

RESEARCH ARTICLE

Teacher Talk during Children's Play in Head Start Preschools: Differences in Quantity, Differences in Quality

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Teacher-child interactions in preschool classrooms have been studied extensively (e.g. Mashburn, Pianta, & Hamre, et al., 2008), but the nuances of these interactions during particularly dynamic times of the preschool day are less well-examined. The current study focuses specifically on teacher-child interactions during free choice time (FCT). Teachers in the two higher-scoring classrooms (on the CLASS instrument) in the study provided more exposure to talk, more sophisticated talk, longer interactions, more discussions, and fewer directives than teachers in the two lower-scoring classrooms. Given the current lack of training in teacher preparation regarding how to talk with children and how to effectively facilitate FCT, this study has implications for teacher preparation and professional development. This study also contributes to a research base indicating that well-facilitated playtime in preschools can support children's learning—in this case, language development—in developmentally appropriate ways.

Keywords: play, vocabulary development, teacher development, free choice time

Preschool can help prepare children from economically disadvantaged families for the academic, emotional, and social challenges of schooling (e.g. Auger, Farkas, & Burchinal, et al., 2014; Bania, Kay, & Aos, et al., 2014). The quality of children's experiences matter, not simply the fact of attending preschool. Children's interactions with teachers matter especially (e.g. Mashburn, Pianta, & Hamre, et al., 2008; Weisberg, Hirsh-Pasek, & Golinkoff, et al., 2015). However, there are few studies that look at what those interactions comprise of during times of the day that are particularly dynamic and complex, such as free choice time (FCT), even though FCT may constitute 20% or more of the preschool day. While the CLASS instrument (Pianta, La Paro, & Hamre, 2008) provides more general information about the quality of interactions with children, it does not focus in particular on those interactions during FCT (Paulick, 2019). The current study offers mixed-methods validity for the CLASS, providing additional indications of classroom quality during FCT that cannot be measured by an instrument that does not capture talk. In order

to train and support preschool teachers to engage in rich, meaningful interactions with children during this potentially important portion of the preschool day, the need to understand the current range of teacher language practice and its likely association with important child outcomes is vital. This is the focus of the study reported here.

CONCEPTUAL FRAMEWORK

Play in the Preschool Day

What American preschool looks like—the physical space, the curriculum, the goals—varies widely (e.g. Stipek, Feiler, & Daniels et al., 1995). Even Head Start, the federally funded preschool program that serves close to a million preschoolers nationwide (US Department of Health and Human Services, 2015), has aspects that look different from site to site. One element of Head Start that is consistent, however, is a time in the day intended for FCT, when children have the opportunity to choose activities and playmates without the teachers imposing a particular learning goal or agenda. Given the necessary constraints of the Head Start day (e.g. meal time, nap time, and circle time), this is the portion of the day that is most likely to promote and include *play*.

Play is important for the cognitive, social, and emotional development of preschool-aged children (e.g. Barnett, 1990; Piaget, 1962; Van Hoorn, Nourot, Scales, & Alward, 2014; Vygotsky, 1978). It follows that a preschool curriculum rooted in play has the potential to be powerful for children. *Playful learning* is a balanced, developmentally-appropriate approach to preschool (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009). It is an approach that is rooted in play, consistent with the Head Start mission, and comprised of two components: a) playful content lessons; and b) child-directed playtime (FCT) (see Figure 1). Playful content lessons are somewhat teacher-directed and goal oriented; FCT is child-directed and not goal oriented. Both playful content lessons and FCT are part of the day in a playful learning classroom. FCT is the component of playful learning that includes authentic play (Isenberg & Quisenberry, 1988; Levy, 1978; Lillemyr, 2009; Piaget, 1962), since FCT is choice-based, motivating, child-directed, and largely open-ended.

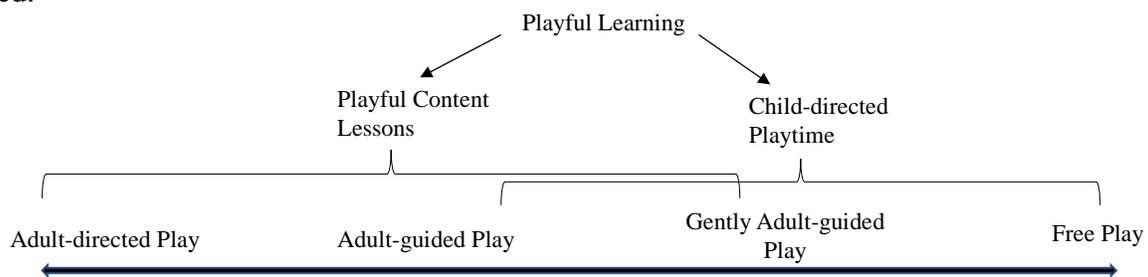


Figure 1. Contextualizing child-directed playtime, adapted from Pyle & Daniels (2017)

Teacher Talk and FCT

During FCT, children choose from a wide array of purposefully provided indoor play activities (including materials for dramatic play, art, block-building, reading, etc.), and teachers are gentle guiders of that play (Vygotsky, 1978). As an important part of that gentle guidance, teachers

engage in discussions with individual children or small groups. Those discussions, whether they are part of pretend play or they are based in reality, have the potential to develop children's language (Dickinson & Tabors, 2002), so discussions are part of the backbone of well-facilitated FCT. The language of play is relevant to children's lives (Dickinson & Tabors, 2001; Lightbown & Spada, 1999), and is therefore more likely to be built upon and retained than teacher-directed talk. Clark's (2003) research supports the notion that using rare or novel words in a situation where the child and the adult share a joint locus of attention can develop children's oral vocabulary. FCT is an ideal forum for the joint locus of attention, since children are engaged in activities they have chosen.

While some Head Start programs offer bilingual instruction, most programs provide English immersion. For young dual language learners, who make up nearly a third of Head Start students nationwide (US Department of Health and Human Services, 2015), FCT provides unique opportunities for language development that include the following: being able to listen and observe language (Tabors, 2008) while still engaging in robust play with peers, engaging in one-on-one conversations with adults who can provide some home language support (Espinosa, 2010; Author, 2013), and having the time and space to practice language in a low-stress environment (Garcia & Jensen, 2007).

FCT as part of the preschool day is a rare opportunity for teachers to engage in child-initiated, relevant, and developmentally appropriate conversations with individual children, the kinds of conversations that support language development. For example, for a four-year-old who is passionate about rabbits, FCT is a time to build a hutch out of blocks, engage in dramatic play as a rabbit, draw and label rabbits, or a host of other child-directed activities. When a teacher engages the child in a discussion about that passion, the child is motivated to learn words like *soft*, *busy*, and *sleepy*, or even words like *hutch*, *predator*, and *mammal*, because those words are directly relevant to the child's chosen play activity and passion.

Oral Language Development in Preschool

Oral language development during preschool is related to language outcomes in elementary school (NICHD ECCRN, 2016; Storch & Whitehurst, 2002), and children from lower-income families tend to enter school with lower scores on language assessments (National Center for Educational Statistics, 2009). Furthermore, early language is associated with later reading outcomes (Dickinson, McCabe, Anastasopoulos, Peisner-Feinberg, & Poe, 2003; Vellutino, Tunmer, Jaccard, & Chen, 2007), and preschool develops language. This is true for native English speakers and dual language learners alike. It follows that the quality of teacher-child interactions in preschools predicts children's development in a variety of areas (NICHD ECCRN, 2016), and what teachers do to support concept development and language during preschool may be of great consequence (Dickinson, Golinkoff, & Hirsh-Pasek, 2010).

Language support in preschool, both for native speakers and for dual language learners, can happen in a variety of ways; language development ideally is present in various forms throughout a playful learning day. There is some evidence supporting structured, teacher-directed time for language development during the preschool day (Saunders, Foorman, & Carlson, 2006). There is also evidence that playful content lessons can support vocabulary learning (Han, Moore, Vukelich, & Buell, 2010). Heretofore, little research has explored the range (or effects) of language and vocabulary modeling during FCT, in particular. The current study looks at the quantity and

quality of talk used in classrooms during FCT. By examining two ends of a continuum of current teacher practice, the researchers can better inform teacher preparation and future teacher practice.

Examining Talk more Generally and During FCT

Much of the work on teacher talk in preschool classrooms has focused on book reading, although a small body of studies has looked at other times of the day. In one of those studies, Dickinson, Barnes, Hofer, and Grifenhagen (2014) examined how teacher talk across three slightly different teacher-directed early childhood classroom experiences (book reading, small group instruction, and whole class content instruction) included academic language support. The children in that study were predominantly native English speakers. The researchers concluded that teachers in the lowest quartile of their study were not likely to be providing children with the kinds of language that would support the children's language development. Even the teachers in the higher end of the continuum in that study were speaking to children using the productive vocabulary of an average 7-year-old. In other words, teacher talk in preschool classrooms generally is an aspect of teaching that requires support (Dickinson & Tabors, 2001).

Two studies of teacher talk included FCT in particular. Gest, Holland-Coviello, Welsh, et al. (2006) observed FCT, mealtime, and book reading one time in each of twenty Head Start classrooms, capturing approximately ten minutes of teacher talk during FCT in each classroom. They found that there were distinctive patterns of talk across the three contexts, such that FCT was associated with the most pretend talk by teachers, mealtime was associated with more decontextualized talk, and book reading was associated with overall richness of talk. They did not, however, examine the length of interactions between teachers and children.

Dickinson, Darrow, and Tinubu (2008) conducted a small study of teacher language also during FCT, focusing in particular on block-building and dramatic play. They studied two teachers in each of two Head Start classrooms, analyzing a total of 30-35 minutes of talk per teacher to determine (a) how often the teachers were using language development strategies, (b) if what the children were engaged in (blocks versus dramatic play) mattered, and (c) what the variability in language use was among teachers. They found that teachers' language support was limited in general but more robust during block building than dramatic play, there was some variability across teachers, and there was the need for more research on times in the Head Start day like FCT that are more child-directed.

The current study builds on all of the studies above, providing additional evidence regarding variability of the amount, sophistication, and intent of teacher talk as a function of CLASS scores. Unlike previous studies, the current study included the analysis of much longer stretches of teacher talk, multiple observations of the same teachers, and included the spectrum of FCT activities, examining the content of the interactions across FCT. The researcher asked: *In classrooms with FCT that scored higher or lower on the CLASS, how does the talk that children are being exposed to differ in terms of amount, sophistication, and type?*

METHOD

Two types of analysis were conducted for this study. First, the researcher conducted a quantitative analysis of the amount and sophistication of the words that the teachers used when talking to or

with children during FCT. Next, the researcher coded and conducted a qualitative examination of transcripts of the teacher talk to identify the type of talk teachers were using with children during FCT.

Sample

Teachers and preschool children in four Head Start classrooms in one large county in California participated in this study. All of the lead teachers in the study were women who had Bachelor's degrees and who had been teaching preschool for at least five years. Each of the four classrooms had seventeen children enrolled, and all of the children were English learners. There were no statistically significant differences across the four classrooms in terms of the children's average language skills as measured by the Oral Language Assessment Inventory (Gentile, 2003), gender balance, attendance, or behavioral issues (as reported by the teachers). The classroom set-ups and materials were also quite similar, and all of the classrooms were administered by the same central office. The administration personnel described their approach to preschool as *playful learning*, including both playful content lessons and FCT.

The four focal classrooms were the two highest and two lowest scoring classrooms on "Instructional Support" dimension of the district-administered CLASS (Pianta, LaParo, & Hamre, 2008) within a larger sample of 16 classrooms that had been chosen by a district administrator to represent a range of teaching quality. Instructional Support includes Concept Development, Quality of Feedback, and Language Modeling. Those dimensions of teaching mapped closely onto the opportunities for language development of interest in this study. In each of the four—two high-scoring and two low-scoring—focal classrooms, audio recordings of the teacher talk during six full blocks (averaging 35 minutes apiece) of FCT were collected from September to December, with an average of ten days between visits. The teacher talk was transcribed, and a research assistant confirmed the accuracy of the transcriptions.

Table 1

Minutes of FCT observations for six visits per classroom

Classroom	District CLASS Instructional Support Score	M	SD	Total Minutes
501	2	29.6	1	178
902	2.3	34.3	4.9	242
601	6	40.3	7.9	192
901	7	32	8.6	206

Analysis

First, using the method from the Dickinson (2014) study described above, a "words per minute" score was calculated in order to understand the range of the sheer amount of language to which children were being exposed. This involved counting each word spoken by each teacher to children during FCT and dividing it by the number of minutes spent in FCT.

Second, the quality of the teacher talk was measured. The overwhelming majority of research that has been conducted on word frequencies is focused on text-based language rather

than oral language (e.g. Chall & Dale, 1995; Hiebert, 2005; Zeno, Ivens, & Millard et al., 1995). This gap is filled by a study from 1982 by Moe, Hopkins, and Rush, who catalogued the most commonly used words in children's spontaneous oral language and the frequencies of those words. Those researchers collected oral language data on 329 first grade children and found that a mere 309 words account for approximately 80% of the children's spontaneous oral language. The most-used words were *you, the, what, to, it, is, a, do, this, and and*. The list also included nouns such as *mother, baby, brother, sister, cat, grandma, and book*; pronouns like *I, we, and they*; adjectives such as *kind, favorite, and funny*; and verbs like *know, play, want, and try*.

As has been done in prior research (Roessingh, 2008; Storkel & Hoover, 2010), Moe and colleagues' list was used to quantify "sophisticated" vocabulary. In each transcript, those 309 words were removed, as were proper nouns (overwhelmingly comprised of children's & adults' names), exclamations like "Oh!" and "Wow!", and non-word utterances such as "Mmm-hmm". Each word that remained—each token—was counted as a "rare word". The rare words were divided by the total number of minutes for the observations for each teacher. The result was a "rare words per minute" score for each teacher. For both the words per minute and the rare words per minute scores, ANCOVA analyses accounted for covariance within teachers and compared the lower-scoring and higher-scoring classrooms.

For the qualitative portion of the analysis, each transcript was organized into utterances, with each utterance roughly corresponding to one sentence (see Appendix for examples) and each sentence accounting for one line of teacher talk. In the online qualitative research platform Dedoose (2014), each teacher's transcript was divided into interactions. An interaction was defined as a teacher engaged with a child or a small group of children with a joint locus of attention. When the locus of attention shifted, a new interaction began.

The researcher found no precedent in research for categorizing interactions by length, consequently, length was determined after examining the dataset, and is defined here. An interaction was brief when a teacher answered a quick question, gave a direction, or attempted unsuccessfully to engage a child. A "brief" interaction was defined as one to three lines of teacher talk. Child talk may or may not have been interspersed in the teacher talk. Medium-length interactions were longer than these brief interactions but were not extensive. Interactions with four to eight lines of teacher talk were coded as "medium." These interactions were often a teacher explaining or describing something to the child, although they were sometimes rich yet brief discussions. Interactions coded as "sustained" were more than eight lines of teacher talk. If conversations lasted for more than twenty lines of teacher talk, the interactions were divided into multiple twenty-line interactions. This allowed for a more equitable interaction count across classrooms. Every attempt was made to break conversations at natural breaking points, such as when the topic shifted in the conversation.

The unit of analysis for the coding was the interaction. Each interaction was also coded as a type: "direct," "inform," "question," (Gest et al., 2006) and/or "discuss." Each utterance was one line of the transcript. If the preponderance of the interaction was just one of those codes, the interaction was coded as just one type. Often, the interactions included more than one type and were coded accordingly. Appendix B defines and illustrates each of those interaction types. A research assistant was trained and coded 20% of the interactions (selected by a random number generator). Reliability was calculated by comparing the research assistant's codes for "type" with those of the researcher (Cohen's *kappa* > 0.85).

The transcripts are reported, to the extent possible, exactly as spoken. There are no corrections in grammar, usage, or syntax. For example, the following interaction was coded as

discuss, question, and sustained. The teacher sat down next to a 4 year-old native Vietnamese-speaking boy who was counting money in the toy cash register. After a moment, the child spoke to her:

Child: When my daddy go somewhere, my daddy save money.

Teacher: Oh, yeah?

Your daddy's saving money.

C: Uh huh!

T: Of course.

Daddy's working to save money.

Right?

C: Yeah.

T: What is your dad?

Is he a mechanic?

What is your dad working?

You know?

In the office?

C: I dunno.

T: Oh.

So can you ask daddy what is his work?

And tell us about it?

Tell us about it tomorrow?

C: (nods vigorously) Yeah.

T: Can you ask daddy what is his work?

C: Uh huh.

T: He might be one –

See, he might be one of the community workers, Donny.

C: Oh!

While the teacher in this interaction was not eliciting a lot of language from the child, she was engaging in a meaningful conversation with him relevant to the task that the child chose and to the child's life. She was providing a model of talk and some relatively sophisticated vocabulary.

A total of 210 lead teacher interactions were coded in each of the four classrooms. Two hundred ten was the number of interactions in the classroom with the fewest interactions (which was a teacher in a lower-scoring classroom). All teacher's interactions were coded. Then, the researcher systematically sampled the other teachers' interactions. This allowed for the inclusion of interactions from a range of earlier and later observations.

The total of 420 interactions in the two higher playful learning classrooms were across 283 minutes (an average of .67 interactions per minute); the 420 interactions in the lower playful learning classrooms were across 298 minutes (an average of .71 interactions per minute). This was not by design, but it meant that the "interactions per minute" calculation was nearly the same regardless of the CLASS score of the classroom. The interactions themselves, however, proved to be different across types of classroom.

RESULTS

Both the quantitative and the qualitative aspects of teacher language were found to be different between the classrooms that scored higher and lower on the CLASS. The quantitative differences were marginally statistically significant, which is promising given the small sample size.

First, the researcher looked at the total words and rare words spoken in visits to the higher and lower-scoring classrooms. In the higher-scoring classrooms, the number of words spoken across the 12 observations was considerably higher than in the lower-scoring classrooms (see Table 2). Across approximately the same number of minutes, there were 54.1% more words total in the higher-scoring classrooms and 55% more rare words total in the higher-scoring classrooms.

Table 2

Words Spoken by Teacher			
	Total Minutes	Total Words	Total Rare Words
Visits to lower-scoring classrooms (N=12)	420	21,391	4,826
Visits to higher-scoring classrooms (N=12)	398	32,878	7,355

Next, the researcher looked at the average words per minute and the average rare words per minute during visits to the lower and higher-scoring classrooms. The 12 visits to the classrooms with the lower CLASS scores had an average words per minute (WPM) score of 50.93 ($SD = 11.39$); the 12 visits in the classrooms with the higher CLASS scores had an average words per minute (WPM) score of 82.62 ($SD = 19.01$). A one-way ANCOVA test revealed that the effect of CLASS score was approaching significance $F(1, 3) = 7.09$, $p < .08$ when controlling for classroom differences within each of the two CLASS conditions (see Table 3).

Similarly, the 12 visits in the classrooms with the lower CLASS scores had an average rare words per minute (RWPM) score of 11.49 ($SD = 2.73$); the 12 visits in the classrooms with the higher CLASS scores had an average rare words per minute (RWPM) score of 18.48 ($SD = 3.53$). Again, the effect of CLASS score was approaching significance $F(1, 3) = 6.89$, $p < .08$ when controlling for classroom differences within each of the two CLASS conditions.

Table 3

Descriptive Statistics for words spoken by teachers						
	Words per Minute			Rare Words per Minute		
	N	M	SD	N	M	SD
Visits to lower-scoring classrooms (N=12)	12	50.93	11.39	6	11.49	2.73
Visits to higher-scoring classrooms (N=12)	12	82.62	19.01	6	18.48	3.53

Then, the length of interactions between teachers and students during FCT was investigated (see Table 4). In higher-scoring classrooms, there were more than twice as many sustained interactions as there were in the lower-scoring classrooms. Conversely, teachers and children in lower-scoring classrooms engaged in more than twice as many brief interactions as they did in the higher-scoring classrooms.

While the total time accounted for was nearly the same (just 5% —or 15 minutes—less in the higher-scoring classrooms), the fact that 212 of the interactions in the higher-scoring

classrooms were sustained and just 101 of the interactions in the lower-scoring classrooms were sustained indicates that the teachers spent more of the total time talking in the higher playful learning classrooms. This is not surprising, given the finding that there were more words spoken in the higher-scoring classrooms. It is potentially problematic, however, if exposure to talk is related to outcomes for children's language development.

Table 4

Interaction length by Classroom Quality			
	<u>Brief</u>	<u>Medium</u>	<u>Sustained</u>
Lower-scoring classrooms	165	154	101
Higher-scoring classrooms	80	128	212

Finally, the researchers looked at the type of interaction (see Figure 2). There were more than three times as many teacher-child interactions that included discussions in the higher-scoring classrooms than in the lower-scoring classrooms, and teacher talk in the lower-scoring classrooms included nearly twice as many directives. Interactions with close-ended questions and those with information were approximately the same in the higher and lower-scoring classrooms.

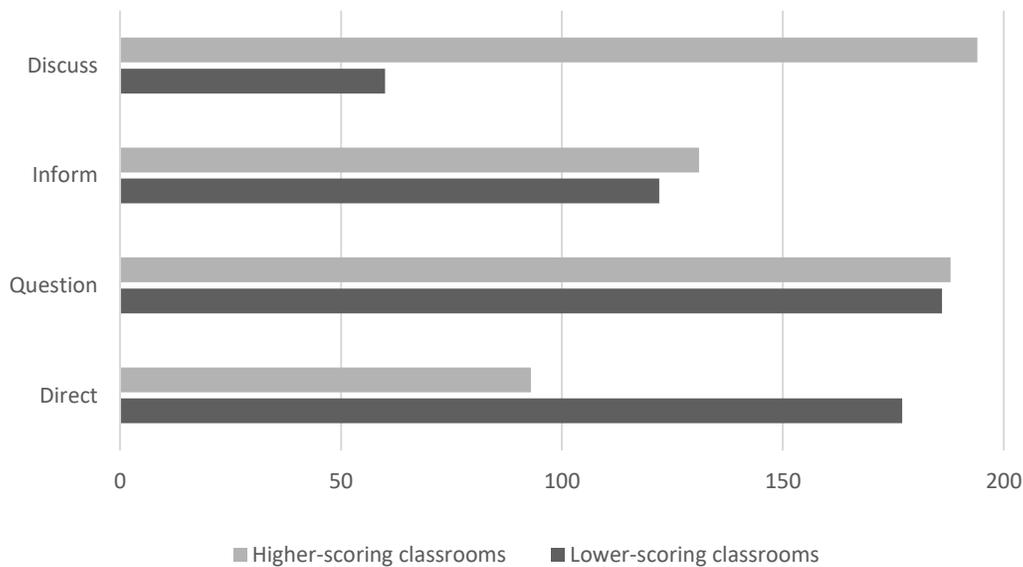


Figure 2. Numbers of interactions across classroom quality

Interactions were frequently coded as multiple types, and Table 4 shows the co-occurrence of the different interaction types. While fewer than 10% of the interactions that included discussion also involved direction, 46% of the interactions that included discussions also included close-ended questions. Additionally, interactions with close-ended questions also included information about 24% of the time.

Table 5

Co-occurrence of the codes for type of talk interaction				
	<u>Direct</u>	<u>Question</u>	<u>Inform</u>	<u>Discuss</u>
Direct	270	64	62	24
Question	--	374	88	117
Inform	--	--	253	45
Discuss	--	--	--	254

To summarize, the teacher language in the higher-scoring classrooms trended toward being more robust and sophisticated than in the lower-scoring classrooms.

Analyses demonstrated at the *word* level there was a trend toward more talk (as measured by words per FCT minute and by total number of words) by the lead teachers in higher-scoring classrooms than by the lead teachers in lower-scoring classrooms. The talk was more sophisticated (as measured by rare words per FCT minute) by the lead teachers in higher-scoring classrooms than by the lead teachers in lower-scoring classrooms.

At the *interaction* level, while the number of interactions per minute was approximately the same in higher and lower-scoring classrooms, there were twice as many sustained interactions and half as many brief interactions in the higher-scoring classrooms. Furthermore, there were more than three times as many interactions with discussions in the higher versus the lower-scoring classrooms, and just shy of half as many interactions with directives. Numbers of interactions with close-ended questions and information were approximately equal across the two types of classrooms. Although many interactions included both close-ended questions and discussion, interactions that included both directives and discussion were rare.

DISCUSSION

By drilling down on the teacher talk in classrooms that enact FCT in ways that are generally of higher and lower quality, considerable and specific differences across teachers were found. In the highest-scoring classrooms in this study, the teachers were talking more, including more sophisticated words, than in the lower-scoring classrooms. Likewise, in the highest scoring classrooms, considerably more of the interactions with children were sustained and could be classified as discussions. On the other hand, in the generally lower-scoring classrooms in the study, many more of the interactions were brief and directive.

Children in the higher-scoring classrooms on the CLASS were getting more modeling of talk and more exposure to sophisticated vocabulary. Children in the generally higher-scoring classrooms were also being engaged in more discussions and being directed less often than children in lower-scoring classrooms. Notwithstanding that direction is valuable and necessary in a preschool setting, it is reasonable to infer from these data that a dominant focus on teacher direction during FCT may detract from authentic play experiences and preempt time and space for discussion. There is reason to believe that individualized interactions, like those inherent in FCT interactions that were sustained and included discussions, may support language development (Gerde & Powell, 2009) whereas brief, directive interactions may not.

Research has demonstrated that language models, exposure to vocabulary, and engagement in sustained verbal interactions and discussions are all key to developing children's oral language

(Clark, 2003; Tabors, 2008). While this study did not measure if or how the children in these classrooms benefited from the talk in their classrooms, it provides evidence that children in generally higher quality Head Start classrooms received exposure during FCT to more challenging and variable talk than children in lower quality Head Start classrooms.

Implications

Given the potentially valuable benefits of FCT, it is important both that what constitutes strong teacher practice is understood and that the current range of practice is examined. An understanding of what teachers are doing and a sense of what is ideal provides vital information to support the development of pre-service and in-service preschool teachers, preschool programs, curricula, and policy. While the current study was modest in scope, the results of this analysis of teacher talk point to the possibility that teachers are more substantively engaged with children during FCT in the higher quality classrooms than in the lower quality classrooms. Furthermore, this study examined additional indications of classroom quality—the quantity and quality of teacher talk during FCT—providing additional detail regarding the more general constructs that the CLASS instrument measures.

Of particular concern is research indicating that children from low-SES families are likely to have less robust vocabularies than their more advantaged peers (Carlo, August, McLaughlin, et al., 2004; White, Graves, & Slater, 1990), and children who do not develop strong oral language skills during the preschool years fall behind their peers with regard to literacy development, even before entering kindergarten (Biemiller, 2006; Snow, Burns, & Griffin, 1998). Given that research and the current findings, it is vital that children have exposure to strong models of oral language early and that they have opportunities to develop their own oral language. In other words, all Head Start teachers should have access to training in how to support oral language development across the preschool day, including learning how to engage children in discussions and how to model relevant, interesting vocabulary use for children.

Thus, this work has implications for preschool teacher preparation and professional development and for future research. Facilitating FCT—providing gentle, child-specific guidance—in a way that preserves play's child-directed, child-initiated essence is no easy task; many teachers need support with the skill of child-centered conversation. In highlighting the differences in the amount and sophistication of teacher language during FCT, this study furthers the conversation around what ideal teacher talk might sound like during FCT.

Head Start's reporting of national CLASS Pre-K scores indicates that Instructional Support is an area for growth (US Department of Health and Human Services, 2017). The average score for Instructional Support is 2.83 out of 7, while Emotional Support is a 6 and Classroom Organization is a 5.73. The lower-scoring focal teachers in this study scored a 2 and a 2.3 on Instructional Support, and there is evidence that there is room for growth in their language and talk with children.

Future research should explore teachers' experiences, training, and support regarding how to engage most effectively with children during FCT. In both the lower-scoring and the higher-scoring classrooms, there was substantial evidence that the teachers cared for their students and cared about their own work as professionals. Professionals require training; both FCT and language support appear to be areas where teachers are less prepared.

Differences in teaching practice may be a result of many things—different training, beliefs, priorities, interpretations, knowledge and skills. The differences may be conscious or unconscious, and they may be trainable or not. There is some evidence that Head Start teachers can be trained to support children's language and literacy development (Wasik, Bond, & Hindman, 2006). A first step in this case may be to create spaces for teachers to share their practice with one another. This can happen during professional development sessions, peer observations, or venues for peer dialogue. While some teachers may require talk, language, and discourse training, other teachers are already talking to and with children in supportive and appropriate ways. In situations where there is a range of practice, targeted professional development and tapping the expertise of teachers who already engage in these practices are useful strategies.

There are opportunities for teacher support in preservice training, as well. Some of the focus of early childhood teacher preparation and teaching should be on developing children's language—including vocabulary—across the preschool day. Training in learning about children's and children's families' lives and interests may also support teachers' engagement in relevant, vocabulary-building discussions with children.

Limitations and Future Directions

This study was limited in scale, so additional work to validate the findings is recommended. In addition, while recent work in education and linguistics has utilized the Moe, Hopkins, and Rush (1982) study as the basis for analysis of language frequencies (Roessingh, 2008; Storkel & Hoover, 2010), coding anything not on this list as “rare” is an imperfect proxy for sophistication. Future research needs to begin updating this list and extending it to include the language of teachers. Moreover, additional research during FCT on teachers' modeling of language features beyond vocabulary—things like discourse styles, syntax, and semantics—would supplement this work in important ways.

Additionally, this study did not measure child outcomes as a result of the range of teacher practice. Left unanswered is whether these particular differences in teaching practice actually make a difference for children's language outcomes. Further research is necessary to determine how child outcomes can be measured, and serious thought needs to be put into what—and at what point—the researchers choose to measure those outcomes. Despite the fact that it is difficult to measure what are often distal outcomes from FCT compared to the outcomes from more content-driven lessons, that work is vital both to maintaining and supporting developmentally appropriate approaches to preschool teaching and to developing children's vocabulary.

CONCLUSION

This study provides evidence that differences exist in the language to which children are being exposed and engaged and further evidence that what the CLASS is measuring more generally is evident specifically in terms of teacher talk. Given the vital import of early language development, it is incumbent upon the research community to continue to study teacher talk during FCT and to ensure that teachers are trained to make the best use of that important portion of the preschool day.

Time for play in preschools has been reduced in recent decades to make space for more academic, objective-driven curricula (Genishi & Dyson, 2009; Nicolopoulou, 2010; Zigler &

Bishop-Josef, 2004). But supporting children's cognitive development and providing time for play are not mutually exclusive phenomena. Rather, teachers ought to be trained to facilitate FCT well, thereby supporting the development of children's language, among other aspects of development, within a context that is engaging and developmentally appropriate (Copple & Bredekamp, 2009). The underlying supposition of the current study is that teachers can leverage FCT to support children's language development while simultaneously allowing children to engage in deep, rich, enjoyable play. Additional research that unpacks well-facilitated FCT may help counteract the current trend of replacing that time period of the day with more academic, teacher-directed content.

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Appendix A

	CODE	Explanation	Example
Quantity/ Duration	Brief	1-3 lines of teacher talk	[see "Direct" example]
	Medium	4-8 lines of teacher talk	[see "Question" example]
	Sustained	9 + lines of teacher talk [broken up at content shifts if exceeding 20 lines]	[see "Discuss" example]
Quality/Form	Direct	telling a child to do something	Teacher: Go wash your hands.
	Inform	providing information; praising; explaining	Teacher: [<i>demonstrating how to make a hand turkey with finger paints</i>]: One, two three four five six seven eight nine ten. And I remove my hand. All right. Now, for this one, I make a mix. Yellow and purple. All right. This is my turkey. When you finish, Ms. Bahk will help you paint your whole hands. And you can do one right here and another one right here.
	Question	close-ended, generally not followed up	Teacher: What is it, Fatima? Child: Circle. T: Yes, circle. And how many circles do you need? Do you need. . . ? 3,4,5? How many circles do you need to make a snowman?
	Discuss	open-ended questions with responses that build on what the child has provided	Child [<i>using play dough</i>]: I make a cookie. Teacher: That's a cookie. Oh, look at that. And then after you do that, Vicky, what will you do next? Where do you put that? Where do you put that? C: We lay it down. T: In the oven? C: Yeah. T: And bake it? C: Yeah. T: Wow, look at that. How did you make it? C: With the cookie dough. T: You made a chocolate cookie, right? C: Yeah.