Interactions Are the Active Ingredient in Classrooms

Past attempts to define and measure quality in early childhood education have yielded limited results. We now know that many of the more commonly debated regulations intended to improve the quality of classrooms (i.e., class size, teacher education, and credentialing) are not sufficient to ensure that children make academic and social progress.\(^1\, ^2\)

Likewise, the implementation of different curricula has done little to improve student achievement, because it is teachers’ facilitation of learning objectives—not simply having the curriculum box on the shelf—that determines whether children benefit from instruction.\(^3\) Consistent evidence suggests that if we want to improve children’s academic achievement and social skill development, we need to focus on how teachers instruct and relate with children.\(^4\)

As the figure below illustrates, when we identify and measure effective interactions, we can create opportunities to promote them through teacher education, professional development, and monitoring and evaluation. Moreover, teachers increase their competencies, become more effective teachers, experience greater job satisfaction, and remain in the field of teaching. Most importantly, more effective teacher-student interactions and improved teacher outcomes lead to enhanced outcomes for children—children learn more and develop the social skills necessary for future achievement.

---

**Effective Teacher-Student Interactions**

Measuring and Improving Classroom Practice

**Interactions Are the Active Ingredient in Classrooms**

Investing in research-based tools to help teachers and schools to improve the quality of their interactions with children has the potential to make a difference in our young children’s lives. The Classroom Assessment Scoring System\(^5\) (CLASS) is one tool that can help federal agencies, state departments of education, non-profit organizations, and schools take a step in this direction. CLASS offers a research-based approach to defining and measuring effective interactions in early childhood and elementary classrooms. The CLASS also provides aligned professional development supports to give targeted feedback to programs and teachers, with the overarching goal of improving outcomes for children in Pre-K - 3rd classrooms.

CLASS is supported, in part, by grants from the Foundation for Child Development and the Picower Foundation.

For more information about CLASS please visit: www.classobservation.com
E-mail us at: contact@classobservation.com
or call 1-866-301-8278, ext.4

---

**Effective teacher-student interactions create:**

- **Emotional Support**
  - Positive relationships among teachers and children

- **Classroom Organization**
  - Well-managed classrooms that provide children with frequent, engaging learning activities

- **Instructional Support**
  - Interactions that teach children to think, provide ongoing feedback and support, and facilitate language development

**Effective Teacher-Student Interactions**

- Teacher Preparation/Education
- Ongoing Professional Development
- Curriculum
- Evaluation

**Effective Teacher-Student Interactions that Impact Student Learning**

**Social & Academic Outcomes for Children**

**Improved Teacher Outcomes**
Too Few Students are Exposed to the Interactions that Matter Most

To improve the effectiveness of teacher-student interactions, we must first know how to assess them.

The Classroom Assessment Scoring System® (CLASS) provides a reliable, valid assessment of effective interactions. The CLASS assesses three broad domains of effective interactions—Emotional Support, Classroom Organization, and Instructional Support—that characterize children’s classroom experiences in Pre-K-3rd grades. Each domain is comprised of multiple dimensions of effective interactions known to contribute to children’s success in school, such as Teacher Sensitivity, Behavior Management, and Quality of Feedback.

Research conducted in over 3,000 classrooms concludes that from Pre-K programs into the third grade, children in classrooms with higher CLASS ratings realize greater gains in achievement and social skill development.

The link between effective interactions and improved social and academic outcomes for children has been replicated in numerous studies across the Pre-K and elementary years. In fact, effective teacher-student interactions can mitigate the achievement gap.

Unfortunately, too few children are exposed to these types of effective interactions in the early grades. In a study of 700 preschool classrooms across 11 states, less than 15% of classrooms were observed to display moderately to highly effective teacher-student interactions across all three categories. Moreover, effective interactions are highly variable from year to year. In a study that followed 800 students from first through fifth grade, less than 10% of children were consistently enrolled in classrooms that scored in the mid- to upper range for effective interactions. Significantly, children from low income families are less likely to experience effective teacher-student interactions, relative to middle-income peers.

Selected studies demonstrate:

- higher levels of instructional support are related to preschoolers’ gains in pre-reading and math skills;
- high levels of emotional support contribute to preschoolers’ social competence in the kindergarten year;
- high levels of emotional support are associated with growth in reading and math achievement from kindergarten through third grade;
- high levels of classroom organization are associated with gains in first graders’ literacy;
- kindergarten children are more engaged and exhibit greater self-control in classrooms offering more effective teacher-child interactions;
- 1st grade children at-risk for school failure perform on par with peers, both socially and academically, when exposed to classrooms with effective teacher-child interactions.

This figure illustrates that across several thousand Pre-K-3rd classrooms observed throughout the country, children tend to experience moderate to high levels of effective interactions for emotional support and classroom organization. However, most children attend Pre-K-3rd classrooms characterized by very low levels of instructional support.
Effective Teacher-Student Interactions: Measuring and Improving Classroom Practice

The ability to demonstrate even small improvements in effective interactions has practical implications: differences in just over one point on the CLASS seven-point scale translate into improved achievement and social skill development for children. Moreover, children who experience effective interactions for several years receive cumulative benefits. Children enrolled in classrooms that average just over one point higher on CLASS for two consecutive years score significantly better on several standardized tests of language and literacy than their peers in classrooms with lower CLASS scores for two years.¹⁵

The creators of the CLASS have partnered with federal agencies as well as state departments of education to develop systems that use CLASS to measure and improve classroom practices.

The CLASS can be used in:
- Teacher preparation and education
- Professional development
- Program monitoring
- Research and evaluation

The developers of CLASS are creating tools to facilitate use of CLASS for these purposes.

MyTeachingPartner (MTP) is one example of this work. MTP is aligned with growing evidence suggesting that a collaborative, individualized, and sustained approach to professional development is the most effective strategy for changing classroom practices.

MTP provides relevant, interactive, and on-going feedback to teachers through online resources, and web-mediated consultation throughout the school year. MTP uses CLASS to focus teachers’ attention on the very interactions shown to be most effective.

Research demonstrates teachers participating in MTP engage in more effective interactions with children, especially in classrooms that serve higher proportions of children in poverty.¹⁶ Students in these classrooms show enhanced academic and social skill development.

Other professional development programs that incorporate a collaborative, individualized, and sustained approach have produced similar findings. An evaluation of an elementary grades professional development program that explicitly focuses on teacher-child interactions, Responsive Classroom, revealed that teachers who participated in this sustained professional development program were able to improve the effectiveness of their social and instructional interactions with children which, in turn, led to gains in children’s academic achievement and social skill development.¹⁷

As policy-makers and program administrators strive to maximize children’s developmental outcomes and streamline budgets, research-based monitoring, evaluation, and professional development strategies are gaining prominence. A research-based assessment tool quantifies information about classroom practices that translates into efficient and effective professional development.

(CLASS) “has changed the way I teach in the sense that it has made me more patient and confident... I have become more productive in my lessons, and now it has become easier for me to instruct, maintain good classroom organization, and provide a positive climate.”

- Pre-kindergarten teacher, after participating in CLASS professional development

CLASS is supported, in part, by grants from the Foundation for Child Development and the Picower Foundation.
For more information about CLASS please visit www.ClassObservation.com E-mail us at Contact@ClassObservation.com or call 1-866-301-8278, ext. 4
Effective Teacher-Student Interactions: Measuring and Improving Classroom Practice

For pre-k: Robert Pianta, Carollee Howes, Margaret Burchinal, Richard Clifford, Diane Early et al., “Features of Pre-Kindergarten Programs, Classrooms, and Teachers: Do They Predict Observed Classroom Quality and Child-Teacher Interactions?” Applied Developmental Science, 9:3, pages 144-159.


Mashburn, Pianta, Hamre, Downer et al., Child Development, 79, pages 732-749.


Bridget Hamre and Robert Pianta, “Can Instructional and Emotional Support in First Grade Classrooms Make a Difference for Children At Risk of School Failure?” Child Development, 76, pages 949-967.


Anne Henry, “The Power of Two: The Impact of Experiencing Two Years of High Quality Classrooms”, Manuscript in preparation, University of Virginia.
