

Peer Effects on Children and Teachers in Preschool Classrooms
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Project Description.

Recent years have seen increasing proportions of children attending early childhood education (ECE) programs, and growing involvement of local, state, and federal governments in funding, regulating, and directing ECE efforts. In this context, there is a growing need to delineate mechanisms to best target public resources, to improve ECE program quality, and to promote the academic and behavioral skills of young children. This project seeks to delineate the role of an understudied component of ECE contexts: the role of peers. Based on theoretical frameworks arguing for the central role of peers in affecting both children and adults, this study will specify and test a conceptual model delineated specific paths through which peer effects operate.

Specifically, we hypothesize that peer cognitive and behavioral skills within a classroom will predict shifts in individual child skills through the preschool year, and will also predict shifts in teacher instructional practices, which in turn are hypothesized to support children's functioning as they transition into kindergarten. Moreover, we argue that these associations will function both within and across cognitive and behavioral realms of functioning, and that they may be moderated by initial levels of child and teacher functioning. As the first study to assess the potential for peers to affect both individual children and teachers, this research has the potential to provide essential insights into classroom composition effects, which in turn will inform ECE policies regarding targeted versus universal programs and efforts to improve ECE quality and children's development.

Research Questions.

- Do the cognitive and behavioral skills of peers in children's preschool classrooms predict shifts in individual children's skills through preschool?

- Do peer skills predict shifts in teacher instructional quality?
- Do enhanced child skills and teacher instructional quality through preschool in turn predict heightened child skills following entry to kindergarten?
- Are peer effects stronger within than across domains of child skills?
- Are peer skills more strongly linked to improvements in child skills and teacher effectiveness for children and teachers who begin the preschool year with lower skills?

Sample. Data were drawn from the National Center for Early Development and Learning Multistate Study of Pre-Kindergarten, 2001-2003 (NCEDL), which followed approximately 900 low-income children in public, private, and Head Start preschool classrooms across six states from the beginning of preschool through the transition to kindergarten.

Methods. Data were collected from direct child assessments, classroom observations, and parent, teacher, and administrator interviews in the fall and spring of preschool and the fall and spring of kindergarten. Using well-validated assessments of children's cognitive, language, and behavioral skills as well as observational measures of teachers' instructional and emotional support, we are conducting cross-lagged path analyses to test prospective relationships between peer skills and growth in both individual child skills and teacher instructional practices. The use of lagged models and rich covariates help adjust for selection bias inherent in correlational data.

Progress Update. Analyses to date have incorporated multilevel regression models to assess how peer academic and behavioral skills are associated with prospective shifts in individual child skills and teacher instructional quality through the

preschool year, adjusting for a broad range of child, family, teacher, and classroom covariates. Results have found that peer language skills in the fall predicted relative increases in individual child language skills (effect size = 0.06 SDs), whereas peer math skills were not associated with children's skill growth. These patterns were not moderated by children's initial skill levels. Results were small in size, but similar in size to the effect of mothers having a college degree versus just a high school degree on children's spring academic skills.

In addition, aggregate levels of classroom-level language and math skills were each associated with small positive shifts in teachers' instructional quality (effect size = 0.19 SDs for language skills and 0.15 SDs for math skills). No significant results have emerged in relation to children's prosocial or disruptive behaviors in the classroom.

Analyses are continuing, incorporating cross-lagged multilevel path models and following children through the entrance to kindergarten to assess the potential for peer skills to promote children's growth in skills both directly as well as through shifts in instructional quality.

Implications for policy/practice

Results from this project will be disseminated to researchers, policy makers, and practitioners through a variety of outlets. Results will inform discussions

concerning targeted versus universal preschool programs, and will have import for efforts to improve ECE program quality, target public resources, and improve the school readiness skills of economically disadvantaged children.

Implications for research

Results from this study will dramatically expand knowledge on the potential role of peers in promoting or hindering children's learning and development, providing new information by assessing both cognitive and behavioral realms of functioning and by following children into kindergarten to assess the longevity of effects. Moreover, as the first study to assess whether peer skills are associated with shifts in teaching practices, this work will assess the potential for an accumulation of peer effects on children through multiple pathways.

For more information:

Coley, R. L., Kull, M., & Cook, K. D. (2016). *Peer effects on children's cognitive skills and teachers' instructional quality in state-funded preschool programs*. Unpublished manuscript.

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