JULY 2014

Teacher-Child Interactions in Early Childhood

Research Summary

Teachstone® : CLASS®

What does quality teaching look like in an early childhood classroom? Twenty-five years ago, it was providing a safe place for children to play, with stimulating materials and books to read. Today, we have provided those basics in most early childhood classrooms, and our focus has shifted to the hows of quality— how teachers interact with children, how they use time and materials to get the most out of everymoment, and how they ensure that children are engaged and stimulated.

Our focus has shifted to the **HOWs** of quality.

Imagine two classrooms down the hall from each other, both with high-quality resources and materials. In the classroom with more effective interactions, the teachers are actively engaged with the children—being a "challenging customer" in the children's pretend restaurant, encouraging children in the paint area to experiment with mixing colors, and helping a child brainstorm what to do while waiting for his turn on the computer. The children respond with deep engagement and eagerness to contribute their own ideas, and these everyday activities challenge them to engage in social problem solving, create and test hypotheses about the physical world, and learn to regulate their behavior.

In the less effective classroom, the teachers sit close to the children but take a less active role. Children are comfortable involving them in play, but the teachers miss opportunities to take interactions deeper. Some children pull basket after basket off the shelves, playing with each activity for a minute or two before moving on to the next. Others hover at the edges, not sure what to do. In between brief conversations with children, the teachers discuss their plans for the rest of the school day. The children are safe and comfortable but do not stay engaged with activities for long and seem to wander from one thing to the next.

Teachers face enormous distractions with paperwork, routine care, and packed schedules. But some teachers manage to cut through these distractions to truly connect with children, and research shows that these teachers have significant and lasting effects on outcomes. The Classroom Assessment Scoring System® (CLASS®) observation measures were developed to make effective teacher-child interactions objective and measurable. The CLASS framework also serves as a roadmap for improving interactions by defining in detail interactions that matter most for children.The CLASS system is rooted in the theory that interactions between teachers and children fundamentally drive learning: effective teachers actively engage with children and create environments that are conducive to learning.[1] This theory has been supported by studies involving thousands of classrooms and tens of thousands of students across age levels, from infancy through secondary school.

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Early Childhood: Ages 3 through 8

The conceptual and theoretical bases for the CLASS framework were initially developed as part of the landmark NICHD Study of Early Child Care and Youth Development (SECCYD), which followed over 1,300 children born in 1991 from birth through high school. The Classroom Observation Record, a precursor to the CLASS tool that was used in the SECCYD study, demonstrated that:

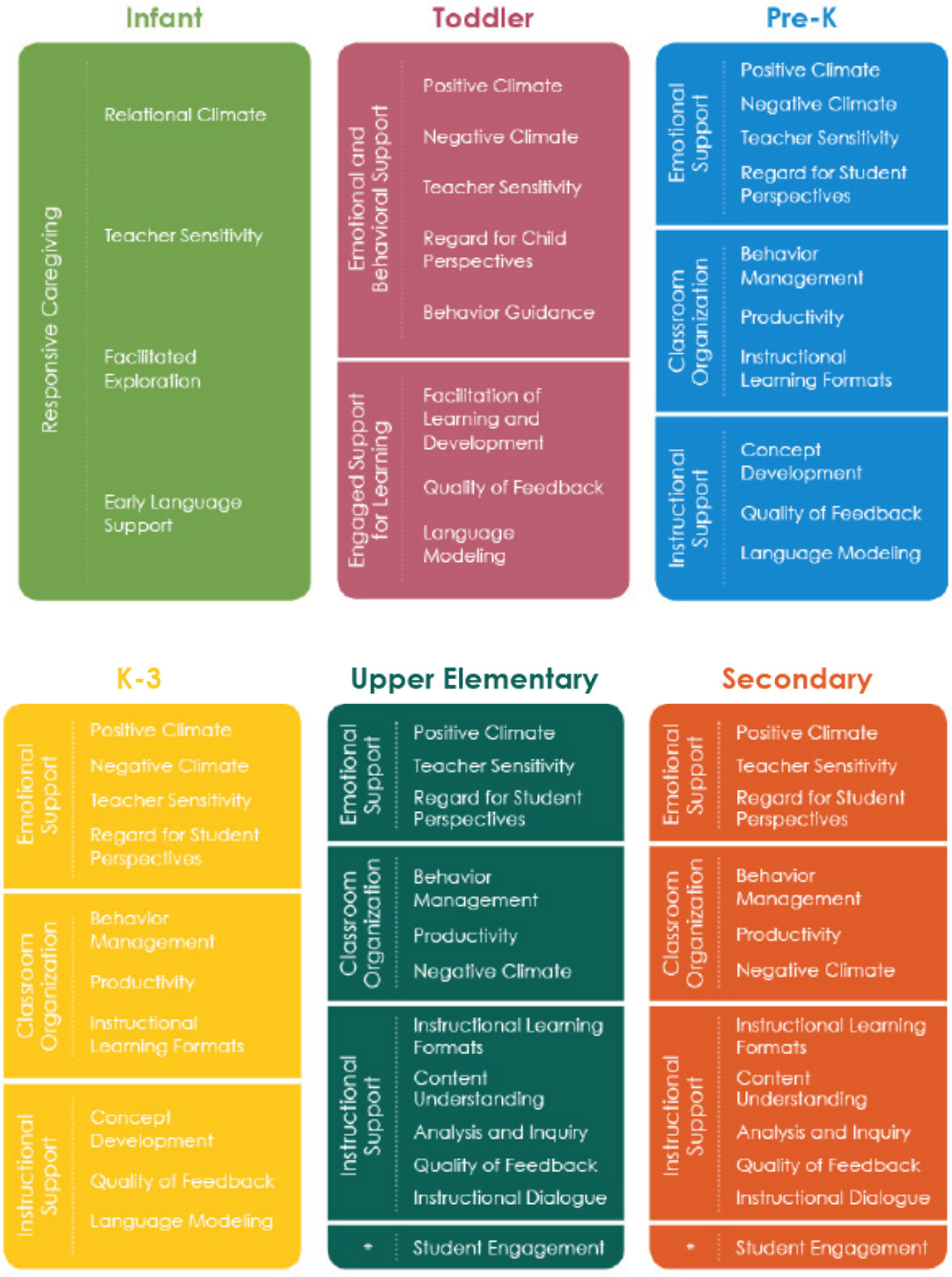
- In first grade, more effective emotional and instructional support were associated with students' higher engagement in academic activities, more positive behavior with peers, and less negative behavior with teachers and peers. [2]
- First-grade children identified as at risk for school failure had similar achievement to their not-at-risk peers when their first-grade classrooms provided high levels of emotional and instructional support. [3]
- From kindergarten to fifth grade, students who made more rapid progress in reading and math were more likely to be in classes with emotionally supportive teacher-child interactions. [4]

The CLASS tool in its current form was developed and validated in a large-scale study of state-funded preschool programs that was conducted in 11 states, involving 671 classrooms with over 2,400 children who were followed into kindergarten. This study demonstrated that effective Instructional Support was associated with greater preschool gains in receptive vocabulary, expressive vocabulary, rhyming skills, letter naming, and math skills. Effective Emotional Support was associated with gains in social competence and decreases in problem behaviors. [5]

Researchers also used these data to examine the use of the CLASS tool in diverse settings, including in preschool classrooms that serve children with varying proportions of Hispanic/Latino children and children who are dual language learners (DLLs). Findings indicated that the CLASS tool is valid and predicts student outcomes equally well in classrooms with more versus fewer Hispanic/Latino children, and with more versus fewer DLLs. [6]

These early, large-scale studies demonstrated the importance of effective teacher-child interactions to student's academic and social development in early childhood. Additional studies have extended this work into infant and toddler classrooms.

Across age levels, effective interactions are organized into CLASS domains and dimensions.



*The Student Engagement dimension measures student involvement and focus. This dimension focuses solely on student behaviors.

The Early Years: Birth to Age Three

Although more and more infants and toddlers spend time in nonparental care, access to high-quality care environments is limited. [7] Effective teacher-child interactions that are warm and stimulating are a key component of quality in early care settings. Research suggests that these types of interactions provide a foundation for young children's cognitive and social-emotional development. [8]

Recently, versions of the CLASS framework have been developed to capture effective interactions in infant and toddler classrooms. The Toddler CLASS observation measure captures two domains of interactions: Emotional and Behavioral Support and Engaged Support for Learning, subdivided into eight dimensions. Early findings indicate that scores on the Toddler CLASS measure are positively associated with state quality ratings, smaller group sizes, and better teacher qualifications. [9] In a large-scale study of nearly 500 Early Head Start classrooms, several associations with child outcomes were found, including associations with early language skills and behavior problems [10] ; however, further research is needed to replicate and extend these findings. A more recent study found associations between Emotional and Behavioral Support scores and lower levels of child behavior problems. [11]

The Infant CLASS observation measure captures teacher-child interactions as part of a single domain, called Responsive Caregiving, subdivided into four dimensions. An initial study showed that Infant CLASS scores were correlated with scores on the ITERS-R, another measure of child-care quality, and that individual dimension scores were correlated with lower teacher: child ratios and more years of infant teaching experience. [12] In pilot testing across six sites, Infant CLASS scores showed high stability across the school day. Analyses also confirmed that the four dimensions of the tool were best represented by a single domain rather than multiple separate domains. [13]

Improving Teacher-Child Interactions

One of the most important findings from CLASS-based research over the past decade is that teachers can improve their interactions with children. Several professional development programs tested in research settings have resulted in significant improvements ranging from one-fifth to a full point on the seven-point CLASS scale—small differences that mean real improvements in quality and child outcomes. Programs and resources that have proven effective at increasing CLASS scores include coaching, coursework, and a video library of effective teaching exemplars.

Coaching. MyTeachingPartner™ (MTP™) is a structured coaching program in which a teacher works one-on-one with a coach for a 10-month period to analyze their own classroom video and focus on individual areas for growth. A study of MTP coaching [14] showed that:

- Participation in MTP coaching led to significant gains in teacher-child interactions in all three Pre-K CLASS domains.
- Children in the MTP classrooms made greater language and literacy gains compared to children in a control group.

As Teachstone® has taken MTP coaching to scale in large city- and state-wide projects, results from the field have been promising. Across several projects, coaches were able to implement the program with levels of quality and intensity similar to those seen in the research setting. Additionally, an evaluation of the First 5 California CARES Plus MTP program demonstrated that teachers in MTP coaching made significant gains in Classroom Organization and Instructional Support. [15]

Coursework. Another research study tested the efficacy of a CLASS-based course focused on teacher-child interactions and language and literacy development. Instructors provided teachers with in-depth instruction on each of the CLASS dimensions and opportunities to

identify effective interactions in authentic classroom videos. In a randomized, controlled study of the course, participation led to significant gains in the dimensions of Positive Climate, Teacher Sensitivity, Regard for Student Perspectives, Instructional Learning Formats, Concept Development, Quality of Feedback, and Language Modeling.

Video Library. The CLASS Video Library uses real classroom video to show examples of highly effective teacher-child interactions. In a study, teachers who made greater use of the Video Library showed larger improvements in their teacher-child interactions. [16] Those gains were associated with stronger social-emotional outcomes in children. [17]

New Directions in Research

The first generation of research on teacher-child interactions demonstrated their importance for a range of child outcomes, including early academic skills, social-emotional skills, and self-regulation. A second generation of research has emerged over the past 10 years focused on better understanding teacher-child interactions and the mechanisms through which they produce effects, as well as broader policy questions around improving interactions at scale.

Child engagement and learning to learn.

One way that teacher-child interactions affect outcomes is through increased child engagement in learning. Effective teachers are better at drawing children into learning and keeping them engaged, which in turn leads to better academic outcomes. [18] Effective interactions also support development of children's learning-to-learn skills, including attention, persistence, and frustration tolerance—skills that are linked to better early learning outcomes. [19] The effects of highly engaging interactions can be seen across a single morning of observation: more effective interactions directly lead to more positive and constructive engagement on the part of children in the moments that follow. [20]

Consistency across the school day. A recent line of research examines consistency in Emotional Support, considered separately from average levels of Emotional Support, in predicting child outcomes. Researchers theorized that children establish trust in their caregivers when they know what to expect from them, and this trust sets the stage for productive learning. Findings support this theory, showing that consistency in interactions is related to academic and social-emotional outcomes beyond teachers' average Emotional Support scores. [21] [22]

Focusing professional development. A re-analysis of a large dataset suggests that three dimensions—Positive Climate, Productivity, and Concept Development—stand out as being the most closely linked to children's early academic skills, suggesting that these dimensions may warrant extra attention when designing professional development. [23] Additionally, research into MyTeachingPartner coaching indicates that improvements in Emotional Support and Instructional Support follow different patterns. Gains were seen in all three CLASS domains when coaches and teachers focused their sessions on Instructional Support, although effects leveled off after 11 to 15 sessions. Emotional Support gains were seen in response to watching video exemplars, although a minimum of about 15 minutes of video watching was necessary to see initial results. [24]

Quality rating and improvement systems. An increasingly popular policy tool in early childhood, Quality Rating and Improvement Systems (QRISs) are designed to incentivize programs to improve their quality. A study recreating common QRIS standards using a measure of global quality found few links to child outcomes. However, in the same data, CLASS scores were significantly related to outcomes. [25] In a separate evaluation, the Virginia state QRIS system, which includes the CLASS measure and gives it substantial weight, significantly predicted gains in child outcomes. [26]

These results and others contribute to the growing knowledge base around teacher-child interactions. This knowledge base demonstrates that interactions are a key component of quality in early child care and education, predicting outcomes across measures of academic, social, and behavioral development. Furthermore, studies show that targeted professional development built around the CLASS framework can help teachers improve their outcomes, netting measurable benefits for the children in their care. Ongoing research will continue to build our understanding of this critical aspect of quality.

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