

Executive Summary

Title: Teacher-Child Interactions, Teacher Beliefs, and Student Outcomes in MMSD 4K Classrooms

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Abstract: Studies demonstrate that high quality 4-year-old kindergarten (4K) has positive effects on children’s early literacy skills (Mashburn, 2008), social competence (Bulotsky-Shearer, Wen, Faria, Hahs-Vaughn, & Korfmacher, 2012), and rates of problem behavior (Powell, Son, File, & San Juan, 2010). Quality is a multidimensional construct encompassing *structural quality* (e.g., classroom materials) and *process quality* (e.g., children’s daily learning experiences). Process quality—specifically, the frequency and type of teacher-child interactions—is the critical “driver” of children’s learning and development (Hamre et al., 2013). Furthermore, teachers’ beliefs about early childhood education and their role in promoting early learning often shape interactions between teachers and their students (Burgess, Lundgren, Lloyd, & Pianta, 2001). This study examined (a) the associations between teacher-child interactions and teacher beliefs about those interactions, and (b) the extent to which interactions and/or beliefs predict student outcomes. A mixed-methods approach was adopted to analyze and integrate data from classroom observations, teacher surveys, and focus-group interviews (as well as measures of students’ early literacy and social-behavioral outcomes). The study addressed three questions:

1. What is the level of quality of teacher-child interactions in 4K classrooms in Madison Metropolitan School District (MMSD)? Specifically, based on classroom observations, what is the quality of interactions in terms of support for social-emotional functioning, management of children’s behavior and engagement, and support for language and conceptual development? To what extent does quality vary in relation to teacher experience and student characteristics in terms of English language proficiency and free or reduced-price lunch status?
2. What are the beliefs among 4K teachers in MMSD? Specifically, based on surveys and focus groups, what are teachers’ beliefs about early childhood education and the role of 4K programming? To what extent do beliefs vary in relation to teacher experience and student characteristics?
3. What are the associations among interactive quality, teacher beliefs, and student outcomes in terms of early literacy skills and social-behavioral competence?

Participants included 23 teachers in 4K classrooms in MMSD. To address the research questions, four procedures were implemented from October 2017 through July 2018:

1. Observations were conducted in October, November, March, and April using the

Classroom Assessment Scoring System (Pianta, LaParo, & Hamre, 2008) to observe and rate three domains of teacher-child interactions (emotional support; classroom organization; instructional support) on a 7-point scale ranging from low to high quality. Researchers observed each classroom for approximately 2 hours—i.e., three 20-minute cycles in the fall and three 20-minute cycles in the spring.

2. Teachers completed a 42-item beliefs survey in December to measure the extent to which they endorse three domains of beliefs (child-centered; teacher-directed; responsiveness to children's family, culture, or disability).
3. A subsample of 13 teachers participated in focus groups in January and February. They shared their perspectives regarding the purpose of 4K, the critical goals and outcomes for 4K students, and the ways in which they structure and utilize storybook reading and center time to help children achieve these outcomes.
4. The researchers assessed students' early literacy and social-behavioral outcomes using (a) *Phonological Awareness Literacy Screener* data obtained through MMSD in July, and (b) *Child Behavior Rating Scale* ratings completed by teachers in May.

Findings: Key findings are summarized for each of the three main research questions.

Interactive Quality. Compared to 4K samples in national studies conducted in state-funded and Head Start classrooms, 4K teachers in MMSD displayed similar or higher-quality classroom interactions. On average, classrooms had (a) high-quality ratings for emotional support (average rating of 6 out of 7); (b) mid-to-high ratings in classroom organization (rating of 5.5); and (c) low-to-mid ratings for instructional support (rating of 3). Quality was higher in classrooms of teachers with more years of 4K teaching experience and a higher proportion of children who are English language learners.

Teacher Beliefs. Teachers reported strong child-centered beliefs and beliefs about being responsive to children's family, culture, and disabilities; they also ranked these beliefs as having the greatest influence on their classroom practices (compared to other factors such as MMSD policies or the 4K curriculum). During the focus groups, teachers overwhelmingly endorsed social-emotional development as the primary goal of 4K (and, to a lesser extent, language development), while stating explicitly that pre-academic skills are not the primary focus. A related theme emerged concerning a "disconnect" teachers perceived between the goals and practices of 4K versus Kindergarten. Specifically, teachers believe that Kindergarten has shifted too far away from a play-based approach to an emphasis on structured academic skill acquisition. They believe the transition from 4K to Kindergarten is not "seamless," that the Kindergarten emphasis on academics at the expense of play and social-emotional learning, coupled with a more rigid daily schedule and limited communication/use of 4K assessment information, makes the transition challenging even for those children who were "successful" in 4K.

Student Outcomes. After controlling for students' fall *Phonological Awareness Literacy Screener* scores and free or reduced-price lunch status, one variable predicted early literacy gains—specifically, the degree to which teachers endorse teacher-directed beliefs that

support an intentional focus on skill development and structuring activities to promote skill development. In terms of social-behavioral outcomes, two variables contributed to high behavior ratings—specifically, (a) the degree to which teachers endorse child-centered beliefs about the importance of allowing children to select activities and promoting child independence and decision-making, and (b) the number of years of teacher experience with 4K.

Implications: Three implications may be derived from the findings of this study.

1. Although consistent with findings of previous studies that also used the *Classroom Assessment Scoring System* in 4K classrooms, the lower quality ratings for instructional support (relative to emotional support and classroom organization) indicate that 4K teachers in MMSD may benefit from professional development related to strengthening their interactions to support children’s concept development, higher-order thinking, and language learning. In one large-scale study of 671 4K classrooms, for example, interactions that provided instructional support contributed to children’s development of language, literacy, and math skills (Curby & Chavez, 2013).
2. Growth in literacy and social-emotional skills may require a balanced model of teachers’ beliefs and practices that merges a child-centered, play-based approach with a teacher-directed focus on literacy skills. That said, a critical question for future research and professional development is: How can 4K teachers ensure that children engage in developmentally appropriate, play-based activities (consistent with child-centered beliefs that predict social-emotional growth) and, simultaneously, embed within those activities an intentional focus on early literacy (consistent with teacher-directed beliefs that predict literacy growth)?
3. Finally, MMSD may need to consider ways to establish a stronger and more consistent alignment between 4K and Kindergarten. That is, the district may want to find ways to ensure that 4K assessment information is communicated and used effectively and proactively to facilitate children’s transition to Kindergarten, as well as ways to better align the goals and practices of 4K and Kindergarten.

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