How the CLASS™ has Impacted Early Learning

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Outline

• Importance of Early Relationships: Foundation of the CLASS™
  • School Readiness
• Relations to child outcomes
  • Emotional Support
  • Classroom Organization
  • Instructional Support
• Causal impacts on child outcomes
  • My Teaching Partner
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Importance of Early Relationships
Video: INBRIEF: The Science of Child Development

Source Center on the Developing Child at Harvard University.  
http://developingchild.harvard.edu
Importance of Quality Interactions with Adults

• Children need social interactions in order to thrive both emotionally and physically.

• Interactions with adults are the foundation for forming relationships that can have positive or negative effects on later development.

(Pianta, 1999)
Importance of Quality Interactions with Adults

• Warm and nurturing early relationships with adults promote a view of the world as a safe place where people are generally good.

• Harsh, distant, or abusive early relationships with adults may promote a view of the world as an unstable, or even dangerous, environment where people may not be trusted.
Effects of healthy, supportive teacher-child relationships

- When children’s caregivers are responsive and sensitive to their needs, children generally do well.

  Healthy and supportive relationships with teachers

  Child...
  - generally adjusts well to school
  - has good social skills
  - performs better academically

(Birch & Ladd, 1997; Palermo et al., 2007; Pianta et al., 1997)
Effects of negative teacher-child relationships

When occurring over time, conflict can lead to negative teacher-child relationships which have consequences for children’s development.

Child...
- lacks skills necessary for school adjustment
- performs worse on academic tasks
- has poorer social skills and relationships with peers

(Baker et al., 2008; Driscoll & Pianta, 2010)
Early Childhood Experiences Matter

• Children who attend preschool start kindergarten more academically and socially prepared.

(Peisner-Fienberg & Schaf, 2010; Vandell et al. 2010)
CLASS AND SCHOOL READINESS

Supporting programs
School Readiness

What is it?
• Children possessing the skills, knowledge, and attitudes necessary for success in school and for later learning.

Why is it Important?
• The first years of life are critical to a child’s lifelong development. Young children’s earliest experiences set the stage for future development and success in school and later in life.

(Blair, 2002; Li et al., 2012)
What We Know

• Low-income children enter school with significantly lower cognitive abilities than more affluent children (Lee & Burkham, 2002)

• Low-income 4-5-yr-old children are 12-14 months below national norms in language development (Layzer, 2008)

• 40% of low-income children did not know all the letters of the alphabet at the end of kindergarten (Head Start Impact Study, 2010)

• Children from low-income households are more likely to attend lower quality elementary schools, limiting opportunities for remediation (Lee & Burkam, 2002)

• Children who are behind in the early years of school are unlikely to catch up and may even fall further behind (Jimerson et al., 1999; McClelland et al., 2006)
The Classroom Assessment Scoring System™: Measuring Interactions
Measuring Teacher-Child Interactions

- The CLASS™ lens organizes effective classroom interactions into 3 broad categories or domains.

(Pianta, La Paro, & Hamre, 2008)
Video Title: Importance of Teachers

Video located in NCQTL’s Engaging Interactions and Environments In-Service Suites, Building a Solid Foundation
The State of Quality

700 preschool classrooms across 11 states

(NCEDL, 2005)
Emotional Support & Child Outcomes
Emotionally Supportive Interactions

In settings with effective social and emotional support, teachers:

• Have positive relationships with children
• Foster positive peer relationships
• Notice and respond when children need support
• Recognize and label children’s emotions
• Respond to children’s ideas and interests

(Pianta, La Paro, & Hamre, 2008)
Socioemotional Outcomes

• Lower internalizing behaviors
  • Fewer socially withdrawn, sad/tearful and/or anxious behaviors.

• More prosocial behaviors
  • Increased positive interactions, cooperative play, social skills, and/or sharing behaviors.

• Fewer challenging behaviors
  • Aggression, defiance

(Downer et al., 2010 [for review]; Gormley et al., 2011; Hamre & Pianta, 2001)
Relational and Efficacy

- Close teacher-child relationships
- Increased autonomy and self-efficacy

(Allen et al., 2011; Hamre, Hatfield et al., in press)
Biological

- Adaptive and typical activity in stress response system
  - Cortisol/‘stress’ hormone
  - Norepinephrine

(Hatfield et al., 2013)
Classroom Organization & Child Outcomes
Well Organized Classrooms

- **Classrooms** that support children’s ability to get the most out of their interactions with teachers, peers, and tasks through effective management of children’s time, behavior, and attention

- **Teachers** have clear and well-established behavior guidelines, create routines to get the most out of each day, and engage children in learning.

- **Children** meet behavioral expectations, know what to expect, and are engaged in learning.

(Pianta, La Paro, & Hamre, 2008)
Well Organized Classrooms and Developing Self-Regulation

• During early childhood, children are learning how to control their impulses and behavior.

• Clear behavioral expectations, consistent routines, and a variety of engaging materials and activities help children learn to regulate their behavior.

• Children need opportunities to practice using good judgment and opportunities to do the right thing.

(Rimm-Kaufman et al., 2009; Weiland et al., 2013)
Child Outcomes

• High levels of classroom organization are associated with gains in first graders’ literacy.

• Increased ability to regulate attention and impulses.

• Develop positive approaches to learning (e.g., initiative, curiosity, persistence, attentiveness, cooperation)

• Children’s ability to stay focused, interested, and engaged allows them to learn new skills and achieve learning goals.

(NICHD ECCRN, 2005; Ponitz et al., 2009)
Instructional Support & Child Outcomes
Instructional Support

How teachers **Help** Children

- Learn to solve problems, reason, and think.
- Use feedback to expand and deepen skills and knowledge.
- Develop more complex language skills.

(Pianta, La Paro, & Hamre, 2008)
Influence of Instructional Support on Achievement

First Grade Instructional Support

- Low levels of maternal education
- Moderate levels of maternal education
- High levels of maternal education

Standardized tests of achievement adjusted

(Hamre & Pianta, 2005)
Instructional Support

Within a Responsive Classroom, Higher Instructional Support leads to

• Higher gains in Language
  • Expressive and Receptive
• Higher gains in Literacy
  • Print Recognition
  • Phonics
• Math Skills

(Hamre, Hatfield et al., in press; Mashburn et al., 2008)
But are the Effects Linear?

For example, does a one point change in Instructional Support correspond to exactly a one point change in literacy skills?
But are the Effects Linear?

Or, is it more likely that classrooms must reach a ‘threshold’ of quality interactions before child outcomes are truly impacted? For example, when a classroom scores above a 4 on Instructional Support, children’s literacy skills are higher.
Emotional Support and Child Outcomes

When Emotional Support was at or above 5.00

- Higher math, reading, & social skills
- Lower behavior problems

(Burchinal et al., 2010)
Instructional Support and Child Outcomes

When Instructional Support was at or above 3.25
- Higher language, math, reading, & social skills

(Burchinal et al., 2010)
Classroom Organization

• Gains in the ability to regulate impulses and behavior when CLASS scores are ~4 in Classroom Organization

(Hamre, Hatfield et al., in press; Weiland & Yoshikawa, 2013)
My Teaching Partner
Causal Links to Interventions Designed to Improve CLASS Scores

• Differences in just over 1 point on the CLASS 7-point scales translate into improved achievement and social skill development for students.

• Teachers participating in MTP coaching engage in more effective interactions with students, especially in classrooms that serve higher proportions of students in poverty.

• Teachers have been shown to behave more sensitively, increase students’ attention to learning, improve language stimulation to students and teach more effectively.

• Students in these classrooms show enhanced academic and social skill development

(Allen et al., 2011; Pianta, Mashburn et al., 2008)
Teachers’ Emotional Consistency Matters for Preschool Children¹

Timothy W. Curby & Laura L. Brock

This study examined teachers’ emotional support in classrooms and how it relates to childrens’ outcomes in preschool and kindergarten. Findings suggest that more consistent emotional support was related to better academic and social outcomes, emphasizing the potentially important role of consistency in children’s school experiences.

Research indicates the ways teachers interact with children is critical in determining how children develop over time. One aspect of these interactions is the emotional support children experience in the classroom. Emotional support describes the emotional climate of the classroom as well as the ability of the teacher to sensitively respond to student needs. Many early childhood teachers would say that is the most important part of their job. The ability for teachers to provide an emotionally supportive environment is related to the development of children’s social skills (e.g., increased social competence and reduced problem behaviors), as well as some academic outcomes.

Past research exploring emotional support has focused on the average levels of that support across the day and year. However, teachers are not perfectly consistent in the levels of support that they offer. This may be particularly true within a single day. If a teacher fluctuates in the amount of emotional support offered (i.e., the teacher is inconsistent), children may not feel as secure and may devote attention to monitoring their teachers’ emotional cues instead of the lesson at hand. The purpose of this study was to examine the degree to which teachers’ consistent provision of emotional support was associated with children’s achievement and social skills.

The Study

Researchers used data from two studies conducted by the National Center for Early Development and Learning (NCEDL) entitled the Multi-State Study of Pre-Kindergarten (Multi-State) and the State-Wide Early Education Programs Study (SWEPP). The Multi-State Study included 6 states of 40 Pre-Kindergarten classrooms.

Emotional Support

The Classroom Assessment Scoring System (CLASS) was used to assess teachers’ use of Emotional Support, including:

- Positive Climate (closeness, enthusiasm, and respect)
- Negative Climate (irritability, anger, or aggression)
- Teacher Sensitivity (support individual student needs)
- Overcontrol (rigid in approach to activities, without regard for student perspectives) - reversed

Average Emotional Support was calculated across these four dimensions and four observations within a day. Emotional Support Consistency was calculated as the reversed standard deviation of emotional support across the observations within a day.

¹This research brief is based on the following published study: Curby, T. W., Brock, L., & Hamre, B. (2013). Teachers’ emotional support consistency predicts children’s achievement gains and social skills. Early Education and Development, 24, 292-309. doi:10.1080/10409289.2012.665760

This published study can be purchased at: http://www.tandfonline.com/doi/abs/10.1080/10409289.2012.665760
sites in 2001-2002, and the SWEEP Study involved an additional 5 states with 100 sites in 2003-2004. A total of 694 classrooms were observed several (at least 4) times during a typical day using the CLASS observation instrument.

The CLASS provided average scores for Emotional Support in each classroom. Not only was the average used, but also the standard deviation (i.e., how much spread there was in the scores) was computed in Emotional Support across the day as a way to determine how much inconsistency there was in Emotional Support. The average levels of Emotional Support and the degree to which Emotional Support varied (i.e., Emotional Support Consistency) were used as predictors of children’s outcomes.

The study included 2439 English-speaking children. Children completed a variety of assessments relating to achievement (e.g., receptive and expressive vocabulary, rhyming, letter naming, and early math) in preschool, and reports of their competence and problem behaviors were collected in kindergarten.

Findings

Results indicated that Emotional Support Consistency was significantly related to children’s academic and social outcomes, such that more consistency was related to better academic outcomes in prekindergarten as well as social outcomes in kindergarten.

Consistency was, in fact, a better predictor of children’s outcomes than average levels of Emotional Support. This may be in part due to the fact that teachers who had higher levels of Emotional Support also tended to be consistent. However, Emotional Support Consistency predicted more child outcomes than Emotional Support averages.

Implications

These results suggest that consistency is an important aspect of emotional support in the classroom and that greater understanding of consistency within a day may benefit both practitioners and researchers. Overall, these findings lend support to future observational work that captures teachers consistency as well as their average emotional support.

Greater attention may need to be given to pre-service training and professional development programs for early childhood teachers. It may be helpful to target key factors associated with greater emotional support variability (and less consistency). Emotionally consistent classrooms may provide an atmosphere that is more conducive to learning because children know more of what to expect, can feel more secure, and can attend to learning tasks with fewer disruptions.

Other findings have suggested that stress may be one aspect of teachers’ lives that could result in greater variability. Thus, attention should be given to ways to reduce teacher stress and support more consistent classroom functioning so that children might not have to navigate unpredictable teacher interactions. Refer to the Additional Resources for more information.

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Additional Resources

Also see:


Learning How Much Quality is Necessary to Get to Good Results for Children

How Much Quality is Needed to Achieve School Readiness Outcomes for Children?

How good does an early childhood program have to be in order to achieve school readiness outcomes for children? This is known as the “threshold question,” and policy makers and others have wanted an answer to this question since the onset of public investments in early care and education (ECE) programs. With expansion of Head Start and pre-kindergarten programs for three- and four-year-old children, this question is getting even more attention.

Policy and other decision makers want this information so they can craft policies and direct resources to those factors that make the most difference to children’s school readiness. While we know that higher quality ECE programs and better results for children tend to go hand-in-hand, we don’t know the level of quality or quality indicators that are necessary for achieving learning outcomes that help children be successful in kindergarten and beyond.

In an attempt to fill this knowledge gap—to try and identify the minimum level of program quality required to attain positive results for children—this study examined academic and social outcomes for children from low income families. For the purposes of this study, low-income was defined by household income of less than 150% of the federal poverty level. The study focused on these children because, as a group, they are the target of most policy decisions related to program quality and access by families.

The study used data on teacher-child interactions and instructional quality from an 11-state pre-kindergarten (pre-k) evaluation. The findings show that achieving positive child outcomes require higher-quality, publicly-funded pre-k programs than typically are available.

A Description of the Study

Study Participants. Participants were 1,129 children enrolled in 671 pre-k classrooms in 11 states involved in two previous studies: the National Center for Early Development and Learning’s (NCEDL) Multi-State Study of Pre-Kindergarten and the NCEDL and National Institute for Early Education Research (NIEER) State-Wide Early Education Programs Study.

The pre-k classrooms were located in public schools, Head Start settings, and community-based programs. Demographic data, such as pre-test scores, children’s gender, race, and mother’s education, were collected. Having this information allowed researchers to compare findings across the classrooms in the 11 states.

Measures of Classroom Quality and Child Outcomes. To determine the level of quality in each of the classrooms studied, teachers’ interactions with children were assessed using the Classroom Assessment Scoring System (CLASS). This assessment tool is based on a seven-point scale that measures teacher-child interactions in two areas: (1) instructional support and (2) emotional support. A growing body of research demonstrates the relationship between higher scores on these two domains and positive effects on children’s academic and social outcomes.

These outcomes were assessed through tests of children’s academic and language skills at the beginning and end of the pre-kindergarten year. The battery of tests for this purpose measured children’s receptive language, expressive language, rhyming, applied problem solving, and letter naming, all of which are linked with children’s academic success. Teachers also completed a behavioral rating scale to measure children’s social competence and identify problem behaviors.
What the Study Found

The study focused on ten child academic and social outcomes related to children’s school readiness. To find out whether a specific level of classroom quality had to be in place to achieve these academic and social outcomes, the study identified each classroom’s level of quality in terms of whether the quality was low, moderate, or high. Then, based on differences between children’s fall and spring test scores, researchers looked at the relationship between the classroom’s level of quality and the strength of the ten academic and social outcomes.

Here are the findings:

- When teachers were more responsive and sensitive and were rated as providing high-quality emotional support, children showed better social adjustment and fewer behavior problems.
- In classrooms where teachers were rated as showing lower levels of emotional and instructional support, children experienced no benefits from the interactions with their teachers.
- Children showed more advanced academic and language skills when their pre-k teachers provided instruction rated in the moderate to high-quality range.

Thus, moderate to high-level classroom quality seems necessary for improving low-income children’s social skills, reducing behavior problems, and promoting reading, math, and language skills. This means goals for pre-k may be achievable only if programs ensure high-quality teacher-child interactions and mid-to-high-quality instruction.

A threshold for classroom quality does, in fact, seem to exist. You can think of the continuum from moderate to high-quality as the “threshold range.”

What the findings mean for early childhood programs

You might expect that children would simply get fewer benefits from low quality programs. But this study shows that programs need to function at least at the mid-level of quality and often times higher to get to good results for children. Lower levels of quality do not help children develop socially or academically.

Linking Research to Practice

So, what does this mean for program administrators and teachers? These findings confirm that the level of classroom quality matters. But there’s more: the findings indicate that when the level of classroom quality goes below a certain level, children do not appear to gain school readiness benefits from their participation in the program.

Children are more likely to develop good social and academic outcomes when the quality level of their classrooms is in the threshold range: i.e., from the moderate- to high-range of classroom quality. Unless state-funded pre-k classrooms function within the threshold range, participating children will not be well served.

Results of this work suggest the following implications and recommendations:

- The finding that there are not associations between quality and child outcomes in low quality programs provides further evidence that state or federal funding or vouchers for lower quality programs should be ended if the goal is to enhance children’s cognitive and social development.
- Furthermore, the presence of threshold effects suggests that quality enhancement programs should focus on improving lower quality programs only if those enhancement programs (e.g. professional development) have demonstrated impacts that improve quality to the active range of effects on child outcomes.
- And these results suggest that making small improvements in quality may have positive effects on child outcomes if they move low-quality programs into the moderate-to-high quality range.
- Given the very high numbers of programs in which quality is below the threshold for impacts on child outcomes, it is imperative to attend to all three of these recommendations in any comprehensive quality improvement strategy.

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