

Measuring and Improving Classroom Quality in Early Childhood

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Discover. Create. Change.

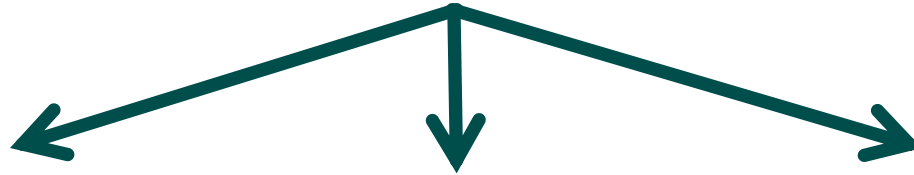
Quality matters...

- **What is quality?**
- **How can we assess it in a way that will have the biggest impact on children's development?**
- **Linking quality assessment/monitoring to quality improvement**
- **Systems to: Assess/monitor; Improve impacts; and Implement well at scale**

Quality - A focus on student-teacher interactions

- Interactions with adults form “infrastructure” for school success:
 - ❑ Self-regulation, emotional self-control
 - ❑ Task orientation, persistence, motivation
 - ❑ Cognitive processes, language
- Instruction is, in part, a social process:
 - ❑ Interactions with teachers are a “medium” for engagement
 - ❑ Good instruction is embedded in interactions
- Interactions operate across content/curriculum

**Teacher-Child Interactions
(these matter)**



**Emotional
Support**

**Classroom
Organization**

**Instructional
Support**

Teacher-student interaction: CLASS PK

- Positive climate
- Negative climate
- Teacher sensitivity
- Regard for student perspectives

**Emotional
Support**

- Effective behavior management
- Learning formats/engagement
- Productivity

**Organization/
Management**

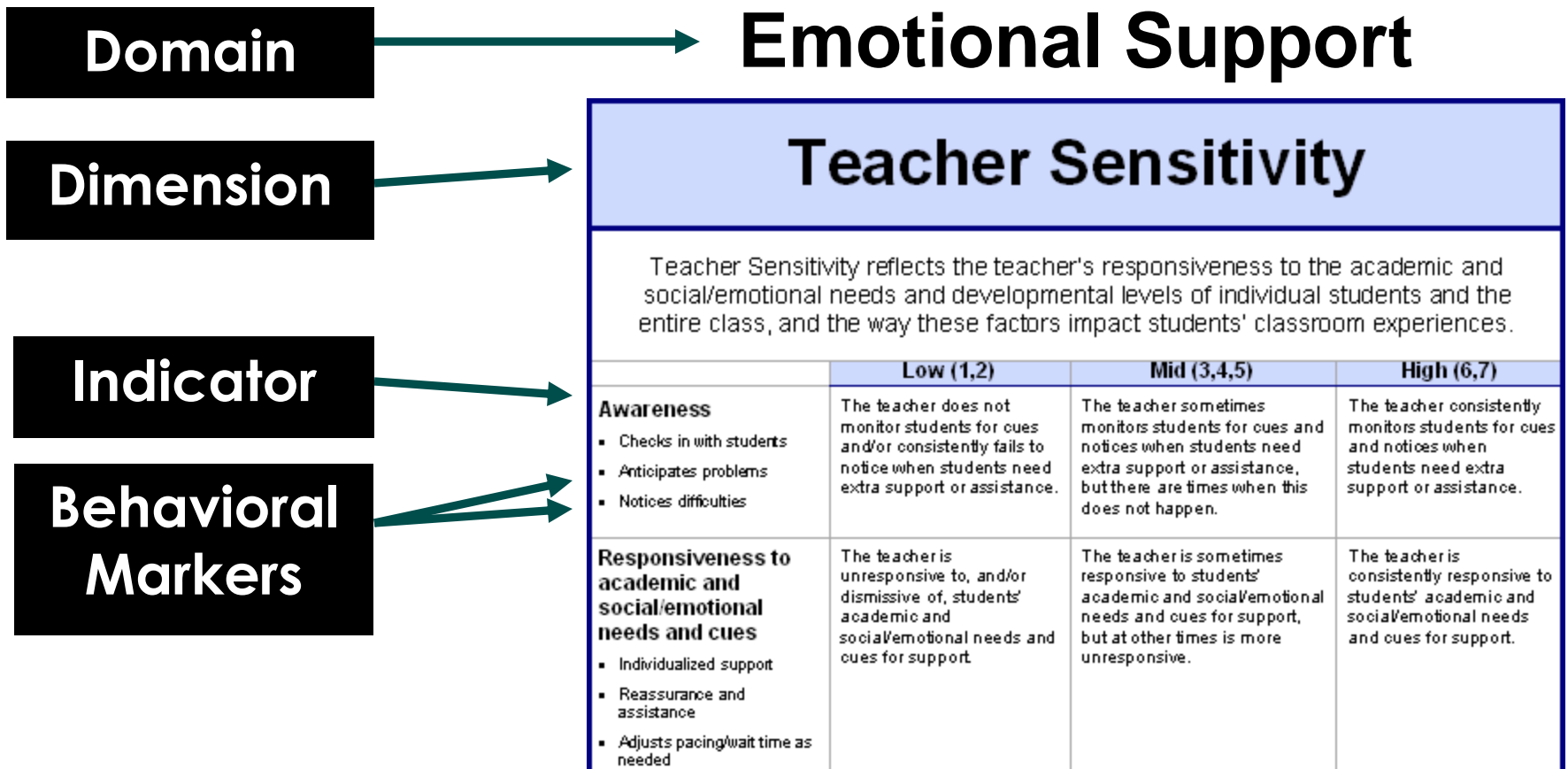
- Concept development
- Evaluative feedback
- Language modeling

**Instructional
Support**

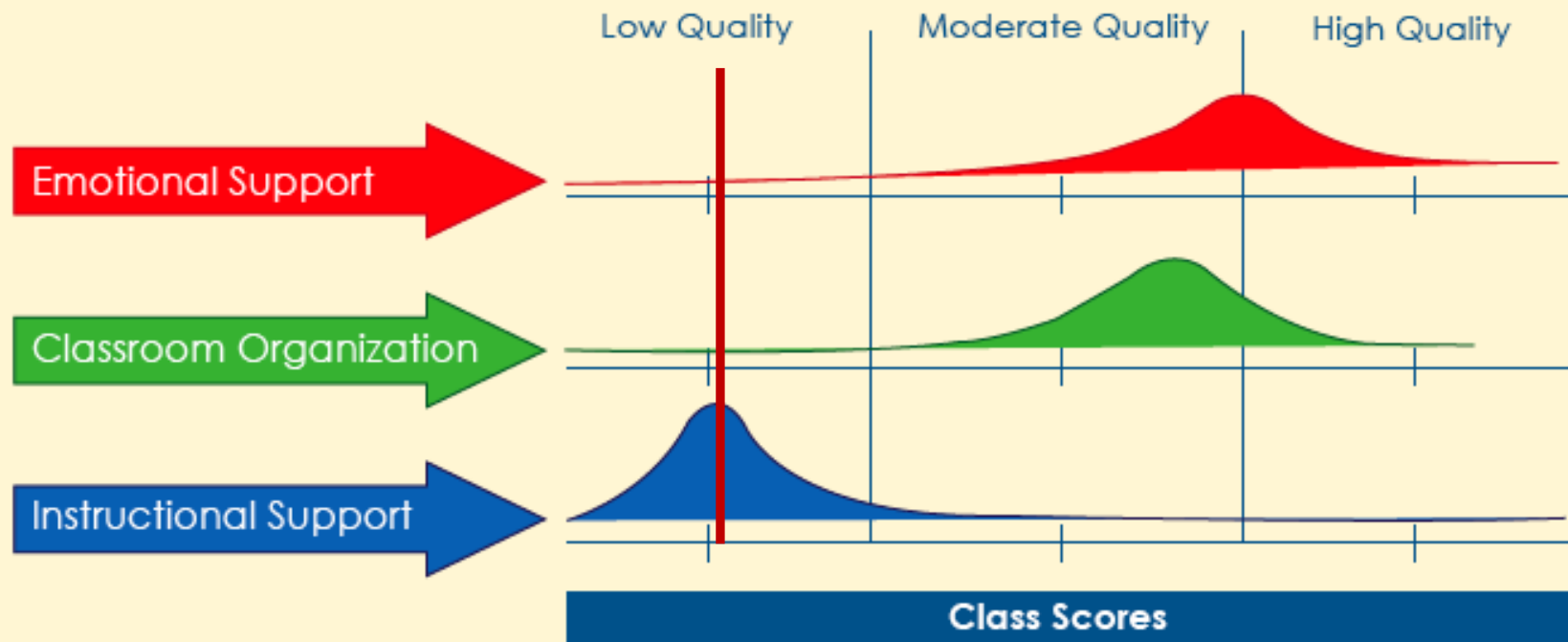
Measuring interactions: CLASS

- CLASS is a tool for observing and assessing the quality of interactions between teachers and students
- Ratings (1-7) of the *emotional, organizational, and instructional supports* provided by teachers that contribute to children's *social, developmental, and academic achievement*.
- CLASS is used to assess interactions among teachers and students for a variety of purposes:
 - Teacher Professional Development
 - Monitoring and Evaluation of Teacher Performance/ Effectiveness
 - Research

How is the CLASS organized?



Average Ratings of Interactions in Pre-K - 3rd Classrooms



Interactions and children's PK development

| | Emotional Support | Instructional Support | ECERS-R Total | Structural |
|---------------------|-------------------|-----------------------|---------------|------------|
| Receptive Language | | ✓ | | |
| Expressive Language | | ✓ | ✓ | |
| Rhyming | | ✓ | | |
| Letter Naming | | ✓ | | |
| Math Skills | | ✓ | | |
| Social Competence | ✓ | | | |
| Behavior Problems | ✓ | | | |

Changes in children's development from beginning to end of preschool

Mashburn, et al. (in press)

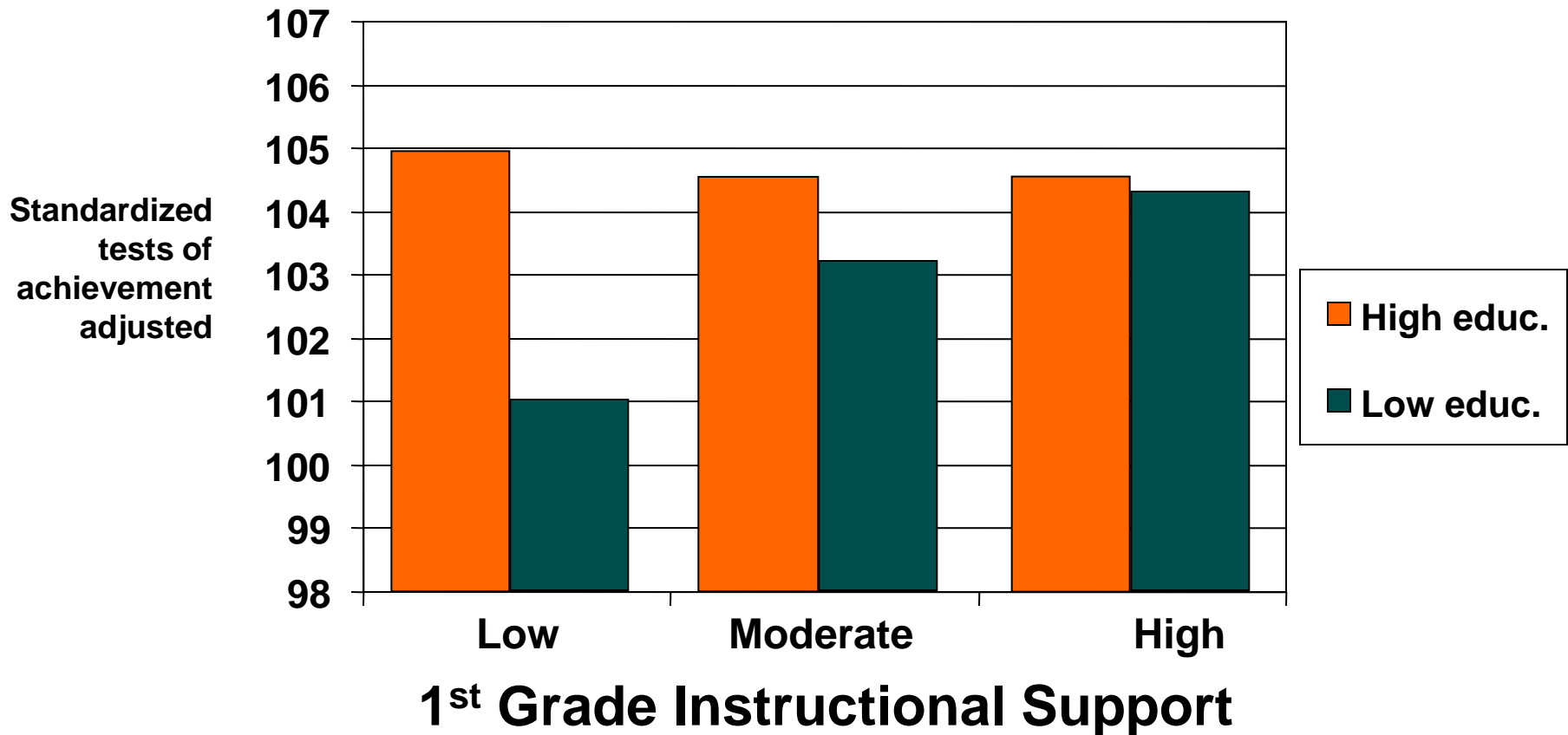
Do PK effects persist into kindergarten?

- Yes, children in pre-k classrooms offering higher levels of Instructional Support displayed better language skills at the end of the kindergarten year.
- Kindergarten Instructional Support scores made an independent contribution to gains in children's language and math abilities.

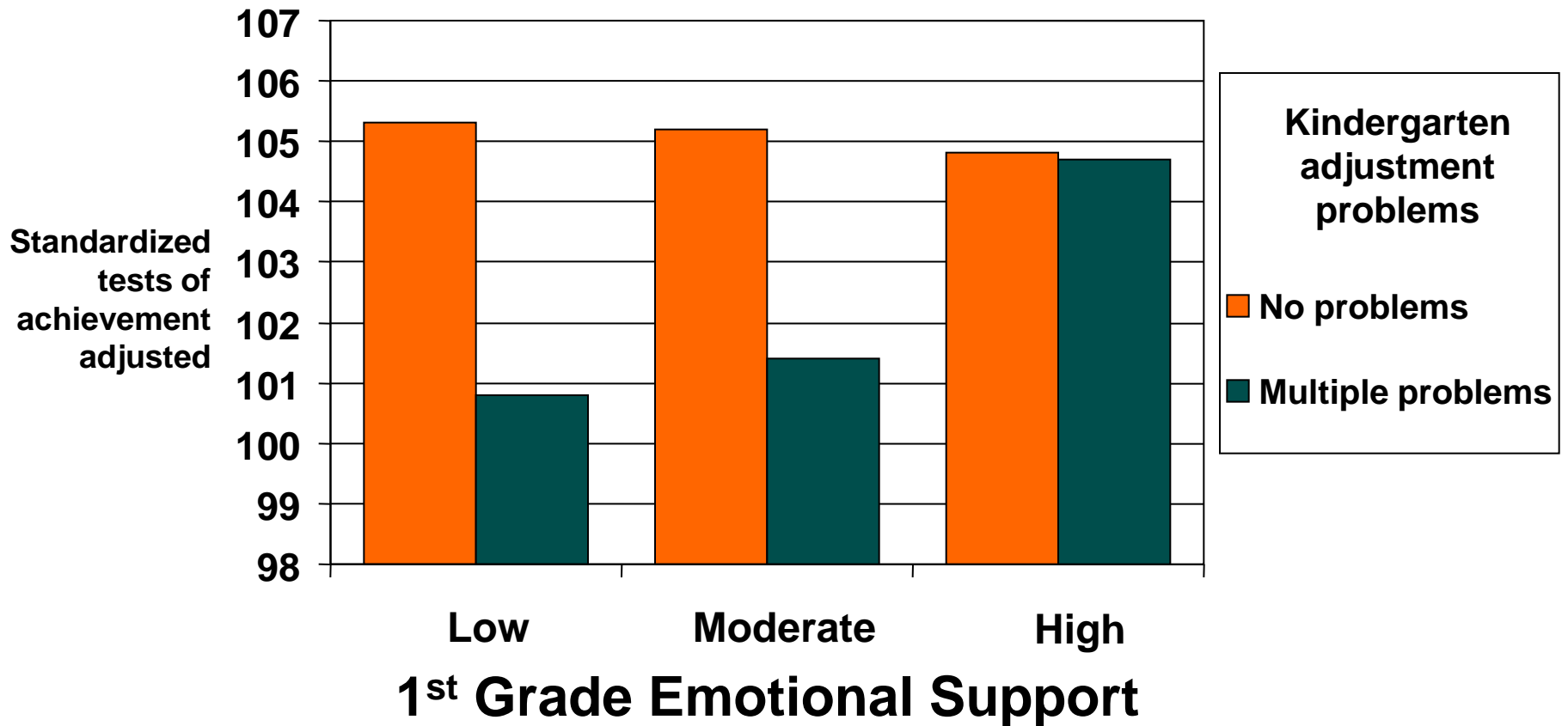
Is there an “active range” for effects?

- Analysis of “thresholds” – points on distribution where impacts are evident
- Emotional Support – “4.5” and above
- Instructional Support – “2” and above”
- For IS, the active range appears linked to teachers’ increased support for cognitive skills
- One-point shift appears meaningful

Gains in grade 1 achievement in instructionally supportive classrooms



Gains in grade 1 achievement in emotionally supportive classrooms



CLASS Video Library

Welcome to our video library of CLASS constructs. Listed below are the 11 areas of CLASS that we have chosen to focus on and explain further through video demonstrations. You'll get a chance to view teachers interacting with their students in a real-life class setting, while displaying some of the positive behaviors we associate with the various CLASS categories.

CLASS Construct List

**** Use pulldown menu to select**

Positive Climate

Select from the pulldown or pick one of the main categories below.

Teacher Sensitivity



Positive Climate



Regard for Student Perspectives



Behavior Management



Productivity



Concept Development



Instructional Learning Formats



Literacy Focus



Quality of Feedback



Children's Engagement



Language Modeling



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Class Video Details: Teacher Sensitivity

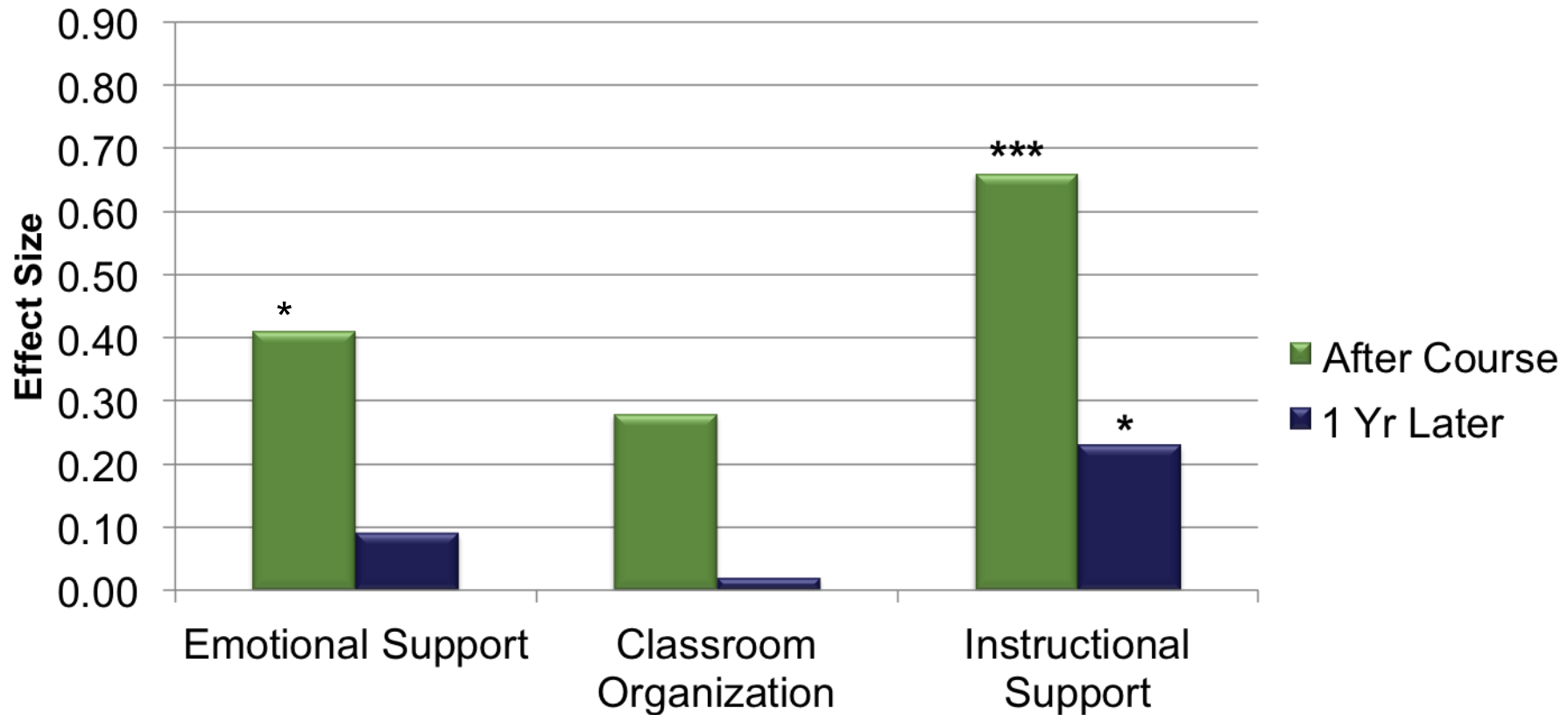


Teacher Sensitivity to Child's Shyness

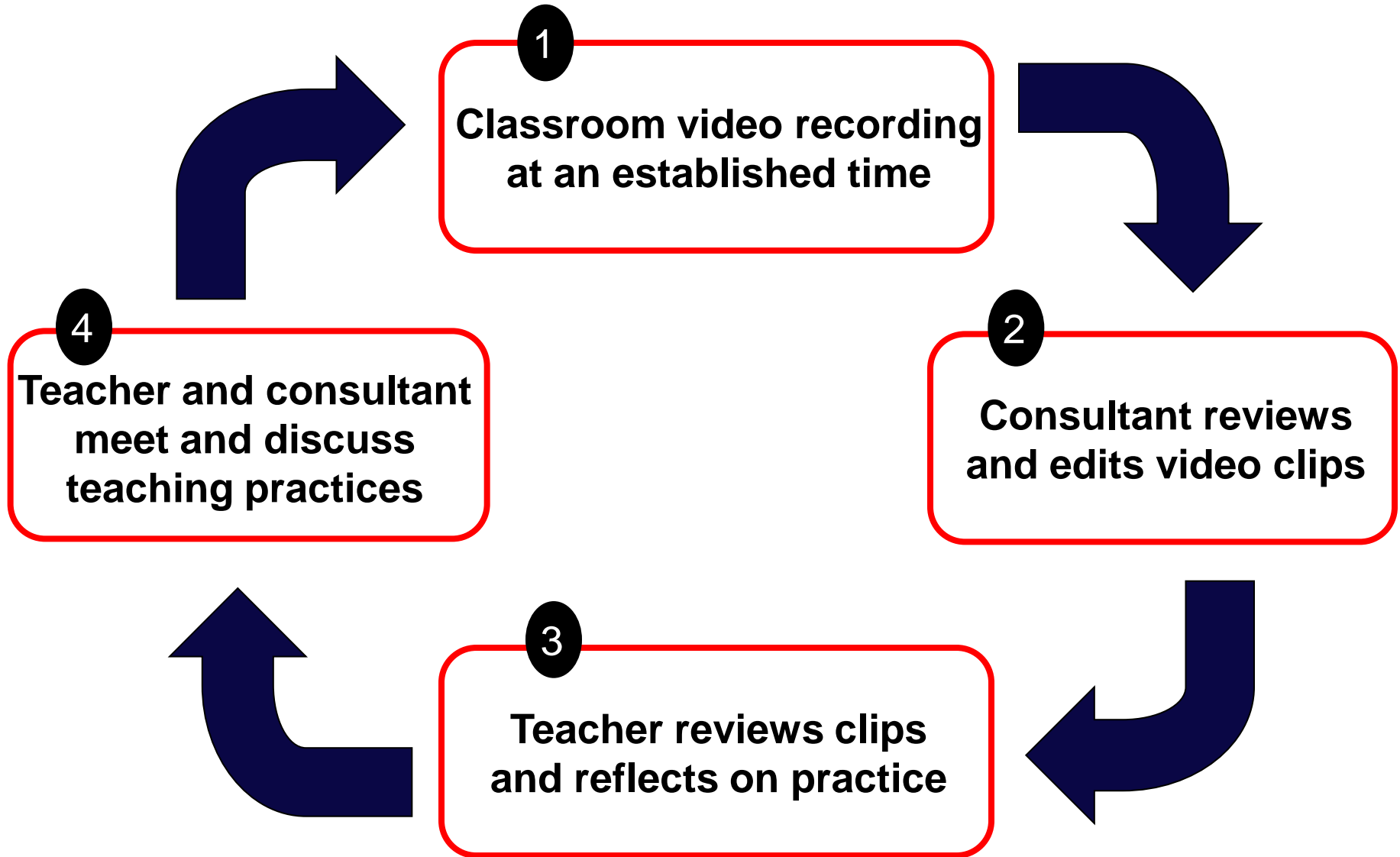
A child who is asked to talk to the group is reluctant to respond in front of the group. To maximize the child's feeling of success and encouragement, the teacher uses verbal and non-verbal strategies, such as touch and a gentle tone of voice. The teacher's close physical proximity appears reassuring to the child. The teacher begins with an open-ended question and moves to a yes/no question when the child is hesitant to respond. The teacher goes further to provide the information to the class on behalf of the child. She ends the child's turn with an extra touch of reassurance, and a thank you. This child is probably more likely to respond to these types of requests than if she was not offered this support, and maybe the next time she will speak more.

<< GO BACK

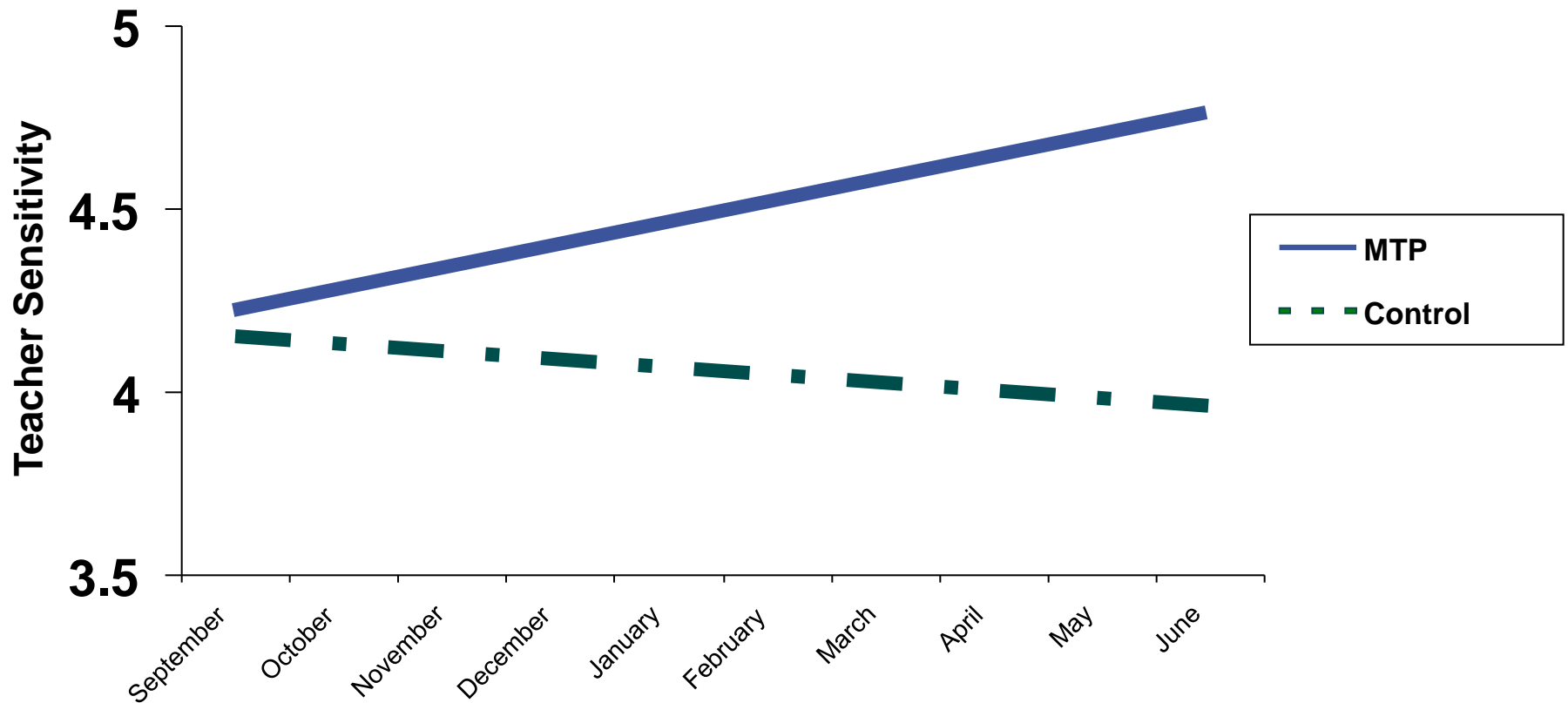
Course improves interactions



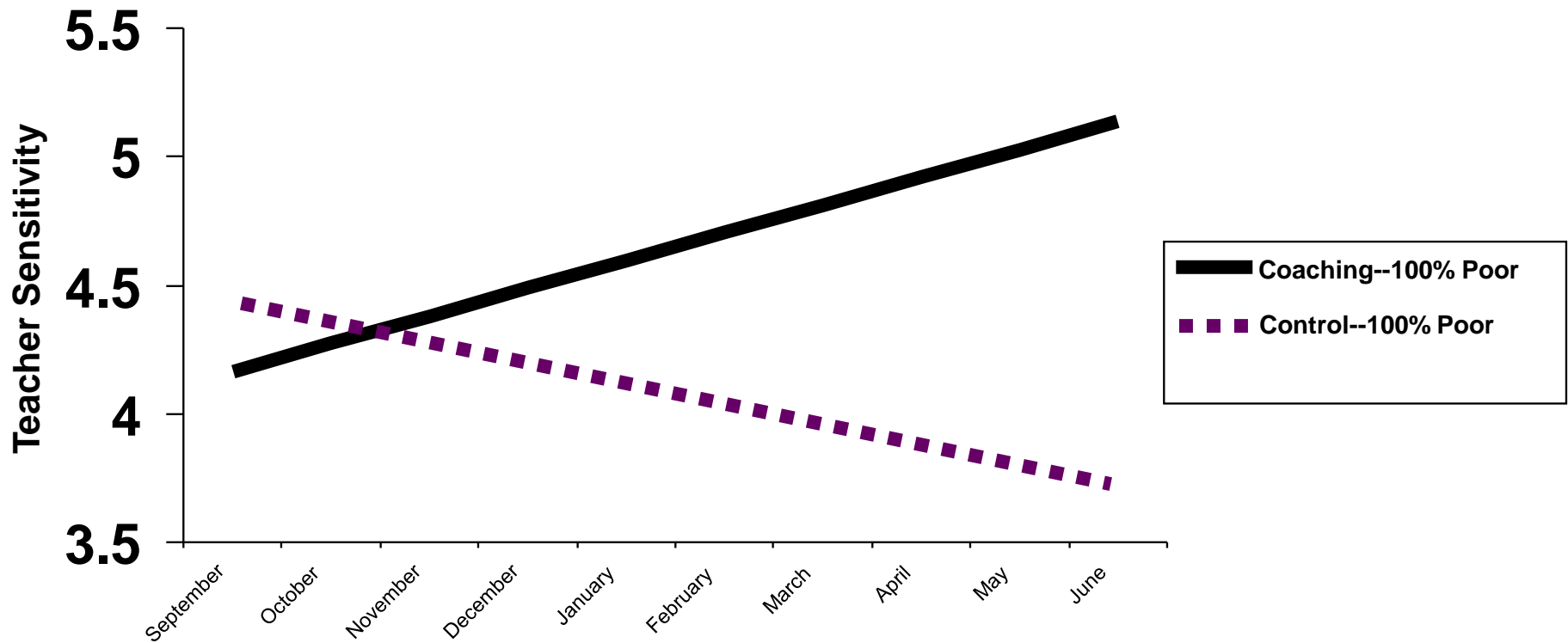
* $p < .05$; ** $p < .01$; *** $p < .001$



MTP Coaching improves interactions



Classrooms with high poverty benefit most from MTP coaching for teachers



Findings: Effects of MTP support in PK

■ Teachers with MTP coaches

- ❑ Grew more sensitive in interactions with students
- ❑ Increased students' engagement in instruction
- ❑ Improved language stimulation techniques
- ❑ High-poverty classrooms benefit a great deal
- ❑ Early career teachers benefit from coaching and video

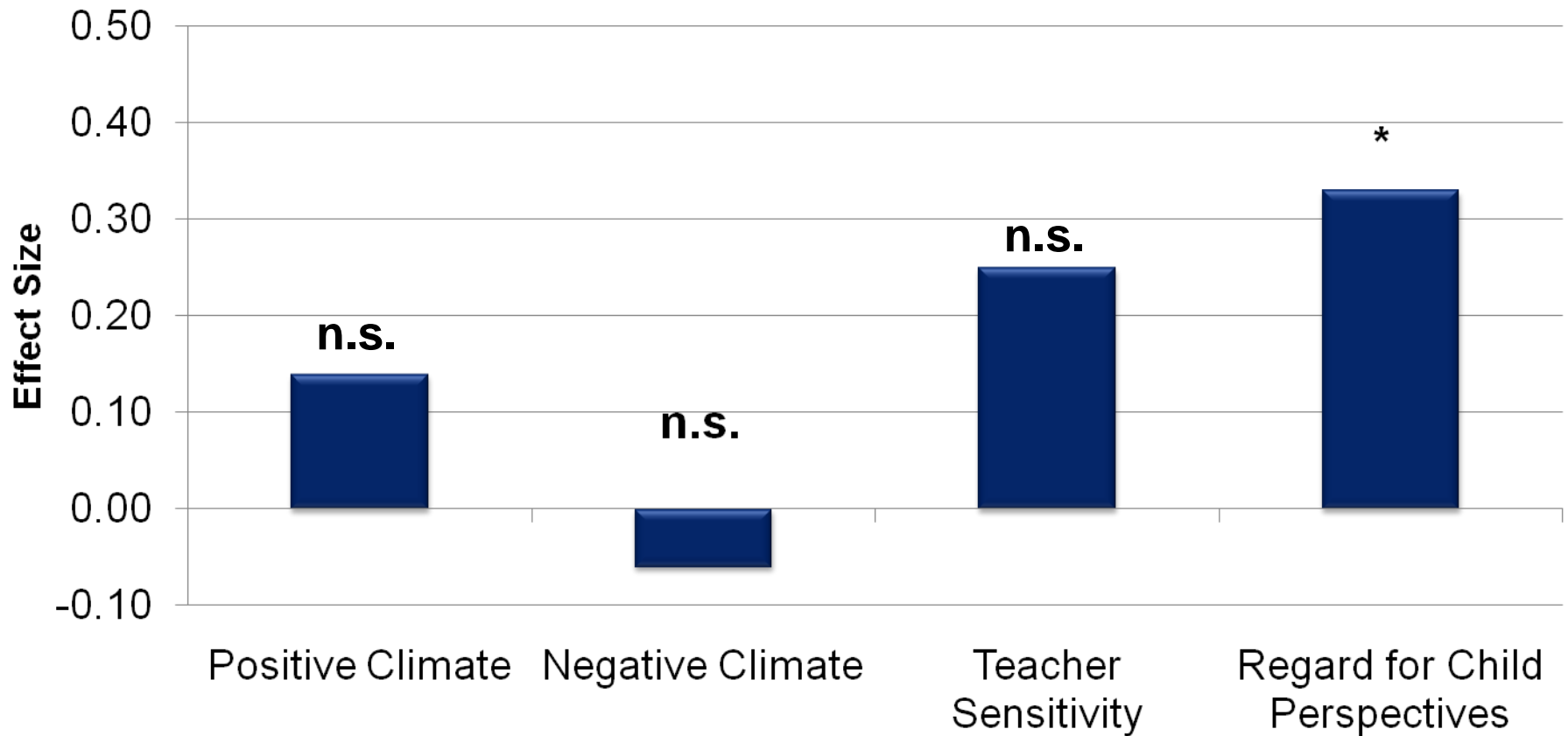
■ Children with MTP teachers

- ❑ Made greater gains in tests of early literacy
- ❑ Experienced lower levels of problem behavior
- ❑ Demonstrated higher levels of expressive language

MTP coaching protocol – Study II

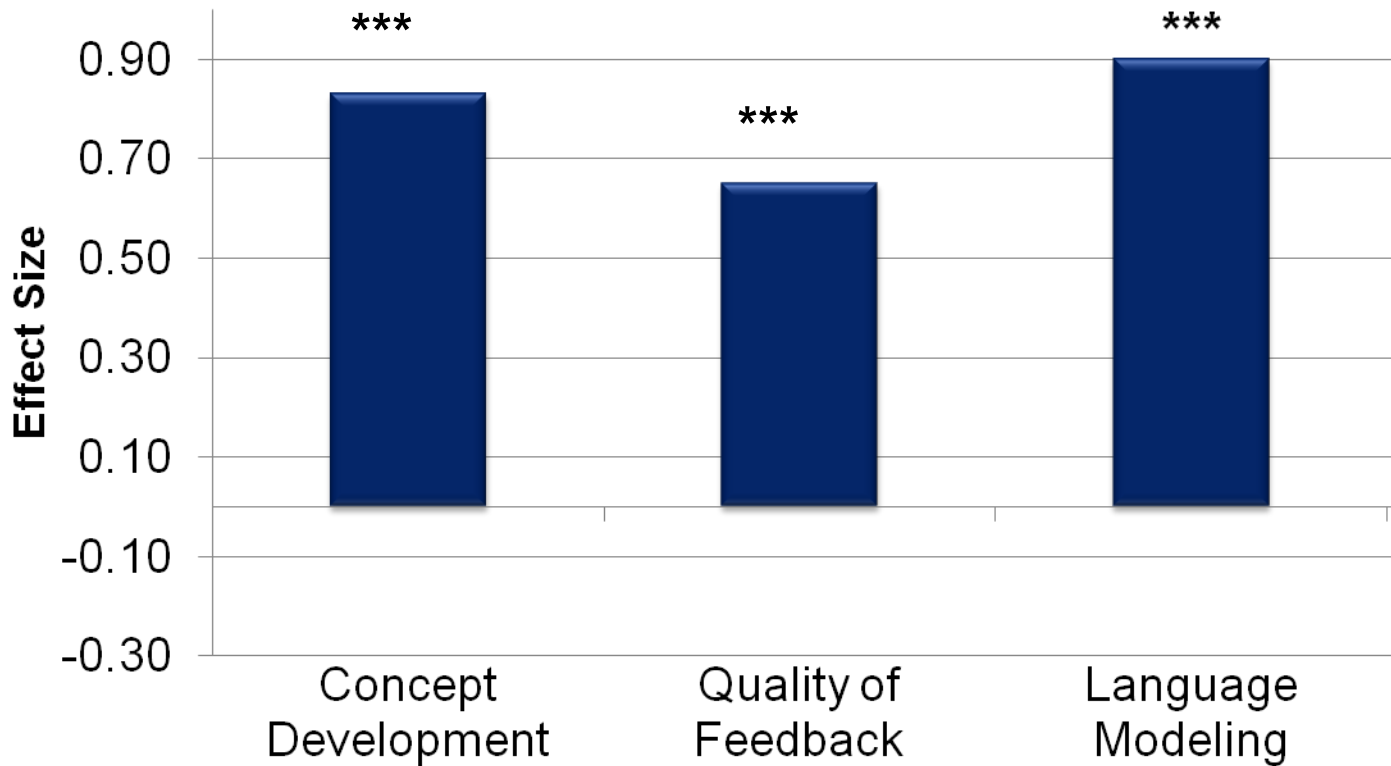
- **Scale-up to broader # of sites, etc.**
 - Manualized local coaching – increased rigor including prompt-bank and regular feedback to local coaches
- **Standardize sequence of exposure**
 - One year of exposure (12-16 cycles)
 - Cycle One
 - Live visit; test process and technology
 - Cycles Two through Five
 - Cycle Two – Emotional Support: Positive Climate
 - Cycle Three – Classroom Organization
 - Cycles Four and Five – Emotional Support; Sensitivity
 - Cycle Six through remainder of year: Instructional Support

Coaching improves emotional support



* $p < .05$; ** $p < .01$; *** $p < .001$

Coaching improves instructional support



* $p < .05$; ** $p < .01$; *** $p < .001$

Effects on child outcomes

- Coursework-coaching tested separately and in combination
- Child outcomes in coaching year and for children in teachers' classrooms the following year
- Literacy, language development, self-regulation
- No effects in concurrent (coaching) year
- For children year after coaching, MTP increased self-regulation and working memory; expressive language; and literacy in classrooms with targeted curriculum.

Implementation implications

- **Effective PD interventions can be delivered locally with high fidelity and quality.**
- **Quality of implementation matters for teacher engagement and for benefits of PD.**
- **“Implementors” need focused support. Biweekly conference calls, check-ins, standardized protocols all essential to keeping focused.**

QRIS: Indicators and impacts

- **QRIS Goal: Measure “quality” with multiple indicators, composite (“star”), drive change in school readiness**
- **Do QRIS indicators or composites predict children’s school readiness?**
- **Simulation of 9 states’ existing QRIS using 5 indicators and association with growth in child outcomes**
- **Indicators: Staff quality; ratio/size; family engagement; observed environment; observed teacher-child interactions**

Results of QRIS simulation

- No single indicator has any association with growth in math, reading, language or social skills, except . . .
- Observed teacher-child interactions with all child outcome assessments (effect sizes .3 - .5)
- None of the 9 states' QRIS “star ratings” were related to children's learning; more stars ≠ greater child learning
- If observed interactions were included in composites, those effects “wash out” in composites
- Systems should be simpler and more focused on quality indicator(s) that drive student learning

Accountability and program development

- **New policy frameworks (QRIS) offer potential, but also require careful evaluation**
- **Accountability systems – wide-scale monitoring and feedback at correct level of aggregation. Link to aligned, proven-effective PD to target improvements in metrics.**
- **Require capacity – # of observers/quality control**
- **Live or video coding and stakes of the data**
- **Issues to be resolved: cutpoints, combining with other metrics, implementation**

Moving the needle – Access *and* Quality

- Align observation with PD resources and feedback to – “move” quality into “active range.”
- Not all coaching and observation is effective; must be focused, ongoing, aligned to target behaviors
- A focus for teacher professional development and preparation to increase quality and child outcomes
- Incentives and policies to use effective PD?
Certification for competent performance? Systems of “badging” to accrue credits and career path?
- Re-design of preparation and support systems

Appreciation and collaborators

- Institute of Education Sciences support for the National Center for Research on Early Childhood Education
- Eunice Kennedy Shriver National Institute for Child Health and Human Development
- University of Virginia Center for Advanced Study of Teaching and Learning
- Colleagues and collaborators at Frank Porter Graham Child Development Center at University of North Carolina Chapel Hill; UCLA, UNC-Greensboro.
- Dozens of partner programs and districts and the hundreds of teachers who have worked with us