Organization of Early Childhood Classroom Environments May Matter for Children's Language Learning

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BACKGROUND

Young children's language skills are one of the strongest predictors of long-term developmental outcomes (Kendeou et al., 2009; Schleppegrell, 2012; Snow et al., 1998) and children's environments play a key role in supporting early language development (Rowe & Snow, 2020).

More than 12 million American children younger than age five attend some type of nonparental care (Child Care Aware of America, 2019), making the early childhood (EC) classroom environment a particularly influential context for supporting children's language development. Previous research has identified several aspects of EC classrooms that influence children's language learning, including teacher-child interactions, materials and activities available for children, and overall classroom management (Dynia et al., 2018; Pianta et al., 2006). However, there is still much to learn about how to best support children's learning in EC classrooms and how to create environments most conducive to learning.

The way EC teachers organize and structure various features of their classrooms may be especially important for children's language learning (Baroody & Diamond, 2014; McLean et al., 2016) – for instance, how they arrange the physical classroom environment and what materials they provide, how they structure time that children are and are not engaged in activities, the type and format of activities offered, and how they manage children's behavior throughout the day. Certain organizational patterns may provide children with more opportunities to practice language skills than others. For example, an EC classroom where activities are organized in a way that encourages children to share their ideas, thoughts, and feelings may be more conducive to children's language learning than one where activities are primarily organized such that children's language is rote and prescribed.

Previous studies examined these individual organizational aspects in isolation rather than collectively (e.g., Guo et al., 2012; Pianta et al., 2006; Smith et al., 2002), which provides a limited view of overall classroom organization, especially because each of these individual aspects simultaneously influences other aspects of classroom organization. Additionally, much of the research exploring classroom factors associated with children's language skills involves snapshots of classroom organization at only one point in the school year (e.g., Chien et al., 2010; Fuligni et al., 2012). Yet, examining classroom-level organizational factors over the course of the school year is important because classroom structure, activities, and schedule may change as children become more familiar with the classroom environment and routines and their skills develop. Moreover, classroom organizational practices have not been explored systematically in classrooms where children have demonstrated high language gains (e.g., Baroody & Diamond, 2014; Cabell et al., 2013). This context is important to consider, as teachers in these classrooms may implement specific organizational practices and routines that are especially powerful in promoting children's language learning.

Thus, there is a critical need to better understand EC classroom organization, particularly in classrooms where children make high language gains over the course of the school year. In this research brief, we summarize findings from a recent study (Cutler et al., 2022) that provide insight into how teachers can organize their classrooms, routines, and schedules to optimize children's language development.

Data & Research Goals

For this study, we examined a subset of 60 EC classrooms serving children between 3 and 5 years old. These classrooms were part of a broader project originally designed to evaluate the effects of a language and literacy professional development program (see Piasta et al., 2020, 2017 for additional information about the broader project). The 60 classrooms consisted of two groups: 30 classrooms in which children made higher gains in their language skills across the school year – higher language gains (HLG) classrooms – and 30 classrooms in which children made lower gains in their language skills across the school year – lower language gains (LLG) classrooms. To determine these two groups of classrooms, we assessed children's language gains using three subscales of the Clinical Evaluation of Language Fundamentals Preschool-2 (CELF-P2; Semel et al., 2004) in the fall and spring. Demographic information about the classrooms and teachers is listed in Table 1.

Table 1. Demographic Information for Classrooms and Teachers (*n* = 60)

	n	%		*n*	%
Classrooms			**Teachers**		
Location			Average Age (years)	42	
Rural	25	42%	Female	59	98%
Suburban	16	27%	Race		
Urban	13	22%	Multiracial	1	2%
Affiliation			Black	8	13%
Public-School Based	29	48%	White	51	85%
Center-Based	22	37%	Highest Education		
Head Start	16	27%	High School Diploma	7	12%
Enrolled in QRIS	29	48%	Associate's Degree	14	23%
Classrooms with Children with IEPs	37	62%	Bachelor's Degree	9	15%
Classrooms with Multilingual Children	13	22%	Graduate Degree	27	45%
Average Number of Children in Classroom	19		Average Years of Pre-K Teaching Experience	11	

Note. QRIS = the state's Quality Rating Improvement System; IEP = Individualized Education Program

A key goal of the study was to gain a better understanding of classroom organization practices in EC classrooms with higher language gains. We expected that teachers in these classrooms may be organizing their classrooms, routines, and schedules in ways that were particularly effective for promoting children's language growth. To explore this, we used fall and spring observational data from these classrooms to examine four different aspects of classroom organization: (a) organization of classroom time, specifically time children spent in non-instruction activities, such as transitions and meal times, (b) organization of daily classroom activities, including the frequency of activities and the amount of time children spent in activities (e.g., large group circle, small groups, activity time/free choice), (c) organization of the classroom physical literacy environment, such as the presence of reading and writing materials, and (d) organization of classroom management related to children's productivity and behavior management. Additional information about each of these aspects of organization and our measurement tools can be seen in Table 2.

Table 2. Aspects of Classroom Organization

	Organization of Classroom Non-Instructional Time	Organization of Daily Classroom Activities	Organization of the Physical Literacy Environment	Organization of Classroom Management
Definition	Time children spend in non-instructional activities. Includes things such as when children are in personal care routines like using the bathroom or eating snack, time spent transitioning or waiting in between activities, time in non-instruction due to disruptive behavior such as when a visitor enters the room or the teacher is dealing with children's negative behaviors, and time spent off-task.	Frequency and duration of activities that make up the daily schedule of an early childhood classroom. Includes activities such as large group circle, small groups, activity time/free choice, cleanup, and meals/snacks.	The presence of literacy materials in the classroom and the extent to which children engage with the materials. Includes things such as if there is environmental print (e.g., labels, nametags, child-dictated writing), the availability of writing materials (e.g., paper, crayons), language and literacy materials (e.g., variety of books, puzzles), and technology materials (e.g., literacy- or language-related computer games).	Behavior management, productivity, and instructional learning formats available in classrooms
Measure Used	*Individualizing Student Instruction coding scheme* (ISI; Connor et al., 2009)	*Classroom Schedule Coding Sheet* (CS[2]; Cutler et al., 2022)	*Classroom Literacy Observation Profile* (CLOP; McGinty & Sofka, 2009)	*Classroom Organization domain of the CLASS, Pre-K version* (Pianta et al., 2006)

KEY FINDINGS

Children in HLG Classrooms Spent Less Time in Non-Instruction

Overall, **children in the HLG classrooms spent about 10% less time in non-instruction** throughout the year than did children in the LLG classrooms. In particular, children in the HLG classrooms also spent less time in non-instructional periods that were associated with disruptive behavior, particularly in the fall (20% HLG vs 51% LLG). These findings suggest that teachers in the HLG classrooms were better able to organize and manage individual children's time than were teachers in the LLG classrooms, including limiting the overall amount of time that children spent in non-instruction. Teachers in the HLG classrooms may have implemented better behavioral management strategies at the start of the school year than did teachers in the LLG classrooms, reducing the amount of time that children spent in non-instruction due to disruptive behavior.

Teachers in HLG Classrooms Better Organized Children's Time and Activities at the Start of the School Year

The organization of classroom time and classroom activities at the beginning of the year was different in the HLG classrooms than it was in the LLG classrooms. In addition to spending less time in non-instruction, overall, and particularly less time in non-instruction due to disruptive behavior in the fall (as described above), **children in the HLG classrooms also spent less time in large group circle (24% vs 32%) and in meals/snacks (1% vs 6%)** than did children in the LLG classrooms. The differences specific to large group circle may be particularly important for children's language learning, given that children's language is often limited during large group circle. Instead, this type of activity tends to be dominated by teacher talk (Bustamante et al., 2018) and consists of activities that are less linguistically complex, such as rote and recitation-based routines for attendance, calendar counting, and weather (Essa & Burnham, 2020; Kostelnik et al., 2018).

Taken together, these findings indicate that in addition to better organizing and managing children's time at the beginning of the school year, teachers in the HLG classrooms also seemed to more effectively organize time spent in routinized, large group contexts such as circle time and meals/snacks at the start of the year, as evidenced by the fact that children in the HLG classrooms spent less time in these types of activities in the fall. This pattern of findings suggests that reducing children's disruptive behavior and time in non-instruction coupled with limiting the amount of time they spend in activities that are traditionally teacher-dominated, such as large group circle, may positively influence children's opportunities for language learning.

Teachers in HLG Classrooms Adjusted Classroom Schedules Across the School Year

The scheduling of children's time in the HLG classrooms also changed from fall to spring. Specifically, **children in HLG classrooms spent less time in large group circle time in the fall (24%) than in the spring (31%),** whereas children in LLG classrooms spent a similar amount of time in large group circle (32%) in both the fall and spring. This shift over time suggests that teachers in HLG classrooms may begin the year more in line with the developmental level of their students and adjust their schedule of activities to meet the changing needs and skills of the children in their classroom. Such adjustments may contribute to children's language gains.

Organization of the Physical Literacy Environment and of Classroom Management Did Not Distinguish HLG Classrooms

Teachers in the HLG and LLG classrooms provided comparable physical literacy environments and classroom management patterns in both the fall and spring. This suggests that these specific aspects of classroom organization may not have been as important for children's language learning as the organization of classroom time and of classroom activities discussed earlier. Thus, the global measures commonly used to assess certain aspects of classroom organization such as the materials available or the overall approach to classroom management, may not effectively account for more granular classroom organizational practices or individual children's experiences as these relate to children's language learning.

Shared Book Reading Activities Were Infrequent

Shared book reading has long been considered an important practice in EC classrooms and a prominent activity for promoting language learning in young children (Gerde & Powell, 2009; Zucker et al., 2021). However, despite its importance, **there were several classrooms in which we did not observe a shared book reading activity.** Even for the classrooms that engaged in shared book reading, the frequency of shared reading was generally low (typically occurring only once during the observation). This finding was particularly surprising, especially because the teachers who participated in this study selected a time of day for classroom observations that represented their typical instructional time and also because current EC guidelines recommend that children be read to multiple times a day (Copple & Bredekamp, 2009; U.S. Department of Education Early Childhood Head Start Task Force, 2002). These results suggest that additional research into how often teachers engage in shared reading with children throughout the day and how they make planning decisions regarding shared reading activities is warranted.

RECOMMENDATIONS

When taken together, our findings indicate that the way teachers organized their classrooms, particularly in the fall, may matter for children's language development. These findings highlight the importance of effectively organizing and managing children's time in EC classrooms at the start of the school year as well as the need to adjust classroom schedule and activity organization in ways that are responsive to children's changing needs and skills across the year.

Based on these findings, we suggest the following recommendations:

Teachers and Practitioners

- **Establish consistent, responsive management and organizational classroom routines and practices at the start of the school year.** This may necessitate additional training regarding social-emotional development and classroom management strategies.

- **Reconsider how time can be organized to maximize children's learning**, especially over the course of the school year. The time in activities should change and adapt to individual and group characteristics.

- **Include more shared book reading opportunities.** Although teachers are managing many expectations and organizing a variety of activities to support learning, given the evidence of the role shared book reading plays in supporting language learning (Gerde & Powell, 2009; Zucker et al., 2021), there is a need to include more shared book reading experiences across the day and the school year.

Administrators and Policymakers

- **Prioritize opportunities for teachers to develop skills around a broad range of organizational strategies,** including the organization of classroom activities and time. This may include offering training on developmental expectations, supporting individual children who are off task, and planning adaptive classroom organization strategies that account for children's varying skills, needs, and development across the school year.

- **Provide funds for professional development** focused on the cultivation of these organizational practices.

- **Consider broadening the way that classroom organization is viewed or measured at the program-level or in QRIS systems**, including supporting teachers and program administrators to examine classroom organization at multiple time points through the year in order to adequately address the ways that organization may support language learning over time.

Researchers

- **Use more robust measurements of classroom organization that consider various aspects of classroom organization** (e.g., physical space and materials, daily schedule, instructional vs non-instructional time) and how these may influence children's language development.

- **Assess classroom organization at multiple time points throughout the year**, as these may yield important findings regarding how certain aspects of classroom organization fluctuate depending on timing.

- **Engage in research that examines teachers' perspectives on and decisions regarding classroom organization.** This has the potential to yield more robust information regarding EC classroom organization by understanding teachers' overall perceptions of classroom organization and their views regarding the relation between classroom organization and children's opportunities for language learning.

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