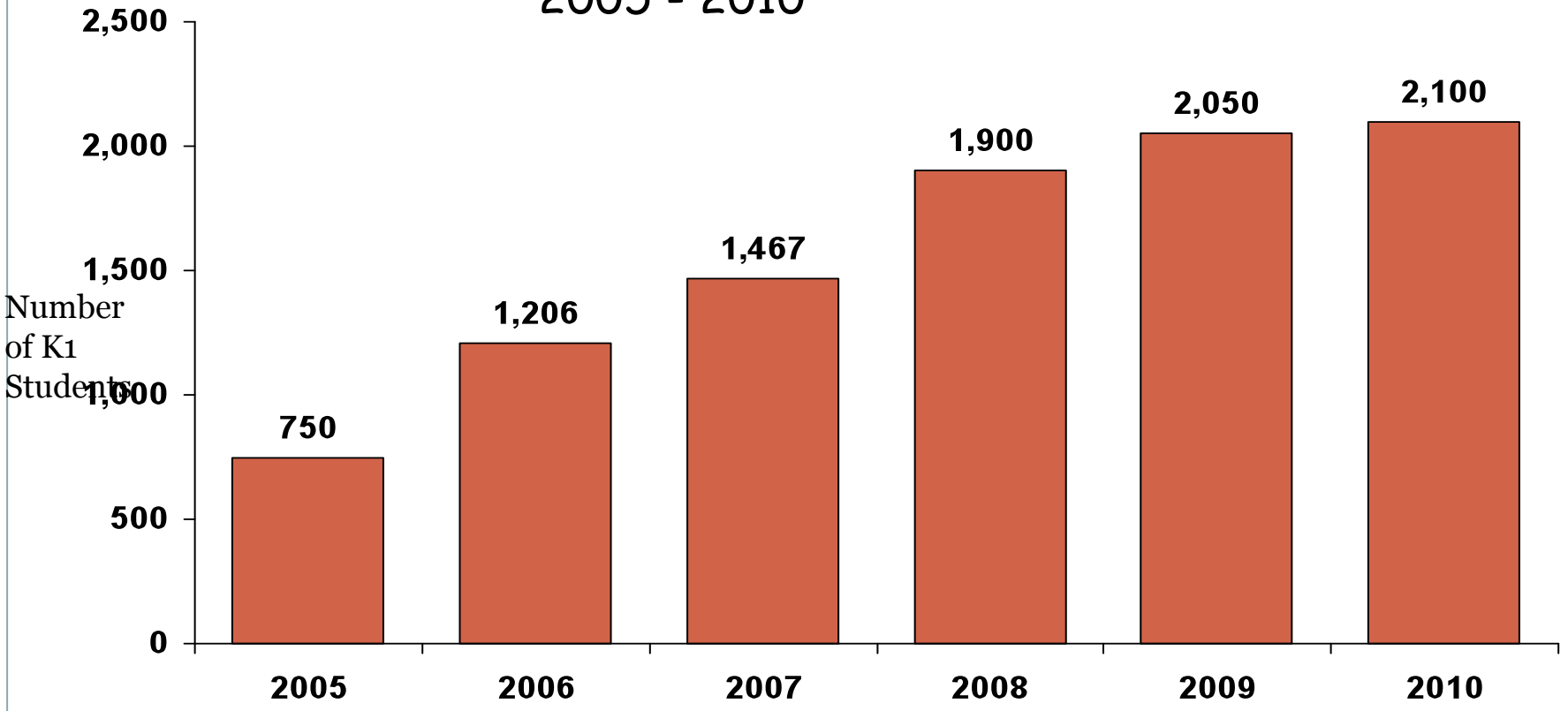
Using Data in Real Time for Real Decisions

BOSTON PUBLIC SCHOOLS

The Investment: K1 Expansion

FOCUS On Children
Boston Public Schools

Number of BPS K1 Students, 2005 - 2010



Number of K1 Classrooms	38	60	78	101	108	110

Boston Public Schools Early Childhood Programs: Data Examples

- Choose a curriculum
- Choose quality enhancements
- Evaluate quality/outcomes
- Push instruction
- Prove that it is worth the investment

Curriculum context in 2005

- Early Reading First grant both in Boston and in Springfield. PALS data indicated that growth was significant for all groups especially ELL for 24 classrooms in six schools.
- Building Blocks also was being tested out. Pilot data says works even enhancing vocab. Beyond first grade.
- From this we decided to mandate a PreK curriculum. BPS and my staff not used to mandate curriculum

Quality Evaluation

- DOE Cost and Quality Study “measure quality first”
- 2006: ECERS, CLASS, SELA
  - Boston Globe
- 2008: ECERS, CLASS, ELLCO & PPVT, and
- 2010 ECERS, CLASS, ELLCO, PPVT,
- 2010 Fidelity study and RDD” Math, Executive Functioning, Self Regulation, etc.

2006 Results

- 30% of our programs are at the level they need to be to close the achievement gap
- We are doing well in tone and interactions
- We need to improve in conceptual development, coverage, safety and sanitary practices
- Families want out of school time options
- Kindergarten lower quality

- The findings and recommendations of the study guide all of our work of the new department

1. Curriculum

Study Findings

- 70% of the classrooms do not meet the good benchmark but this is do in part to the amount of **time children are spending on task** and not necessarily the absence of materials.
- No difference between K1 and K2 classrooms and no difference between EEC and ELC and Neighborhood classrooms
- Classes with presence and use of paraprofessional were more likely to meet the good benchmark of quality

Story Behind the Findings

- Do not have a strong uniform curriculum for K1 and K2
- Bilingual and Unified have not done a lot of work in early education
- Teachers are not trained in current early childhood practice
- Coaching support is minimal
- Principals do not know how to monitor quality
- Resources not evenly distributed between K1 and K2

Curricula used	K1	K2
Harcourt Trophies	20%	27%
OWL	60%	4%
Readers and Writers	8%	83%
Building Blocks	40%	2%
TERC	12%	88%
Self Developed	20%	17%
Other	--	13%

1. Curriculum

Short Term Solutions

- Support the mandate of K1 curriculum (OWL) and/or accreditation
- Identify and create K2 curriculum
- Create PD at all levels
  -Paraprofessionals
  -Teachers
  - Principals
- Bring in outside resources

Long Term Solutions

- K0-3rd grade curriculum alignment

Decisions/Help Needed

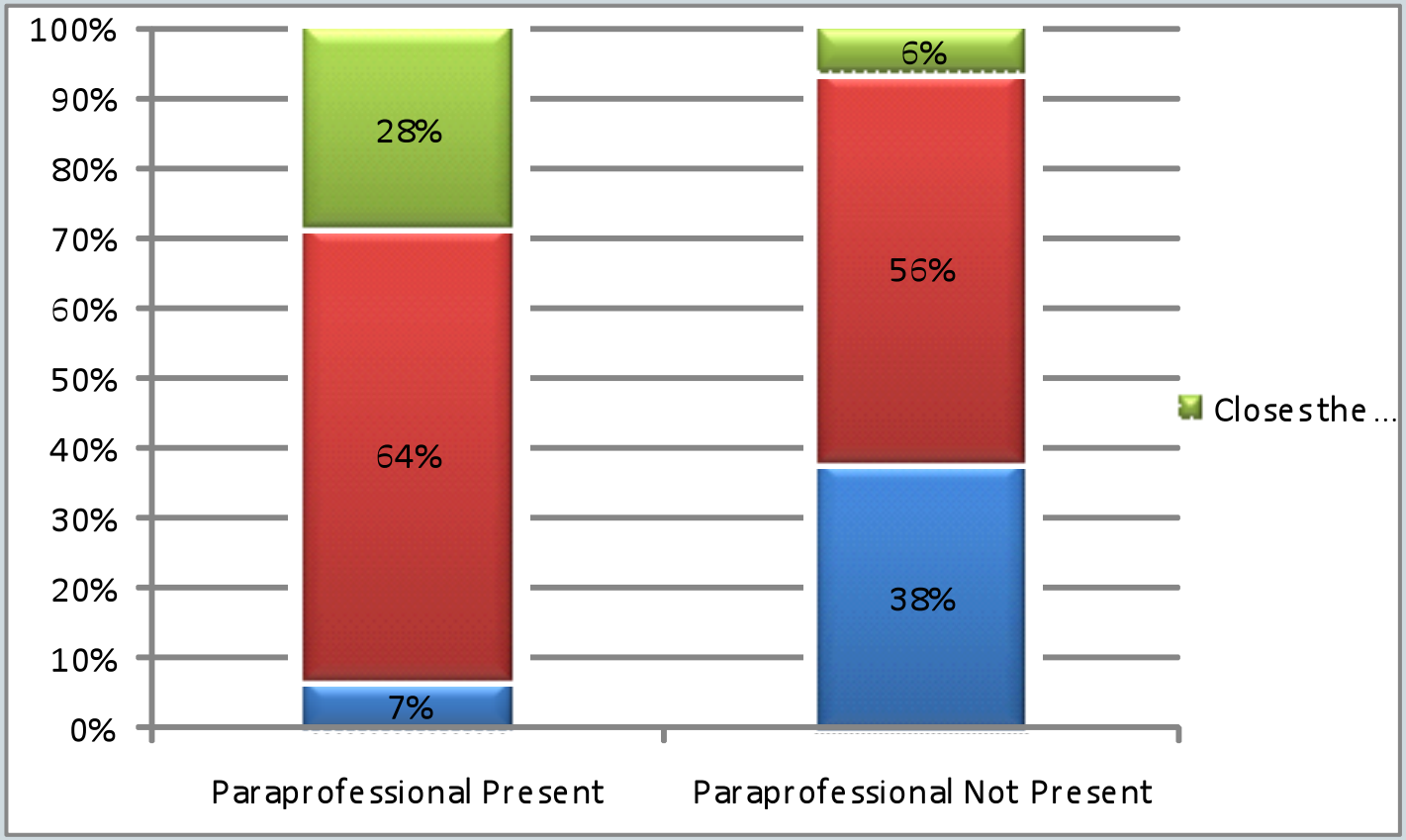
- Can I create a K2 curriculum?
- How do we best implement a policy handbook – the "essentials"?
- Need help with Reading First Grant
- How do I get to principals to show them data and offer them PD?

2008 Findings

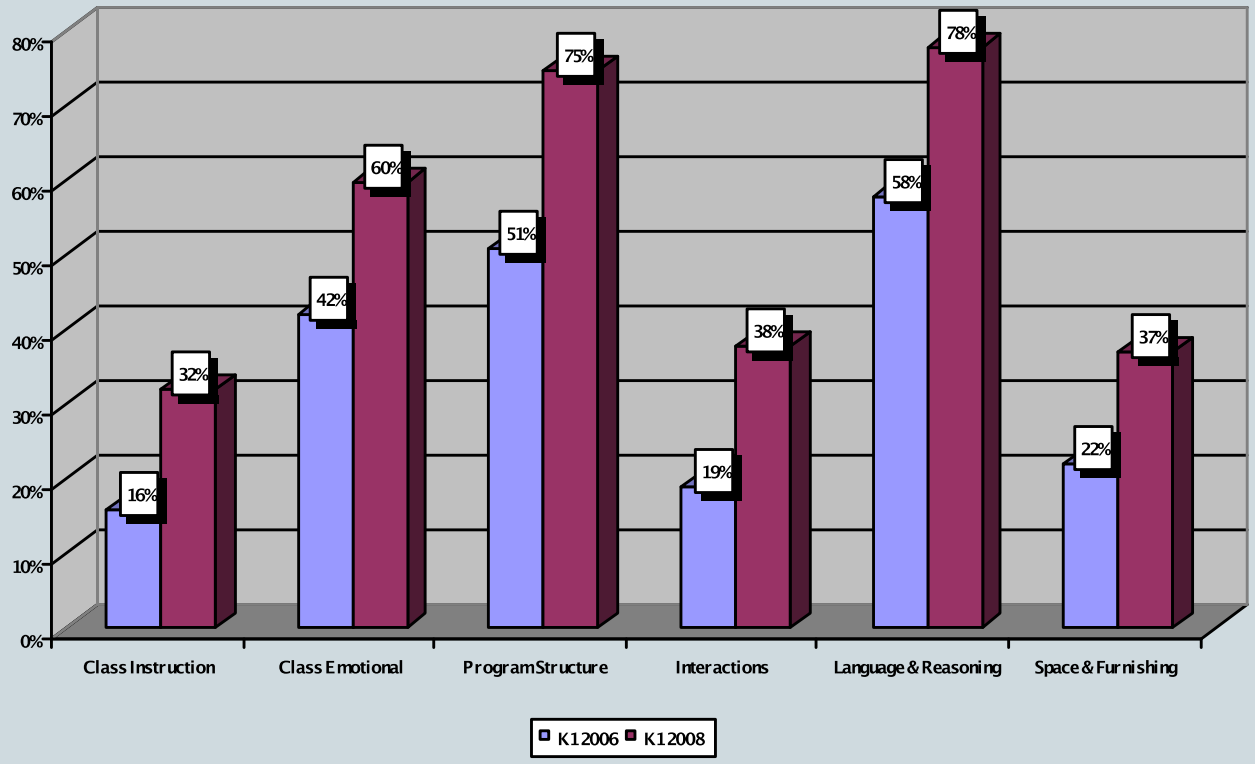
- Quality measures
- Comparison of NAEYC versus no NAEYC
- Study of coaching and PD
- PPVT measures

- K1s quality making gains
- K2 quality still lag behind

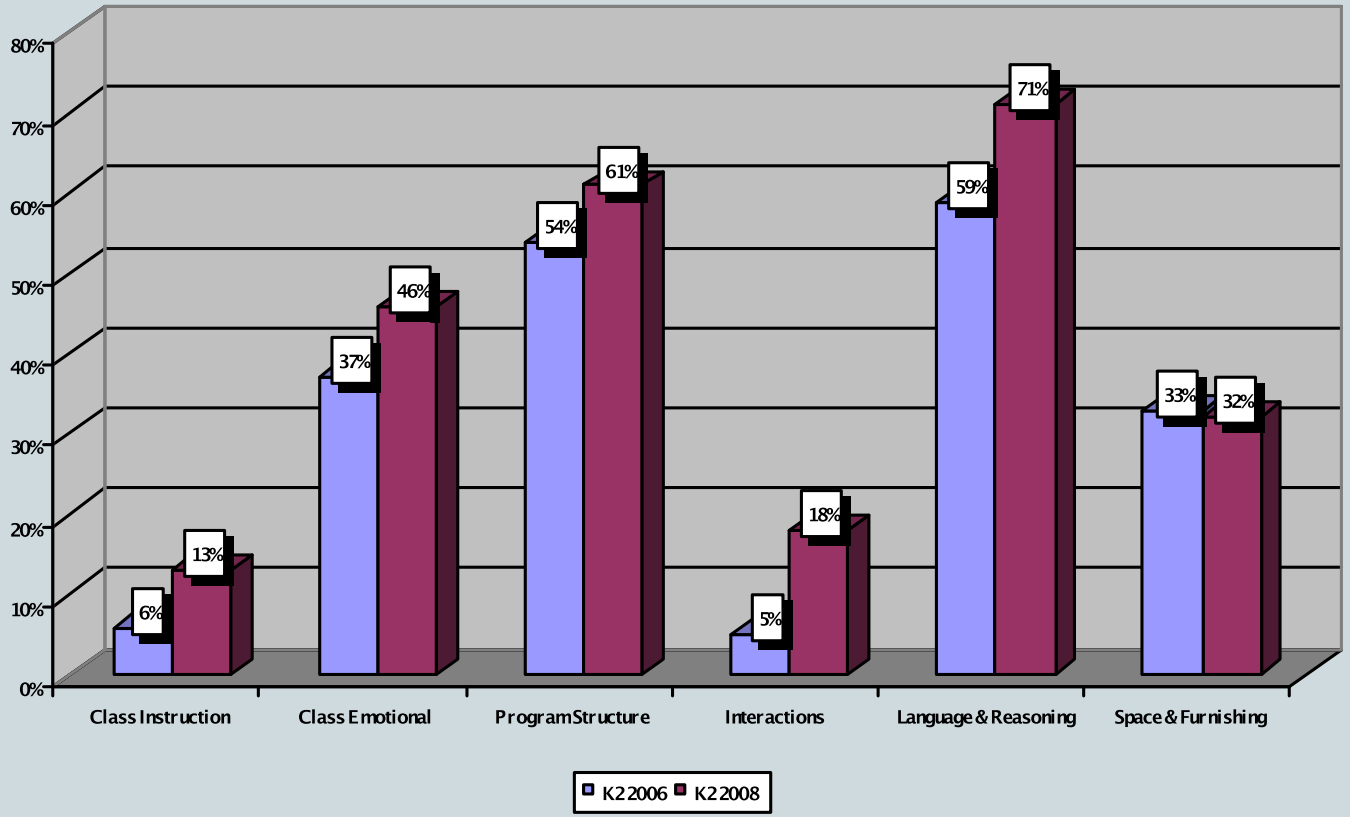
Importance of Paraprofessionals



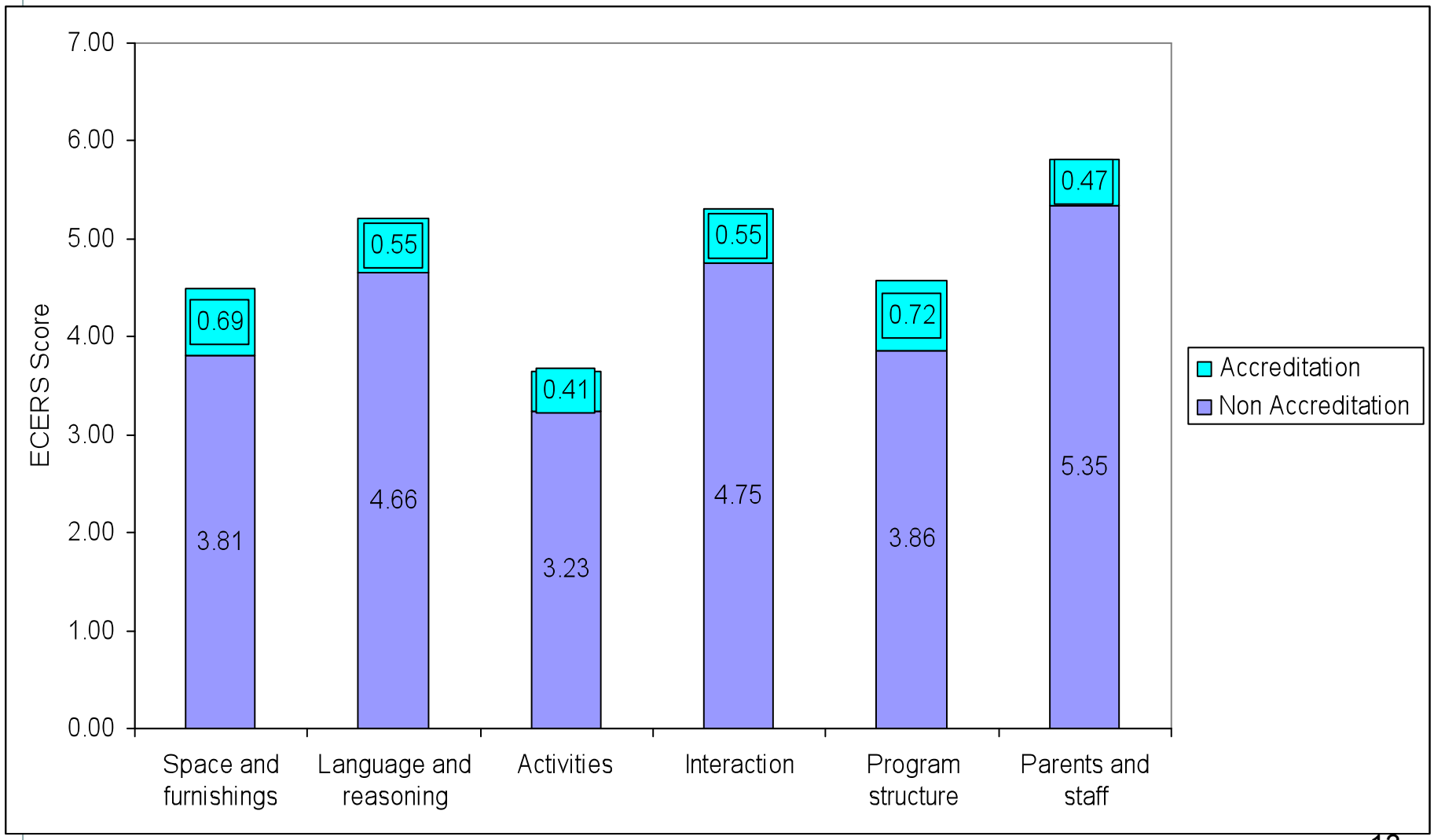
2006 to 2008 Percentage of K1 Programs that meet the "good' benchmark



2006 to 2008 Percentage of K2 Programs that meet the "good' benchmark



The Investment: NAEYC Accreditation & Quality



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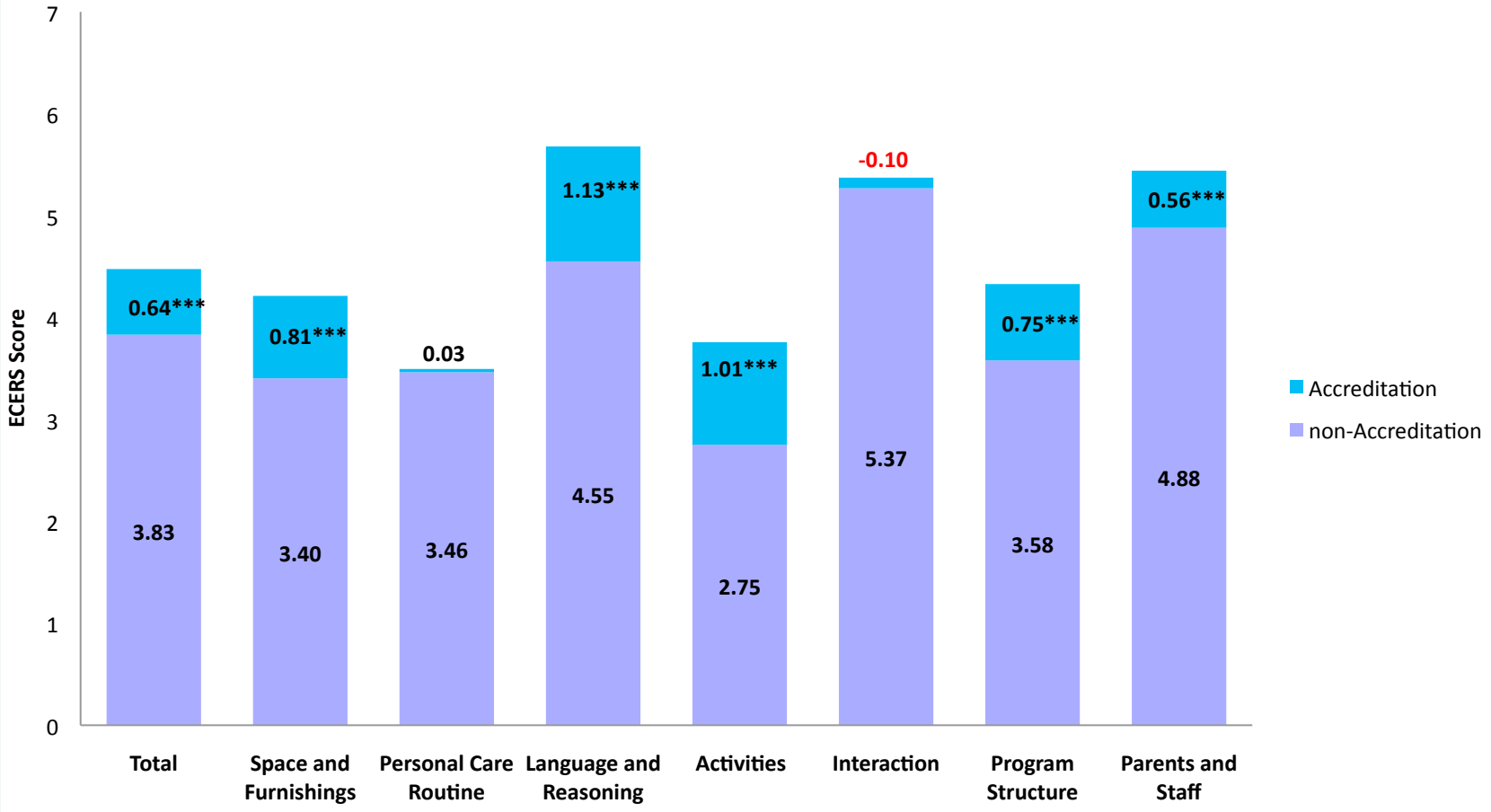
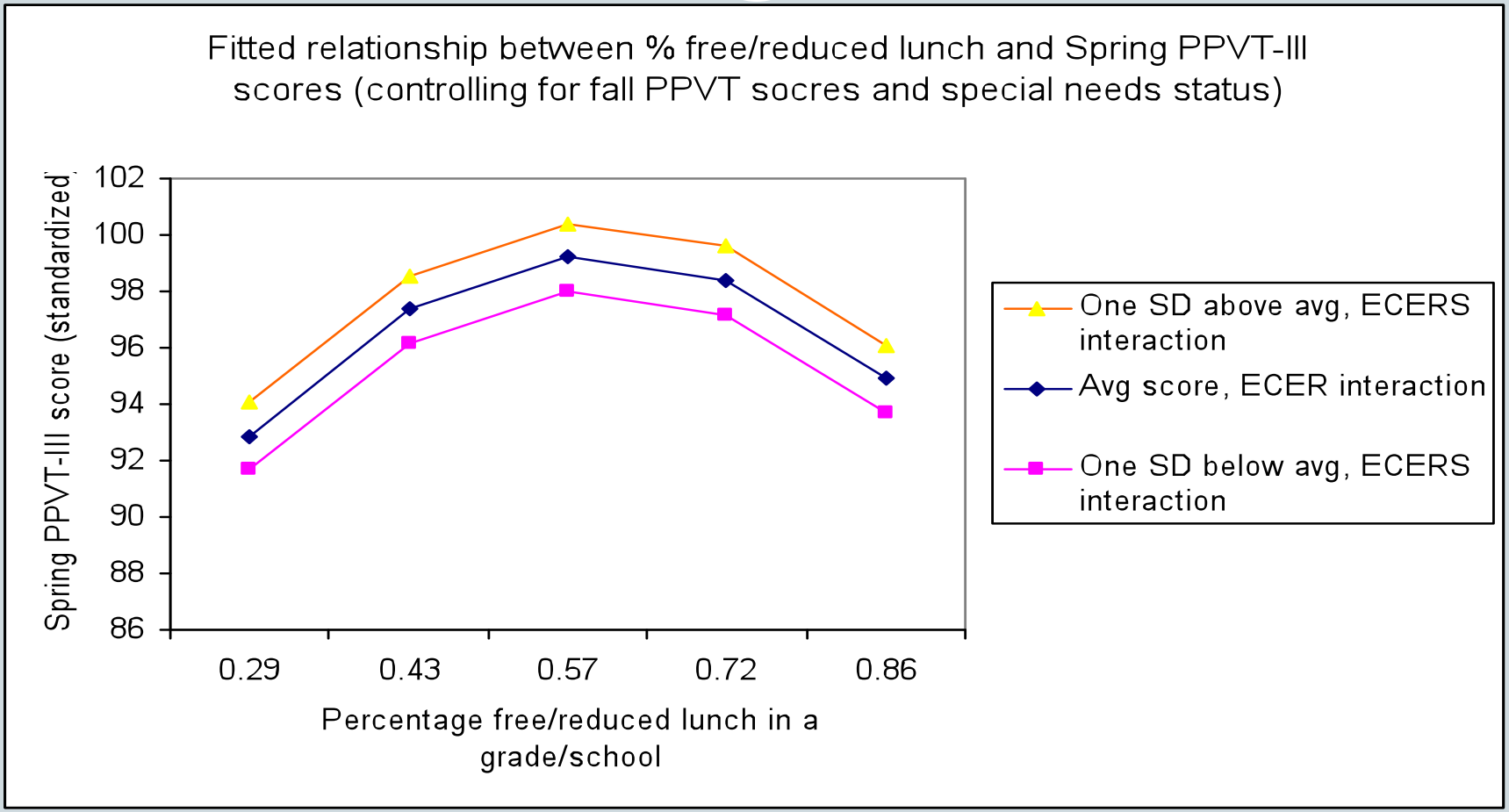
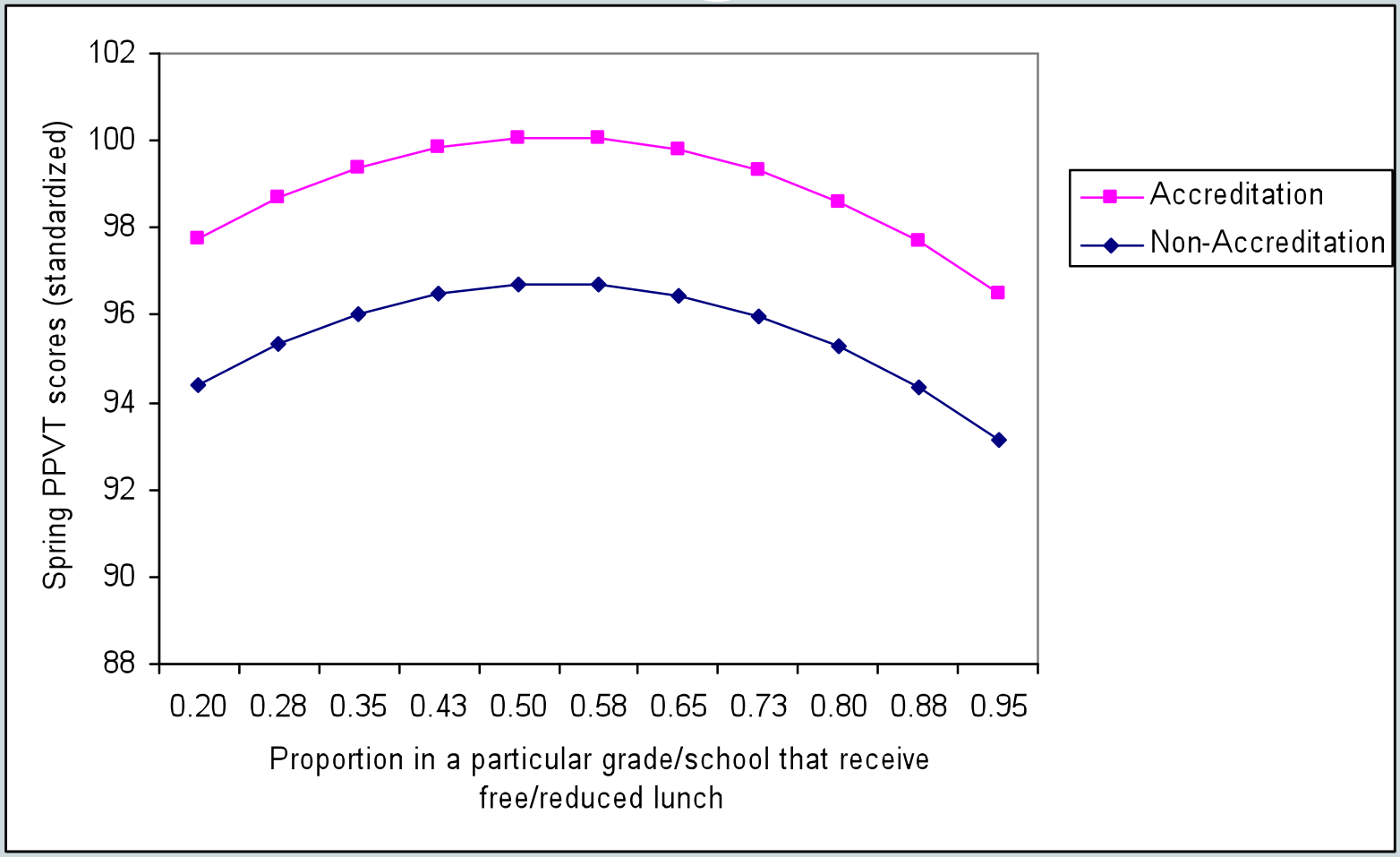
NAEYC Accreditation in K2 Classrooms (N=80)



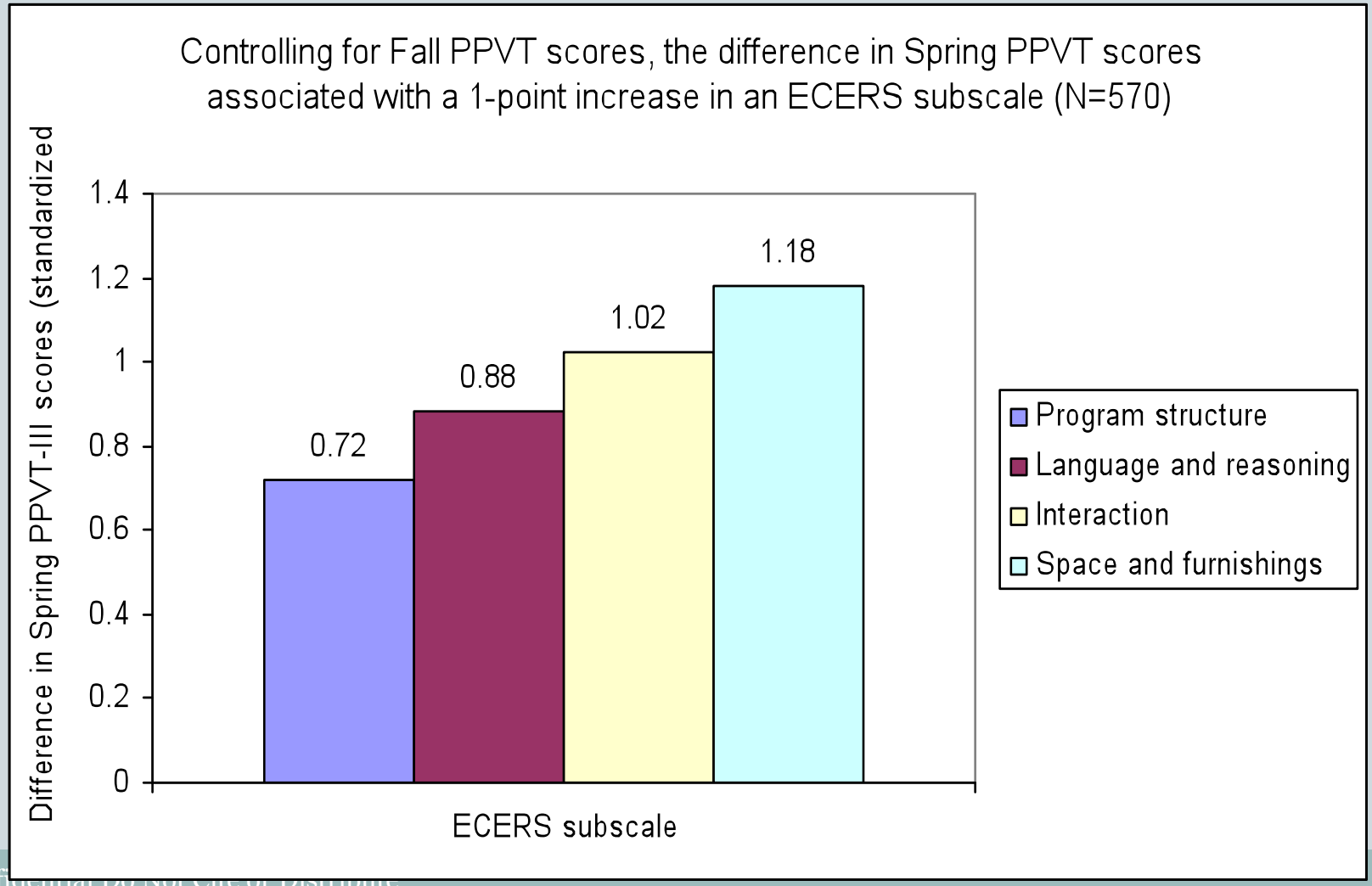
Quality/PPVT relationship by % free/reduced lunch



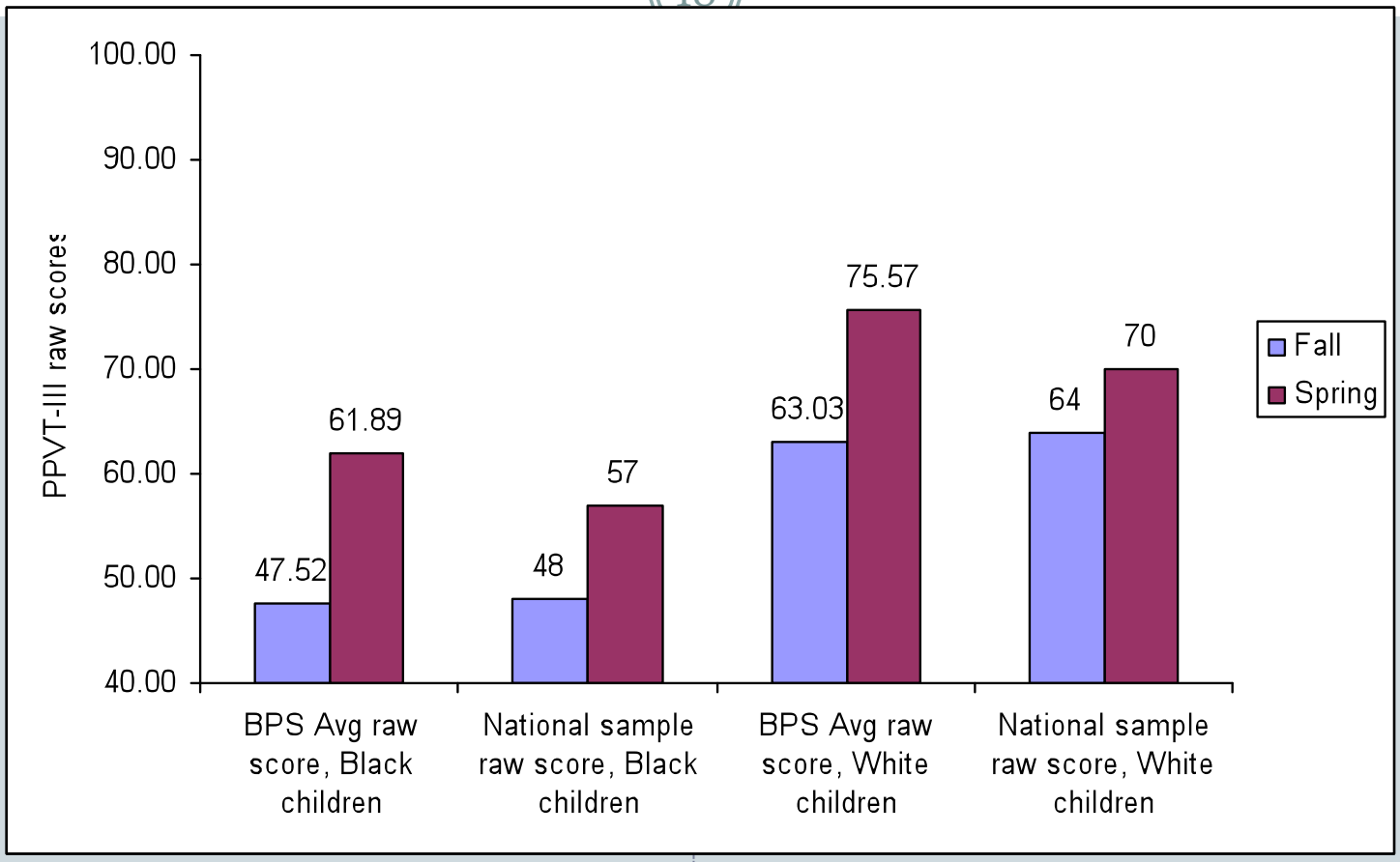
Fitted relationship between accreditation status and Spring PPVT scores (controlling for child demographics, and Fall PPVT scores and adjusting for clustering in schools/classrooms)



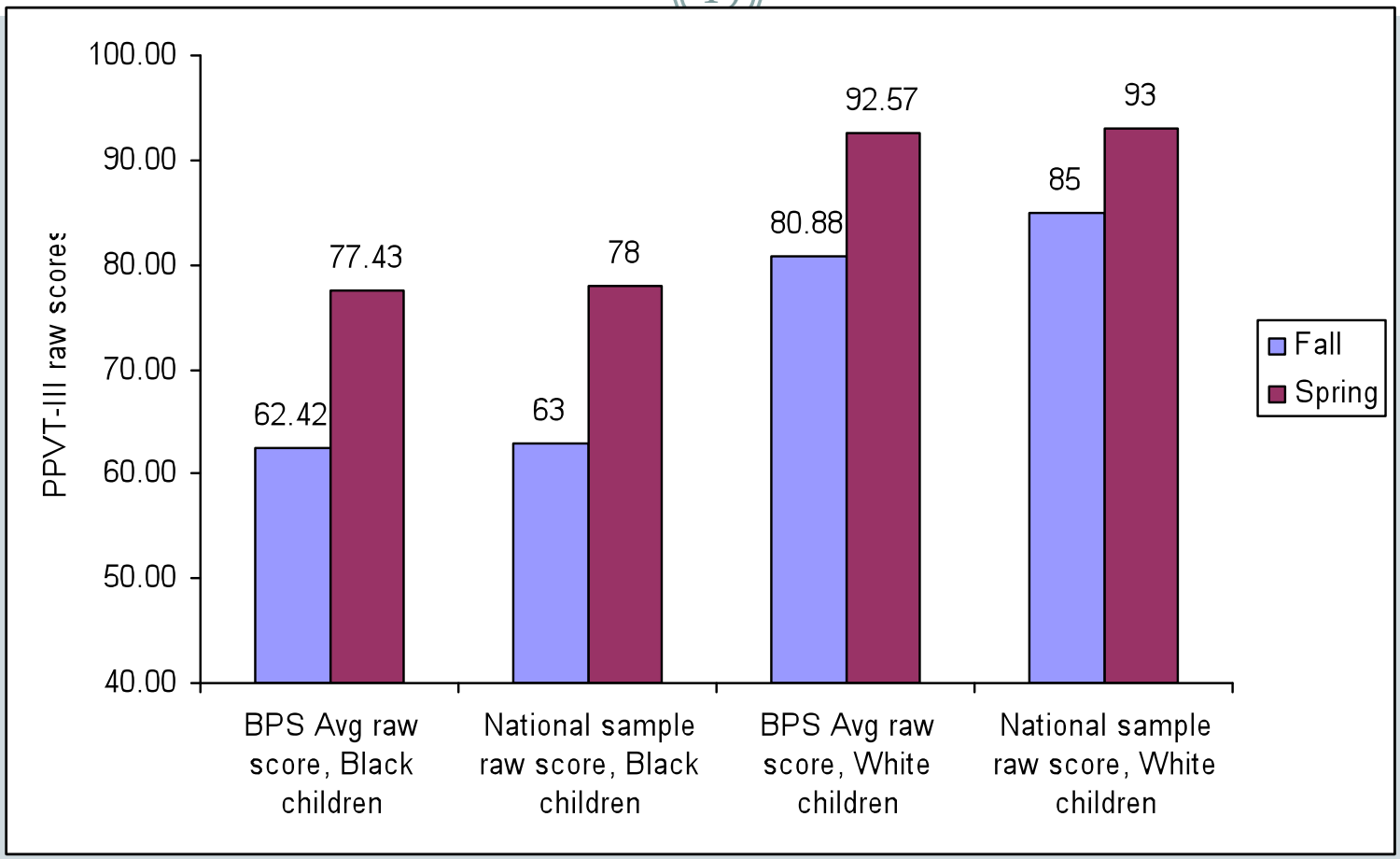
Relationship between quality and child outcomes



Comparing BPS K1 raw scores to National scores



Comparing BPS K2 raw scores to National scores



Proving it makes a difference
Using District Data

- DIBELS data demonstrate large and significant differences between K1 and K2 students
- DIBELS data maintain into second grade (at risk group differences larger) some "diminishing"
- MCAS data show significant differences between two groups

RDD study

- Partnered with a team from Harvard
- Examined curriculum fidelity and found that the OWL and Building Blocks were moderately to highly implemented across the district
- Used Regression Discontinuity approach to estimate impact of a year of K1 on children's language, literacy, mathematics, and executive function outcomes
- > 2000 children tested
- Results not fully ready yet but found substantial impacts on language, literacy, and mathematics and small impacts on executive function
- Impacts are among the largest detected to date among any prekindergarten RD evaluation

More on the RDD study

- Math and language/literacy were directly targeted by the chosen curricula
- Executive function skills were not directly targeted by chosen curricula but differences were found
- Results show that K1 overall is improving children's school readiness on multiple measures
- Results also show that a large urban public school district can implement two meaningful curricula in the same year with the right supports

Results based on data

- Selected curriculum
- Selected EVT
- NAEYC accreditation as a strategy for K2
- Coaching (now for new teachers only)
- Bigger emphasis on Conceptual Development
- K1s not cut in bad environment
- Expanding K1s in Circle of Promise
- Cost analysis looking at savings to district
- Need help creating longitudinal infrastructure