Opportunity in early education:
Improving the quality of teacher-child interactions through classroom observation and professional development

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Challenges for early education

- We know program enrollment makes a difference and that program "quality" is essential, but…..

- What are the ingredients of a high-quality classroom?

- What is a high-quality teacher?

- Can training and professional development improve quality of early education?

Results of large-scale observational studies

- **National-level studies**
    - **National Center for Early Development and Learning (NCEDL)**
    - **NICHD Study of Early Child Care**
- **Up to 1,000 settings observed at preschool, K, 1, 3 — more than 4,000 classrooms**
- **Large set of systematic standardized classroom observation in U.S. schools**
- **All teachers credentialed/certified**

Describing opportunities to learn: Counting behaviors, activities, practices

- **Vast majority of interaction/activity is whole group or individual seatwork**

- **Few, if any, social or instructional interactions between teacher and individual child**

- **Mostly literacy activities**

- **Exceptional variation within and across grades**

- **Consistent patterns from pre-k to 3rd grade**

How do students spend time?

- **High levels (30%) of "business/routine" activity**
  - ❑ **pk-3: managing materials, routines**

- **High levels of "basic skills" focus**
  - ❑ **7:1 in pk-1; 14:1 in 3**

- **Ratio of listening, sitting, watching: Doing**
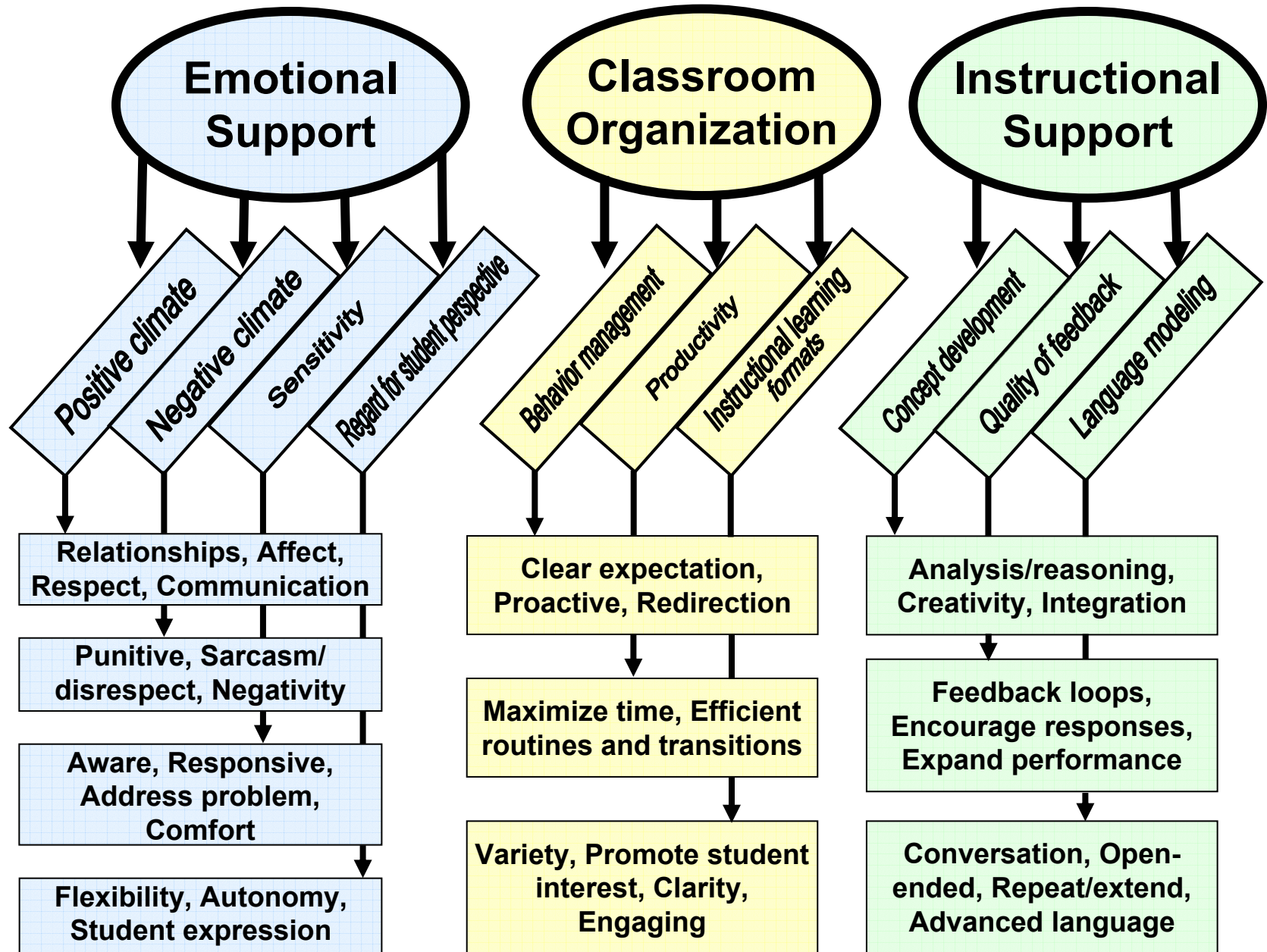 - ❑ **10: pk-1 1,3**

(NICHD ECCRN 2002, 2004)

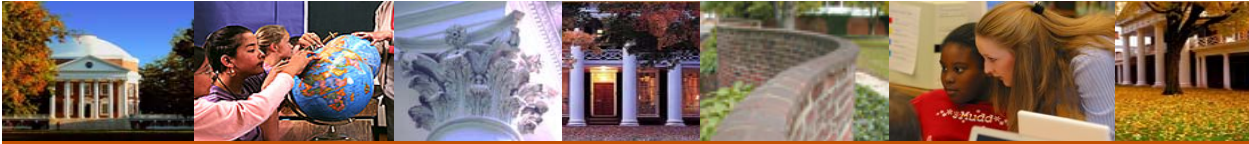# Rating interactions: What is the CLASS?

- **Focus on how teachers and students interact**

- **What the teacher is doing to promote the positive emotional, social, and academic development of students in the classroom.**

- **Factor analysis of CLASS (and other) scales indicate three broad constructs, consistent pk-3:**
  - ❑ **Emotional Support**
  - ❑ **Organization / Management**
  - ❑ **Instructional Support**

DOMAINS

Emotional Support

Classroom Organization

Instructional Support

DIMENSIONS

Positive climate · Negative climate · Sensitivity · Regard for student perspective

Behavior management · Productivity · Instructional learning formats

Concept development · Quality of feedback · Language modeling

INDICATORS

Relationships, Affect, Respect, Communication

Punitive, Sarcasm/disrespect, Negativity

Aware, Responsive, Address problem, Comfort

Flexibility, Autonomy, Student expression

Clear expectation, Proactive, Redirection

Maximize time, Efficient routines and transitions

Variety, Promote student interest, Clarity, Engaging

Analysis/reasoning, Creativity, Integration

Feedback loops, Encourage responses, Expand performance

Conversation, Open-ended, Repeat/extend, Advanced language

Classroom ratings: CLASS PK-3

- **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**
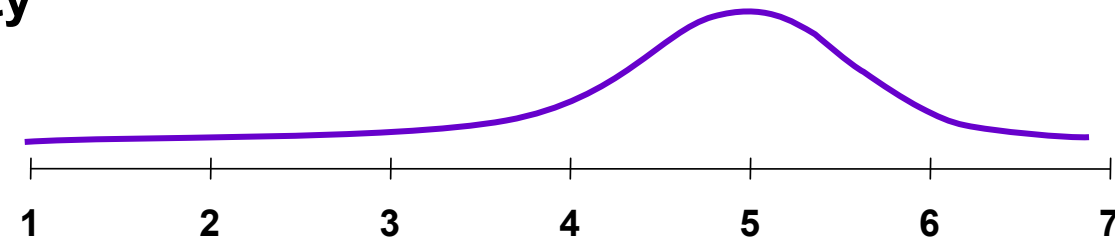- **Language modeling**

Instructional Support
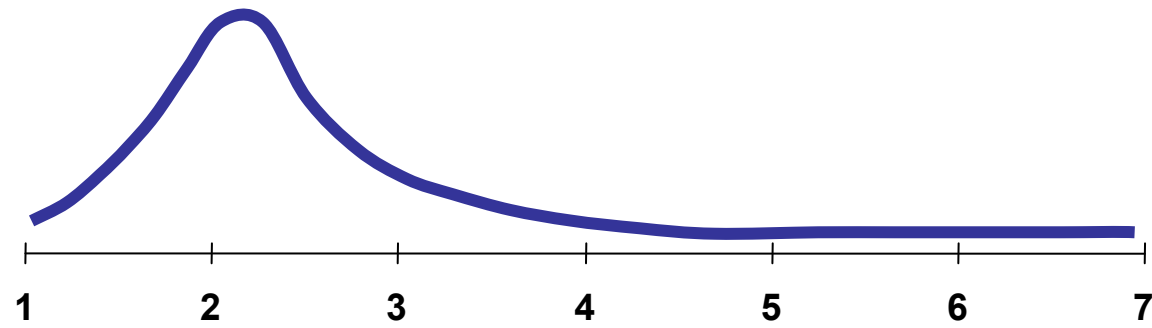
What is the quality of the classroom setting?

- **Positive emotional climate**
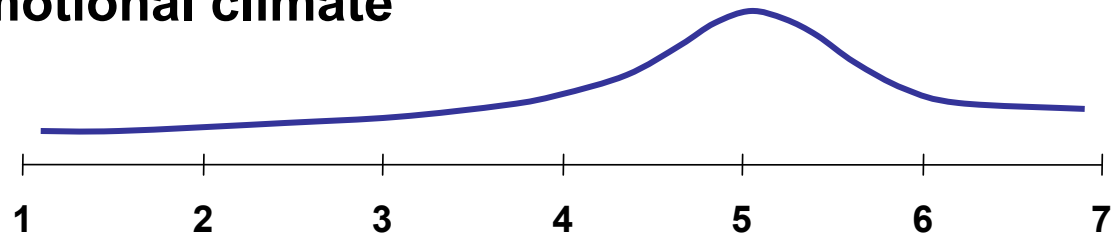
- **Productivity**

- **Quality of feedback**

Classroom interactions and children's social and academic performance

- **Designs that isolate effects for instructional and emotional inputs controlling for other influences - value added**
  - ❑ Family and demographic factors
  - ❑ Child's prior performance
  - ❑ Structural features of schooling
- **Primarily small main effects**
  - ❑ Instructional and emotional quality predict more positive achievement and social outcomes
  - ❑ Larger effects on more proximal outcomes (e.g., child engagement)
  - ❑ Exposures to more instruction in literacy and math also predict to those outcomes
- **Stronger effects for different groups of children**
  - ❑ Low maternal education
  - ❑ Adjustment problems in K
  - ❑ Poor

Pre-k quality and growth in child outcomes

- **Where should we focus attention in policy, program development, and teacher preparation?**

- **Predicting achievement growth during preK from:**
  - ❑ **Structural features (teacher ed., curriculum, etc.)**
  - ❑ **Observed interactions (ECERS, CLASS)**

- **No association of structure with outcome, singly or in combination (e.g., NIEER index)**

- **Instructional and Emotional Supports (CLASS) predict positive changes in literacy, language, and math skills – small effect sizes – persist into kindergarten**

Gains in Gr. 1 achievement in instructionally supportive classrooms

Standardized tests of achievement adjusted

1st Grade Instructional Support

Legend:
- High educ.
- Low educ.
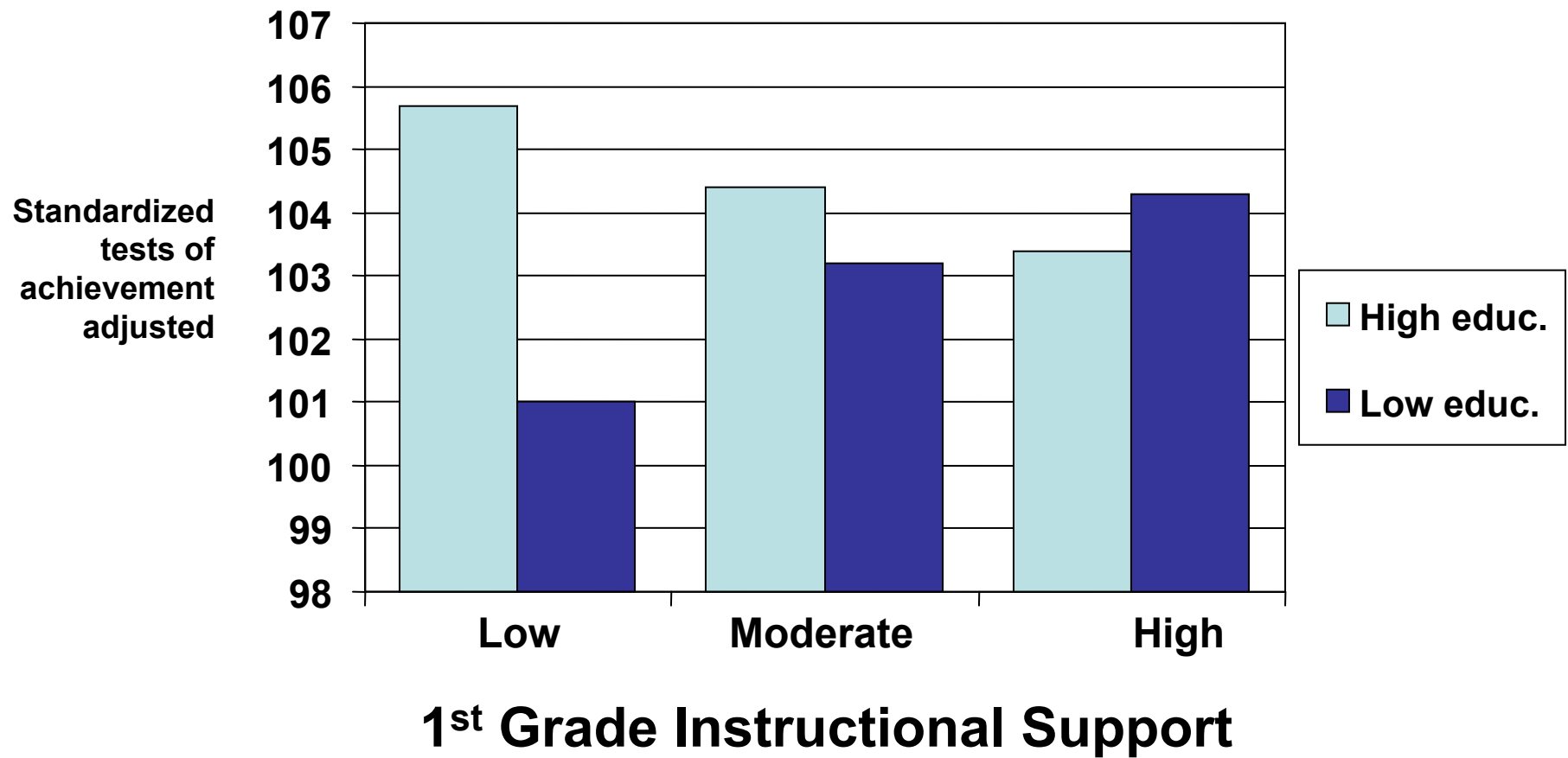
Gains in Gr. 1 achievement in emotionally supportive classrooms

Standardized tests of achievement adjusted

Kindergarten adjustment problems

☐ No problems

■ Multiple problems

1st Grade Emotional Support

Low — Moderate — High
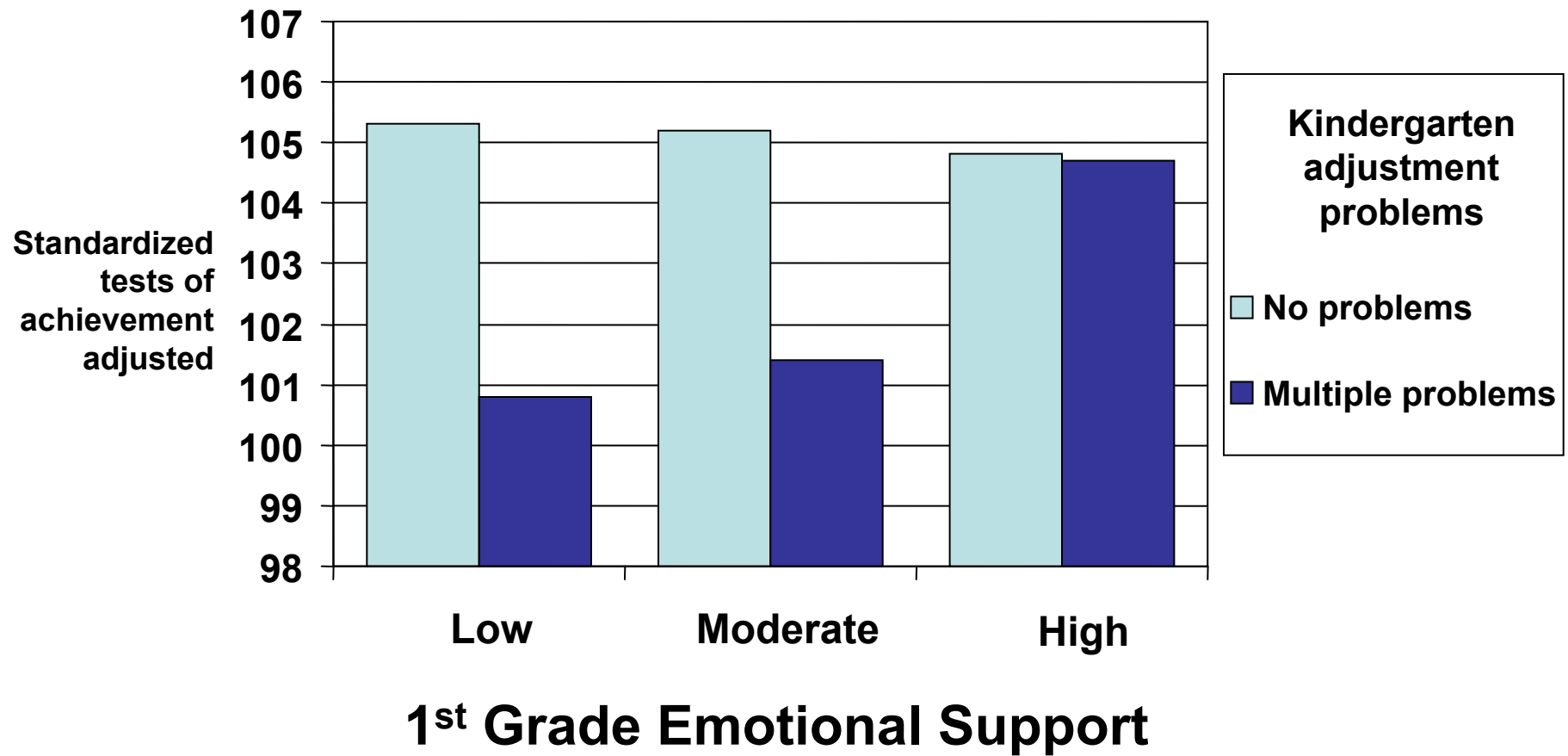
Implications of our work P-5

- **Focus regulation and training on teachers' interactions with children - standards**

- **Strive toward moving instructional dimensions and implementation "up" the scale of quality interactions**

- **Develop training and support approaches that address teachers' interactions with children**

- **Approach these goals systematically and scientifically with standardized, validated observations at core**

- **A science of teaching and teacher-training that relies on direct and validated observation**

Standardized observation:
Support for high-quality interactions

Professional
development/
training

Resource
allocation

Evaluation

Curriculum

Observational
Assessment

CLASS
Instructional
Organization
Social

Social and
academic
outcomes
for children

Improved
teacher
outcomes
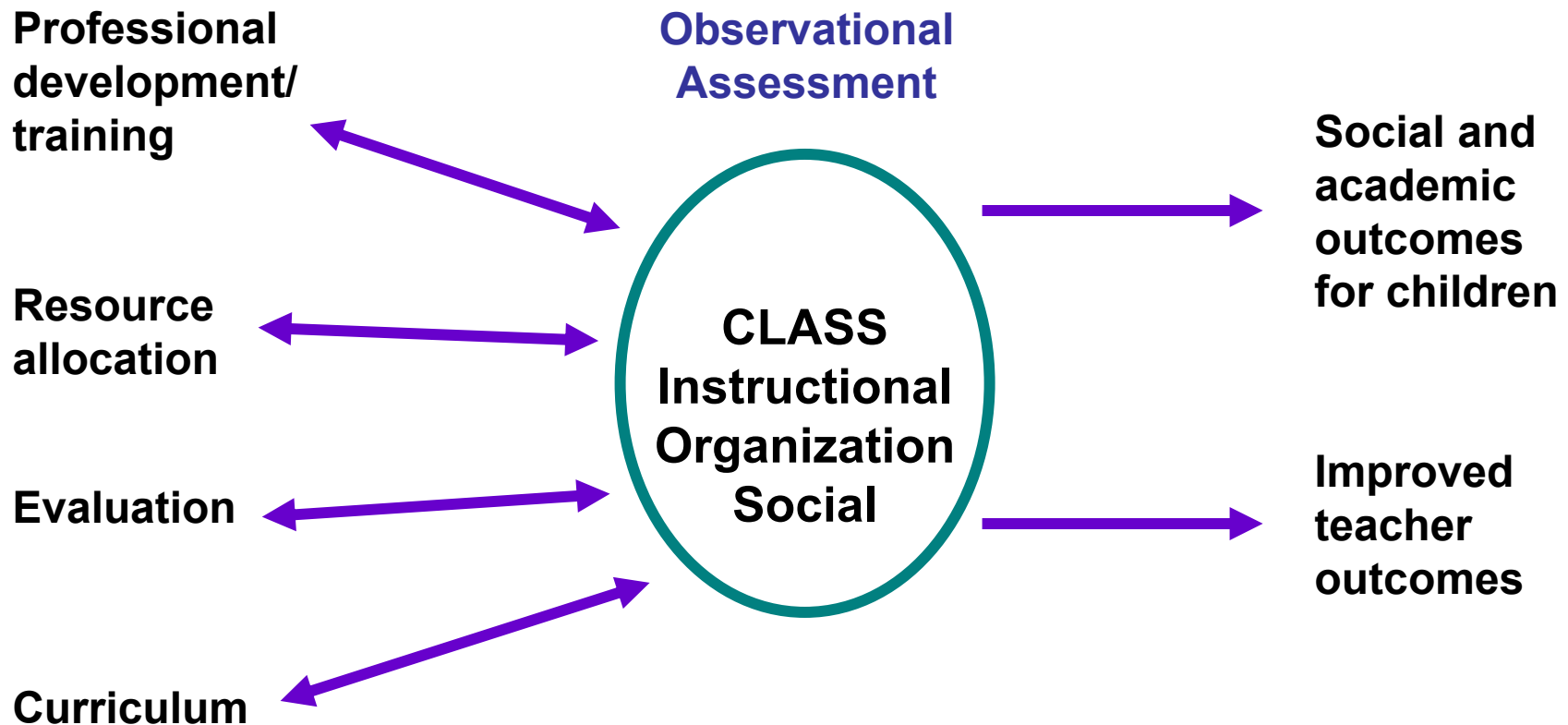
myTeachingPartner
Building language, literacy, and social relationships.

Focus on interactions in classrooms

- Teacher-child interactions and relationships are the means by which the curricula are implemented

- MTP uses CLASS as the basis for defining high-quality implementation and as the target/focus of professional development

- Goals of MTP are to:

  - Increase teachers' observation skills in identifying interactive behaviors and cues related to CLASS

  - Identify children's differential responses to teacher behaviors

  - Increase teachers' skills in identifying alternative responses to children's' cues – create opportunity

MTP support for teachers

MTP Activities

Two forms of web-based support for quality implementation

Teacher-child interactions and relationships: CLASS

Student growth in language, literacy and social relationships
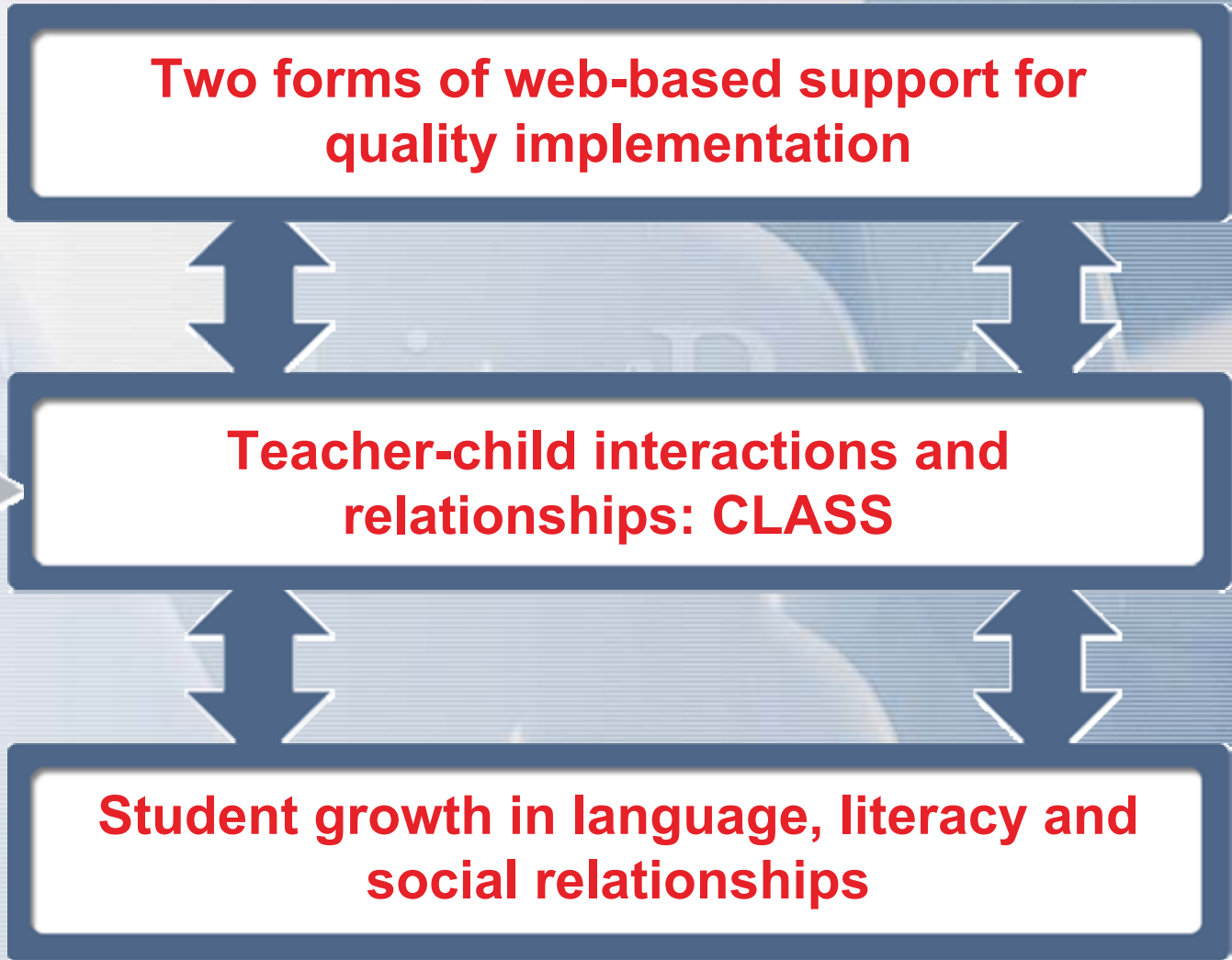
Quality teaching videos: PK-3

CLASS examples: PK-3

MTP consultation cycle

1 Classroom video recording at an established time

2 Consultant reviews and edits video clips

3 Teacher reviews clips and reflects on practice

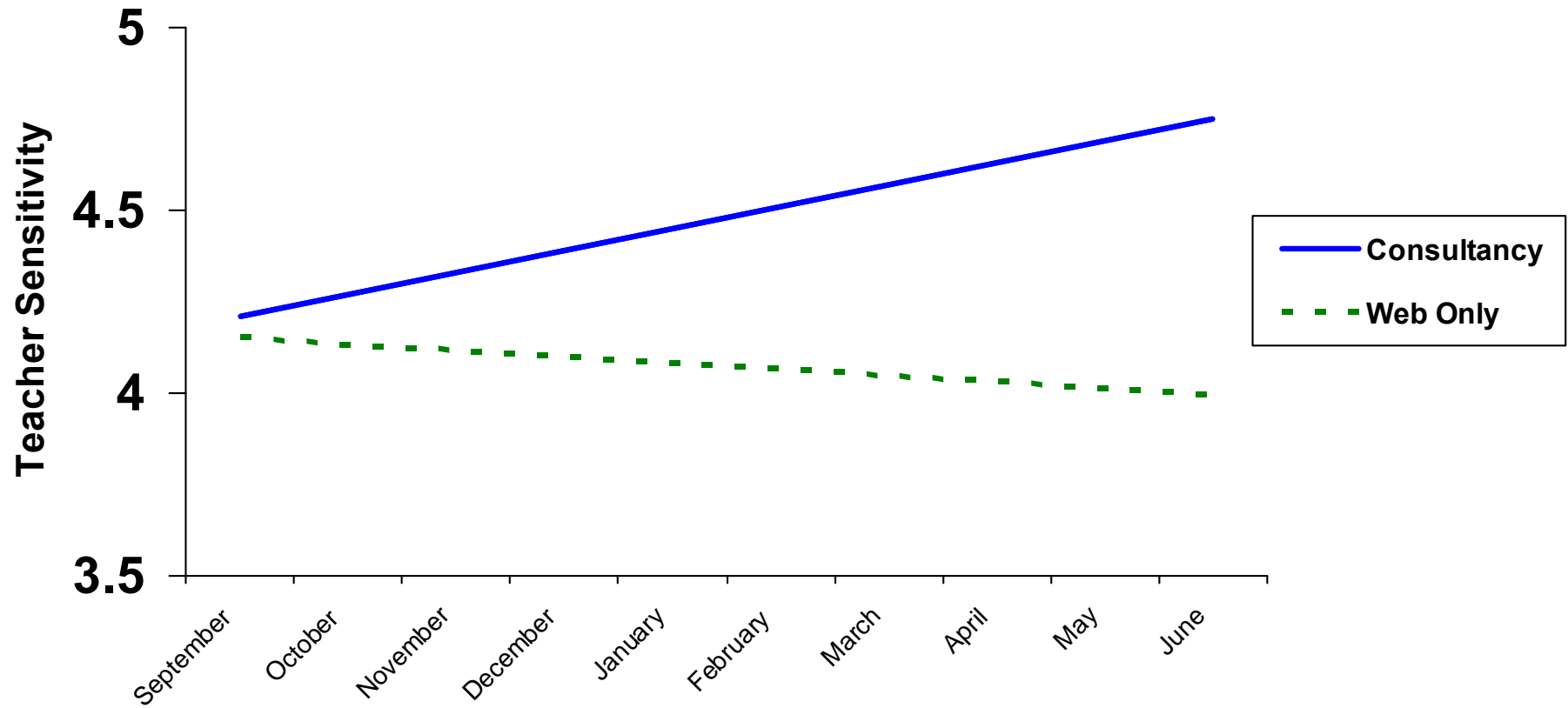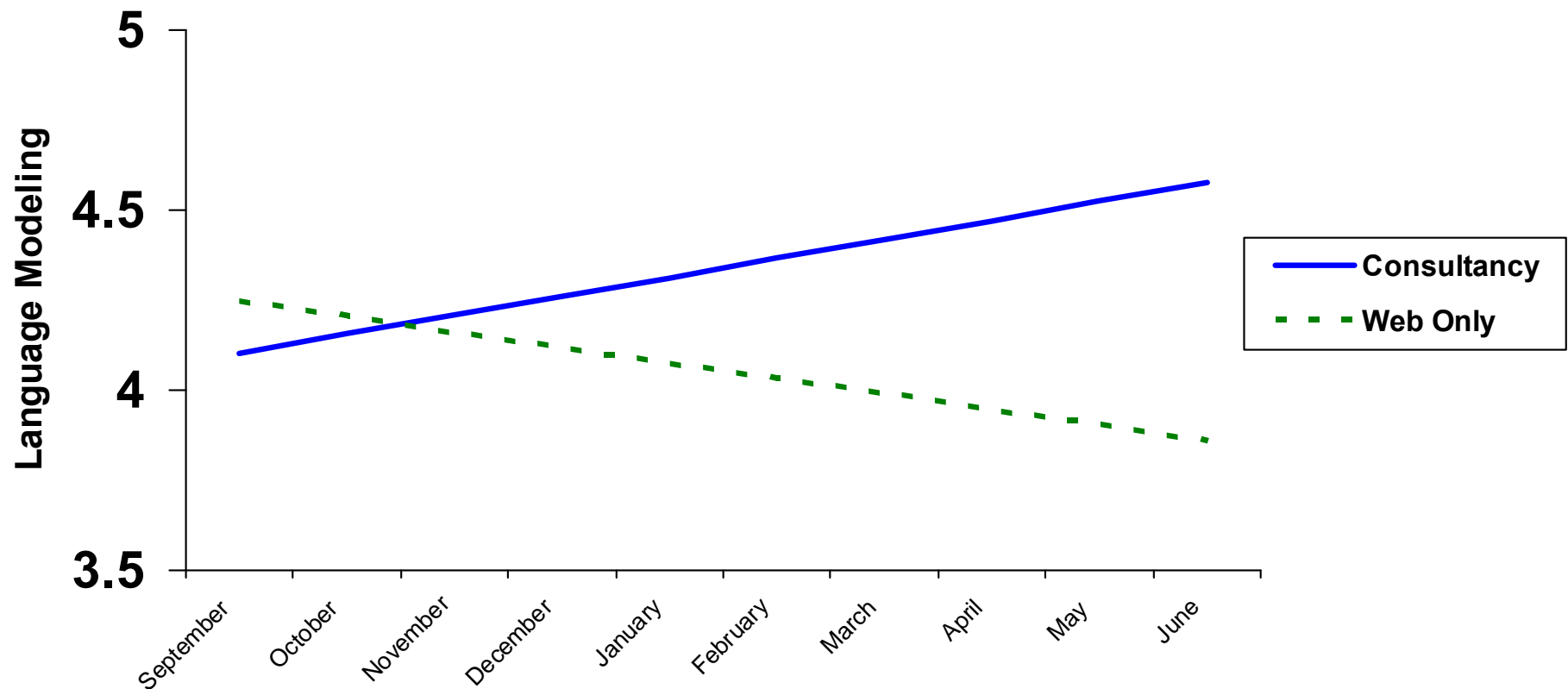**4** Teacher and consultant meet and discuss teaching practices

Changes in sensitivity for teachers in the MTP consultation and web only study conditions
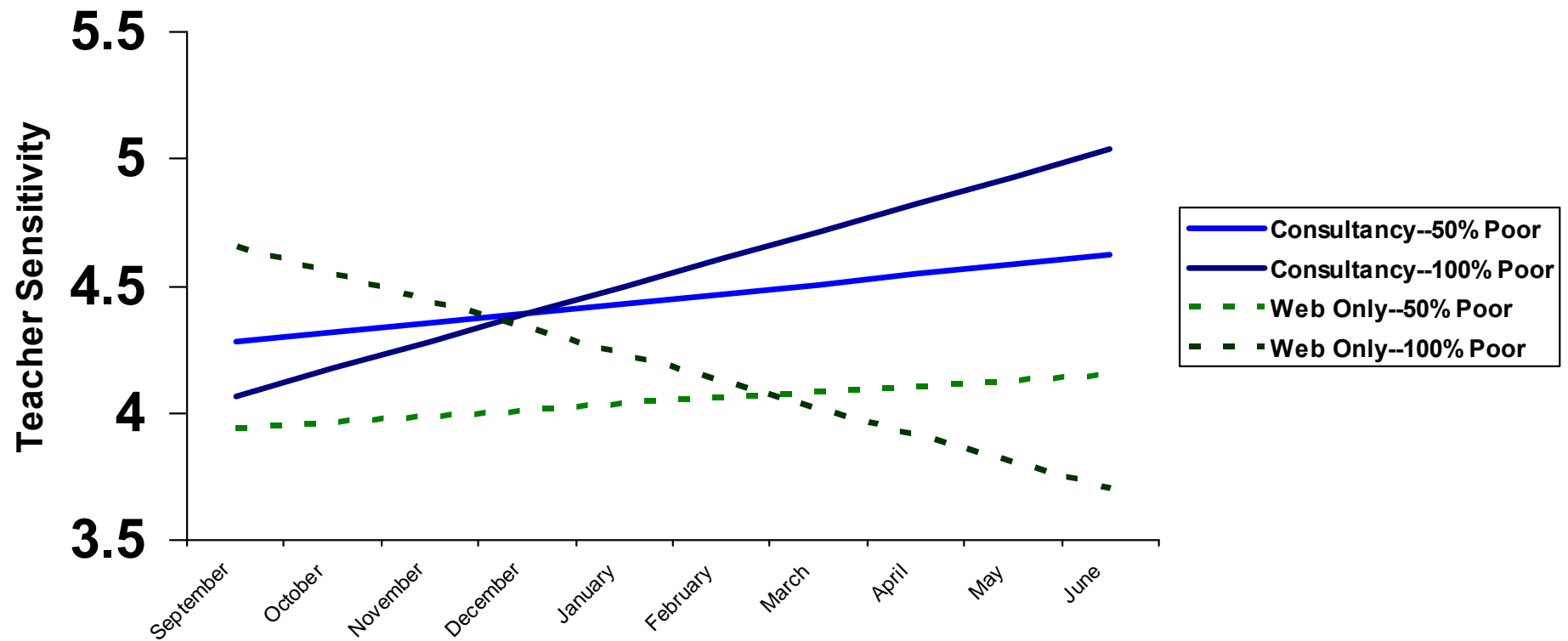
Changes in language stimulation for teachers in the MTP consultation and web conditions
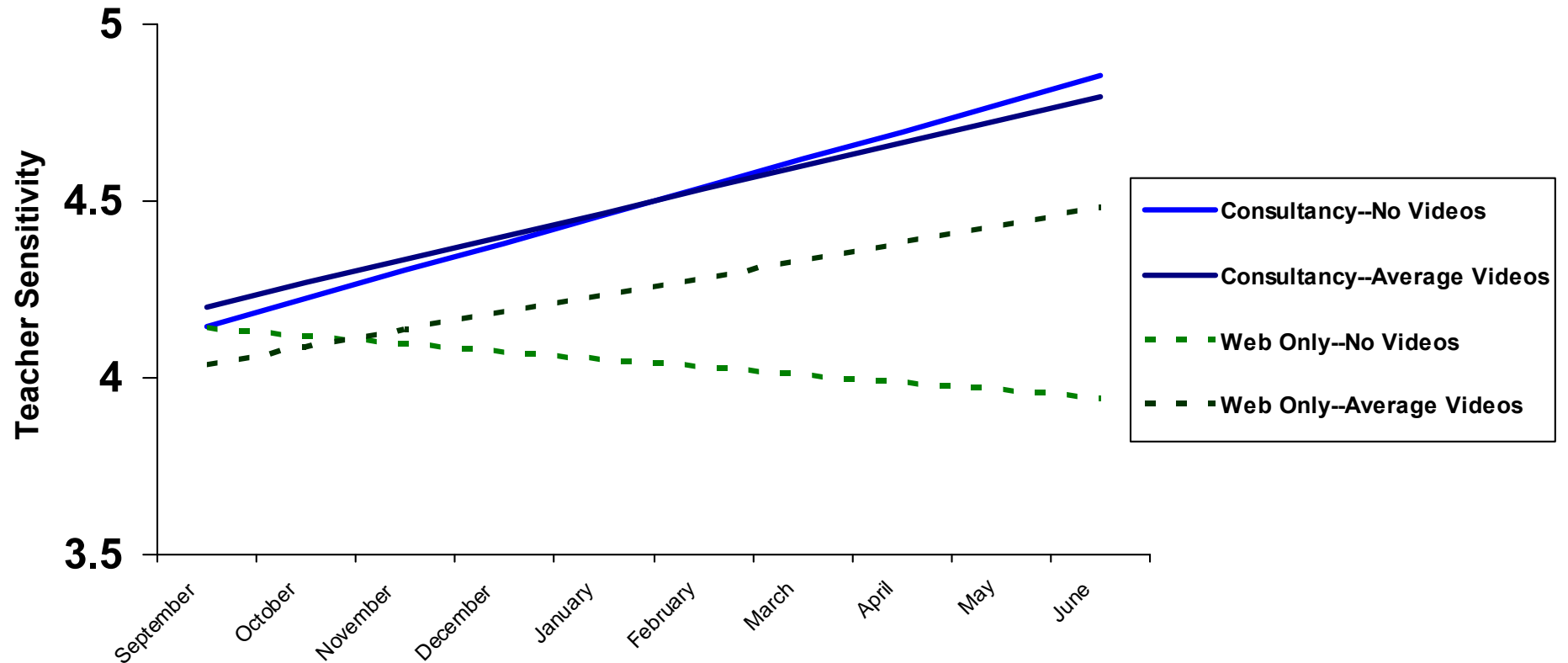
Moderating effects of study condition on the association between classroom poverty and changes in teacher sensitivity

Moderating effects of study condition on the association between visiting video pages and changes in teacher sensitivity

Effects of MTP support: Results

- **Teachers receiving consultation show greater increases in quality of instructional interactions**

- **When teachers participate in consultation, children show greater gains in tests of early literacy**

- **Early career teachers who view CLASS videos show gains in interactions with children**

- **When teachers participate in consultation, they report lower levels of problem behavior for target children**

Standardized observation of interactions

- **Is feasible, reliable and valid. A scalable language and lens for classroom settings**

- **Three domains: Emotional, Organizational, Instructional appear valid across grades**

- **A lever for research on teacher professional development and preparation to increase setting quality and child outcomes**

- **Implications for accountability systems, teacher quality, research on teacher ed.**