Revolutionizing early childhood teaching

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Today’s presentation

- Demand for effective teaching and teacher training
- Measurement of teacher-child interactions
- NCRECE professional development study and MyTeachingPartner approach
- Implications
Teacher-Child Interactions (these matter)

- Emotional Support
- Classroom Organization
- Instructional Support
Dimensions of interaction: CLASS PK-5

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

- Effective behavior management
- Learning formats/engagement
- Productivity

- Concept development
- Evaluative feedback
- Language modeling

Emotional Support
Organization/Management
Instructional Support
Average Ratings of Interactions in Pre-K - 3rd Classrooms

- Emotional Support
- Classroom Organization
- Instructional Support
## Interactions and children’s PK development

<table>
<thead>
<tr>
<th></th>
<th>Emotional Support</th>
<th>Instructional Support</th>
<th>ECERS-R Total</th>
<th>Structural</th>
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</thead>
<tbody>
<tr>
<td><strong>Receptive Language</strong></td>
<td>✓</td>
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<tr>
<td><strong>Expressive Language</strong></td>
<td>✓</td>
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<td><strong>Rhyming</strong></td>
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<td><strong>Letter Naming</strong></td>
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<td><strong>Math Skills</strong></td>
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<td><strong>Social Competence</strong></td>
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<td><strong>Behavior Problems</strong></td>
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*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.

- One-point differences in observed instructional supports appear linked to shifts in child outcomes.
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
Similar findings for dual-language learners?

- Two major studies
- Does CLASS describe interactions in language-diverse settings?
- Does CLASS predict outcomes similarly?
- CLASS 3-factor structure and psychometric properties same across diverse classrooms
- Predicts outcomes similarly for DLLs
- Evidence supports use in diverse settings
Gains in grade 1 achievement in instructionally supportive classrooms.

Standardized tests of achievement adjusted.

1st Grade Instructional Support

- Low
- Moderate
- High

High educ.
Low educ.
Aligned professional development: MTP

- Connecting outcomes and inputs – Alignment
- CLASS – specific definitions of interactions
- Video Library – analysis of others’ interactions
- Coaching – ongoing analysis/feedback on own interactions
- Course – knowledge and analytic skills
- All tested in RCTs
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.

<table>
<thead>
<tr>
<th>Teacher Sensitivity</th>
<th>Positive Climate</th>
<th>Regard for Student Perspectives</th>
<th>Behavior Management</th>
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<tbody>
<tr>
<td><img src="image1" alt="Teacher Sensitivity Image" /></td>
<td><img src="image2" alt="Positive Climate Image" /></td>
<td><img src="image3" alt="Regard for Student Perspectives Image" /></td>
<td><img src="image4" alt="Behavior Management Image" /></td>
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<th>Concept Development</th>
<th>Instructional Learning Formats</th>
<th>Literacy Focus</th>
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<td><img src="image6" alt="Concept Development Image" /></td>
<td><img src="image7" alt="Instructional Learning Formats Image" /></td>
<td><img src="image8" alt="Literacy Focus Image" /></td>
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<th>Children's Engagement</th>
<th>Language Modeling</th>
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<td><img src="image9" alt="Quality of Feedback Image" /></td>
<td><img src="image10" alt="Children's Engagement Image" /></td>
<td><img src="image11" alt="Language Modeling Image" /></td>
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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
MyTeachingPartner research

- 240 participating pre-K teachers split into groups based on three conditions:
  - Materials (traditional)
  - Website access, materials
  - Website access, materials, MTP

- Support high-quality teacher-child interactions with the CLASS as the frame

- **Key features** – specificity and standardization
MTP Coaching improves interactions

Teacher Sensitivity

- MTP
- Control
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
NCRECE professional development study

NCRECE evaluates two PD supports:

- In-service course on effective interactions for language/literacy
- In-service coaching using MyTeachingPartner
Sample characteristics

Teachers: N = 506

- 45% with Bachelor’s degree, 42% with AA or less
- 13% with Master’s degree
- Mean years teaching preschool: 11.3 (s.d., 7.8)
- Ethnicity: African American 47%; White 33%; Latina 9%; Asian 3%; Other 8%
- 10 early ed sites, mostly urban, 60% HS
- Higher education partners at each site
Course objectives

- Identify connections between teacher-child interactions, child development, and learning

- Describe elements of effective teaching as defined by Classroom Assessment Scoring System (CLASS)

- Accurately observe effective and ineffective interactions with children using CLASS

- Describe implementing language and literacy curricula through effective teacher-child interactions
Course impacts on beliefs, knowledge, skill

*Course impacts on beliefs, knowledge, skill*

- Teaching Belief: *p<.05; ** p<.01; ***p<.001*
- Teaching Knowledge: ***
- Skill in Seeing Effective Interactions: ***

Legend:
- Green: After Course
- Blue: 1 Yr Later
Course impacts on teaching practice

* Effect Size

- Emotional Support
- Classroom Organization
- Instructional Support

After Course
1 Yr Later

*p<.05; ** p<.01; ***p<.001
MTP coaching protocol – Phase 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 impacts on emotional support

- Positive Climate: n.s.
- Negative Climate: n.s.
- Teacher Sensitivity: n.s.
- Regard for Child Perspectives: *p<.05

*p<.05; **p<.01; ***p<.001
Coaching impacts on instructional support

*p<.05; ** p<.01; ***p<.001
Implementation questions

- Can effective PD, such as MTP or the course, be delivered with fidelity and quality at scale?
- How does implementation relate to teachers’ engagement and changes in teachers’ practice?
- Can we train external instructors and coaches to deliver the interventions as intended?
- Is the quality of implementation strong at scale?
Did course instructors follow plans?

Fidelity to course was strong with limited variability among instructors.
Did local coaches follow plans?

MTP coaches delivered coaching as intended – higher in 2nd cohort
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.
Improving impacts of classrooms

- Standardized, valid observations can be scaled and integrated into human capital management and PD

- New policy frameworks (QRIS, HCMS, RTT) offer potential, but also require careful evaluation

- Focus performance measures and PD on teachers’ interactions with children – common language and aligned systems

- Aligned PD improves interactions and student outcomes – experimental studies

- Incentives, supports, and targets for teacher behavior/performance in classrooms – implications

- We can improve teachers’ impacts on kids