Improving Impacts of Classrooms: Professional Development and Classroom Observation

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Questions and challenges for policy, research, and training in education

- What experiences for learning and development are offered to students in classroom settings?
- Do interactions with teachers and experiences in classrooms matter for students?
- Can observation leverage efforts to improve the richness, quality, and effectiveness of experiences in classrooms?
- Can we define and assess teacher quality in terms of actual performance?
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, 5 – more than 4,000 classrooms

- Largest set of systematic standardized classroom observations in U.S. schools

- All teachers credentialed/certified

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 (50%-90% of instruction)
- Exceptional variation within and across grades and classrooms

How do students spend time?

- High-levels (30%) of “business/routine” activity
  - Pk-5: managing materials, routines

- High levels of “basic skills” focus
  - 7:1 in pk-1; 14:1 in 3-5

- Ratio of listening, sitting, watching: Doing
  - 10:1 across grades
Rating interactions: What is the CLASS?

Focus on teachers’ interactions with students

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

Three broad domains, consistent pk-12:

- Emotional Support
- Organization / Management
- Instructional support
### Classroom ratings: CLASS PK-5

<table>
<thead>
<tr>
<th>Emotional Support</th>
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<tbody>
<tr>
<td>- Positive climate</td>
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<tr>
<td>- Negative climate</td>
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<tr>
<td>- Teacher sensitivity</td>
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<td>- Regard for student perspectives</td>
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<table>
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<th>Organization/Management</th>
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<tbody>
<tr>
<td>- Effective behavior management</td>
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<tr>
<td>- Learning formats/engagement</td>
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<tr>
<td>- Productivity</td>
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<tr>
<th>Instructional Support</th>
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<tbody>
<tr>
<td>- Concept development</td>
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<td>- Evaluative feedback</td>
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<tr>
<td>- Language modeling</td>
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Emotional Support

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

- Relationships, Affect, Respect, Communication
  - Punitive, Sarcasm/disrespect, Negativity
  - Aware, Responsive, Address problem, Comfort
  - Flexibility, Autonomy, Student expression

Classroom Organization

- Behavior management
- Productivity
- Instructional learning formats

- Clear expectation, Proactive, Redirection
  - Maximize time, Efficient routines and transitions
  - Variety, Promote student interest, Clarity, Engaging

Instructional Support

- Concept development
- Quality of feedback
- Language modeling

- Analysis/reasoning, Creativity, Integration
  - Feedback loops, Encourage responses, Expand performance
  - Conversation, Open-ended, Repeat/extend, Advanced language
Features of teacher-student interaction

- Positive emotional climate
- Productivity
- Quality of feedback
Pre-k quality and growth in child outcomes

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

- Predicting achievement growth during pre-k 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 (.15-.20) persist into kindergarten

Predicting student development in pre-k

<table>
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<th>Emotional Support</th>
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<th>ECERS-R Total</th>
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<tbody>
<tr>
<td>Receptive Language</td>
<td>✓</td>
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<tr>
<td>Expressive Language</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Rhyming</td>
<td>✓</td>
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<td>Letter Naming</td>
<td>✓</td>
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<td>Math Skills</td>
<td>✓</td>
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<tr>
<td>Social Competence</td>
<td>✓</td>
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<tr>
<td>Behavior Problems</td>
<td>✓</td>
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Changes in children’s development from beginning to end of preschool
Mashburn, et al. (in press)
Gains in grade 1 achievement in instructionally supportive classrooms

1st Grade Instructional Support

Implications of our work

- Focus regulation and training on teachers’ interactions with children—standards and measures
- 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
- Incentives, PD supports, and targets for teacher behavior/performance in classrooms

Support for high-quality interactions

- Professional development/training
- Resource allocation
- Evaluation
- Curriculum

CLASS Instructional Organization Emotional

Observational Assessment

Social and academic outcomes for children
Improved teacher outcomes

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
- Increase teachers’ skills in identifying alternative responses to children's’ cues – create opportunity
- Two web-based treatments: video exemplars and consultation – focus on own or others’ behavior
Quality teaching videos: PK-3

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.

Select from the pulldown or pick one of the main categories below.
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.
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
MTP Prompts: Feedback for teachers

Nice Work.

PROMPT #1:
When teachers anticipate and respond to students' academic, emotional, and social needs, they demonstrate Teacher Sensitivity. What do you see yourself doing in this clip that reflects your understanding of the difficulty the students may have in writing their personal narratives?

DIMENSION FOCUS:
Learn more about Teacher Sensitivity before reviewing this clip and submitting your response.
** Clinking on this link should open up a new browser.

YOUR RESPONSE:

Submit My Response

<<<PLAY VIDEO:
Roll over the video and press the play button below to being.
Testing effects of MTP treatment models

- Statewide pre-kindergarten programs in 41 districts

- Districts stratified and classrooms recruited then randomized (220) into web-only, web consultation, and materials groups.

- Measures: Teacher demographics, attitudes; classroom composition; teacher-child interactions; 4 students selected randomly for pre-post tests

- Process data: Implementation; consultation process; web-logs and site usage
Changes in sensitivity for teachers in the MTP consultation and web-only study conditions

![Graph showing changes in teacher sensitivity over time. The blue line represents Consultancy, while the green dashed line represents Web Only. The sensitivity scores range from 3.5 to 5.0, with a general upward trend from September to June.]
Changes in language stimulation for teachers in the MTP consultation and web conditions
Consultation reduces the negative impacts of poverty on teacher-child interactions – More supports required in high-poverty classrooms
Effects of MTP support: Summary

- Teachers receiving consultation show greater increases in quality of instructional interactions.
- Children with teachers in consultancy show greater gains in tests of early literacy and language development; lower levels of problem behavior.
- Consultation reduces effects of poverty.
- Early career teachers who have greater exposure to either condition show gains in interactions and child outcomes.
- Teachers report high levels of satisfaction, motivation, and lower isolation.

Standardized observation of interactions

- 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 education