CIRCLE TIME REVISITED

How Do Preschool Classrooms Use This Part of the Day?

ABSTRACT

Circle time is a near universally used preschool activity; however, little research has explored its nature, content, and quality. This study examined activity types, teacher and child talk, child engagement, and classroom quality in a sample of public preschool classrooms in an urban, high-poverty school district. Results demonstrated that teacher talk was twice as prevalent as child talk, and there was a lack of back-and-forth exchanges and open-ended questions. Quality of instruction was low on all dimensions of the Classroom Assessment Scoring System, and child engagement dropped to low levels in about 40% of classrooms. Finally, classroom quality predicted child-to-teacher talk ratio and child engagement. Evidence calls into question the richness and quality of circle time and suggests that even modest improvements in quality and an increased focus on child participation could ensure that educators are not squandering valuable learning time and depleting children's behavioral self-regulation during the first activity of the day.

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BURGEONING evidence shows that high-quality preschool experiences can build language, literacy, mathematics, science, and social studies competencies, all of which support later academic success (Barnett, 2008; Keys et al., 2013). In addition, preschool can help children develop key socio-emotional skills regarding self-regulation and interpersonal interaction (Bulotsky-

Shearer & Fantuzzo, 2011). Preschool can also enhance children's fine and gross motor skills, which are important unto themselves but also are predictive of executive functions and academic outcomes (Cameron et al., 2012). The findings of this robust body of research have prompted calls for universal prekindergarten throughout the United States, with new initiatives currently under way in New York, Philadelphia, and other major cities.

The effectiveness of preschool depends largely on its quality, which is often relatively poor, particularly with regard to academically oriented instruction. Indeed, research using the rigorously developed Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2008) suggests that although preschool classrooms around the nation often provide high levels of warmth and sensitivity toward children, as well as appropriate management of children's attention and behavior, the quality of teachers' conceptual instruction—including the introduction of new ideas, the language used to describe them, and the feedback provided to children on their own remarks—is often extremely low, falling below a score of 3 on a scale of 1 to 7 (Cabell, DeCoster, LoCasale-Crouch, Hamre, & Pianta, 2013). Moreover, consistent with patterns of socioeconomic inequity in the K–12 grades, children in poverty, who need high-impact early experiences the most, typically experience the lowest quality instruction. For example, classroom observations in the large-scale, nationally representative FACES (Family and Child Experiences) study of Head Start classrooms showed average instructional quality scores of 1.7 of 7 on the CLASS (Hindman & Wasik, 2013). Low quality attenuates child gains, and, as a result, the promise of preschool to level the playing field for success—particularly for those at highest risk—remains unrealized.

Time Pressures in the Early Childhood Classroom Day

The phenomenon of low-quality preschool instruction in the United States grows in part from the profound mismatch among the wide array of skills educators target, the diverse skills and needs of the children, and the limited amount of time available for instruction. Somewhat ironically, the recent, widespread recognition of the potential power of preschool has led to extraordinarily heightened expectations for what teachers will cover in preschool classrooms. For example, the National Association for the Education of Young Children (NAEYC) and the National Council of Teachers of Mathematics (2002) suggests that preschool classrooms should address all domains of development (e.g., cognitive areas, including academic content in language, literacy, science, and mathematics; social areas, including intra- and interpersonal skills; physical areas, including fine and gross motor skills). Moreover, NAEYC charges teachers with making accommodations in this instruction for children's individual skills and dispositions, including, but not limited to, any diagnosed special needs. Because preschool children are among the most cognitively and socially diverse of any grade, it is essential that teachers deliver at least some content in time-intensive formats, such as one-on-one or small-group settings, rather than relying on whole-group and independent, self-guided work, as higher grades often do. Thus, relative to K–12 peers, preschool teachers

strive to build a comparatively broad spectrum of skills using techniques that might require more instructional time.

Compared with K–12 settings, the preschool day has less instructional time, as many children attend preschool for only part of the day and/or part of the week. Even when children spend 5 full days per week in preschool, many essential personal care activities, such as extended bathroom visits and napping, can erode instructional time, making it even more essential that content be covered efficiently and effectively. Finally, the logistical challenges of managing large groups of very young children often lead to extended transitions between activities in which no instruction occurs. For example, Early and colleagues (2010) reviewed thousands of prekindergarten classroom observations to determine how children spent their time, revealing that much of their day (44%) was dedicated to no particular learning-focused activity at all, as children experienced inefficient transitions between activities. Consequently, while preschool teachers, of any educators, may need to provide the most support for children, they endeavor to do so with the least instructional time.

Understanding Circle Time

Given the time pressures in early childhood classrooms, it is essential to explore the instruction that teachers fit into the day and examine what, exactly, children have opportunities to learn. A sizeable body of work has explored shared book reading in the classroom, yielding important practical suggestions for enriching adult-child conversations about texts (Wasik, Hindman, & Snell, 2016). Other research has examined small-group or center time, producing helpful evidence regarding the importance of both guided and free play during this time (Bodrova & Leong, 2010). Yet much of the classroom day remains unexplored.

The purpose of this study is to closely examine how teachers and children make use of another prominent part of the day: circle time. Although little research has examined circle time, making it difficult to generalize about its routines and components, it often represents the first organized, whole-group activity of the day and features prominently in all comprehensive, evidence-based, cognitively oriented early childhood curricula (e.g., Creative Curriculum, HighScope, OWL [Opening the World of Learning], Tools of the Mind). Across the nation, there is evidence that most preschool teachers use circle time (Reich, 1994; Zaghlawan & Ostrosky, 2011). Findings suggest that circle time involves about 15 to 20 minutes (Chien et al., 2010), which, although a relatively brief span of time, occurs nearly every day in most classrooms; therefore, children may be exposed to a total of 45 hours of circle time, as a low estimate, over a full, 180-day academic year. Consequently, this particular segment of the preschool day represents an important and little-understood lever for improving children's exposure to high-quality instruction.

Observational work (Chen & Kim, 2014; Emilson & Johansson, 2013; Majorano, Cigala, & Corsano, 2009) suggests that, in general, during circle time, teachers sit at the head of a circle or rows of children, either on the floor (i.e., at child level) or in a chair (i.e., above the children). Children may have a specific spot on the carpet to which they are regularly assigned, or they may freely choose their seat each day.

Regardless, children are generally seated in very close proximity to one another, creating a need for them to manage their own physical activity carefully. As an organized, teacher-led activity, children are expected to attend either to the teacher or to one or more other children while in circle time.

Beyond the structure of circle time, a largely piecemeal literature suggests that its goals may vary widely across teachers but generally involve orienting children to the day, acknowledging who is present and who is absent, and/or providing some information about the day to come. Circle time may include some or all of the following activities: greeting one another, taking attendance, discussing and updating the calendar, discussing the weather and updating a weather chart, singing songs with a social and/or academic focus, reviewing a morning message about the day to come, reading a book, and previewing the rest of the day's activities (Vargo, Heal, Epperley, & Kooistra, 2014; Zaghlawan & Ostrosky, 2011).

Compared with better researched parts of the schedule, including book reading, center time, meal time, or outside play, no peer-reviewed study—to our knowledge—has undertaken a comprehensive review of the nature and quality of circle time in preschool classrooms (Zhang, Diamond, & Powell, 2015). In this study, we identify pressing questions about how well this part of the day aligns with best practices and ultimately address them by examining circle time programming in one high-need, urban district's prekindergarten classrooms.

Hints of Concern from the Field Regarding the Effectiveness of Circle Time

Although relatively little work has explored circle time in a comprehensive way, extant studies reveal probable benefits as well as likely missed opportunities.

Instructional Quality

The most striking potential problem with circle time is that the instruction provided may be of low quality for most children, particularly regarding the linguistic richness of exchanges around the core content.

Content may lend itself to repetition and memorization. Although any content could serve as a springboard for rich teacher-child conversations, much of the information typically addressed in circle time lends itself to rote memorization and recitation-focused exchanges. For example, in the relatively small literature addressing the content of circle time, the most widely studied component is the calendar (Beneke, Ostrosky, & Katz, 2008; Berteletti, Lucangeli, & Zorzi, 2012; Church, 2010). During discussion of the calendar, teachers generally prompt children to recall the current date or to recite months of the year and days of the week, count the number of days in the month leading up to the current date, select the numeral representing the current date, and place it in the appropriate spot on a large calendar. Calendar-related activities might support rehearsal of days and months in sequence, number identification, rote counting, and/or counting with one-to-one correspondence (Beneke et al., 2008).

Although they contain important information, these calendar-based exchanges, are highly repetitive from day to day, are likely redundant with other common math-focused activities in preschool classrooms, and offer relatively few straight-forward opportunities for abstract, give-and-take conversations (Clements & Sarama, 2007). Moreover, the calendar's benefit to other classroom activities—its focus on time—involves abstract content that is challenging for preschoolers to grasp (Beneke et al, 2008; Berteletti et al., 2012; Flores, 2007). Thus, the calendar portion of circle time frequently results in low-level rote learning instead of high-quality interactions that advance children's knowledge of mathematics and other content, at least in the absence of high-quality teacher professional development to support other uses of this activity.

Circle time might benefit children's literacy knowledge (Zhang et al., 2015), particularly where the morning message is concerned. In morning message, the teacher writes a message about the day and asks children to discuss the letters and punctuation that compose the message. The nature of these messages, as well as how teachers engage children in the code and meaning of those messages (Hindman & Wasik, 2012), varies widely, particularly in the absence of professional development on this topic (Zhang et al., 2015). Spelling and grammatical errors by teachers may also undermine the value of these messages as code-focused teaching experiences (Hindman & Wasik, 2012). Substantially less is known about the extent to which circle time might support child vocabulary development; effects in this area would likely hinge on the nature and quality of instruction in new words and ideas. The few studies of the instructional content of circle time leave many open questions about what topics are addressed, with concerning suggestions that instruction may focus on relatively fact-oriented, right-and-wrong concepts. Importantly, we do not to suggest that high-quality instruction is impossible during circle time or around this specific content; rather, we simply note the observational evidence that this facet of circle time may be underdeveloped in many early childhood classrooms.

Low linguistic richness of teacher-child talk. Parallel to work questioning the instructional content of circle time, a small body of available research hints that at least one key factor of instructional quality, the richness of linguistic interactions, is also low. For example, one small study of two Head Start classrooms (Chen & Kim, 2014) revealed that, during circle time, teachers were able to engage in multiple-turn conversations with children, but these conversations were low in language richness and were heavily controlled by teachers, rather than children. In comparison, teacher-child conversations during free play were more extensive. Similar findings emerged from a study of Italian preschools (Majorano et al., 2009), as well as one Swedish preschool's circle time (Emilson & Johansson, 2013). Another study found that teachers simply repeated what children said during circle time rather than elaborating on their remarks or using them as springboards for further conversations (Yifat & Zadunaisky-Ehrlich, 2008). As with instructional content, questions remain about the quality of the language used to communicate content during circle time, and more work documenting how preschool teachers use circle time and where improvements could be supported is needed.

Affective Quality and Engagement

Research indicates poor affective quality of circle time in many settings. Circle time may be a challenging activity for young children to sit through, particularly if it is highly repetitive and routinized and offers few opportunities for individual child input. For example, Zaghlawan and Ostrosky (2011) found that the frequency of disruptive behaviors was high during circle time in eight Head Start classrooms and that the most challenging times were during the highly structured calendar, roll call, and discussion periods of circle time. Similarly, in two Head Start classrooms, Ling and Barnett (2013) found high levels of disruptive behaviors during circle time, initiated by a very small percentage of the children but resulting in obstacles to learning for the group as a whole. Vargo et al. (2014) discovered that even appropriate behaviors, such as raising a hand to share an idea, could be disruptive when children engaged in this behavior at inappropriate times (e.g., raising a hand when a question was not asked or when the child did not actually have a response).

Finally, one important study from Wiltz and Klein (2001) consulted preschool children about their opinions on their classroom day and found low regard for circle time. Indeed, this was the time of the day that children indicated they liked the least. Importantly, this negative view of circle time was salient in both low- and high-quality settings (as determined by standardized teacher observations). Children cited the length of time they had to sit still and the preponderance of listening rather than talking or playing as drawbacks of this part of the day.

Research shows, however, that structured efforts by teachers, including reinforcement of appropriate behavior and opportunities for movement, diminished circle time disruptions (Ling & Barnett, 2013; Seifert & Metz, 2016; Vargo et al., 2014). The degree to which children are productively engaged during circle time may depend on teachers' practices, an issue that requires greater attention.

Global Quality of Instruction

To our knowledge, no peer-reviewed research has examined the global quality of circle time instruction using a rigorously studied tool such as the CLASS. The holistic nature of the CLASS, tapping into instructional support, emotional support, and classroom organization, can provide additional information about the extent to which circle time offers children support in these essential areas. Exploring the overall quality of circle time instruction using this tool represents a valuable contribution to the field by drawing a more robust understanding of the potential strengths and weaknesses of this part of the day.

Current Study

In summary, early childhood literature includes abundant evidence of the importance of high-quality preschool for the development and learning of young children, particularly those in poverty, as well as widespread concerns about quality. At the same time, there are some common, lengthy, and underresearched parts of the preschool day, including circle time. A modest body of studies has examined

one or more facets of circle time and shown that there is substantial room for improvement. To date, however, no comprehensive work has systematically examined the content addressed during circle time, how teachers and children talk about this content, and how engaged children are. Moreover, research has yet to explore what teacher and classroom factors predict variations in circle time delivery. The current study explores several research questions: (1) What is the content of circle time instruction, and what are the specific activities that teachers implement? (2) What is the nature of teacher and child instructional talk during circle time? (3) What is the overall level of child engagement throughout circle time? (4) What is the global quality of circle time instruction as measured by the CLASS? (5) What teacher and classroom factors predict the two most proximal indicators of circle time quality: instructional talk and child engagement?

Method

Procedure

This observational study was conducted in one urban, high-need public school district in a major mid-Atlantic city. All prekindergarten teachers in the district were invited to participate in a larger study of a professional development intervention targeting language and vocabulary instruction, with a particular emphasis on high-quality teacher-child interaction. Interested teachers agreed to be randomized into either the intervention (coaching-based professional development) or comparison (business as usual) conditions and to be videotaped multiple times per year. The current study involves pretest data collected in the fall, before any intervention was provided; consequently, all teachers are considered part of the same pool, although they would later go on to have differentiated experiences, depending on their condition.

These full-day classrooms were observed and videotaped for a full morning of instruction (i.e., the core, content-rich period of the day). A single camera followed the teacher and children throughout the morning, recording teacher and child interactions. The circle time portions of these videotapes were later coded (as described below) for overall instructional quality using the CLASS (Pianta et al., 2008), as well as for teacher and child talk and child engagement using project-aligned coding schemes. Finally, teachers completed a paper-and-pencil survey capturing their ethnicity, education, and experience.

Participants

In total, we recruited 22 public preschool teachers; this sample was determined to be adequate in a power analysis for our larger project. All preschool teachers in the district were invited by e-mail from their central administration. Nearly all ($n = 21$) teachers were female. Although 41% of teachers reported their ethnicity as White, 36% identified themselves as African American, 5% identified themselves as Hispanic/Latino, and 18% reported being of other (including multiethnic) backgrounds. On average, teachers had 8.82 years of experience ($SD = 6.82$). All held bachelor's degrees and state teaching certificates, and nearly two thirds (64%) also held master's

degrees. Children in these classrooms (averaging about 13–14 children per classroom during the observations) were evenly divided by gender (e.g., 50% female). Most (80%) were Black (primarily African American), 15% were Hispanic/Latino, and 5% were White. One third (33%) were dual-language learners (with the primary home language being Spanish). More information on adults and children is presented in Table 1.

Measures

Global classroom quality. Global quality of circle time was assessed using the CLASS (Pianta et al., 2008). We considered the start of circle time to be when teachers had children gathered together and used an initiating comment such as, "OK, friends, welcome to circle time!" or "Let's get started." We considered circle time to conclude when the teacher dismissed children to another activity using a remark such as, "Davon, you can be the first friend to choose a center," or "Let's get our coats on to go outside."

The CLASS is an observational measure of global quality and teacher-child interactions across 10 dimensions organized into three domains: emotional support (positive climate, negative climate, teacher sensitivity, and regard for student perspectives), classroom organization (behavior management, productivity, and instructional learning formats), and instructional support (concept development, quality of feedback, and language modeling). The CLASS uses a 7-point scale to indicate low-quality (1, 2), midrange-quality (3–5), and high-quality (6, 7) interactions. Ratings of all 22 classrooms were conducted by a certified CLASS observer, and 18% of classrooms were double coded to examine interrater reliability, yielding 91% agreement (±1), the standard for this measure (Curby, Downer, & Booren, 2014).

Instructional content coding scheme. Circle time activities were coded to capture their content focus, using seven mutually exclusive codes. These codes were exhaustive, meaning that all parts of the circle time were coded.

A set of codes was initially drafted based on the research literature, but these codes were vetted, altered, and amended through initial viewing of the circle time videotapes (Strauss & Corbin, 1998). Ultimately, codes were retained that captured

Table 1. Classroom Quality Scores

Dimension	Min	Max	*M*	*SD*
Adults in the classroom	1	2	1.50	.51
Children in the classroom	7	20	13.38	3.26
Positive climate	2	7	5.23	1.26
Negative climate (reverse coded)	4	7	6.64	.71
Teacher sensitivity	2	7	4.44	1.38
Regard for student perspective	2	6	3.44	1.31
Behavior management	1	7	4.65	1.49
Productivity	2	7	4.33	1.44
Instructional learning format	1	6	3.55	1.43
Concept development	1	2	1.31	.45
Quality of feedback	1	3	1.74	.83
Language modeling	1	4	1.84	.84
Emotional support	2.50	6.25	4.94	1.05
Classroom organization	1.33	6.33	4.18	1.32
Instructional support	1	3	1.63	.58

distinct phenomena and that could be reliably coded by different raters. A total of seven distinct codes were used: sharing, calendar time, reviewing schedule and rules, language/literacy and numeracy skills, morning message, singing and dancing, and transitions/noninstructional time.

Sharing. The sharing code captured instances wherein the teacher went around the circle and asked at least three children to share something (i.e., what they did over the weekend), or, in some cases, had children pair off and share with each other. This code relied on the expectation that the class would be focused on learning about the interests and/or out-of-school time of peers and that children would take turns being the focal child.

Calendar. Calendar time in most classrooms was composed of teachers focusing children's attention on a physical calendar showing the month and day. Teachers led discussion around the specific date (e.g., day of the week, progress through the month, name of the year). Teachers also led the children in reciting relevant background information (e.g., reciting all the months of the year, reciting all the days of the week). Some teachers also discussed the day's weather, with or without a visual aid depicting different kinds of weather (e.g., poster showing a sun or rain cloud).

Schedule. During a segment on reviewing the schedule and rules, the teacher would lay out the plan for the day and/or have the children review classroom rules before they started engaging in activities. This block of activity served a broadly orienting purpose, preparing children with high-level information they could draw on throughout the day.

Language/literacy and numeracy. Language/literacy and numeracy skills activities were typically composed of children counting things or identifying letters of the alphabet. In some cases, however, children identified and discussed new vocabulary words or spelled out short sight words.

Morning message. Teachers presented a message on a large board or piece of paper; in general, teachers wrote the message as children watched, although sometimes they wrote the message ahead of time and simply drew children's attention to it during this segment. Teachers then read the message aloud, after which they discussed the message with children and/or invited children to come up to the board individually and mark letters, words, or punctuation they recognized in the message.

Singing and dancing. Singing and dancing comprised teachers guiding children in singing one or more songs about academics (e.g., alphabet song), nonacademic content (e.g., welcome or good morning song), or behavior (e.g., "keep your hands to yourself" song). Songs and/or dancing were often introduced as a chance for children to take a break from focused instruction activities and let out some excitement and energy (e.g., "Shake your sillies out!").

Transition/non instructional time. The code for transition/noninstructional time was used to capture periods where teachers were switching activities or handling administrative duties with no structure or direction for the children (e.g., marking attendance, organizing paperwork, strategizing with an assistant teacher while children waited for direction).

Teacher instructional-talk coding scheme. We coded all teacher utterances during the circle time activity. An *utterance* was defined as a complete phrase or idea. In other words, the sentence, "Flowers need water to grow, but what else

do they need?" would be coded as two utterances: "Flowers need water to grow," and "What else do they need?"

Content or purpose of talk. Coding of the content and purpose of the teacher remarks included 11 mutually exclusive and exhaustive categories:

1. Counting: Counting utterances were made by the teacher to demonstrate or encourage children to count (e.g., "Let's count how many circles we have in the classroom").
2. Other math skills: Other math skill utterances encouraged math skills beyond counting (e.g., "There are four stars and five squares, so are there more stars or squares on our chart?").
3. Literacy skills: Literacy utterances covered letter recognition, letter-sound correspondence, and recognition of some short sight words (e.g., "*M* makes an *mmmmm* sound").
4. Defining vocabulary: Defining vocabulary utterances were meant to introduce new words to children (e.g., "What does it mean to have 'patience'?").
5. Theme-related new information: Theme-related new information provided new content relevant to the overarching content children were learning (e.g., "Our nose helps us smell, our eyes help us see, our ears help us hear, our hands help us touch, and our tongue helps us taste. Those are our five senses.").
6. Academic songs: Academic songs had theme-, calendar-, or morning message-relevant content embedded in them (e.g., days of the week song, weather song).
7. Nonacademic songs: Nonacademic songs were not focused on the current theme of instruction or on broader classroom content. Instead, they were familiar, often classic songs likely to be repeated throughout the year, regardless of the focal theme (e.g., "Skip to My Lou").
8. Behavior songs: Behavior songs focused on reminding children of appropriate behavior (e.g., "ears are listening, eyes are watching, mouths are quiet, bodies are calm" song).
9. Behavior management: Behavior management utterances were attempts by the teacher to keep children on task (e.g., "Everyone: Eyes up here"; "Turn around and put your hands in your lap, please").
10. General teacher statements: General statement utterances were made by the teacher without a specific content focus (e.g., "Great job on the morning message today, class!" or "You shared your gummies; that's very nice! That is being a good friend").
11. Administrative: Administrative utterances involved the teacher addressing logistical or administrative issues during circle time, often with another teacher or adult (e.g., "No, that event is on Friday") or with children (e.g., "A few of you told me you didn't bring lunch. Raise your hand if you didn't bring lunch today").

Structure of teacher talk. Along with the content-focused codes, each teacher utterance was assigned to one of three mutually exclusive categories: comments, open-ended questions, and closed questions. Comments were defined as nonquestion

teacher utterances (e.g., "Fall is here!" or "Let's look at our calendar and do the days of the week"). Open-ended questions were defined as those that required more than a one-word response and invited elaborated responses (e.g., "Ricky, what did you do this weekend?" or "How do you know when it's going to rain outside?"). Closed questions were defined as those that could be often answered with a yes/no or one-word response (e.g., "What color is this?" or "Is it cold outside?").

Reliability of teacher talk. To examine interrater reliability, 18% ($n = 4$) of classroom videos were double coded by a different coder for teacher talk. There was 89% agreement between coders on total teacher talk (all teacher utterances combined), 98% agreement on total behavior management utterances, and 99% agreement on total academically oriented teacher utterances (i.e., counting, other math skills, literacy skills, defining vocabulary, and theme-related new information combined).

Child talk coding scheme. We coded child utterances in the following categories:

1. Repeating teacher: Children sometimes repeated verbatim the teacher's statement (e.g., "Today is September 14th, 2016"). This may have occurred in response to a direct teacher request for repetition or automatically, suggesting that a direct request from the teacher had been routinized and internalized.

2. Demonstrating knowledge: These utterances involved children answering a question correctly or volunteering knowledge on a subject being discussed (e.g., "Letter *M* says *mmmmm*").

3. Asking questions: We coded children as asking relevant question utterances when they actively posed a question to the teacher or group that was relevant to the activity (e.g., "Why is the giraffe so tall?").

4. Singing: We coded children as singing whenever they participated in any of the three types of songs noted above.

5. Conversation: Back-and-forth conversation utterances involved multiple turns between a child and the teacher or a child and his or her peers. Conversations required at least four conversational turns, including contingent responses from both parties (e.g., TEACHER: "What did you do this weekend?" CHILD: "I slept in my bunk bed with my cousin and my cat!" TEACHER: "You slept with your cousin and your cat! Wow! Which bunk did you choose?" CHILD: "The bottom one." TEACHER: "Oh, that's fun!").

6. Nonacademic: Nonacademic talk utterances were off-task or not relevant to the activity (e.g., "I didn't get a turn" or "I need to use the bathroom").

Reliability of child talk. To examine interrater reliability for child utterances, the same videos as above were double coded. There was 93% agreement between coders in total child talk (all child utterances combined) and 89% agreement in on-task child utterances (demonstrating knowledge, repeating the teacher, asking relevant questions, and back-and-forth exchanges combined).

Child engagement during circle time. Child engagement was coded three times during each observation session (1 minute into circle time, halfway through, and 1 minute before circle time finished). Observers watched the video of the whole classroom 10 seconds before through 10 seconds after each coding point and noted how many children were engaged. We defined *engaged* as focused on the teacher,

including looking in the direction of the teacher silently or raising a hand, as opposed to children who were focused away from the teacher and/or actively talking to or otherwise interacting with peers in unsanctioned ways. Once again, 18% of the classrooms were double coded for engagement. The coders were within 5 percentage points on engagement for 83% (10 of 12) of the observation points. All child engagement results are specified at the classroom level (i.e., percentage of children engaged in the entire classroom).

Results

Before exploring each research question, we present some basic descriptive information about circle time in these classrooms. The average length of circle time in minutes was consistent with previous research ($M = 21:20$, $SD = 10:40$), although the range was substantial (8:00–55:40 minutes). Outliers were relatively rare; only three circle times endured for more than 30 minutes, and only three endured for fewer than 15 minutes. Half of the classrooms had one teacher present during circle time ($n = 11$), and the other half had two teachers present ($n = 11$). All teachers worked with their whole group for circle time, with the number of children involved ranging from 7 to 20 ($M = 13.38$, $SD = 3.26$).

Research Question 1: Content of Instruction during Circle Time

Of the seven types of circle time activities, each activity was used by at least five classrooms (with the exception of transition/noninstructional time), revealing that, across the sample, teachers used various practices. However, within each classroom, an average of just three of these possible different types of activities were employed during circle time, indicating that each teacher used just a few different activities in his or her own classroom. Nearly all teachers (95%) used morning message, and 77% used calendar time. Singing and dancing were frequently employed (50%), whereas literacy and numeracy skills (36%), children sharing with the class (27%), reviewing schedule and rules (23%), and transitions/noninstructional time (9%) were less frequently observed.

By a factor of 2 (see Table 2), the most time, on average, was devoted to morning message ($M = 11:00$, $SD = 6:18$). Equal time was dedicated to calendar time ($M = 5:27$, $SD = 3:44$), children sharing ($M = 5:31$, $SD = 3:29$), and literacy and numeracy skills ($M = 6:17$, $SD = 3:48$). In comparison, reviewing the daily schedule and

Table 2. Time Spent in Each Activity Type

Activity Type	n	Min	Max	M	SD
Children sharing	6	3:00	12:01	5:31	3:29
Calendar time	17	1:00	17:22	5:27	3:44
Reviewing schedule or rules	5	:38	6:00	3:42	2:10
Literacy and numeracy skills	8	1:50	11:24	6:17	3:48
Morning message	21	3:29	31:48	11:00	6:18
Singing and dancing	11	1:15	6:56	3:43	1:50
Transitions or noninstructional time	2	:39	1:06	:53	:19

rules (M = 3:42, SD = 2:10), singing and dancing (M = 3:43, SD = 1:50), and transitions or noninstructional time (M = 0:53, SD = 0:19) were the briefest options. ANOVA showed significant differences in length across circle time segments, $F(6, 63)$ = 5.43, $p < .001$. Post hoc comparisons using the Tukey HSD test indicated that teachers spent significantly more time on morning message than calendar time (p = .005), daily schedule and rules (p = .024), singing and dancing (p = .001), and transitions or noninstructional time (p = .044).

Research Question 2: Linguistic Richness during Circle Time

Across circle time as a whole, teachers made 89.77 utterances (SD = 32.84), about twice as many utterances as children (M = 44.86 utterances, SD = 20.73; see Table 3). Teacher talk was generally framed in comments (M = 62.41, SD = 29.29), with most teachers offering no or few open-ended questions during circle time (M = 2.27, SD = 4.45, or 2% of total teacher talk during circle time), and a low to moderate amount of closed questions (M = 24.18, SD = 12.58, or 27% of total teacher talk during circle time).

Teacher talk. Of these statements, the most common type was general teacher statements (M = 34.95, SD = 19.84), which reflected noninstructional content such as "Good morning class!" and "I'm so happy that you all came today." In fact, these composed 39% of the total adult talk during circle time, and 26% of total talk overall. Regarding instruction-focused remarks, those targeting literacy predominated (M = 23.55, SD = 12.84). Notably, there were very few comments or questions about counting (M = 2.32, SD = 1.73) or other math skills (M = 1.73,

Table 3. Teacher and Child Talk Frequency

Utterance Type	Min	Max	M	SD
Teacher:				
Behavior management	2	64	22.41	17.48
Counting	0	6	2.32	1.73
Other math skills	0	15	1.73	3.52
Literary skills	4	57	23.55	12.84
Defining vocabulary	0	18	1.32	3.98
Theme-related new information	0	1	.05	.21
Academic songs	0	6	1.41	1.68
Nonacademic songs	0	5	1.05	1.25
Behavior songs	0	3	.23	.69
General statements	14	84	34.95	19.84
Administrative comments	0	10	2.64	3.25
Total teacher utterances	41	164	89.77	32.84
Total teacher comments	23	135	62.41	29.29
Total teacher open-ended questions	0	17	2.27	4.45
Total teacher closed questions	7	46	24.18	12.58
Children:				
Demonstrating knowledge	5	46	18.36	12.12
Repeating teacher	4	25	12.05	5.67
Asking questions	0	3	.36	.85
Singing	0	9	2.64	2.36
Back-and-forth exchange with teacher	0	12	1.64	2.79
Nonacademic talk	0	29	9.82	8.40
Total child utterances	18	99	44.86	20.73

$SD = 3.52$); new words defined ($M = 1.32$, $SD = 3.98$); or new, theme-related information ($M = 0.05$, $SD = 0.21$).

Child talk. Regarding child utterances, the vast majority (68%) were comments in response to teacher prompts. Most commonly, children demonstrated knowledge by sharing a related thought on the topic the teacher introduced ($M = 18.36$, $SD = 12.12$), but nearly as many remarks involved repeating the teacher at his or her request ($M = 12.05$, $SD = 5.67$). Nonacademic or off-task comments were also frequent ($M = 9.82$, $SD = 8.40$) and in fact represented 22% of the child utterances and 7% of utterances overall. Children asked very few relevant questions ($M = 0.36$, $SD = 0.85$). In fact, no circle time included more than one child question, on average. Classrooms also rarely featured multiple-turn, back-and-forth exchanges between a child and either the teacher or a peer ($M = 1.64$, $SD = 2.79$).

Content and talk. Exploring the intersection of circle time activities and talk, distinct features of two particular activities emerged. Not surprisingly, because it accounted for the longest segment of circle time, morning message was unique as the time when teachers made the most utterances of any circle time activity ($M = 19.81$, $SD = 12.26$, or 42% of teacher talk during that activity); accordingly, children also made the most utterances during morning message ($M = 22.62$, $SD = 12.56$). Similarly, teachers made the second largest number of utterances during literacy and math skill activities ($M = 10.63$, $SD = 8.96$, or 40% of teacher talk during that activity), as did children ($M = 18.25$, $SD = 10.28$). Interestingly, however, sharing time emerged as the activity block in which teachers asked the most open-ended questions ($M = 3.00$, $SD = 6.87$), and when children had the most back and forth conversations with teachers ($M = 3.33$, $SD = 4.08$). That said, the total number of teacher-child exchanges during this segment of the day remained small, with many instances of children sharing and not getting follow-up questions from teachers.

Data reduction. To reduce teacher and child talk data into manageable categories, we combined all on-topic teacher talk (i.e., counting, other math, literacy, defining vocabulary, theme-related new information, and academic songs), excluding nonacademic songs, behavior management songs and remarks, and general and administrative statements, yielding an average of 28.05 remarks per circle time ($SD = 14.57$). We also combined on-topic child talk related to the target content (i.e., demonstrating knowledge, repeating teacher, asking questions, singing academic songs, and conversations) about information, distinguishing this material from behavior-focused or off-topic content (nonacademic talk, singing nonacademic songs). Children averaged 32.41 remarks per circle time ($SD = 17.10$). Finally, we calculated the proportion of on-topic child talk to on-topic teacher talk to gauge this facet of child participation, which was 1.3 to 1 factor of child talk.

Research Question 3: Child Engagement during Circle Time

Overall, children remained mostly engaged during circle time, with an average of 84% engagement 1 minute into circle time ($SD = 0.09$), 77% engagement halfway through ($SD = 0.12$), and 72% engagement 1 minute before circle time ended ($SD = 0.17$). Averaging across all time points, mean engagement throughout circle time was 78% ($SD = 0.09$, or 9%).

The standard deviations of mean engagement nearly doubled from Time 1 to Time 3, suggesting that certain classrooms lost children's attention more than others. One helpful metric to understand this phenomenon is to explore how many classrooms, at each time point, demonstrated very low child engagement, operationalized as 70% or fewer of children demonstrating engagement. At Time 1, only 5% of classrooms had fewer than 70% of children engaged. At Time 2, this percentage increased to 19%, meaning that, in one in five classrooms, a strong minority of children were not attending to circle time instruction by the halfway point. By Time 3, fully 38% of classrooms, or nearly two in five classrooms, had low engagement levels.

Circle times that had less than 70% engagement at Time 3 differed from those with better engagement in selected ways. Those with low engagement at Time 3 were more than 50% longer (M = 27:16, SD = 14:56) than those that maintained higher engagement (M = 17:53, SD = 5:37), a significant difference, $t(19)$ = 2.07, p = .05. However, despite the disparity in duration, the groups did not differ in the number of teacher statements, $t(19)$ = 0.66, p = .52; open-ended questions, $t(19)$ = 0.09, p = .93; closed questions, $t(19)$ = 0.73, p = .48; or total amount of child talk, $t(19)$ = 0.84, p = .41. In fact, the main difference between the two groups was that teachers whose classroom engagement fell below 70% at the end of circle time made more than twice as many behavioral management comments (M = 33.78, SD = 21.45), as did teachers with engagement above 70% (M = 14.33, SD = 8.30), again, a significant difference $t(19)$ = 2.99, p = .007. Finally, chi-square analyses showed that low engagement at the end of circle time was not significantly related to the presence or absence of any particular activity during circle time (e.g., morning message, calendar time), although using circle time for transition activities was marginally related to low engagement at the end of circle time, $\chi^2(1)$ = 2.97, p = .086.

Research Question 4: Global Quality of Instruction during Circle Time

As noted above, quality of instruction during circle time, as measured by the CLASS, was scored on a scale from 1 to 7 (1 = *very low quality*; 7 = *very high quality*). Emotional support (M = 4.94, SD = 1.05) and classroom organization (M = 4.18, SD = 1.32) were in the midrange, whereas instructional support (M = 1.63, SD = 0.58) was very low. In fact, scores fell below national averages of Head Start classrooms—taken from full-day observation, not just circle time—on all three domains (emotional support: M = 6.03, SD = 0.28; classroom organization: M = 5.80, SD = 0.36; instructional support: M = 2.88, SD = 0.54) (DHHS, 2015). More specifically, regard for student perspective (M = 3.44, SD = 1.31), concept development (M = 1.31, SD = 0.45), and language modeling (M = 1.84, SD = 0.84) stood out as particularly low subdomains compared with national averages (i.e., regard for student perspective, M = 5.37; concept development, M = 2.44, SD = 0.57; language modeling, M = 3.35, SD = 0.59) (DHHS, 2015). See Table 1 for complete CLASS scores. Because there were high correlations among these three domains (instructional support and emotional support, r = .73; instructional support and classroom organization, r = .76; and emotional support and classroom organization, r = .92; p < .001 for all), we created one mean CLASS score, averaging across domains, for use in subsequent analyses, as in Hamre, Hatfield, Pianta, and Jamil (2014).

Table 4. Regressions of Classroom Quality on Teacher Talk Ratio and Child Engagement

| | Outcome Variables | | | |
| | Teacher Talk Ratio | | Engagement | |
Predictor variable	B	SE	B	SE
Constant	.39	.38	.68	.06
Classroom quality	.24*	.10	.04*	.02

* $p < .05$.

Quality of Instruction as a Predictor of Child Engagement (Research Question 5)

Correlations between child engagement and classroom quality variables are presented in Table 4. We conducted two OLS multiple regressions: one with proportion of child content-relevant talk as the outcome (see Research Question 2) and the other with average child engagement as the outcome (see Research Question 3). Potential predictors of interest included global CLASS score for circle time, length of circle time in minutes, number of children in the circle time group, teacher education, and teacher experience. Given the modest sample size, however, we trimmed covariates that did not at least marginally contribute to the model (i.e., $p > .10$).

Proportion of child talk. Ultimately, only global instructional quality (i.e., CLASS score) predicted the proportion of child to teacher talk ($\beta = .47$, $p = .029$), meaning that children in classrooms with higher instructional quality contributed a larger percentage of that classroom's overall talk (see Table 5).

Child engagement. Once again, only global instructional quality (i.e., CLASS score) predicted child engagement ($\beta = .42$, $p = .041$). Thus, children in classrooms with higher instructional quality were more engaged during circle time. However, a trend also emerged, suggesting that holding a master's degree was inversely linked to child engagement (see Table 5).

Discussion

This study explored the content, duration, teacher and child talk, quality of instruction, and degree of child engagement during circle time, a near universal activity in preschool classrooms. Overall, we found that classrooms addressed several of a relatively small array of activities during circle time. More broadly, evidence suggested

Table 5. Correlation Matrix for Relevant Study Variables

Variable	1	2	3	4	5	6	7
1. Engagement	—	.31	.47*	.10	−.28	−.44*	.17
2. Teacher talk ratio	.31	—	.47*	.00	.25	−.08	.16
3. Classroom quality	.47*	.47*	—	.10	−.01	−.10	.35
4. Children in classroom	.10	.00	.10	—	−.09	−.06	.13
5. Activity length	−.28	.25	−.01	−.09	—	−.06	−.21
6. Master's degree	−.44*	−.08	−.10	−.06	−.06	—	.45*
7. Years teaching	.17	.16	.35	.13	−.21	.45*	—

* $p < .05$.

that circle time is not, on the whole, closely aligned with optimal practices in early childhood. On average, teacher talk was twice as prevalent as child talk, and both teacher and child talk consisted mostly of statements and closed-ended questions rather than extended back-and-forth exchanges or open-ended questions. Quality of instruction was low, particularly on the instructional support domain of the CLASS. Finally, over the 20-minute activity (on average), child engagement decreased significantly, falling in about 40% of classrooms to low levels (less than 70%). Even so, two aspects of instructional quality—the ratio of child-to-teacher talk and child engagement—were higher during circle time when instruction was more rich, warm, and structured. This evidence, along with previous research, calls into question the richness and quality of circle time instruction and suggests that even modest improvements in pacing and quality could help to ensure that educators maximize valuable learning time and preserve children's behavioral self-regulation in the first activity of the day. Below, we focus on two distinct but interrelated dimensions of circle time that emerged in this study as possible areas for improvement: promoting more rich language exchanges and fostering child engagement.

Shortage of Rich Exchange during Circle Time Activities

In the average classroom, circle time was composed of a few activities ($M = 3$). One of the most promising among these, with regard to child outcomes, was sharing time, during which children shared what they did over the previous evening or weekend or offered a piece of information about their lives. Although sharing time was not very common (27% of classrooms) and did not last very long ($M = 5:31$), it did promote the most open-ended questions ($M = 3.00$) from teachers and the most back-and-forth exchanges between teachers and children ($M = 3.33$). Child sharing activities potentially give children a chance to practice gathering and vocalizing their thoughts, and they also provide teachers with many opportunities to repeat and extend children's statements and deepen their understanding of concepts. For these reasons, this type of activity may be a prime target for expansion and professional development by those looking to improve the quality of circle time.

Beyond sharing time, circle time activities mainly revolved around teacher-directed exposures to letters, numbers, and facts. Nearly all (95%) classrooms employed morning message, a relatively lengthy activity ($M = 11$ minutes) wherein the teacher writes a message, reads it to the class, and then has children come up, one at a time, to circle letters they recognize in the message. Although children need to learn to recognize and write letters and words, the receptive (i.e., find the letter rather that make the letter) nature of this activity might be most effective when balanced with small-group instruction periods, when teachers can give children more individualized attention as they practice these skills directly. The other highly used activity (77% of classrooms) involved the calendar, which has been critiqued for its abstract nature (Beneke et al, 2008). Notably, both the morning message and calendar were highly teacher managed and offered few opportunities for extended language exchanges; moreover, they are unlikely to change substantially from day to day, potentially limiting learning and diminishing engagement. Finally, the remaining activities, including singing, dancing, or more repetition of letters and numbers, generally included few critical thinking or problem-solving experiences. Therefore,

although circle time lasted, on average, 20 minutes, the nature and implementation of the activities constrained the variety of information to which children were exposed and their opportunities to talk about that information.

Children clearly benefit from routinized interactions as well as repetition of letters, words, numbers, and songs. Teachers, however, often report not having enough time to expose children to everything they want to cover (Nasser, Kidd, Burns, & Campbell, 2015), and considerable stress accompanies efforts to meet federal, state, or district mandates (Hall-Kenyon, Bullough, MacKay, & Marshall, 2014). Given these pressures, teachers may need to weave additional prompts and activities into circle time (e.g., children contribute to the construction of the morning message, children have more sharing time) to foster rich interactions. In fact, the average CLASS language modeling score in these circle times was well below national averages reported in preschools, such as Head Start ($M = 1.84$ vs. $M = 3.35$; DHHS, 2015). Teachers dominated the conversations, making twice as many utterances as children did. Meanwhile, teachers and children were mostly talking "at" each other as opposed to "with" each other, as the most common types of utterances were general teacher statements (noninstructive) or closed questions, whereas children mostly responded to closed questions or repeated verbatim what the teacher said. There were very few instances of open-ended questions, or multiple-turn, back-and-forth conversations, or introduction of new concepts or vocabulary words. These findings suggest that professional development could spend more time addressing circle time to ensure that children are beginning the day with a well-paced and high-quality activity in which they have ample opportunities to think deeply, articulate their views, and exchange ideas with peers and educators. Teacher trainings might endeavor to borrow from successful teacher practices implemented in other activity formats (e.g., whole-group book readings, small-group lessons).

Child Engagement Flags during Circle Time

A second, particularly important finding from this study is that although child engagement was generally high at the outset of circle time (approximately 78%), it decreased in all classrooms as circle time progressed, with about half of classrooms showing significant disengagement (i.e., more than 30% of children off task). Relative to high-engagement classrooms, those with low engagement at the end of the lesson had much longer circle times and roughly the same amount of teacher and child talk; the exception is behavior management comments, of which less engaged classrooms had twice as many. In other words, teachers in low-engagement classrooms spent 50% more time providing an equivalent amount of instructional talk but making double the behavior management comments. One critical consequence is that because circle time is generally the first organized activity of the day, children exposed to low-engagement circle times may deplete their resources for managing attention, emotion, and behavior at the very outset of the school day, setting the stage for difficulty throughout subsequent instructional periods.

Given this evidence, teachers (particularly in classrooms where child engagement flags substantially over time) would be wise to reduce the duration of circle time and/or increase the opportunities for teacher-child interactions around meaningful content during this period. One productive suggestion is to ensure that the

pacing of circle time (i.e., frequency and duration of teacher comments and prompts, progress from one activity to the next) is relatively rapid, particularly when routinized information is presented, so that children remain challenged and interested within the context of a comfortable structure. Effective strategies from other classroom instructional contexts might be presented in professional development; for example, techniques for managing large-group instruction could be drawn from whole-group book-reading approaches, and practices for fostering multiple-turn conversations could be drawn from small-group methods. It is important to note, however, that overall engagement of nearly 80% is strong despite the low instructional quality, suggesting the great potential of circle time to be highly engaging and academically effective with improved instructional practices.

Limitations and Future Directions

Although this study offers a unique look into the quality of a common part of the early childhood classroom schedule, several limitations of this work might guide future research. First, the sample size of 22 classrooms is small, limiting our ability to make broad generalizations for early childhood classrooms. This limitation is particularly notable in light of the relatively large standard deviations observed for many variables; a larger sample would allow more nuanced examination of this variation. Future research should endeavor to replicate these results with larger sample sizes across different regions of the United States, and in programs of diverse auspices (e.g., private preschools, Head Start).

A second potential limitation involves our measure of child engagement. Although there are more standardized measures to assess the engagement of a single child (i.e., inCLASS [Individualized Classroom Assessment Scoring System]; Downer, Booren, Lima, Luckner, & Pianta, 2010), we sought a more global measure of classroom engagement and decided that a descriptive look that was reliable among multiple raters would be optimal for this study. Future research should employ more widely used measures such as the inCLASS to examine relationships between child engagement and classroom quality during circle time. Third, this descriptive study does not test possible improvements for circle time; future research should examine more directly what activities and teacher practices might optimize child learning during circle time using rigorous measures of both teacher and child outcomes. Finally, this study was underpowered to examine moderation effects; thus, future research should explore possible interactions between child engagement and the relationship between teacher practices/talk and child outcomes. In particular, it could be that a threshold of engagement exists, below which teacher instruction does not predict how much children learn.

Conclusion

This study provides a descriptive look at preschool circle time, an activity commonly used to start the day in preschool classrooms that may be straining children's attention spans in the absence of engaging instruction. In our sample, teachers asked very few open-ended questions and defined few new words or new concepts. In

turn, children asked few relevant questions, rarely had multiple back-and-forth exchanges with the teacher or peers, and generally contributed by answering closed questions or repeating what teachers said. Even so, higher quality was significantly linked to more child talk and better child engagement, illuminating a potential pathway to improvement. Moving forward, researchers and practitioners alike should focus on how we can more effectively capitalize on circle time to improve the depth of the content and the quality of teacher-child interactions. With time and attention at such a premium in early childhood classrooms, especially in high-poverty communities, it would be unfortunate not to maximize the quality of circle time and start the day on a path toward quality learning and engagement.

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