Pre-Kindergarten Children Transitioning to Kindergarten:

The Quality of their Classrooms in Pre-K and K

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Background

The importance of the quality of the classroom learning environment in the early grades has been recognized through multiple research studies. Much of the impetus for recent work has come from the well recognized fade out of effects from early childhood programs serving children from low income families, for example Head Start (Puma, Bell, Cook, & Heid, 2010; Puma, Bell, Cook, et al., 2012) and state prekindergarten (pre-k) programs (Lipsey, Farran, & Durkin, 2017). Although fade out was found in earlier, experimental programs like Perry Preschool and Abecedarian, there are differences from newer studies. First, the fade out from these newer scaled up studies occurred by the end of kindergarten instead of later elementary grades (Bailey, Duncan, Odgers, & Yu, 2017). Second, the children in Abecedarian and Perry did not matriculate into elementary schools characterized by high poverty and low performance to the degree that the children in the larger current samples have. One explanation proposed for the fade out is the lack of a sustaining environment in kindergarten and beyond (Bailey et al., 2017).

The measures used in large samples such as ECLS-K and the NICHD study of child care (e.g., Ansari & Pianta, 2018a) focus on teacher reports of their practices not actual observations of the quality of the classroom experiences children are having. The current study used a behavioral count observation system to investigate and compare

the quality of the spring pre-k classroom environment and that of the subsequent kindergartens into which the pre-k children matriculated in the fall.

Method

Sample

Children from one metropolitan school district who had been enrolled in a PDG supported pre-k were eligible for inclusion in a sample followed into kindergarten (K). The sample consisted of students from 98 K classrooms. Each K classroom had an average of five children who had attended a district pre-k (min = 2, max = 10, M = 4.60, SD = 1.54). Of the students, 48% were female, 51% were African-American, 18% were Caucasian, 28% were Hispanic, and 3% belong to other racial/ethnic groups. Of the 454 students, 3% were English Language Learners, and 7% had an IEP. All of the teachers were female; all were licensed in either elementary or early childhood education, with an average of 7.51 year of teaching experience.

Method

Full day classroom observations were conducted in the spring of the pre-k year and again in fall of the K year. All children in each classroom were observed. The pre-k children were identified, and the rest of the children were observed anonymously.

Instruments. The *Teacher Observation in Primary Grades* (TOPG) (Bilbrey et al., 2007) protocol was used to measure observable aspects of pre-k and K teachers' classroom behaviors. The TOPG protocol was completed in tandem with the *Child Observation in Primary Grades* (COPG) (Farran & Anthony, 2014; Farran & Son-Yarbrough, 2001) used to measure observable child behaviors. For each of 20-26 rounds of coding ("sweeps"), observers first coded the teacher followed by the assistant (in pre-k) and then each individual child in the classroom before returning to the teacher to

start another round of the process. For each sweep, a classroom member was located and then observed for approximately 3 seconds, after which the observer immediately coded 9 areas of behaviors.

COPG and TOPG use a systematic behavior-sampling procedure—also known as a snapshot procedure. The COPG captures information regarding children's listening and verbalizations, learning setting, interactions with teachers and peers, activity–task demands, level of involvement in learning activities, and the learning focus of activities. The TOPG captures information regarding teacher and other classroom adults' listening and verbalizations, level of instruction, emotional tone, and the learning focus of activities.

Results

Pedagogical Practices

As can be seen in Table 1, pre-k children transitioned into K classrooms that were much more teacher focused with much less child choice. Whole group instruction occurred at almost twice the rate while centers and free choice activities almost never happened in K. Transitions took up a fifth of the day in both sets of classrooms, and in neither did children spend time outside. K teachers made much more use of "Specials," times when children were taught outside their classroom by another teacher.

Teachers' Level of Instruction

Level of Instruction is only coded when the teacher is engaged with children in a learning interaction. In the first row of Table 2, we report the average rating for all learning opportunities that includes all the content areas. The two subsequent rows contrast the level of instruction during English Language Arts and during Math instruction. A rating of 2 indicates a focus on basic skills, known answer questions;

ratings of 3 and 4 involve inference. It is important to note not only the strong focus on basic skills instruction in both pre-k and K but also the lack of variation among the teachers. In K, the *highest* average level of instruction observed for any teacher was 2.33 during ELA and Math. The teachers were remarkably similar to one another in their instructional approaches.

Listening and Talking by Teachers and Children

Table 3 presents the data on teachers' talking and listening and to whom across the day. In both sets of classrooms teachers talked 2/3 or more of the day and listened, especially to children, only rarely. Listening to children was less frequently observed in K classrooms.

Table 4 presents the same data on talking and listening but for children. Children seldom have opportunities to talk in either pre-k or K.

Social-Emotional Climate

Observers count indications of Behavior Approving and Disapproving each time one occurs whether delivered by a teacher, an assistant or a school staff member. In both grade levels, disapproving communications outnumbered approving ones by nearly 2 to 1 as can be seen in Table 5. The range among schools in how much negativity children experienced was quite large.

Discussion

These data provide detailed descriptions of the quality of the classrooms into which pre-k children transition as they begin kindergarten. Data will also be presented on the redundancy of the specific instructional content.

Table 1. Children's Participation in Various Pedagogical Practices, Pre-K and K

Percentage of Sweeps Children were Observed in each Activity	PreKindergarten					Kindergarten				
	Spring 2017					Fall 2017				
	N	Min	Max	M	SD	N	Min	Max	M	SD
Whole Group	103	8%	33%	**19%**	6%	98	15%	48%	**35%**	7%
Small Group	103	0%	26%	**4%**	5%	98	0%	6%	**0%**	1%
Small Group Centers	103	0%	22%	**4%**	5%	98	0%	11%	**0%**	2%
Centers	103	0%	40%	**17%**	7%	98	0%	17%	**1%**	3%
Individual Activities established by Teacher (IAT)	103	0%	0%	**0%**	0%	98	0%	28%	**4%**	4%
Combination of Small Group and IAT (SGI)	103	0%	0%	**0%**	0%	98	0%	28%	**8%**	7%
Specials	103	0%	12%	**2%**	3%	98	0%	26%	**13%**	5%
Transition	103	5%	46%	**21%**	8%	98	13%	40%	**22%**	5%
Meal Time	103	0%	17%	**9%**	3%	98	3%	20%	**8%**	2%
Nap	103	9%	24%	**17%**	3%	98	0%	12%	**0%**	2%
Gym	103	0%	12%	**2%**	3%	98	0%	15%	**1%**	3%
Playground	103	0%	20%	**5%**	5%	98	0%	13%	**4%**	3%

Table 2. Teachers' Level of Instruction, Pre-K and K

Level of Teacher Instruction (1-5 scale)	PreKindergarten					Kindergarten				
	Spring 2017					Fall 2017				
	N	Min	Max	M	SD	N	Min	Max	M	SD
Average Level of Instruction during learning opportunities	103	1.53	2.44	**1.87**	0.15	98	1.50	2.14	**1.98**	0.10
Average Level of Instruction during ELA Content	103	1.80	3.00	**2.15**	0.21	97	2.00	2.33	**2.03**	0.07
Average Level of Instruction during Math Content	94	2.00	4.00	**2.05**	0.23	89	2.00	2.33	**2.01**	0.04

Note: There were 9 Pre-K classrooms where we did not observe the teacher teaching math; there were 9 K teachers who were not observed instructing math, and 1 teacher not observed instructing ELA content.

Table 3. Teachers Listening and Talking, Pre-K and K

Percentage of Sweeps Teachers Observed Listening and Talking	PreKindergarten				Kindergarten			
	Spring 2017				Fall 2017			
	Min	Max	M	SD	Min	Max	M	SD
Listening	0%	42%	**18%**	12%	0%	40%	**10%**	8%
Listening to Children	0%	42%	**14%**	12%	0%	30%	**8%**	7%
Listening to Small Group	0%	5%	**1%**	2%	0%	5%	**0%**	1%
Listening to Whole Group	0%	4%	**0%**	1%	0%	8%	**1%**	1%
Listening to Parents or Other External Adults	0%	0%	**0%**	0%	0%	6%	**0%**	1%
Listening to another Teacher	0%	9%	**2%**	3%	0%	13%	**0%**	2%
Talking	46%	90%	**69%**	12%	35%	100%	**71%**	14%
Talking to Children	21%	71%	**40%**	13%	4%	65%	**31%**	12%
Talking to Small Group	0%	21%	**7%**	7%	0%	32%	**6%**	7%
Talking to Whole Group	13%	29%	**19%**	5%	5%	65%	**30%**	12%
Talking to Self	0%	4%	**0%**	1%	0%	5%	**0%**	1%
Talking to Parents or Other External Adults	0%	5%	**0%**	1%	0%	17%	**2%**	3%
Talking to another Teacher	0%	10%	**2%**	3%	0%	14%	**1%**	2%
Not Talking or Listening	0%	33%	**13%**	9%	0%	50%	**19%**	12%

Table 4. Children Listening and Talking, Pre-K and K

Percentage of Sweeps Children Observed Listening and Talking	PreKindergarten				Kindergarten			
	Spring 2017				Fall 2017			
	Min	Max	M	SD	Min	Max	M	SD
Listening	15%	78%	**38%**	11%	21%	59%	**35%**	8%
Listening to Teacher	10%	60%	**30%**	9%	10%	52%	**26%**	8%
Listening to Other Children	0%	21%	**7%**	6%	2%	17%	**8%**	3%
Listening to Small Group	0%	4%	**0%**	1%	0%	1%	**0%**	0%
Listening to Whole Group	0%	12%	**1%**	2%	0%	4%	**1%**	1%
Fussing or Crying	0%	5%	**0%**	1%	0%	3%	**0%**	1%
Talking	4%	68%	**29%**	12%	8%	35%	**21%**	7%
Talking to Teacher	0%	21%	**6%**	5%	0%	6%	**2%**	1%
Talking to Other Children	0%	45%	**12%**	9%	2%	20%	**9%**	4%
Talking to Small Group	0%	10%	**1%**	3%	0%	3%	**1%**	1%
Talking to Whole Group	0%	21%	**5%**	5%	0%	14%	**5%**	3%
Talking to Self	0%	21%	**5%**	5%	0%	9%	**4%**	2%
Not Talking or Listening	4%	68%	**33%**	13%	23%	59%	**44%**	7%

Table 5. Behavior Approving and Disapproving Counts, Pre-K and K

Number of Times Teachers/School Staff observed Behavior Approving or Disapproving	PreKindergarten					Kindergarten				
	Spring 2017					Fall 2017				
	N	Min	Max	M	SD	N	Min	Max	M	SD
Behavior Approving	103	7	298	**94**	51	98	2	164	**66**	36
Behavior Disapproving	103	3	446	**131**	89	98	14	239	**113**	51