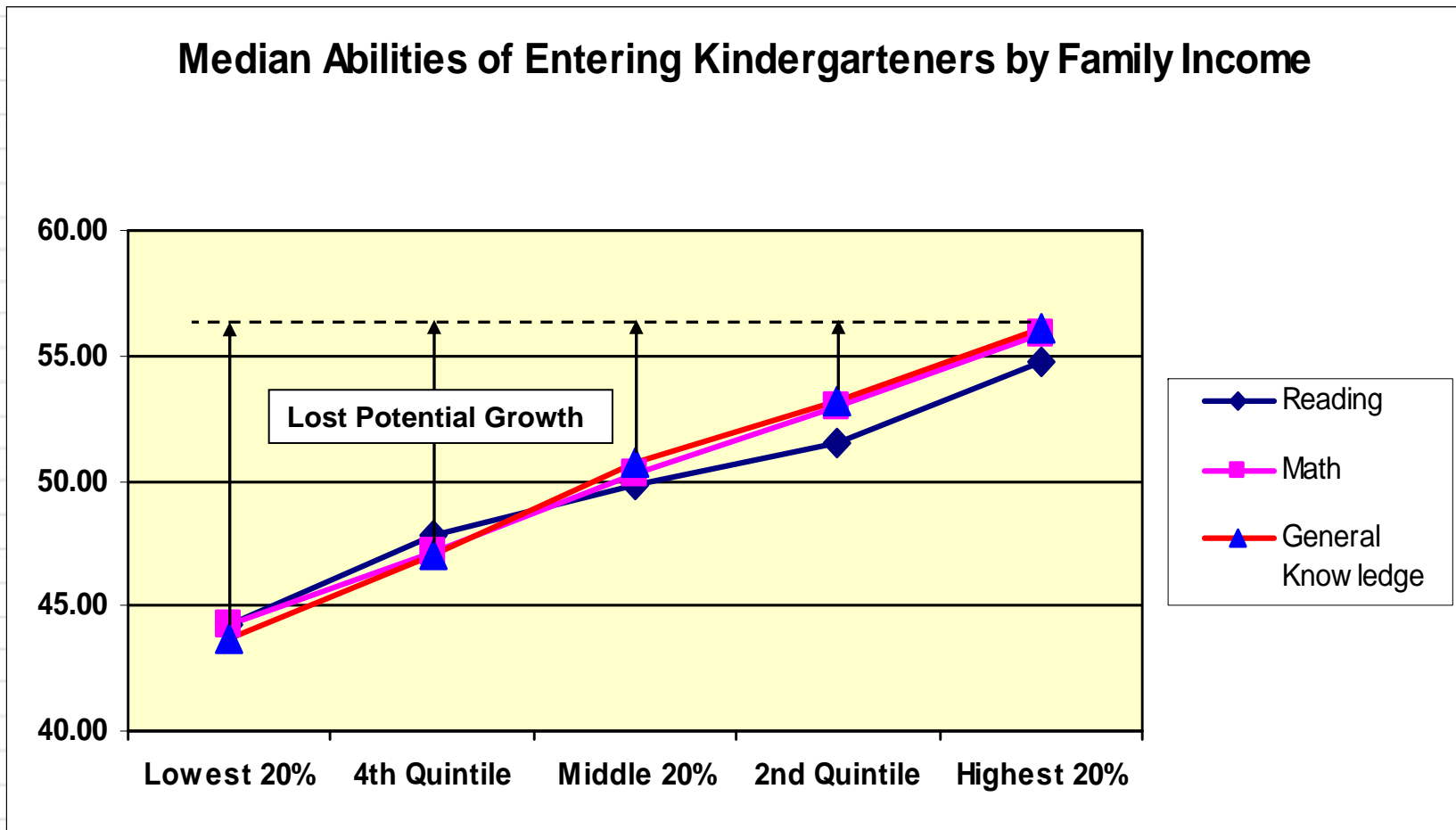
All children benefit

Higher cost, but larger *net* benefit

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

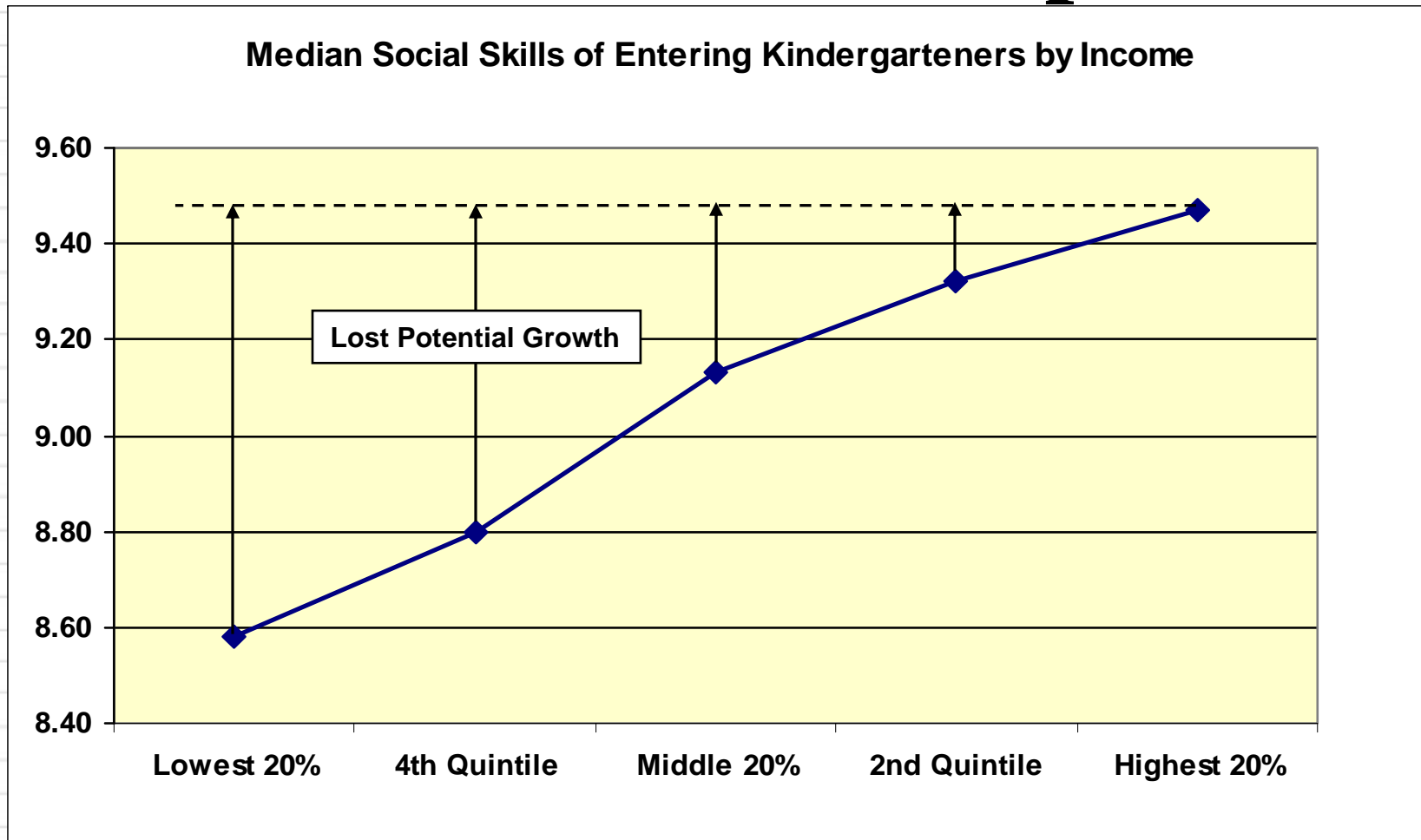


Cognitive Development Gap





Social Skills Gap



Barnett, W. S. (2007). Original analysis of data from the US Department of Education, National Center for Educational Statistics, ECLS-K Base Year Data files and Electronic Codebook (2002).



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 (2004)</u>	<u>Dropout (2005)</u>
Lowest 20%	12%	18%
20-80%	8%	9%
Highest 20%	4%	2%



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

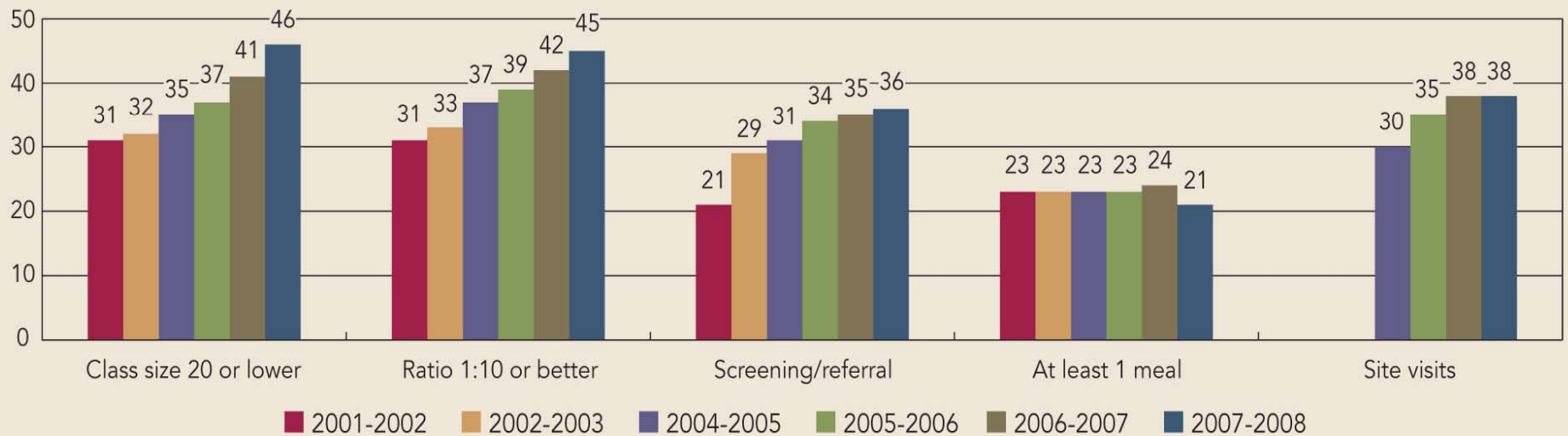
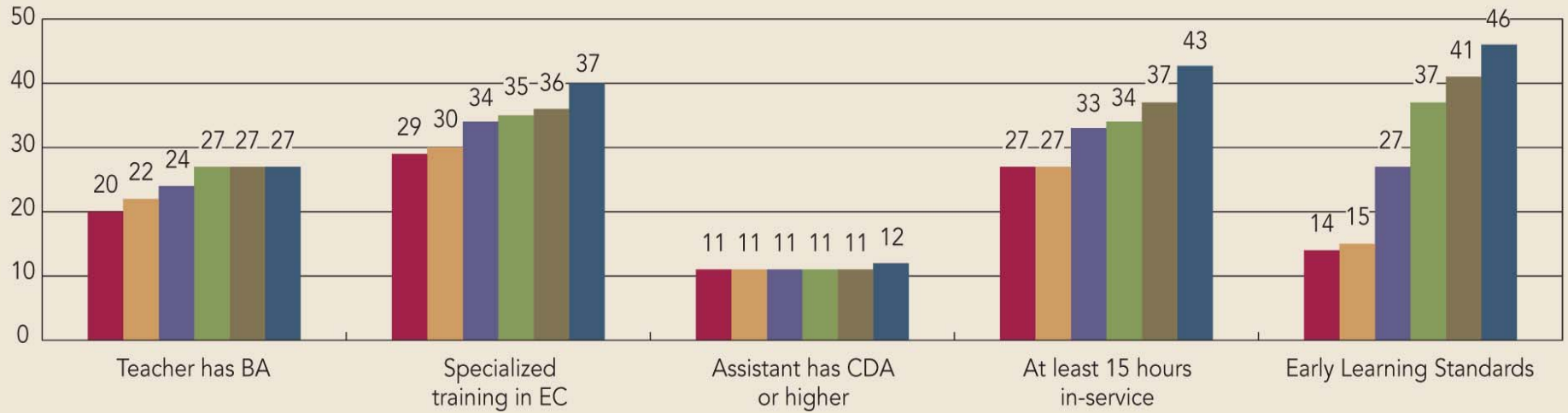


State Pre-K Yearbook: Using Data to Move ECD Policy

- Ranking Access (Enrollment)
- Rating Quality Standards
- Ranking Spending
- Raising the Media Profile
- Building Relationships w/ Policy Makers



Number of State Pre-K Programs Meeting Benchmarks 2002–2008



■ 2001-2002
 ■ 2002-2003
 ■ 2004-2005
 ■ 2005-2006
 ■ 2006-2007
 ■ 2007-2008

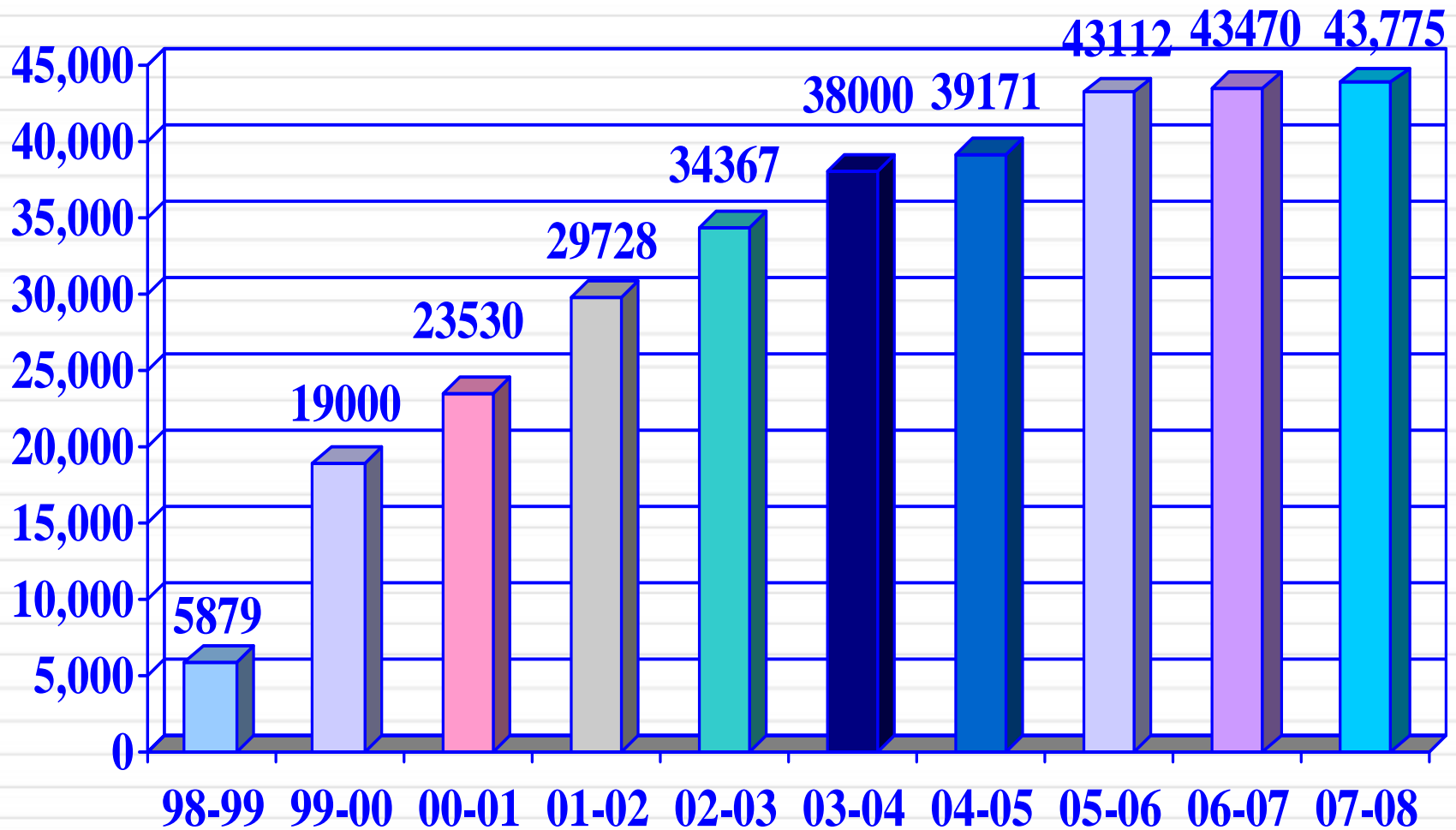


Critical Program Components

- A certified teacher and assistant in each class;
- Full-day (6 hour educational day), 180-day program, plus wrap-around care;
- Maximum class size of 15 students;
- Evidence-based curricula;
- Early learning standards and program guidelines;
- Support for potential learning difficulties; and
- Professional development for key staff.



Enrollment





NJ Pre-K Outcomes

- Gains in language, literacy, math
- 2 years have twice the effect of 1
- Effects sustained through 2nd grade
- Grade repetition cut in half by 2nd grade
 - Language 2yr ES = 40% 1yr ES = 22%
 - Math 2yr ES = 44% 1yr ES = 24%
 - Reading Comprehension improved



Percentage of Classrooms Scoring 1 - 7 on the ECERS-R 1999-2000 vs 2005-2006 in 19 districts

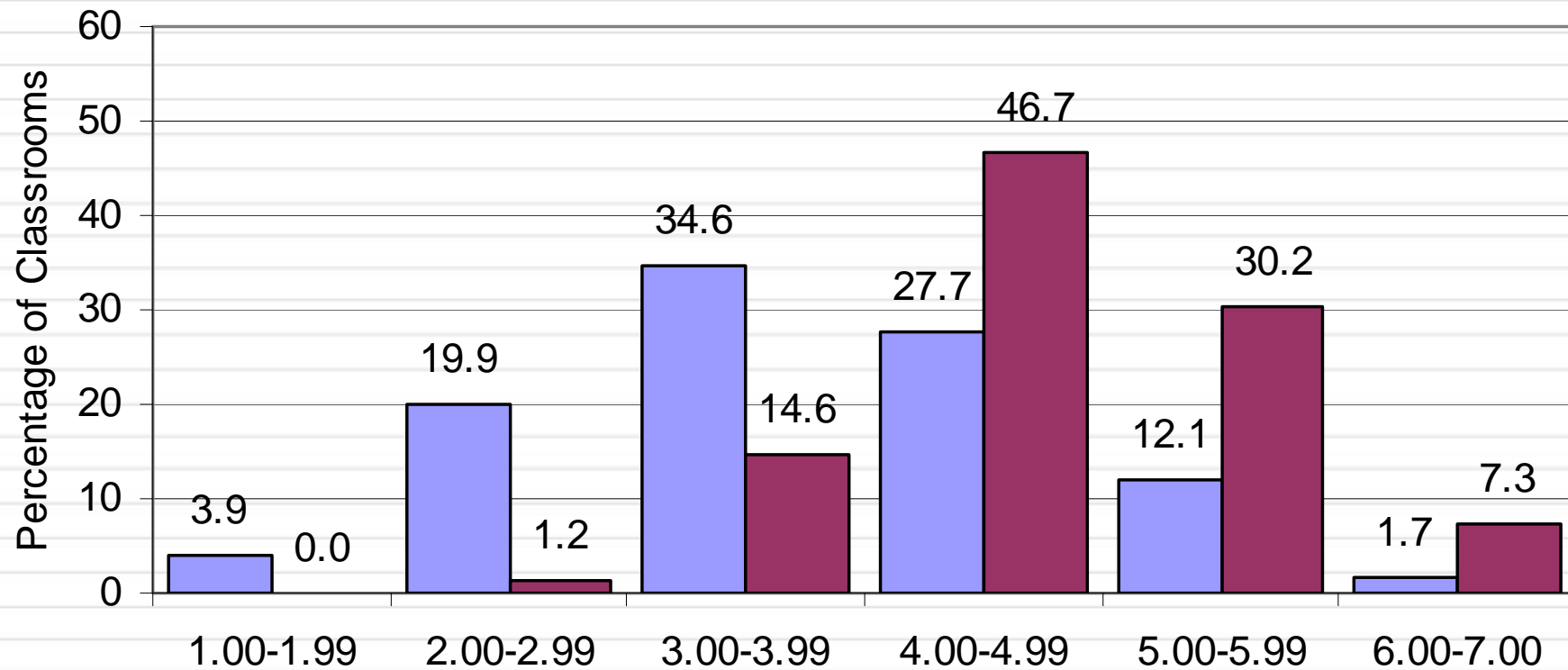
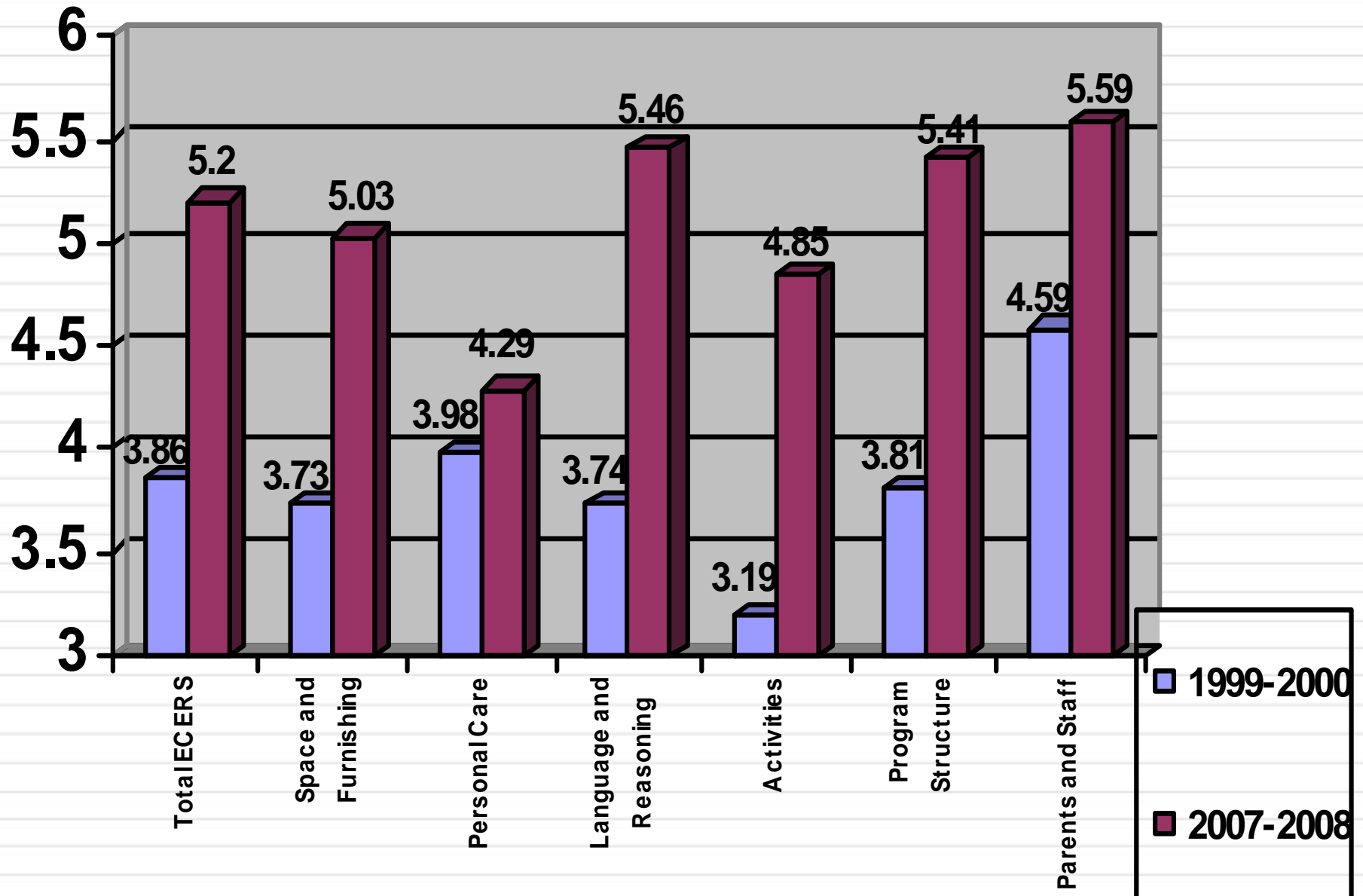


Figure 3. ECERS-R Score

■ 00 Total (N = 232) ■ 06 Total (N = 259)



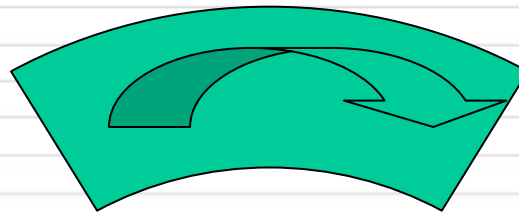


Continuous Improvement Cycle*

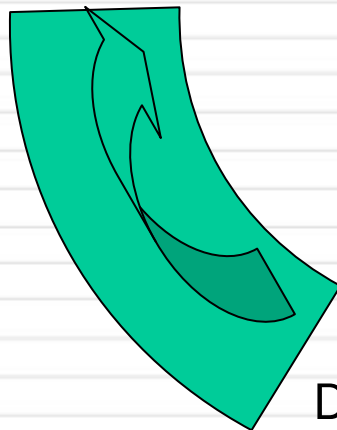
First Develop Standards



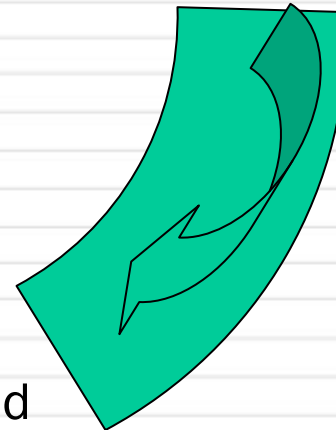
Measure and
Assess Progress



Analyze and Plan



Implement -
Professional
Development and
Technical
Assistance





Accountability Levels

- Child: teaching, program effectiveness
- Classroom: teaching, program effectiveness
- Program: program effectiveness and efficiency (\$)
- State: program effectiveness and efficiency



Statewide Monitoring Efforts

Standards

Accountability

Preschool Teaching & Learning Expectations	Early Learning Assessment System
Preschool Program Implementation Guidelines & State Regulations	Self Assessment & Validation System Limited Review Examination
NJ Supreme Court Objectives/Legislature	Early Learning Improvement Consortium & the NIEER APPLES Study



ISSUES TO CONSIDER

- Targeted vs universal
- Full funding vs incentive/seed money
- Oversight and monitoring – Who's in charge?
- Collaboration – at state level, at local level
- Going to scale – human resources, buildings, recruitment, standards, evaluation
- Sustainability – funding tied to stable source: court order, statute, not tied to individual politician
- Quality Matters!



Conclusions

- Pre-K *can* be a strong public investment
- All children can benefit
- High *quality* is important for gains
- A continuous improvement cycle must be implemented to develop and sustain quality
- Success is not cheap—but,
- Failure is far more expensive