

Meta-Analysis of Research Since 1960

IQ, Achievement and Language

.45 sd initial effect birth to 5

.16 sd at ages 5-10

.23 sd at age >10

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

Meta-Analysis of US Research Since 1960

N= 123 Intervention Studies

Effects on Cognitive Abilities (higher quality studies)

.69 sd initial effect (about .90 w/ more opt. program)

.35 sd at ages 5-10 (about .60 w/ more opt. program)

.28 sd at age >10 (about .45 w/ more opt. program)

Effect on Social-Emotional & Behavior

.16 sd no change over time, larger in higher quality

Significant Influences on Effect Size

Time of Follow-Up	Negative
Intentional Teaching	Positive
Individualization	Positive
Comprehensive Services	Negative

Impacts of ECD Investments

Educational Success and Economic Productivity

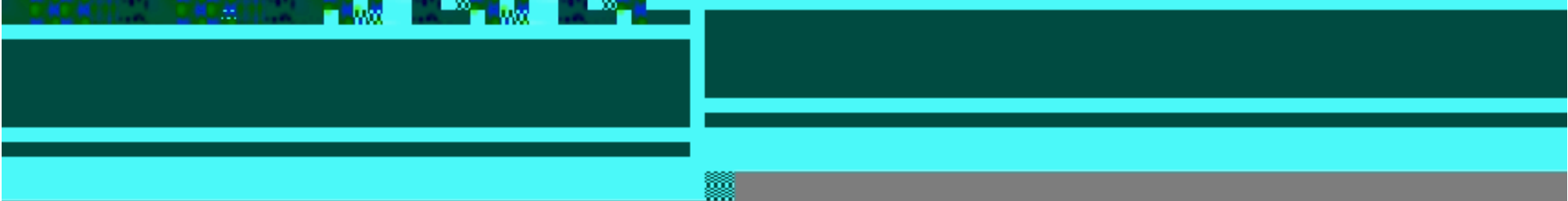
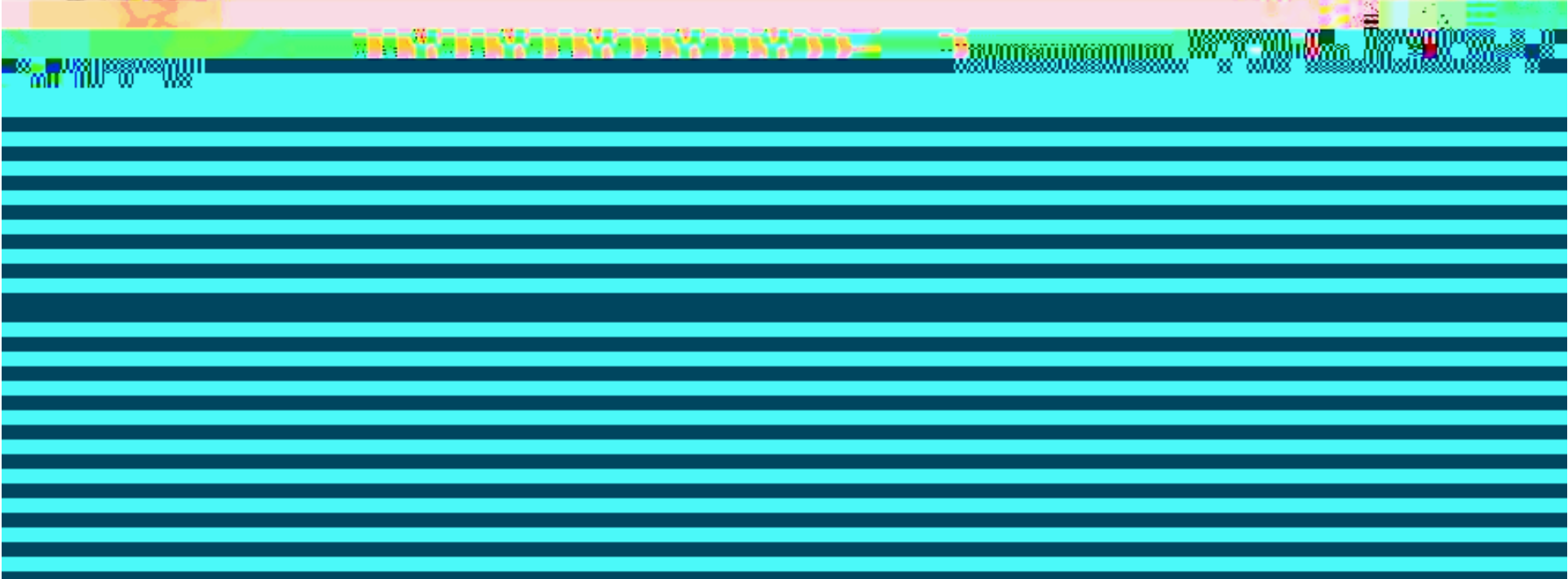
- Achievement test scores
- Special education and grade repetition
- High school graduation
- Behavior problems, delinquency, and crime
- Employment, earnings, and welfare dependency
- Smoking, drug use, depression

Decreased Costs to Government

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



NEED



Chicago Child Parent Centers

- High standards similar to “good” State Pre-K
- Immediate impacts at K:
 - General Cog. ES = .63 1 yr, .87 2 yr
 - Math ES = .33 1 yr, .56 2 yr
 - Reading Rd. ES = .20 1 yr, .48 2 yr
- Effects in 2nd grade:
 - Math ES = .30 1 yr, .40 2 yr
 - Reading ES = .22 1 yr, .46 2 yr
 - Grade repetition = -5.8% 1 yr, -10.7% 2 yr
 - Effects in grade 2 similar to NJ which has similar program.

Tulsa Public Schools and Head Start v. National Head Start

	<u>TPS</u>	<u>THS</u>	<u>NHS (adj.)</u>
Math	.36	.37	.12 (<.18)
Letter-Word	.99	.51	.22 (.34)
Spelling	.74	.33	.16 (.22)

Effects in standard deviation units for comparison across studies.

Tulsa Public Schools (TPS) has largest effects. Tulsa Head Start (THS) which uses public school teachers has larger effects than Head Start nationally (NHS). Even adjusting for problems with the national Head Start study (in parentheses) effects are still smaller in regular Head Start than with public school teachers.

Birth to 3 Programs

- Early Head Start produced very modest gains for infants and toddlers despite spending considerable \$
- Gains did not last to K and no effects at Grade 5
- Nurse Family Partnership produced small gains
- NFP gains appear to be lasting but only for high need subgroups
- There is much uncertainty about best policy and practice birth to three.

What is Needed for Effective Pre-K

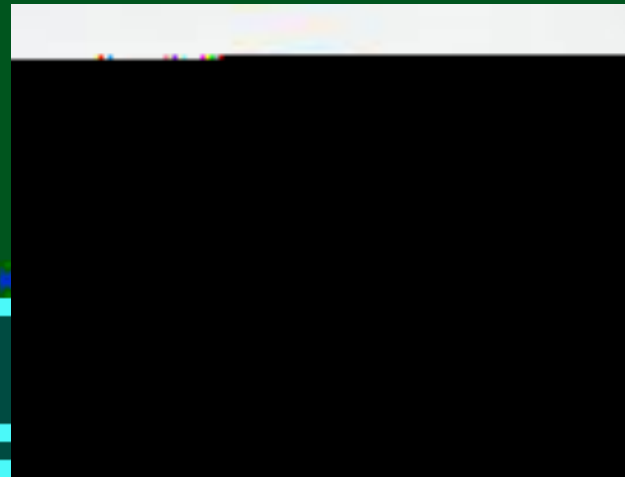
- Well-designed program with clear goals and standards
- Balanced practices & curriculum (not just academic)
- Implemented as designed
- Strong teachers, adequately trained and paid
- Strong supervision and monitoring
- Connections to the public schools and articulation with K-3. Reform in kindergarten and beyond may be needed as children enter better prepared.

Explicit Instruction

Teacher-planned activities and interactions designed to teach information and develop skills.

Comes in different varieties.

Explicit Instruction



Contrasting Explicit Instruction

Mrs. Blanco's class went on a field trip to the pet store down the street where, much to the children's fascination and the adults' dismay, the owner fed the snakes live mice.

Back at the classroom some children are looking at the page in Amazing Snakes on boa constrictors. They ask Mrs. Blanco what the snake is called.

“That's a boa constrictor. ‘Constrictor’, that's an interesting word. Constrict means to squeeze or tighten. Does your mommy or daddy ever say, ‘You're squeezing me too tight,’ when you give them a really big hug? When you squeeze too tight like that you are being a constrictor.”

She points out how the snake in the picture is squeezing its prey – “the animal it will eat.”

The Teacher's Role in Play

- Managing and supporting children's activities

VS

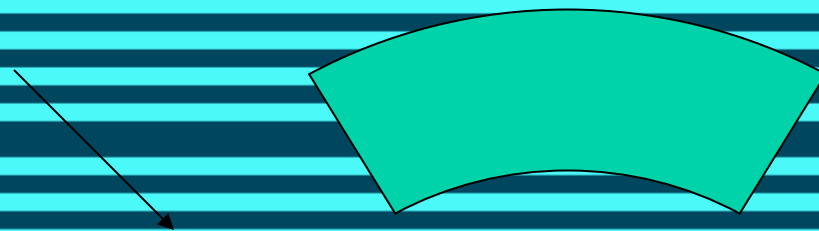
- Scaffolding thinking processes, problem-solving and implementing the standards
- Scaffolding the sophistication of children's socio-dramatic play
- Scaffolding social problem-solving

New Jersey's Urban Pre-K Program

- Teacher with BA & ECE + asst. in each class;
- Full-day (6 hour educational day), 180-day program, plus extended day/full year;
- Access to all 3 and 4 yr. olds in 31 school systems
- 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.

NJ

- 2/3 Private—non-profit, for-profit
- Districts contract with private providers
- All must provide “critical core”
- Providers receive support from districts
- Districts provide coaching and support
- Districts (and state) must assure quality



Navigation icons: back, forward, search, and other controls.

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Footer area with a small logo and text.

Accountability Levels

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



NIJED

Statewide Continuous



NJ Classrooms Change in Literacy Quality Scores

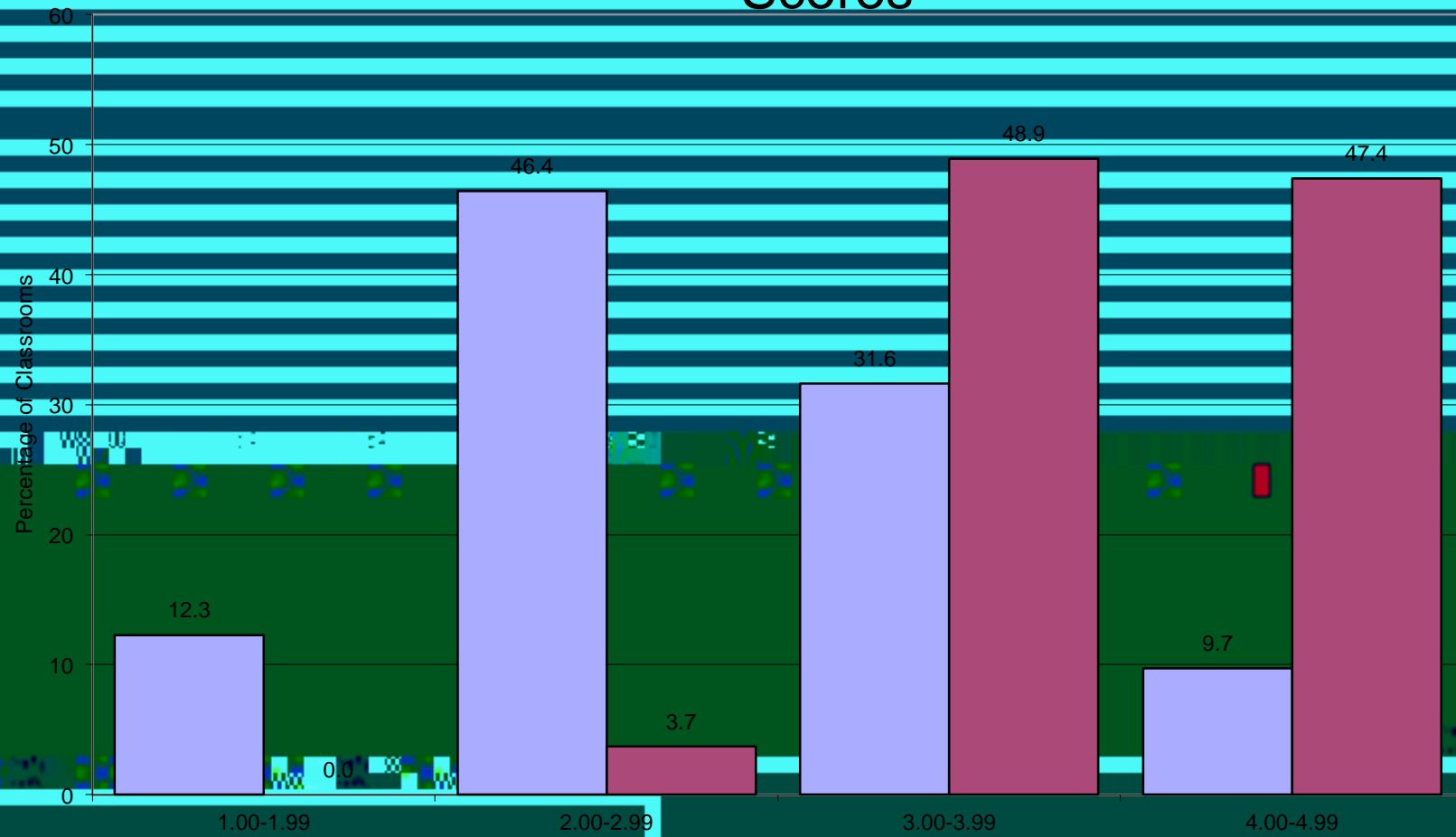
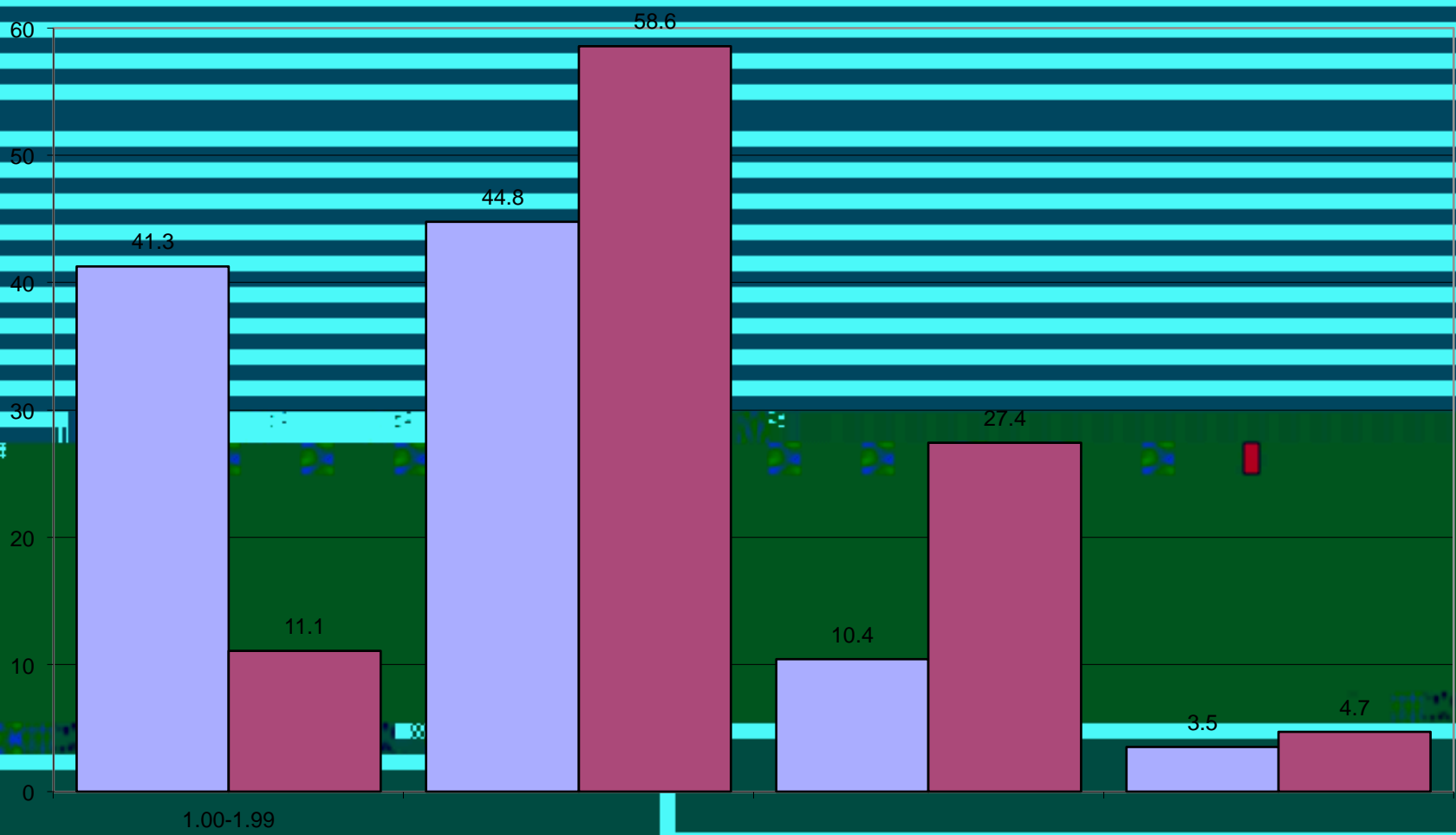
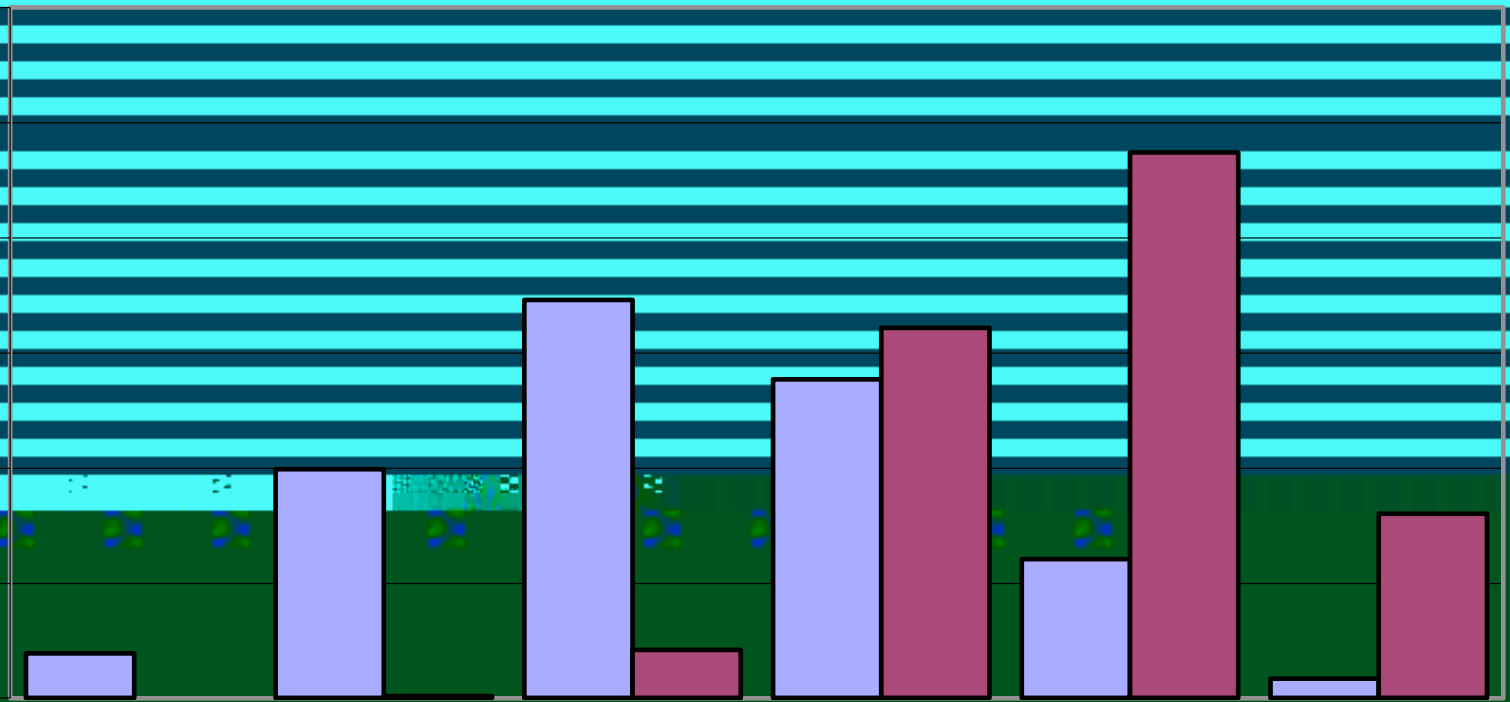


Figure 1. SELA Score

■ 02-03 Total (N = 310) ■ 08-09 Total (N = 405)



1.00-1.99

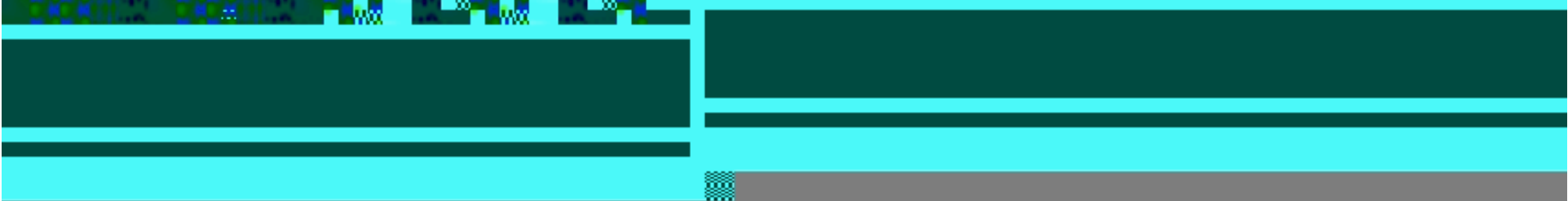
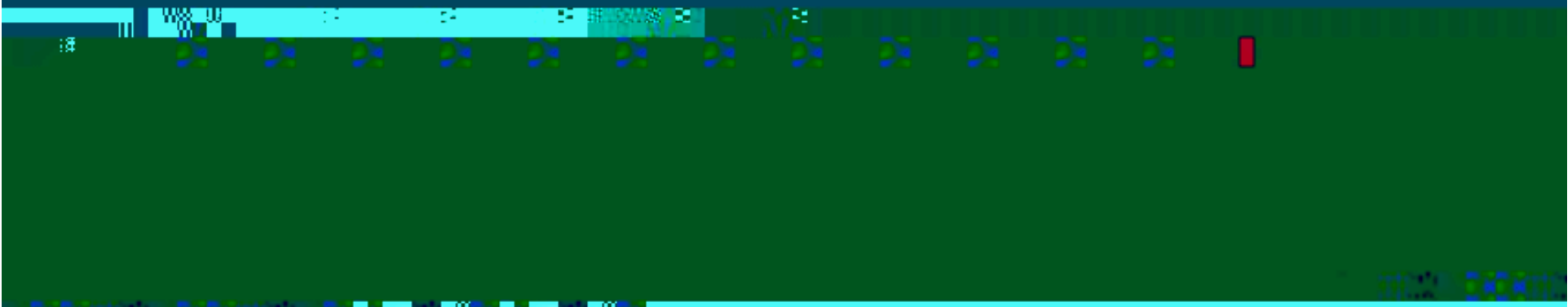


1. The first series (blue bars) shows values of 10, 35, 55, 45, and 25 across the five categories. The second series (red bars) shows values of 0, 0, 15, 50, and 75. The total value for the first series is 135, and for the second series is 140.

2. The second series (red bars) shows values of 0, 0, 15, 50, and 75 across the five categories. The total value for the second series is 140.



NEED



Conclusions

- Preschool programs can have a substantial long-term impact.
- Effects from large scale programs are sometimes too small.
- Replicating successful approaches and emphasizing what works is important.
- A continuous improvement process can increase quality and effectiveness.
- Much remains to be learned, and we likely know more about 3-5 than birth to 3.
- Every year matters—earlier is better—but to make it matter we need better plans and to ensure that our plans are well-implemented.