Building a Unified System for Universal Pre-K in New York City:
The Implementation of Pre-K for All by Setting and Auspice

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I. Introduction

Only months after Mayor de Blasio was inaugurated, New York City (NYC) embarked on an historic two-year plan to expand access to full-day pre-K for every 4-year-old in the city. Entitled Pre-K for All (PKA), the initiative sought to make universal pre-K (UPK), inscribed into New York State law in 1997, a reality in NYC. Launched in the 2014-15 school year, the expansion was rapid and steep. Within two years, the city more than tripled the number of children enrolled in full-day pre-K, from 19,287 children prior to the expansion to 68,647 children in 2015-16, representing about 70% of all NYC 4-year-olds. In 2014-15 alone, funding for pre-K in the city increased by about $358 million, representing almost two-thirds of the national increase in pre-K funding that year.[1]

The two-year PKA initiative to expand the UPK program required a massive deployment of resources, both to recruit children and families, and to recruit teachers and providers to meet the surge in enrollment. PKA's rapid implementation demanded coordination across the Office of the Mayor and more than a dozen agencies, most notably including the Department of Education (DOE), Administration for Children's Services (ACS), and Department of Health and Mental Hygiene (DOHMH), the three lead agencies bearing primary responsibility for the care and education of young children in publicly funded sites.[2] Yet, what most distinguishes the city's PKA effort is the commitment to expand access to UPK while seeking uniformly high quality in its programs.[3] Meeting both goals within necessary budget constraints required a strategic and systematic approach to quality that would build on the city's strengths while addressing its weaknesses, amidst a swift push to scale up the UPK program citywide.

Characteristic of many efforts to improve services for young children, a key challenge for the PKA initiative was (and is) the dual delivery system of UPK provision, which pre-dates UPK and has shaped decades of services for young children in NYC. This two-pronged structure has added complexity to UPK funding since the program began in 1998. Specifically, UPK slots exist in two very different setting types: 1) those within public, private, and charter schools; and 2) those within private community-based organizations (CBOs), referred to in this context as NYC Early Education Centers ("NYCEECs"). This dual structure is characterized by different governance structures and funding streams, and divergent program missions, histories, and capacities. Further

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[1] In 2014-2015, pre-K funding across all 42 states with pre-K and the District of Columbia increased by $573 million. Barnett, W. S., Friedman-Krauss, A. H., Gomez, R., Horowitz, M., Weisenfeld, G. G., Brown, K. C., & Squires, J. H. (2016). *The state of preschool 2015: State preschool yearbook*. New Brunswick, NJ: NIEER.

[2] Hereafter, "UPK" refers to the universal pre-kindergarten program inscribed into state law in 1998; "PKA" refers to the specific policy initiative to extend the UPK program to all 4-year-olds in NYC.

[3] Office of the Mayor, Office of Management and Budget, Department of Education, & Administration for Children's Services. (2014, January). *Ready to launch: New York City's implementation plan for free, high-quality, full-day universal Pre-Kindergarten*. New York: New York City Government.

complicating matters, UPK funds flow to NYCEECs on two paths: directly through a contract with the DOE, or indirectly through an ACS Early Learn contract, which combines different funding sources (primarily Child Care, Head Start, and UPK) into a single stream. NYCEECs may also have separate but concurrent contracts with the DOE and ACS for UPK. Given these multiple contracting structures, the auspices that govern NYCEECs can vary considerably.

This complex landscape has bedeviled policymakers for decades. Although a bifurcated delivery structure has been (and is) used in other localities nationwide, as this report will show, the conditions in NYC are particularly obdurate. Mayor Ed Koch's 1985 initiative to provide UPK to all 4-year-olds in the city ("Project Giant Step") began with high ambitions of unifying the administration of Child Care, Head Start, and public-school preschool programs into one coherent approach. Aware of the inherent challenges of a divided administrative structure, Mayor Koch created a mayoral office of early childhood to oversee collaboration between the Human Resource Administration's Agency for Child Development and the Board of Education. Facing the advent of a new mayor who did not prioritize early childhood services, the project was terminated four years later, leaving only slightly mitigated structural schisms. In 2012, ACS launched the Early Learn initiative, which created new financing systems and policies to promote quality across multiple funding streams (notably Child Care, Head Start, and UPK). While the initiative fostered a more streamlined approach to program contracting and quality enhancement, effective implementation across diverse settings proved to be more difficult than hoped. Indeed, durable structural obstacles to the quality, equity, and efficiency of delivering early childhood services in NYC continue to challenge the city's PKA initiative.[4]

In this context, the purpose of this study, conducted by the National Center for Children and Families (NCCF) at Teachers College, Columbia University, is to examine the implementation of the PKA initiative during the 2016-17 school year, the first year of operation since the two-year expansion began in 2014-15. Specifically, we examine the variation present in PKA implementation and program quality among different program settings (i.e., schools vs. NYCEECs) and programs with different funding auspices (i.e., sites that receive UPK funds only through the DOE, sites that receive UPK and Child Care funds through ACS Early Learn, and sites that receive both UPK and Head Start funds).[5] We also examine how differences in the resource level of neighborhoods where UPK sites are located may relate to variation in PKA's implementation.

The results of the analyses provide evidence of both successes and concerns that can inform the city's continued implementation and expansion of UPK. As the city seeks to extend UPK to 3-year-olds and moves responsibility for all Early Learn contracts to the DOE, the city will encounter significant challenges *and* sterling opportunities to strengthen the UPK program, while demonstrating leadership on how to address structural obstacles that are far from unique to NYC. The transfer of Early Learn will further enable the city to unify and align policies for its early

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[4] Clifford, R. M., Barbarin, O., Chang, F., Early, D., Bryant, D., Howes, C., … Pianta, R. (2005). What is pre-Kindergarten? Characteristics of public pre-kindergarten programs. *Applied Developmental Science*, *9*(3), 126-143; Wilinski, B. (2017). *When pre-k comes to school: Policy, partnerships, and the early childhood education workforce*. New York: Teachers College Press.

[5] "Head Start sites" can receive their Head Start funding either through ACS Early Learn or direct federal contract, and their UPK funding through DOE and/or ACS Early Learn contracts.

childhood services as a whole, beyond the confines of UPK for 3- and 4-year-olds. With this in mind, we offer policy recommendations, discussed at length in *Section VI*, for the city, as well as municipal and state policymakers nationwide who face similar challenges in expanding access to high-quality pre-K across multiple settings under varying auspice.

This final report, intended for use by the Mayor's Office, DOE, ACS, and DOHMH, is divided into six sections:

    I. Introduction
    II. Research Questions and Methods
    III. Synthesis of the Findings and Implications for Quality, Equity, and Efficiency
    IV. Results and Findings from Analyses by Setting and Auspice
    V. Results and Findings from Analyses by Neighborhood Resource Level
    VI. Framing Ideas and Policy Recommendations

The NCCF team stands ready to brief members of the Mayor's Office and three lead agencies on the results, findings, and recommendations presented herein, and to discuss additional analyses that might be useful to policymakers as they work to further strengthen UPK programs.

II. Research Questions and Methods

The aim of the study is to assess the implementation of the PKA initiative as it varies by UPK program setting (schools vs. NYCEECs) and auspice (DOE-UPK, Child Care, and/or Head Start), as well as by the resource level of the neighborhoods in which UPK programs are located. Our research questions were:

- To what extent does PKA implementation and program quality differ by program setting (schools vs. NYCEECs)?
- To what extent does PKA implementation and program quality differ by NYCEEC auspice (DOE-only UPK vs. ACS Early Learn UPK with Child Care vs. UPK with Head Start funding)?
- To what extent does PKA implementation and program quality differ by neighborhood resource level (low, moderate, and high)?

To answer these questions, we utilized a mixed-methods design, incorporating: 1) quantitative and qualitative survey data from administrators and teachers in selected sites spread across neighborhoods with varying resources; 2) interviews with a subset of those teachers and administrators; 3) CLASS observations in each sampled classroom; and 4) the DOE's child demographic data for each site.

II.1. Sampling and Participant Recruitment

II.1.a. Site Sampling

Because this study was one among a group of studies in the NYC Early Childhood Research Network, site sampling was conducted in two stages. First, a coordinated sampling approach was used to assign UPK sites across nine Community Districts (CDs) in NYC to each study team. This approach targeted three goals: 1) to conduct studies in programs located in CDs of varied resource levels (i.e., low, moderate, and highly resourced communities)[6]; 2) to allow for some generalizability across study teams; and 3) to avoid overburdening programs with multiple research activities. With these goals in mind, the Network contracted with the Manpower Demonstration Resource Corporation (MDRC) to oversee the selection of samples of UPK programs for research teams across the nine CDs. To the extent possible, each study team's sample was unique, and in general, programs were not asked to participate in multiple studies.

The CDs were selected based on four criteria:

1. Percentage of residents living with an income-to-needs ratio below 2.0;
2. Representative populations of African-American and Hispanic/Latino/a race/ethnicities;
3. Passing rates on the English Language Arts (ELA) assessment; and

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[6] For sampling and analytic purposes, CDs were categorized as low, moderate, and high resource. We use these categories to represent "neighborhood resource levels," although we recognize that residents define their "neighborhoods" more subjectively than CD boundaries.

4. Number of UPK sites and slots.

Three of the CDs were categorized as low resource, three were categorized as moderate resource, and three were categorized as high resource.[7] These categories were used for purposes of both sampling and data analysis.

Through the coordinated sampling effort, NCCF was assigned 150 sites, roughly distributed equally across the three CD-resource levels (37% low-, 35% moderate-, and 28% high-resource sites). The initial aim of the NCCF study was to recruit an analytic sample of 48 sites from this universe. However, we exceeded expectations by recruiting and completing data collection with 57 sites, representing 38% of our assigned sample.

II.1.b. Site Recruitment

Because the study was a coordinated effort with the DOE, ACS, and DOHMH, the three agencies initially co-authored and sent a letter (both via email and postal mail) to the executive director or principal at each site to inform them about the study and encourage them to participate. The NCCF research team then contacted the designated person by phone or email. Once contact was made, the researcher provided information about the study, determined basic interest, and identified the target administrator (i.e., the person responsible for staffing and operations at the site). This initial contact was followed by an in-person meeting to explain the study in more depth, obtain informed consent, and collect data regarding the funding streams received by the site for each classroom serving 4-year-old children.

Across the nine CDs chosen for sampling, the aggregate distribution of UPK sites was 37% in schools and 63% in NYCEECs. For our sampling frame, we stratified sites to approximate this distribution. Accordingly, the final analytic sample of 57 sites was comprised of 22 schools (39%) and 35 NYCEECs (61%). The sample was not intended to be representative of the UPK universe in the nine CDs. Instead, while achieving a representative distribution of schools and NYCEECs, we sampled to ensure that we had sufficient numbers of the three auspice-types among the NYCEECs to allow for statistical comparison.

Of the 150 sites assigned to us in the coordinated sampling effort, seven sites were no longer offering PKA services. Therefore, our sample universe was 143 sites. Of the 143 sites, 41 sites (29%) declined to participate. Of these, 21 sites stated that they were too busy or overburdened, 13 sites declined for other reasons, and seven sites did not provide a reason. Additionally, despite concerted efforts that included on-site visits, the recruitment team did not successfully make contact or lost contact with administrators at 45 sites (31%). The overall response rate was therefore 40%, for a final sample of 57 sites.

For analytic purposes, the funding data was used to categorize sites into two categories, schools and NYCEECs, and then among NYCEECs, into three sub-categories:

1. NYCEECs that receive UPK funds only via a DOE contract ("*DOE-only NYCEECs*");

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[7] For reference, median income ranged from $27,506 to $38,698 in the low-resource CDs, $33,985 to $48,202 in the moderate-resource CDs, and $60,951 to $94,198 in the high-resource CDs.

2. NYCEECs that receive UPK and Child Care funds via an ACS Early Learn contract ("*Child Care NYCEECs*"); and
3. NYCEECs that receive Head Start funds in addition to UPK and any Child Care funds, usually via an ACS Early Learn contract ("*Head Start NYCEECs*").[8]

Table 1 presents the distribution of the analytic sample across these categories. Of the 22 schools in the sample, 17 were public schools, three were independent Catholic schools, one was a charter school, and one was a pre-K center. Though pre-K centers are not structured like public schools (i.e., with grades for older children), the pre-K center in our sample was categorized as a school because its DOE employees report to DOE superintendents and its teachers belong to the United Federation of Teachers (UFT).

Of the 35 NYCEECs in the sample, 29 were affiliated with a chain or larger organization and six were independently operated. We categorized 13 of the NYCEECs as Head Start sites, although most of them also received Child Care and UPK funding, to distinguish them from the 16 NYCEECs that had only UPK and Child Care funding. This allowed us to examine how sites with Head Start funding might differ from those without Head Start funding. DOE-contract-only sites received no Child Care or Head Start funding for their 4-year-olds. Additionally, seven of the NYCEECs with ACS contracts also had DOE contracts for UPK; we compared sites with and without such concurrent contracts in our analyses.

Table I. Analytic Sample for NCCF Study of Variation in PKA Implementation by Setting, Auspice, and Neighborhood Resource Level (n=57)

	Setting Type					
	TOTAL SCHOOLS (public, private, charter, & pre-K center)	**NYCEECs**				**TOTAL**
		TOTAL NYCEECs	DOE-only NYCEECs	Child Care NYCEECs	Head Start NYCEECs	
Low Resource	7 (32%)	15 (68%)	2	3	10	**22 (100%)**
Moderate Resource	9 (50%)	9 (50%)	1	6	2	**18 (100%)**
High Resource	6 (35%)	11 (65%)	3	7	1	**17 (100%)**
TOTAL	**22 (39%)**	**35 (61%)**	**6**	**16**	**13**	**57 (100%)**

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[8] All but one site in this category received UPK, Head Start, and Child Care funds through an ACS Early Learn contract; one site had a federal contract for Head Start and a DOE contract for UPK.

II.1.c. Classroom Sampling

In schools and DOE-only NYCEECs, one classroom was randomly selected (28 classrooms from 28 sites). In NYCEECs with multiple funding streams (i.e., funding from a mix of ACS-UPK, ACS Child Care, and/or Head Start) that were *equally distributed* across classrooms (i.e., all 4-year-old classrooms contained slots from the same funding sources), one classroom was randomly selected (21 classrooms from 21 sites). In NYCEECs with multiple funding streams that were *differentially distributed* across classrooms (e.g., some classrooms contained UPK-only slots and others contained Child Care and Head Start slots), classrooms were selected to capture each variation in funding blend (17 classrooms from eight sites).

To facilitate prompt teacher recruitment, random selection of classrooms representing each funding blend was conducted using a random number-generator app at the time of administrator consent. In total, 66 classrooms were selected for teacher recruitment. While we had originally intended to analyze variance in implementation within sites across classrooms with different funding blends, the small number of such sites (n=8) was not sufficient for analysis. However, we captured some of these comparisons by including questions in the administrator and teacher surveys regarding within-site differences across classrooms, as described in *Section II.2.a*.

II.1.d. Teacher Recruitment

Following classroom selection, a recruitment letter was provided to the lead teacher in each classroom (either handed to them in person, given to them by the administrator, or emailed to them via administrator and/or researcher). This letter provided general information about the study and invited teachers to participate. After delivery of the letter, research staff followed up with an email that included links to the consent form, which was completed electronically.

II.2.   Data Instruments and Collection

To answer our research questions, we collected several types of data. First, we collected survey data from sampled administrators (n=57) and lead teachers (n=66) at each recruited site.[9] The majority of respondents completed the survey online using the Qualtrics survey platform after a link was emailed to them, although some respondents opted to complete the survey on paper.[10] The survey data were largely quantitative with some open-ended response items, covering several areas of PKA implementation (described in *Section II.2.a*). Second, we conducted Classroom Assessment Scoring System Pre-K (CLASS) observations within each sampled classroom.[11] Third, semi-structured interviews were conducted with a subset of 14 teachers and 16 administrators. Finally, we received de-identified site-level child demographic information from the DOE for the sites in our final sample.

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[9] One administrator who served as site director at two sites within a larger organization completed the administrator survey twice, once for each site. At another site, the UPK lead teacher who also served as the site director completed both the teacher and administrator surveys for that site.

[10] Eleven administrators and 9 teachers completed the survey on paper.

[11] One site declined the CLASS observation; for this site, we used DOE's site-level CLASS data. Analyses were run with and without this one classroom and no significant differences in the results were evident.

II.2.a. Administrator and Teacher Surveys

Administrator and teacher surveys were created by the research team. Starting with the study research questions, the team drafted hypotheses and target-content related to five broad areas of implementation:

1. Program characteristics and experience with PKA;
2. Administrator characteristics and well-being;
3. Teacher characteristics and well-being;
4. Instructional approach, practice, and content; and
5. Professional development.

Questions included in the surveys were developed according particular attention to the multi-faceted policy strategies pursued by the city, which include:[12]

- Providing transcendent policy and standards documents to foster a unified approach to UPK provision across different agencies, program settings, and funding streams;[13]
- Raising education and credential requirements for teachers in all settings to close gaps in qualifications between school- and NYCEEC-based teachers;
- Offering funding to close salary gaps between school- and NYCEEC-based teachers;
- Offering differentiated professional development (including coaching) to teachers;
- Offering professional development to administrators; and
- Providing a social worker to support children and families at each site.

Where possible, questions were drawn from existing surveys from large-scale research studies, including the federal Early Childhood Longitudinal Study – Birth Cohort and the National Survey of Early Care and Education. When existing questions were not available to capture desired content, we created new items to do so. The surveys were piloted with four UPK-site administrators and four UPK-site teachers outside of our sample. Based on feedback from pilot participants, the surveys were revised to ensure clarity and relevance for the target populations.

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[12] Westat, Metis Associates, & Branch Associates. (2016). *Evaluation of the New York City Pre-K for All initiative, 2014-15: Implementation study report: Expansion rollout*. Rockville, MD: Westat.

[13] For example: NYC DOE & NYC ACS. (2015). *Pre-K for all policy handbook: Part I, 2015-2016*. New York: NYC DOE; NYC DOE. (2015). *Pre-K for all program quality standards*. New York: NYC DOE; New York State Department of Education. (2011). *New York State prekindergarten foundation for the common core*. Albany, NY: New York State DOE.

The final administrator and teacher survey included questions in the following content areas:

Final Administrator Survey Content Areas	*Final Teacher Survey Content Areas*
1. Program, classroom, and individual characteristics 2. Administrator responsibilities and satisfaction 3. Child recruitment and enrollment 4. Compliance with program requirements 5. Program funding and budgeting 6. Use and monitoring of curriculum and assessment, and differences across classrooms 7. Conceptualization of school readiness 8. Teacher compensation and retention, and differences across classrooms 9. Professional development for administrators and teachers, and differences across classrooms 10. Family engagement and links to community services 11. Transitions to kindergarten	1. Individual characteristics 2. Curriculum and assessment use 3. Teaching practices and differences across peer classrooms 4. Family engagement 5. Professional development, subsequent changes in practice, and differences across peer classrooms 6. Mental health, autonomy, and capacity 7. Racial/ethnic and linguistic diversity in the classroom 8. Administrative and peer-teacher support 9. Compensation and differences across peer teachers 10. Connection to the neighborhood

Administrators (n=57) and teachers (n=66) completed surveys over the course of the recruitment and data collection process, with the first surveys completed in December 2016 and the last completed in June 2017. The administrator survey required roughly 40 minutes to complete, while the teacher survey required roughly 25 minutes. Survey responses were confidential, with only the core research team knowing the identity of respondents. A strict protocol was followed to de-identify all data for descriptive and analytic purposes. Qualitative items were coded in NVivo by a single member of the research team to allow for quantitative analysis. The qualitative responses were further explored during interviews with a subset of participants in semi-structured interviews, described in detail in *Section II.2.c.*

II.2.b. CLASS Observations

The CLASS is an observational rating tool developed to assess the process quality present in preschool classrooms, which is widely used across the nation for evaluation of early childhood programs. In this study, full-length observations were conducted in 65 of the 66 participating classrooms (with one site declining to have a CLASS observation by our research team), according to the procedures in the CLASS Pre-K manual.[14] Each full-length observation was

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[14] Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System: Manual Pre-K.* Baltimore, MD: Brookes Publishing.

comprised of four cycles of about 20 minutes each, typically beginning during a morning meeting and lasting until all four cycles were complete.

The CLASS includes observations in three domains, each scored on a scale of 1 to 7, which are further broken down into three or four dimensions:

Emotional Support Domain	Classroom Organization Domain	Instructional Support Domain
1. Positive Climate 2. Negative Climate 3. Teacher Sensitivity 4. Regard for Student Perspectives	1. Behavior Management 2. Productivity 3. Instructional Learning Formats	1. Concept Development 2. Quality of Feedback 3. Language Modeling

To obtain each domain score, average scores across observation cycles for each dimension were averaged. In addition, the scores for the three domains were then averaged to render an overall score for the classroom.

All field research staff participated in CLASS Pre-K training provided by Teachstone, which is authorized to train and certify CLASS observers, and completed the Teachstone reliability assessment with a score of 80% or higher. In addition, each member of the research team completed at least two cycles of observation with an experienced CLASS observer from the NCCF research team to further establish reliability. After concurrently observing the two cycles, the team members compared scores and all observers were within one point of the experienced observer on 8/10 of the dimensions in each cycle; each were then cleared to continue observing on their own. CLASS observations were conducted over a nine-week period, from mid-March 2017 to mid-May 2017. On average, CLASS observations lasted 78.5 minutes.

II.2.c. Semi-Structured Interviews

A subset of participants (n=30) who completed the surveys were selected non-randomly to complete a 30- to 45-minute semi-structured qualitative interview. After discerning preliminary findings from the quantitative data, these participants were selected for follow-up interviews to further explore responses they had made on the surveys that were relevant to the preliminary findings. The research staff tried to roughly balance interviews across schools and NYCEECs, and teachers and administrators, with the result being slightly more administrators (n=16) than teachers (n=14) and slightly more participants from NYCEECs (n=19) than schools (n= 11).

Semi-structured qualitative interview protocols were developed for administrators and teachers during the initial instrument development process. To capture a more comprehensive understanding of survey responses, initial protocols encompassed a wide variety of questions elaborating upon key points of interest referenced in the teacher and administrator surveys. Once participants were selected, a subset of questions to ask were selected based on salient patterns in the survey responses that called for elaboration. Members of the research team conducted the

interviews in person with respondents at their program sites over a period of three months, from March to June 2017.

Of the 30 interviews, 28 were recorded and transcribed. One interviewee declined to be recorded, and another's sound quality was too poor to be transcribed; in both instances, comprehensive notes from the interviews were taken and used for analysis. Notes and transcriptions were coded in NVivo by a single member of the research team to identify key themes and exemplary quotes to enrich the quantitative findings.

II.2.d. Demographic Data

The DOE provided the research team with de-identified child demographic data at the site level regarding race/ethnicity, Individualized Education Programs (IEPs), Dual Language Learners (DLLs), and poverty, as measured by eligibility for the free and reduced-price (FRP) lunch program. These numbers were used to derive percentages of these demographic groups in each site. However, because many NYCEECs do not participate in the lunch program, and consequently do not submit FRP lunch forms to the city, the data on child poverty underestimate how many poor children are enrolled at NYCEEC-based UPK programs.

II.3.   Data Analysis

To examine differences between setting, auspice, and neighborhood resource level, preliminary analyses compared survey responses, CLASS scores, and demographic data across each of these categories of comparisons. Specifically, descriptive statistics were run for the following setting types: 1) schools and NYCEECs; and 2) NYCEEC auspice categories (DOE-only NYCEECs, Child Care NYCEECs, and Head Start NYCEECs). We also ran descriptive statistics for the three resource categories: 1) low-resource neighborhoods; 2) moderate-resource neighborhoods; and 3) high-resource neighborhoods.

To discern significant variation by setting, auspice, and neighborhood, independent samples t-tests and one-way analyses of variance (ANOVAs) were conducted to ascertain statistical significance of comparisons between the analytic categories. For the sake of simplicity, all comparisons by setting and auspice were tested for significance using schools as the reference category. In all analyses, because our sample is fairly small (n=57 sites and 66 classrooms), and our study is exploratory, making no claim to causal effects, we have recognized statistical significance at four levels: $p<.10$, $p<.05$, $p<.01$, and $p<.001$.

After identifying preliminary findings using both the quantitative and qualitative data, additional exploratory analyses were conducted. For example, to discern program and classroom variables that may be associated with classroom quality as measured by the CLASS, we identified the classrooms in our sample that fell above the threshold scores on all three CLASS domains that other research has identified as most likely to lead to child-level gains (threshold of 5.0 on the domains of Emotional Support and Classroom Organization and 3.25 on the domain of

Instructional Support).[15] Thus, for purposes of analysis, the "above-threshold" classrooms represent those that were above the thresholds for effectiveness on all three CLASS domains. The "below-threshold" classrooms represent those that were below the thresholds on one or more of the three CLASS domains. Overall, 28 classrooms (42%) were above-threshold and 38 classrooms (58%) were below-threshold. Once again, independent samples t-tests and one-way ANOVAs were conducted to ascertain statistical significance.

Additionally, we examined how NYCEECs with concurrent ACS and DOE contracts for UPK differed from those that had a single contract (either ACS or DOE) for UPK. We also examined how NYCEECs that were affiliated with a larger organization or chain might differ from NYCEECs that operated independently. Finally, to increase our ability to detect statistically significant (and substantive) differences in the implementation of PKA by neighborhood resource level, we combined the data for low- and moderate-resource neighborhoods and then compared data from this combined category with data from high-resource neighborhoods.

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[15] Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly*, *25*(2), 166-176.

III. Synthesis of the Findings and Implications for Quality, Equity, and Efficiency

The results of the analyses suggest that, while the city has much to show for its ambitious PKA efforts, enduring challenges are evident in the disparities between school-based and NYCEEC-based UPK programs. The differences are manifest in the fiscal and professional resources the settings possess and require, teacher and administrator perceptions of how to care for and educate young children, and the standards and requirements that guide programs in each setting. The obstacles inherent in these differences will defy—as they have for many years—easy policy fixes in the pursuit of quality, equity, and efficiency in the city's PKA endeavor. Yet they simultaneously point to multiple opportunities to strengthen the program in both the short-term and long-term to the potentially profound benefit of the city's children and families.

It is of paramount importance to understand that the results point to the assets *and* challenges of both schools and NYCEECs. Discerning the relative strengths of each is a critical step toward improving current practice and crafting the city's ongoing PKA initiative for all 4-year-olds and, ultimately, all 3-year-olds. Moreover, our focus on the contrasts between schools and NYCEECs does not diminish differences among the NYCEECs by auspice. The results suggest that Head Start sites are struggling the most among the NYCEECs with the demands of PKA, though their challenges are by no means unique. Many of the disparities evident in the Head Start data are shared by Child Care sites and, to a lesser extent, the DOE-only sites. Moreover, the results indicate that in some ways, Head Start sites are exemplars of how to serve disadvantaged children and families. Indeed, the analyses of setting and auspice should be considered together, as they reveal structural and policy distinctions that are ripe for consideration and change. By comparison, the neighborhood analyses rendered far fewer findings to guide policy reforms, though they do indicate some particular challenges of UPK provision in lower-resourced neighborhoods.

With these overall thoughts in mind, we present three themes below that emerge from the results and findings presented in *Sections IV* and *V*:

1. Implementing PKA has been more challenging for NYCEECs than for schools, with implications for quality, equity, and efficiency.
2. NYCEECs possess important strengths in serving children and families, with implications for quality and equity in both school- and NYCEEC-based programs.
3. Far fewer differences in PKA implementation were evident by neighborhood resource level than by setting and auspice, though some significant differences were found.

These themes represent a summary of what the analyses reveal about the assets and challenges inherent in each setting, and their implications for the quality, equity, and efficiency of the city's UPK programs. We offer a synthesis of the results and findings *before* presenting the more detailed results and findings in *Sections IV and V* with the hope that it will provide helpful context for understanding the supporting data to be found there. In *Section VI*, we ultimately offer framing ideas and policy recommendations that emanate from these themes, results, and findings.

III.1. Theme #1: *Implementing PKA has been more challenging for NYCEECs than for schools, with implications for quality, equity, and efficiency.*

The results indicate that implementing PKA has been more challenging for NYCEECs than for schools, and that the difficulties affect quality, equity, and efficiency in important—and policy amenable—ways. In the following subsections, we synthesize the results and findings, their context, and their implications in seven areas: a) teacher compensation; b) administrator compensation; c) program management; d) enrollment; e) instructional pedagogy, practice, and quality; f) staff support; and g) staff development.

> **III.1.a. Teacher Compensation**: **Lower teacher compensation at NYCEECs hinders recruitment and retention and fosters a flow of talent from NYCEECs to schools.**

The results reveal substantial differences in compensation between school-based UPK lead teachers (hereafter called, "school teachers") and NYCEEC-based UPK lead teachers (hereafter called, "NYCEEC teachers"). On average, school teachers are paid $30,000 more each year than NYCEEC teachers ($73,471 vs. $43,660 respectively). While this salary gap is clearly wide, it understates the disparity because NYCEEC teachers work longer hours and more months per year. The numbers in *Table 2* break down salary levels for teachers in each setting by the weeks and hours they work (based on the average number of hours per day their site is open), revealing an average hourly wage of $57 in schools vs. $19 in NYCEECs for teachers in the study sample. This substantial pay difference makes recruiting and retaining UPK teachers at NYCEECs more difficult than at schools.

Table 2. Annual, Weekly, and Hourly Pay for School and NYCEEC Lead Teachers (n=61)

	School-based teachers	**NYCEEC-based teachers**	**Difference**
Annual salary (average)	$73,471	$43,660	$29,811/year
Weekly salary - 37 weeks/year in schools - 52 weeks/year in NYCEECs	$1,986	$840	$1,146/week
Hourly wage - 35 hours/week in schools - 45 hours/week in NYCEECs	$57	$19	$38/hour

Note: Most teachers in both settings undoubtedly work longer than the average seven or nine hours per day that their schools or centers are open; without precise data on these hours, we cannot adjust for them here. Additionally, under the UFT contract, public school teachers are paid for 181-193 days per year, depending on when holidays fall; we use an average of 187 days to estimate 37 weeks of work per year. As such, this rough comparison is meant only to illustrate the magnitude of salary differences.

Compensation differences transcend salary. Although most teachers in both settings have health insurance, NYCEEC teachers are less likely than teachers in schools to get insurance through an employer- or union-sponsored plan. As a result, many have to find insurance through a spouse's job, purchase health insurance directly, or use Medicaid or Medicare. NYCEEC teachers are also

less likely than school teachers to have an employer- or union-based retirement plan. Further reflective of these financial pressures, about one in 20 NYCEEC teachers receive some type of government assistance, such as cash and/or housing assistance or food stamps, compared to none of the school teachers. The fact that so many NYCEEC teachers are struggling for financial security—and in some cases, struggling to make ends meet—speaks to the urgent need to address these disparities.

Differences in qualifications account for only part of the compensation gap. All UPK school teachers have a master's degree or higher, as required for lead teachers in public schools, compared to two thirds of NYCEEC teachers. Most of the remaining NYCEEC teachers (almost one third) have a bachelor's degree, as required by Early Learn. Certainly, compensation disparities also stem from differences in union membership. Almost every school teacher reports being a member of a union, compared with two thirds of NYCEEC teachers.[16] Moreover, the UFT's strength and numbers surpass the negotiating power of the unions to which NYCEEC teachers belong.

Data from NYCEEC administrators indicate that the DOE's offer of enhancement funding to raise teacher salaries has been helpful, but not sufficient to remedy these differences. Average teacher salaries are $10,000 higher at NYCEEC sites that use the enhancements than at those that do not, yet the overall gap in salaries endures. Under current rules, enhancement funding can be used to increase the salaries of NYCEEC lead teachers with a bachelor's degree and certification to a maximum of $44,000 per year, and to increase NYCEEC lead teachers with a master's degree and certification to a maximum of $50,000 per year.[17] By comparison, under the UFT contract, in 2016-17, school-based lead teachers with a bachelor's degree and certification had a starting salary of $54,000, and those with a master's degree and certification started at $60,704.[18] Such contract-based differences set a target for DOE efforts to achieve parity between school and NYCEEC teacher salaries.

Given these substantial differences, qualified teachers understandably seek school-based UPK jobs, and as NYCEEC teachers gain the qualifications required by UPK, they pursue better-paying jobs for fewer hours at schools. As a result, some NYCEECs function as a de facto training ground for public schools. The consequent challenge of recruiting and retaining UPK teachers absorbs administrative capacity and financial resources at NYCEECs, as administrators are caught in an inefficient cycle of hiring and training new teachers. Simultaneously, teacher turnover creates program instability and disrupts the continuity that supports children's learning. The combination of lower pay, longer hours, frequent turnover, and program instability also affects the conditions under which teachers work. Although NYCEEC and school teachers reported similar levels of morale at their sites, many NYCEEC teachers expressed frustration or "burn-out" before the end of the year.

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[16] Recall that "school teachers" can work at either public, private, or charter schools, or a pre-K center. In the study sample, 77.3% of school teachers worked for public schools.

[17] NYC ACS. (2014). *Pre-kindergarten: Frequently asked finance questions for Early Learn NYC contractors: UPK enhancement*. New York: ACS.

[18] United Federation of Teachers. (2009). Salary schedules for the 2009-18 contract. New York: UFT. Retrieved from http://www.uft.org/our-rights/salary; Miksic, M. (2017). *MA/BA teacher salary compensation: UFT vs. DC 1707*. New York: Day Care Council of New York.

Because NYCEECs are serving a higher-need population overall, these disparities raise serious equity and efficiency concerns, most saliently in Head Start and Child Care programs, where administrators have the most difficulty with teacher recruitment and retention. Almost every Head Start administrator (84.6%) and most Child Care administrators (68.8%) says that meeting the UPK teacher education and credential requirements is difficult, and most who report difficulty cite the challenge of recruiting teachers with the requisite credentials at current salary levels. Moreover, turnover is most common at Head Start sites, where almost every administrator reported that at least one teacher left their site after the previous year. These challenges mean that NYCEEC administrators must devote more of their time than their school-based counterparts to hiring, training, re-hiring, and re-training an unstable teaching staff that disrupts continuity in programming and the UPK experience for children and families.

From an equity standpoint, it is also important to note that while compensation disparities persist, so do differences in the racial/ethnic composition of teachers in schools versus NYCEECs. School teachers are more likely than NYCEEC teachers to be white: Half of the teachers in schools are white, compared to only a quarter of NYCEEC teachers. Conversely, NYCEEC teachers are more likely to represent racial/ethnic minorities: Three-quarters of the teachers in NYCEECs are racial/ethnic minorities, compared to only half of school teachers. At Child Care and Head Start sites, almost nine out of 10 teachers are racial/ethnic minorities. As the city folds its Early Learn contracts into the DOE, it will confront the reality that the DOE employs a somewhat whiter UPK teaching force at schools that is paid more than the predominantly racial/ethnic minority UPK teaching force at NYCEECs, which is paid less and yet expected to work longer hours each day and more months each year. Although the pursuit of equity for children motivates UPK policy, current policy fails to model such equity among its adults.

➢ **III.1.b. Administrator Compensation**: **Lower administrator compensation at NYCEECs under-values their program leadership.**

While teacher compensation gaps attract most of the media focus, unequal compensation between school and NYCEEC UPK administrators (hereafter called, "school administrators" and "NYCEEC administrators, respectively) also demands attention. On average, school administrators are paid $50,000 more each year than NYCEEC administrators ($117,044 vs. $64,016 respectively). Thus, for both teachers and administrators, average salaries are about 70% to 80% higher at schools than at NYCEECs. Once again, this gap understates the disparity because NYCEEC administrators work longer hours per day than school administrators. The numbers in *Table 3* break down salary levels for administrators in each setting by the weeks and hours they work (based on the average number of hours per day their site is open), revealing an hourly wage of $64 in schools vs. $27 in NYCEECs for administrators in the study sample.

Table 3. Annual, Weekly, and Hourly Pay for School and NYCEEC UPK Administrators (n=48)

	School-based administrators	NYCEEC-based administrators	Difference
Annual salary (average)	$117,044	$64,016	$53,028/year
Weekly salary - 52 weeks/year in schools and NYCEECs	$2,251	$1,231	$1,020/week
Hourly wage - 35 hours/week in schools - 45 hours/week in NYCEECs	$64	$27	$37/hour

Note: Administrators in both settings undoubtedly work longer than the average seven or nine hours per day that their schools or centers are open; without precise data on these hours, we do not adjust for them here. Additionally, while some public-school administrators are paid for 52 weeks a year, others have two months off during the summer. As such, this rough comparison is meant only to illustrate the magnitude of salary differences.

Again, compensation disparities extend to benefits. Although most administrators in both settings have health insurance, NYCEEC administrators are less likely to get insurance through an employer- or union-sponsored plan. Consequently, many administrators find insurance through a spouse's job or purchase health insurance directly. NYCEEC administrators are also less likely than school administrators to have an employer- or union-based retirement plan. Moreover, about one in twenty NYCEEC administrators receive some type of government assistance, such as cash and/or housing assistance, or food stamps, compared to none of the school administrators.

In contrast to teachers, differences in education explain little of these compensation differences. All school administrators (100%) and most NYCEEC administrators (88.6%) have a master's degree or higher. In sum, the findings indicate that equally qualified administrators are getting compensated quite differently, which raises pressing equity concerns regarding the comparability of compensation accorded to UPK program leadership in schools and NYCEECs.

Not unique to NYC, such inequitable teacher and administrator compensation is deeply embedded in the compensation structures of state and municipal UPK systems nationwide.[19] Policymakers here and elsewhere are grappling with the same reality: A substantial infusion of funding will be required to reconcile these inequities. Although the problem defies easy fixes, these disparities should be a top policy priority because they represent a deep structural inequity that compromises the city's commitment to quality, equity, and efficiency.

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[19] McLean, C., Dichter, H., & Whitebook, M. (2017). *Strategies in pursuit of pre-k teacher compensation parity: Lessons from seven states and cities*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley and New Brunswick, NJ: National Institute for Early Education Research; Whitebook, M., McLean, C., & Austin, L. J. E. (2016). *Early childhood workforce index – 2016, Executive Summary*. Berkeley, CA: Center for the Study of Child Care Employment, University of California, Berkeley; Ulrich, R., Hamm, K., & Herzfeldt-Kamprath, R. (2016). *Underpaid and unequal: Racial wage disparities in the early childhood workforce*. Washington, DC: Center for American Progress.

➤ **III.1.c. Program Management**: **Managing a UPK program and complying with its requirements is more difficult and time-consuming for NYCEECs.**

Beyond the obstacles of teacher recruitment and turnover, complying with the demands and governance structures of UPK since the advent of PKA has been harder for NYCEECs than for schools. Many NYCEECs have difficulty managing multiple—and sometimes conflicting—program requirements, recruiting children, and forging transitions to kindergarten.

For Child Care and Head Start NYCEECs, the demands of UPK program management are compounded by their need to answer to multiple agencies at once (e.g., ACS, DOE, and/or DOHMH). Not surprisingly, Head Start administrators, most of whom are navigating the requirements of three programs (Head Start, Child Care, and UPK), report the most difficulty with program compliance. In this context, budgeting and cost allocation becomes a drain on NYCEEC administrative capacity that could otherwise be spent on program and teaching quality. Many NYCEEC administrators, and particularly Head Start administrators, say that the UPK rules regarding budgeting and cost allocation are complicated and confusing, and that they lack sufficient budgeting support. Fiscal administration takes more than five times as long in NYCEECs as in schools, sapping administrative resources. Some NYCEEC administrators, particularly those in Head Start sites, say that complying with the UPK early learning standards is also difficult, citing the challenge of different agency requirements. DOE's effort to absorb Early Learn contracts in 2019 may reduce some of the capacity constraints for sites currently juggling ACS and DOE requirements, but it will not eliminate these significant differences in administrative burden between schools and NYCEECs.

On top of these administrative tasks, child recruitment has been harder for NYCEECs than for schools, with NYCEEC administrators citing competition from schools, competition from other sites in general in areas that may be saturated with UPK programs, and families' preference for school-based UPK. Once again, this suggests that NYCEEC administrators must devote more time and energy to administrative duties, including filling their slots. Nonetheless, ACS data indicate that since the beginning of PKA, enrollment of 4-year-old children in Early Learn sites has declined 20% (from 12,269 in January 2014 to 10,073 in January 2017).[20]

Finally, NYCEEC administrators have a larger task of managing children's transition to kindergarten. While most children in school-based UPK continue at the same school for kindergarten, children at NYCEECs tend to disperse among several schools, increasing the challenge of fostering smooth transitions for them because NYCEECs must simultaneously manage their progression to multiple sites. Given this steeper challenge, the finding that 71.4% of NYCEECs report having all their children visit kindergarten classrooms is impressive. Yet once again, these multiple and sometimes conflicting demands absorb NYCEEC administrative capacity, draining time, energy, and resources. As a result, their administrators carry greater

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[20] Hurley, K. (2017). What's needed for "3-K for All" and child care centers to work and play well together? New York: New School Center for New York City Affairs. Retrieved from: https://static1.squarespace.com/static/53ee4f0be4b015b9c3690d84/t/59419acb6b8f5b3afa739ef5/1497471692307/'3 -K+for+All'+and+Child+Care+Centers+_June+2017.pdf.

burdens and have less freedom than their school counterparts to nurture quality within and outside the classroom.

➢ **III.1.d. Enrollment: The higher-need population of children served by NYCEECs, and especially Head Start sites, further raises the demand on program capacity.**

Amidst these administrative challenges, NYCEECs serve a higher-need population than schools, with Head Start sites serving the highest-need children. The finding that *half of the children* (51.7%) enrolled at Head Start sites are learning English as a second language is particularly noteworthy. With many children speaking languages other than Spanish at home, the pursuit of bilingual instruction becomes more complex. Further, because the data underestimate poverty rates at NYCEECs, the percentage of poor children is likely to be higher at NYCEECs than at schools, given the income-eligibility requirements of both Head Start and Child Care. Finally, the percentage of children with IEPs is twice as high at NYCEECs when compared with schools.

The higher-need population served by NYCEECs, and particularly by Head Start sites, raises the demands on NYCEEC administrators and teachers. For example, some of the NYCEEC administrators who reported difficulty complying with the UPK early learning standards cited the demands of children's social-emotional needs as the reason, which may reflect the higher-need population of children enrolled at NYCEECs. As one administrator said, "Many of our students are in foster care or living in the shelter system…It is hard to meet all the required standards when there are so many special-ed needs." While many schools demonstrate a laudable commitment to such children, they do not serve as many of them.

The higher-need population at NYCEECs corresponds with one of the NYCEEC strengths: their long-standing commitment to serving the multiple needs of children and families in their communities. Indeed, inscribed in the Head Start model is a commitment to serving children with special needs. In this context, NYCEEC administrators describe considerable efforts to leverage their resources to get children and families the services they require. Many of them are successful, as indicated by the findings regarding family services, which are described in *Section IV.1.j.*. At the same time, the findings strongly indicate that holding these programs to expectations of pedagogical quality that are equal to those in schools requires a more intense level of support and resources, though they may surpass their school counterparts in other types of quality such as the provision of family services.

Additionally, data on the race/ethnicity of children enrolled in UPK programs indicate that NYCEECs are more likely to enroll black and Hispanic children, and indeed, to enroll a population of children who are almost entirely racial/ethnic minorities. Once again, Head Start sites distinguished themselves by serving the highest concentration of minorities; *every* Head Start site in the sample served almost entirely racial/ethnic minority children. This concentration of minorities in NYCEECs, primarily black and Hispanic children, raises long-standing equity concerns, particularly when their teachers are being paid less than those in schools. While the city has been grappling with racial/ethnic segregation among its primary, middle, and high schools, the predominance of racial/ethnic minority children in NYCEECs extends this pattern to the UPK level.

> **III.1.e. Instructional Pedagogy, Practice, and Quality: While differences in the choice and use of curricula and assessments are evident, more concerning are conflicts between UPK expectations and NYCEEC teachers' practices, and significant differences in classroom quality between schools and NYCEECs.**

Several differences between schools and NYCEECs in curriculum and assessment use are noteworthy. Schools are more likely to use one or more of the DOE curricula and/or a curriculum they developed themselves, while NYCEECs are more to use the Creative Curriculum. This suggests that school sites have more freedom to select, and even develop, the UPK curricula they would like to use. For assessment, schools are more likely to use Work Sampling, while NYCEECs are more likely to use Teaching Strategies GOLD. While the choice of different curricula is not a big concern, potential misalignment between curricula and assessments is very much so. NYCEEC administrators are more likely than school administrators to say that the content of their assessments is aligned with their curricula, indicating the need for greater attention to such alignment at schools.

More troubling are differences between the two settings in teacher perceptions of UPK expectations and their practice. For example, NYCEEC teachers report greater conflict than school teachers between their current classroom practices and what is expected of them, saying that the demands of UPK, particularly related to assessment and documentation, take away from time they want to spend with children. Some NYCEEC teachers report that the demands of UPK are too much for their children, a concern not expressed by school teachers. Some NYCEEC teachers also say that children's behavioral and social-emotional needs prevent them from fulfilling the requirements of UPK within the time constraints of the UPK day. These differences may reflect a perception of conflict between the expectations of UPK and the historical commitment of NYCEECs, and particularly Head Start sites, to caring holistically for high-need children and families. At the same time, school and NYCEEC teachers cite the same content areas as necessary for children's "school readiness," suggesting that any differences in outcomes do not reflect differences in teachers' intentions, but rather differences in the conditions under which they work to try to achieve them.

Another salient concern is the finding that few, if any, NYCEEC teachers had sufficient "prep-time," which allows teachers to document children's learning, use data from formative assessments, modify the curriculum to meet the needs of individual children, and reflect on pedagogy and practice. While almost all teachers in both schools and NYCEECs believe that planning and assessment are an important part of their work, many NYCEEC teachers say they do not have time to complete the required planning and paperwork during the course of their regular day. Under the UFT contract, teachers in public schools are guaranteed five preparation periods each week, but NYCEEC teachers enjoy no such guarantee. This shortage of time may also explain, in part, why NYCEEC teachers are less likely to discuss challenges and find solutions with their peer pre-K teachers, though this may also reflect the fact that NYCEEC teachers have fewer peer teachers because their programs are, on average, smaller than those of schools. Nonetheless, NYCEEC teachers cite time pressures as a source of stress, which can hinder the quality of their practice.[21]

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[21] Hall-Kenyon, K. M., Bullough, R.V., MacKay, K. L., & Marshall, E. E. (2014). Preschool teacher well-being: A review of the literature. *Early Childhood Education Journal, 42*, 153-162.

In terms of classroom quality, the results indicate that, on average, overall CLASS scores are higher in schools than in NYCEECs, reflecting significant differences on two of the three CLASS domains (Instructional Support and Classroom Organization). The significant differences in classroom quality that are evident between the two settings is a serious concern, in terms of both quality and equity, given the higher-need population of children served in NYCEECs. Addressing these differences, with particular attention to Instructional Support, is clearly needed. However, the results do not suggest that such disparities can be explained by differences in teacher education, certification, credentials, or experience, a finding that is consistent with research in other settings.[22] Nor can they be attributed to differences in curricular focus, with nearly all teachers in both settings prioritizing approaches to learning and social-emotional development. Instead, the data suggest that structural differences between schools and NYCEECs, which define the conditions under which teachers work and develop their skills, explain this gap. More deeply rooted, this problem will not be solved by increasing teacher education or providing more professional development (PD).

The largest differences in CLASS scores were found between schools and Head Start sites. Three plausible reasons may help explain these differences. Head Start sites: 1) are more likely to experience teacher turnover; 2) carry a larger administrative burden and struggle with the requirements of budgeting and allocating costs; and 3) serve the highest-need population of children. In this context, it is particularly concerning that Head Start administrators are the least likely to say they are receiving PD that meets their needs, and that less than half of their teachers say they are getting workshops and coaching that meet their needs. Together, these results further support the necessity of addressing structural differences between NYCEECs and schools to assure that they can attract the qualified staff they need and target PD, and especially coaching, more carefully.

> **III.1.f. Staff Support: Inadequate staffing hinders program and teaching quality at NYCEECs.**

The findings indicate that many NYCEECs administrators lack adequate staffing at their sites to meet the demands of their programs. For example, NYCEEC administrators say they have insufficient funding for substitute teachers to cover for teachers who are out sick, on vacation, or attending PD workshops or coaching meetings. As a result, NYCEEC administrators must find creative ways to cover staffing holes, such as moving teachers to different classrooms, combining classrooms, or hiring less qualified teachers to fill empty positions as quickly as possible, all of which are sub-optimal strategies.

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[22] Burchinal, M., Hyson, M., & Zaslow, M. (2008). Competencies and credentials for early childhood educators: What do we know and what do we need to know? *National Head Start Association Dialog Briefs, 11*(1); Early, D. M., Maxwell, K. L., Burchinal, M., Alva, S., Bender, R. H., Bryant, D., … Vandergrift, N. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development*, *78*(2), 558-580; Early, D. M., Bryant, D. M., Pianta, R. C., Clifford, R. M., Burchinal, M. R., Ritchie, S., … & Barbarin, O. (2006). Are teachers' education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten? *Early Childhood Research Quarterly, 21*, 174-195; Kagan, S. L., Kauerz, K., & Tarrant, K. (2008). *The early care and education teaching workforce: An agenda for reform*. New York: Teachers College Press.

Additionally, some NYCEEC administrators say that visits from their DOE social worker are too infrequent to address the demands of the children and families they serve; one also called for a full-time parent coordinator to support parent engagement. Both NYCEEC administrators and teachers say that they do not have access to sufficient staffing to meet the social-emotional and behavioral needs of their children, a recurring theme. Notably, the call for broader and more intensive support from a social worker appears to transcend settings; school administrators described the need for a full-time, on-site social worker to help address the social-emotional and behavioral challenges of their children, as well as the needs of their families.

Lack of staff coverage at NYCEECs is also a concern as it prevents lead teachers from attending the DOE's PD trainings. NYCEECs can use the "enhancement funding" from DOE to pay for substitute teachers to cover for UPK teachers when they attend DOE-provided PD.[23] Yet, the enhancement funding is limited, and the results suggest that many administrators prioritize it for salary increases for their lead teaching staff. Moreover, efforts to develop teaching staff within sites differ between schools and NYCEECs. NYCEEC teachers attend PD workshops that are more frequent, shorter in duration, and more likely to be led by staff from their own program than those attended by school teachers. Together, these findings may reflect the shortage of staff coverage for PD at the NYCEECs, which makes attendance at outside DOE trainings impractical and even impossible. In short, inadequate staffing persistently roils NYCEECs, disrupting continuity in programming and teaching and deterring the development of teachers and their reflective practice.

> **III.1.g. Staff Development: PD has not always been sufficiently intense and individualized for the teachers and administrators who may need it most.**

Instructional coaching is reaching almost all school and NYCEEC teachers, but less frequently than in other high-quality pre-K models outside NYC;[24] less than half of teachers in both settings receive coaching at least monthly. This is a concern given our finding that coaching that occurs at least monthly is associated with self-reported changes in teacher practice in NYCEECs, particularly for teachers in Child Care sites. Among NYCEEC teachers who received coaching at least monthly, *three-quarters* say that coaching changed their classroom practice "a lot," compared to less than half of NYCEEC teachers who received coaching less often. Overall, teachers are more likely to say that coaching changed their practice substantially than did workshops. In sum, the DOE's deployment of instructional coaches gets positive reviews, but the intensity of coaching appears to affect its impact.

Beyond the intensity of PD, the match between its content and teacher needs is an area of concern. The results indicate that most school and NYCEEC teachers do not feel the content of both PD workshops and coaching matches their needs, often because they feel that the content is already familiar to them. Moreover, overall, about two-thirds of teachers report having no choice in the PD that they receive. These findings indicate some misalignment between the PD that is provided and what teachers feel they need and would choose if they had the opportunity to do so.

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[23] NYC ACS. (2014). *Pre-kindergarten: Frequently asked finance questions for Early Learn NYC contractors: UPK enhancement*. New York: ACS.

[24] Weiland, C., & Yoshikawa, H. (2013). Impacts of a prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills. *Child Development*, *84*(6), 2112-2130.

Such disjuncture creates inefficiencies and may compromise the city's efforts to use PD resources to build workforce capacity.

Finally, we found that only about half of administrators can choose the PD that meets their needs, further indicating that the targeting of administrator PD could be improved. Also striking is the fact that school administrators are nearly five times more likely than NYCEEC administrators to report an increase in their access to PD since the advent PKA, suggesting that many NYCEEC administrators have not received adequate support in managing their transition into the UPK system.

In sum, the findings reveal striking differences in administrative burden, compensation, staffing, and pedagogical quality between schools and NYCEECs, with corresponding inefficiencies in the deployment of city resources. While policy debates regarding program quality—in NYC and elsewhere—often focus on workforce capacity, the findings here suggest that inequities in quality are often artifacts of broader structural problems that will not to be solved solely by greater PD efforts. We address the policy implications of this overall finding in *Section VI*.

III.2 Theme #2: *NYCEECs possess important strengths in serving children and families, with implications for quality and equity in both school- and NYCEEC-based programs.*

Despite the larger challenges that typically characterize NYCEECs, the findings indicate that they possess important strengths in their provision of UPK—strengths that could be better supported and replicated.

For example, the findings indicate that NYCEECs offer (or refer families to) a wider array of family services and provide more of them on site. These services include mental health, food and housing assistance, employment and education, parenting classes, and assistance with government applications. Among the NYCEECs, Head Start sites offer the most family services and provide most of them on site. On average, Head Start sites offer twice as many family services as DOE-only sites. The value of these services should not be under-estimated; given that NYCEECs serve the highest-need population of children and families in the UPK system, the provision of such services is critical to achieving equitable outcomes.

Moreover, the hours and months that NYCEECs are open are better suited to the needs of working families. By staying open more hours per day and every month of the year, NYCEECs serve the child care needs of working families whose workdays extend beyond the UPK day of six hours and 20 minutes, and the school year that ends in June. The shorter day and shorter year at schools may force working parents to access multiple child care arrangements characterized by discontinuity and varying quality, in addition to managing the logistical challenges of transporting children among multiple sites.

Also important is the commitment that NYCEECs demonstrate to bilingual instruction. School and NYCEEC teachers are equally likely to be bilingual in English and Spanish (36.4% and 43.2% respectively), and a surprising number of teachers in both settings speak any second language in addition to English (54.6% in schools and 63.6% in NYCEECs). Yet, these similarities in language skills do not carry over to produce the same instructional practices with

children who are DLLs. NYCEEC teachers are less likely than school teachers to speak only English in the classroom (72.7% of school teachers vs. 45.5% of NYCEEC teachers), and more likely than school teachers to conduct pull-out instruction in a child's home language (0% of school teachers vs. 13.6% of NYCEEC teachers). In short, NYCEECs employ a more racially/ethnically diverse teaching staff that may mirror the children they serve and that is more likely to provide bilingual instruction to support children's multiple language acquisition.

The services that NYCEECs provide to the city's highest-need families, the hours and months they are open, and their practice of bilingual instruction with DLLs reflect more than a commitment to the practical needs of parents and their children. They represent a deeply seated mission to take a holistic approach to the myriad challenges that confront many of the city's children and families. While school administrators and teachers undoubtedly share a similar commitment to their families, structural parameters (including a workday that typically runs from 8:20 am to 2:40 pm) may reinforce, rather than diminish, differences in the capacity of NYCEECs and schools to comprehensively serve children and families. While school administrators speak admirably about trying to engage their UPK families, NYCEECs, and particularly Head Start sites, have a rich and laudable record of service to their communities. The findings indicate that bolstering school capacity to address the multiple needs of diverse UPK children and families is an important policy goal.

III.3. Theme #3: *Far fewer differences in PKA implementation were evident by neighborhood resource level than by setting and auspice, though some significant differences were found.*

The results of the analyses indicate that the obstacles inherent in the structural bifurcation of schools and NYCEECs surpass those from resource disparities between neighborhoods.[25] Far fewer of the differences in PKA implementation were significant between neighborhood resource levels than between settings and auspice categories. Even so, the comparisons by neighborhood resource levels reveal some important differences that underscore the challenges of operating a UPK site in a low/moderate-resource neighborhood.[26] Particularly for NYCEECs that are already struggling to implement UPK, these added challenges increase the demands on their capacity.

First, the finding that child recruitment is more difficult for NYCEECs is complemented by the finding that it is more difficult in low/moderate-resource neighborhoods than in high-resource neighborhoods. While many NYCEEC administrators cite competition from school-based UPK programs in their area, those in low/moderate neighborhoods are most likely to do so. Second, sites in low/moderate-resource neighborhoods unsurprisingly serve a higher-poverty, higher-racial/ethnic-minority population than sites in high-resource neighborhoods. Enrollment at low/moderate sites is more likely to be comprised of 90% or more racial/ethnic minority children. Together, these results underscore the equity concern that NYCEECs—particularly

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[25] This finding is further supported by the fact that schools and NYCEECs were fairly evenly distributed in the neighborhood resource categories (*Table 48 in Appendix A*), which reduces the possibility that important differences by setting are confounding the results by neighborhood.

[26] For ease of presentation when reporting these results, we will sometimes refer to sites or classrooms as "low/moderate sites/classrooms" and "high-resource sites/classrooms" as shorthand for "sites/classrooms in low/moderate-resource neighborhoods" and "sites/classrooms in high-resource neighborhoods."

those in low/moderate neighborhoods—face higher administrative challenges than schools and are serving more disadvantaged populations without the requisite resources to do so effectively. At the same time, teachers in low/moderate-resource neighborhoods are more likely to say that morale is low at their UPK sites than teachers in high-resource neighborhoods, which may reflect the many challenges of teaching—indeed, of working—in a lower-resourced neighborhood.

When we compared average CLASS scores in low/moderate and high-resource neighborhoods, the results indicate that classrooms in both types of neighborhoods have similar average scores on the Instructional Support domain, but that classrooms in high-resource neighborhoods scored higher on Emotional Support and Classroom Organization. When we further compared CLASS scores between schools and NYCEECs within neighborhoods, the results indicate that school and NYCEEC CLASS scores differed significantly only in low/moderate-resource neighborhoods (i.e., on Instructional Support and Classroom Organization), not in high-resource neighborhoods.

Finally, while administrators in both types of neighborhoods report being offered similar types of PD, those in low/moderate neighborhoods are less likely than those in high-resource neighborhoods to report attending summer institutes for administrators. Low/moderate administrators are also less likely to report an increase in the amount of PD for administrators since the advent of PKA. Such differences suggest that city efforts to develop program leadership may be focused more on administrators in high-resource neighborhoods than in low/moderate neighborhoods.

Together, these findings suggest that the higher demands on NYCEEC administrative and teacher capacity, relative to those at schools, are compounded by the challenges of operating within a low/moderate-resource neighborhood, and that NYCEECs in those neighborhoods should be primary targets of policy supports and resources.

III.4. Summary of the Findings and Themes

Together, the findings underscore the disparities between schools and NYCEECs that are deeply embedded in the UPK landscape, contoured by a long history that will not be easy to erase. The PKA initiative recognized the divergent histories and capacities across its UPK programs and undertook admirable efforts to overcome them. But obdurate differences nevertheless endure and the consequences for equity, quality, and efficiency are substantial. The findings suggest that overall, schools are fulfilling some of the pedagogical goals of UPK more successfully and that NYCEECs are excelling at the twin goals of serving families beyond the classroom while supporting children's learning within it.

Given such deeply drawn differences, the pursuit of equity in the quality of UPK programs demands a differentiated policy response that reflects the particular assets and challenges of each setting. It is also important to note that while much of the focus of the analyses has been on the equity and quality of UPK services, the findings point to inefficiencies in the UPK programs as well. Programs that are in near-constant staffing turmoil, locked in a cycle of new hiring and re-training, and hindered by staff shortages and the ad-hoc arrangements that they demand, are not efficient programs. Lower compensation for the leadership in such sites discourages much-needed talent from the field. Providing PD to administrators and teachers that does not align with

their needs is an unwise use of scarce resources. In sum, while the pursuit of equity and quality are inherently connected, the goal of efficiency should also be prioritized, as the call for greater investment in equitably high-quality programs requires an efficient deployment of resources to support a sustainable system.

To better understand this synthesis of the findings, we now turn to a more data-rich presentation of the individual findings and the results of the analyses that support them. In *Section IV* below, we present the results by setting and auspice. In *Section V*, we present the results by neighborhood resource level.

IV. Results and Findings from Analyses by Setting and Auspice

The results by setting and auspice are organized in five topic areas: 1) Program Characteristics and Experience with PKA; 2) Administrator Characteristics and Well-being; 3) Teacher Characteristics and Well-being; 4) Instructional Approach, Practice, Content, and Quality; and 5) Professional Development. Each section begins with a summary of the key findings in the topic area. We then present each key finding individually, followed by the results of analyses that support that finding. For each finding, we present the results first by setting (schools and NYCEECs) and second by auspice (DOE-only, Child Care, and Head Start NYCEECs). In several instances, we present data where significant differences were not found by setting or auspice because we felt the similarities were noteworthy. Tables that contain more complete quantitative data corresponding with the results described below can be found in *Appendix A*.

In addition to the results from the quantitative analyses, we present qualitative data in the form of administrator and teacher quotes from the open-ended survey responses and semi-structured interviews that pertain to each finding. These quotes serve an explanatory function, supporting and expanding upon the quantitative results. A more complete presentation of the qualitative data relevant to each finding can be found in *Appendix B*.

Again, throughout this section, for the sake of simplicity, all tests of statistical significance in both the setting and auspice categories use schools as the category of comparison. Hence, statistical comparisons using the auspice categories (i.e., DOE-only, Child Care, and Head Start NYCEECs) reference whether they differ significantly from schools, not each other.

IV.1. Program Characteristics and Experience with PKA

Summary of Key Findings:

> **Enrollees and Duration of Programming:**
>> Schools serve older and more children in total and are open fewer hours per day and fewer months per year, while NYCEECs serve younger and fewer children in total, and are open more hours per day and 12 months a year.
> **Enrollment Composition:**
>> NYCEECs serve a higher-need population of children than schools, and a higher percentage of racial/ethnic minorities than schools. Head Start sites serve the highest-need children and the highest percentage of racial/ethnic minorities. Enrollment at NYCEECs is more likely to be comprised of 90% or more racial/ethnic minority children, and every Head Start site in the sample serves almost entirely racial/ethnic minority children.
> **Child Recruitment:**
>> Recruiting children for UPK has been harder for NYCEECs than for schools. NYCEEC administrators cite competition from schools, competition from other sites in general, and families' preference for school-based UPK as the main reasons.
> **Teacher Recruitment and Retention:**
>> Both recruiting and retaining teachers who meet UPK requirements has been harder for NYCEECs than for schools, and most difficult for Head Start and Child Care

sites. NYCEEC administrators cite inadequate teacher compensation, a longer workday, and a 12-month work-year for their teachers as the main reasons.

➤ **Teacher Compensation:**
   Providing adequate compensation for UPK teachers has been harder for NYCEECs than for schools, and most difficult for Head Start and Child Care sites. NYCEEC administrators cite insufficient funding as the main reason.

➤ **Fiscal Administration:**
   Budgeting and allocating costs are more difficult for NYCEECs than for schools, and most difficult for Head Start sites. NYCEEC administrators—particularly Head Start administrators—agree most strongly that the UPK rules regarding budgeting and allocating costs are complicated and confusing, and that they lack sufficient budgeting support.

➤ **Multiple and Conflicting Agency Requirements:**
   Many school and NYCEEC administrators say that compliance with program requirements is difficult. Head Start administrators report the most difficulty, and both Head Start and Child Care administrators cite conflicts between agency expectations as the main reason.

➤ **Family Engagement in Children's Learning and Program Activities:**
   Schools and NYCEECs engage parents in similar ways, although schools are more likely than NYCEECs to send materials to parents to support their children's at-home learning at least weekly. DOE-only sites are the least likely to use parent boards or councils to engage families in program activities.

➤ **Services for Children:**
   Schools and NYCEECs offer a similar array of services to children, via on-site provision or referrals, although schools are more likely to provide children with on-site speech and/or occupational therapy. Child Care sites are the least likely to provide on-site speech and/or occupational therapy.

➤ **Services for Families:**
   NYCEECs offer a wider array of services to families than schools and provide more of them on site. Head Start sites offer the most family services and provide more of them on site than any other setting.

➤ **Transitions to Kindergarten:**
   Schools and NYCEECs help children transition to kindergarten in similar ways, but they meet different challenges in doing so.

IV.1.a. Enrollees and Duration of Programming

> *Key finding:* Schools serve older and more children in total and are open fewer hours per day and fewer months per year, while NYCEECs serve younger and fewer children in total, and are open more hours per day and 12 months a year. (*Table 1 in Appendix A*)

IV.1.a.1. Differences by Setting

Overall, NYCEECs served younger children than schools (average age of 2.0 years for the youngest children served by NYCEECs vs. 3.5 years for the youngest children served by schools; p<.001), a reflection of the fact that many NYCEECs serve infants and/or toddlers. At

the same time, schools served older children (an average age of 5.6 years for the oldest children served by NYCEECs vs. 9.8 years for the oldest children served by schools; p<.01), given the presence of kindergarten and elementary-grades. In most NYCEECs, UPK children are thus the oldest children enrolled, and in most schools, they are the youngest children enrolled.

School settings also tended to be bigger, with four times more classrooms and five times more children overall, on average, than NYCEECs (21 classrooms on average in schools vs. 5 in NYCEECs; p<.001). Schools and NYCEECs were equally likely to include 3-year-olds in at least one of their pre-K classrooms (40.9% of schools and 45.7% of NYCEECs).

A notable difference is the gap in hours open per day (Figure 1) and months open per year. On average, NYCEECs were open for nine hours per day, while schools were open for just under seven hours each day (p<.001). Moreover, almost all NYCEECs (94.0%) were open during the summer months, while no schools (0%) reported being open then (p<.001).

Figure 1. Hours Open Each Day by Setting (n=57)
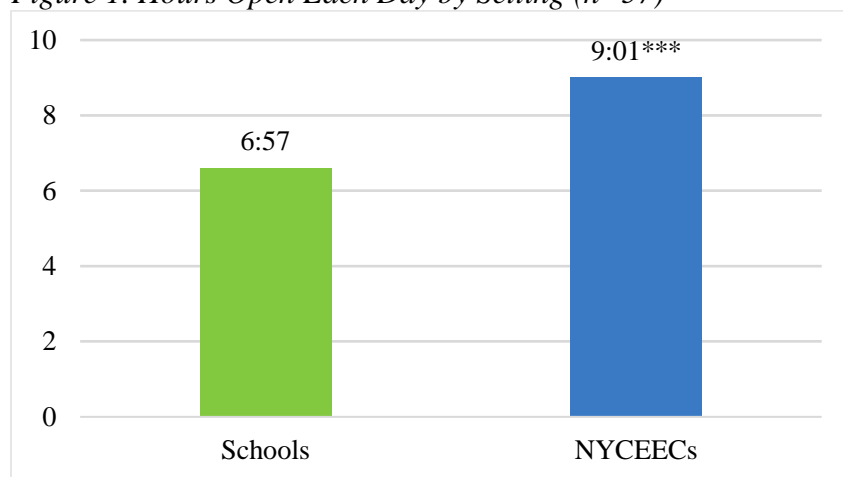
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Data represent hours and minutes. Reference category for statistical comparisons is schools.

IV.1.a.2. Differences by Auspice

Sites in the three auspice categories were similar in size (an average of 62 to 90 children in 4 to 6 classrooms per site) and enrolled children of similar ages (youngest are 1 to 2 years old on average; oldest are 5 to 6 years old on average). Sites in all three auspice-types were open for about 9 hours per day on average, and almost all sites were open 12 months per year.

IV.1.b. Enrollment Composition

> ***Key finding:*** NYCEECs serve a higher-need population of children than schools, and a higher percentage of racial/ethnic minorities than schools. Head Start sites serve the highest-need children and the highest percentage of racial/ethnic minorities. Enrollment at NYCEECs is more likely to be comprised of 90% or more racial/ethnic minority children, and every Head Start site in the sample serves almost entirely racial/ethnic minority children. (*Table 2 in Appendix A*)

IV.1.b.1. Differences by Setting

On the NCCF administrator survey, NYCEEC administrators reported that 43.7% of their UPK children were Dual Language Learners (DLLs), almost double the percentage reported by school administrators (24.1%; $p<.05$; Figure 2).

In addition, the DOE's data on UPK program composition indicate that the percentage of children with IEPs was twice as high at NYCEECs when compared with schools (10.5% vs. 4.9%; $p<.01$).

Figure 2. Percentage of Children in UPK Programs Who Are DLLs or Who Have IEPs by Setting (n=57)
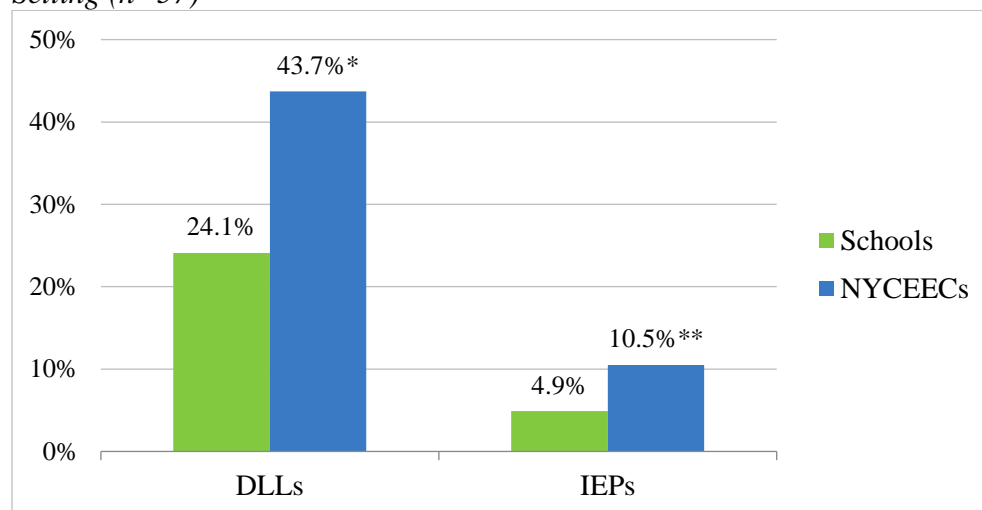
Note: $\sim p<.10$, $*p<.05$, $**p<.01$, $***p<.001$. Reference category for statistical comparisons is schools.

Though the DOE data suggest that NYCEECs and schools had virtually equal enrollment of children living in poverty (56.6% of schools and 57.7% of NYCEECs), the data were taken from FRP lunch forms, which many NYCEECs do not submit to the city. Hence, the data on NYCEEC-enrolled children living in poverty are likely to be substantially underestimated.

As shown in Figure 3, the percentage of children who were Hispanic or black was higher at NYCEECs than at schools (82.2% vs. 65.1%; $p<.05$). At the same time, children enrolled at NYCEECs were less likely than children enrolled at schools to be white (7.3% vs. 18.6% respectively; $p<.05$). The concentration of racial/ethnic minority children within sites also

differed, with NYCEECs more likely than schools (82.9% of NYCEECs vs. 54.6% of schools; p<.05) to enroll a population of children who were almost entirely racial/ethnic minorities (i.e., 90% or more of total enrollment at the site).

Figure 3. Race/Ethnicity of Children in UPK Programs by Setting (n=57)
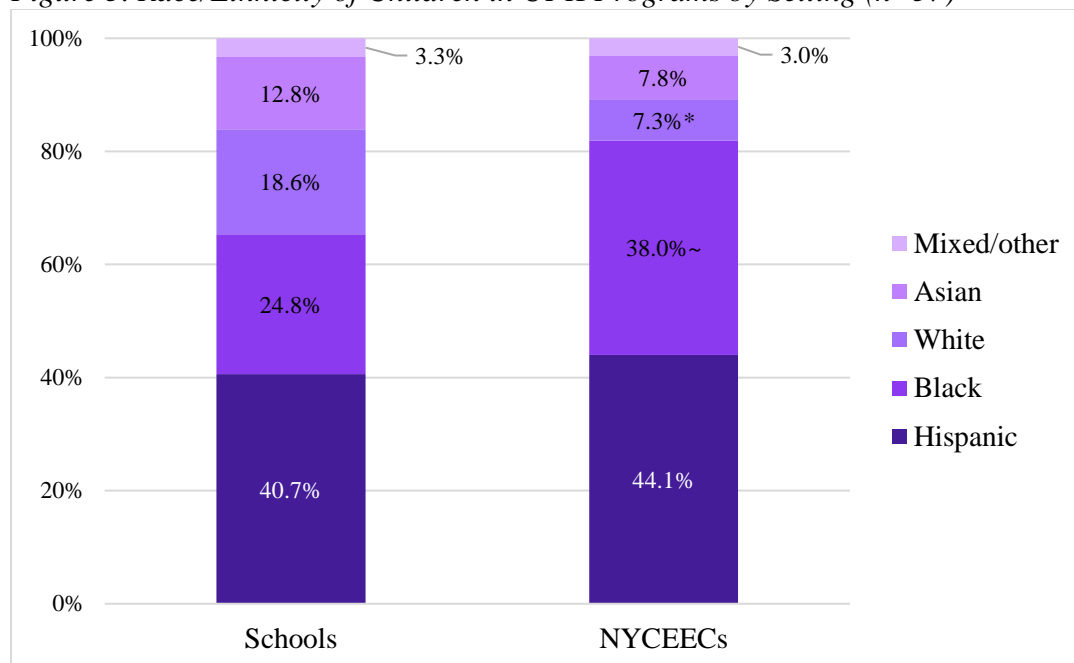
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.1.b.2. Differences by Auspice

Head Start sites served the highest percentage of DLLs (51.7% at Head Start sites [p<.10]; 44.0% at Child Care sites; and 25.6% at DOE-only sites). Additionally, Head Start sites enrolled the highest percentage of children with IEPs (12.6% at Head Start sites [p<.05]; 9.3% at Child Care sites; and 9.2% at DOE-only sites).

The data also indicate that Head Start sites enrolled the highest percentage of children who were black or Hispanic (88.5% at Head Start sites [p<.10]; 83.6% at Child Care sites; and 64.9% at DOE-only sites). Of the children enrolled at Head Start sites, only 1.9% were white (p<.05).

The higher percentage of black or Hispanic children served by Head Start sites is consistent with the data indicating that 100% of Head Start sites enrolled a population that was 90% or more racial/ethnic minority children (p<.05), which means that every Head Start site in the sample served almost entirely racial/ethnic minority children. This heavy concentration of minority children was evident at 87.5% of the Child Care sites, compared to 33.3% of the DOE-sites.

IV.1.c. Child Recruitment

> ***Key finding:*** Recruiting children for UPK has been harder for NYCEECs than for schools. NYCEEC administrators cite competition from schools, competition from other sites in general, and families' preference for school-based UPK as the main reasons. (*Table 3 in Appendix A*)

IV.1.c.1. Differences by Setting

Half of NYCEEC administrators (51.4%) reported that child recruitment was "difficult" or "very difficult" for them, compared to one in five (18.2%) school administrators who reported such difficulty (p<.05). For example, one NYCEEC administrator said:

> "The worst thing about being a director is that it seems each year we get less and less students."
>
> *NYCEEC Administrator*

NYCEEC administrators who said child recruitment was difficult cited competition from schools, competition from other sites in general, and families' preference for school-based UPK. For example:

> "We have many competing public schools in the neighborhood that offer UPK and then the child can continue as part of the ongoing school."
>
> *NYCEEC Administrator*

> "Parents wanted assurance [that] their children would be able to have a spot for [kindergarten] in these schools and because older siblings often already attended these schools."
>
> *NYCEEC Administrator*

IV.1.c. Differences by Auspice

The three types of NYCEECs reported similar levels of difficulty with child recruitment, and cited similar reasons for the difficulty, such as competition from schools, competition from other sites in general, and families' preference for school-based UPK.

IV.1.d. Teacher Recruitment and Retention

> ***Key finding:*** Both recruiting and retaining teachers who meet UPK requirements has been harder for NYCEECs than for schools, and most difficult for Head Start and Child Care sites. NYCEEC administrators cite inadequate teacher compensation, a longer workday, and a 12-month work-year for their teachers as the main reasons. (*Table 4 in Appendix A*)

IV.1.d.1. Differences by Setting

Two-thirds of NYCEEC administrators (65.7%), compared to one in 11 school administrators (9.1%), said that complying with UPK requirements regarding teacher credentials and/or education was difficult (3 or 4 on 4-point scale; p<.001).[27] NYCEEC administrators reported that hiring teachers with the requisite credentials and education was difficult because of the lower salaries, longer workdays, and longer work-years at NYCEECs. For example:

> "[Teacher recruitment is the] worst thing about being a UPK director…We're supposed to provide [the] same quality as DOE, but we don't because we're not able to attract the most qualified staff. The benefits, working conditions, and salary here are much worse."
>
> *NYCEEC Administrator*

> "Teachers who are fully qualified go to DOE for more money and a shorter work year."
>
> *NYCEEC Administrator*

> "Average [pay for teachers] is less than working at a fast food joint."
>
> *NYCEEC Administrator*

Retaining teachers has also been harder for NYCEECs. Two thirds of NYCEEC administrators (68.6%) vs. one-third of school administrators (36.4%) reported that at least one of their UPK teachers had left in the prior year (p<.05). Half of those NYCEEC administrators (52.2%) said that their teachers left to pursue better-paying jobs at schools, and a third (34.8%) said they left for a job teaching older children. For example:

> "Once we invest time and funding to ensure our teaching staff is qualified and licensable many move onto DOE because the salary and additional benefits are so much better than what we are able to offer. Having the option to work 180 days/year vs. the required 261 days by ACS is a no-brainer to some."
>
> *NYCEEC Administrator*

> "The most talented teachers are taking positions in the DOE. It is my experience that ACS Early Learn qualified teachers are not as skilled…and [are] unmotivated to learn new skills. Talented certified teachers for ACS do not stay."
>
> *NYCEEC Administrator*

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[27] UPK Lead Teachers must have a teaching license or certificate valid for service in early childhood, OR a teaching license or certificate for students with disabilities valid for service in the early childhood grades, OR a bachelor's degree in the early childhood grades or a related field AND a written study plan to obtain early childhood certification within three years.

IV.1.d.2. Differences by Auspice

Head Start and Child Care sites had the most difficulty with teacher recruitment and retention (Figure 4). Almost every Head Start administrator (84.6%; p<.001) and most Child Care administrators (68.8%; p<.001) said that meeting the UPK education and credential requirements was difficult, compared to 16.7% of DOE-only administrators who reported such difficulty.

Figure 4. Percentage of Sites in Which Recruiting Qualified Teachers Was Difficult by Setting and Auspice (n=35)
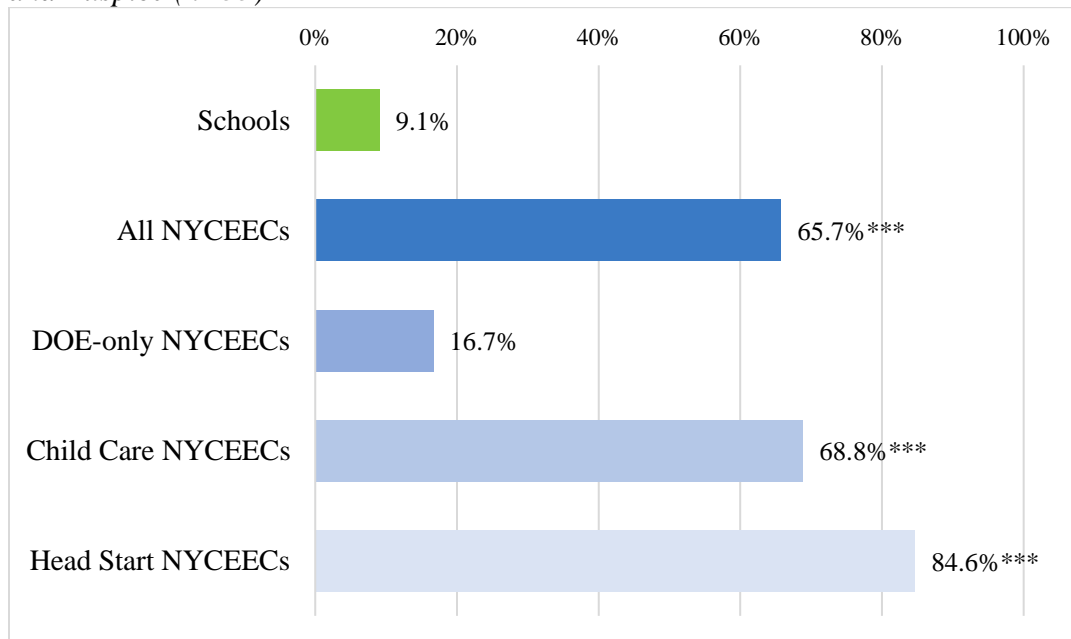
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

Most Head Start (90.0%) and Child Care (80.0%) administrators who reported difficulty cited the challenge of recruiting teachers with the requisite UPK credentials at current salary levels. One in five (20.0%) Head Start and Child Care administrators also cited the challenge of getting teachers to pursue the required credentials. For example:

> "Teachers refuse to take advantage of study plans."
>
> *Head Start Administrator*

> "Teachers can't afford on their salary to return to school."
>
> *Child Care Administrator*

Teacher turnover was most common at Head Start sites (Figure 5). Head Start administrators were more likely to report having at least one teacher leave their site after the previous year (84.6% at Head Start sites [p<.05]; 62.5% at Child Care sites; and 50% at DOE-only sites).

Figure 5. Percentage of Sites in Which at Least One Teacher Left in the Prior Year by Setting and Auspice (n=57)
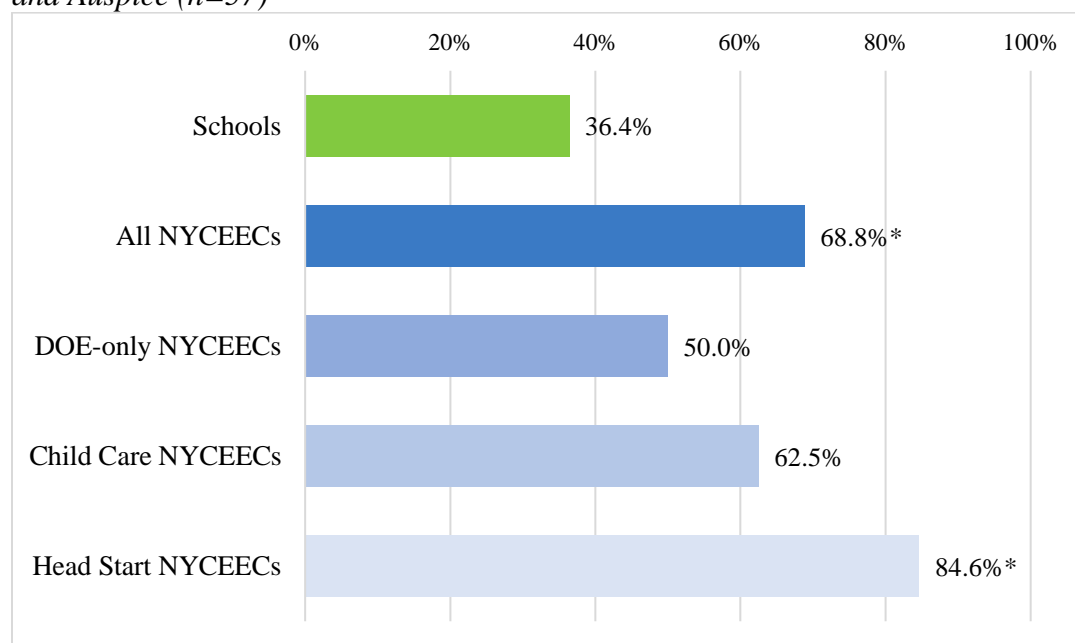
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

Many Head Start administrators in particular cited higher-paying jobs in schools, better hours, and summers off as the main reason that teachers left. For example:

> "I had four positions that I've been trying to fill all year. And now I know that I'm going to lose two of my certified lead teachers for next year... A lot of those teachers, they're going to go, because the grass is greener [at schools]."
>
> *Head Start Administrator*

> "The biggest challenge is that…the teachers would like the summers off and it's hard to tell them no. So, it's hard to compete."
>
> *Head Start Administrator*

> "Teachers get certified [and] they go after the money. They need to pay bills. [So] they go to the…public schools."
>
> *Head Start Administrator*

IV.1.e. Teacher Compensation

> ***Key finding:*** Providing adequate compensation for UPK teachers has been harder for NYCEECs than for schools, and most difficult for Head Start and Child Care sites. NYCEEC administrators cite insufficient funding as the main reason. (*Table 4 in Appendix A*)

IV.1.e.1. Differences by Setting

NYCEEC administrators were more likely to say that meeting UPK requirements regarding teacher compensation had been difficult.[28] Two-thirds of NYCEEC administrators (65.7%) described teacher compensation as difficult, compared to 9.1% of school administrators (p<.001). Most of those NYCEEC teachers (81.0%) cited insufficient funds for compensation as the reason, while 14.3% said that UPK compensation rules are unclear and 9.5% said that managing salary differences within sites was difficult. For example:

> "Teachers put in long hours and they are not paid well in comparison to DOE wages. I had been under the impression that it would be comparable when they were first rolling it out."
>
> *NYCEEC Administrator*

> "Qualified teachers [are] under-paid and our program loses them to DOE…We are unable to recruit and retain the best and brightest."
>
> *NYCEEC Administrator*

Administrators were also asked the extent to which they pay all their 4-year-old teachers the same salary. NYCEEC administrators (58.8%) were more likely than school administrators (22.7%) to say their pre-K teachers receive equal compensation (p<.01). Both school and NYCEEC administrators explained that disparities are caused by differences in teachers' education, certification, credentials, education, and years of experience, as articulated in UFT or other union contracts. School administrators were most likely to cite differences in years of experience, as required by UFT-contract salary scales, while NYCEEC administrators were most likely to cite differences in certifications and credentials, as teachers gain the qualifications required by UPK.

IV.1.e.2. Differences by Auspice

Head Start (76.9%; p<.001) and Child Care administrators (68.8%; p<.01) were most likely to describe teacher compensation as difficult, while one third (33.3%) of DOE-only administrators reported such difficulty. Once again, administrators in all three categories who said teacher compensation was difficult cited insufficient funds for compensation as the reason. For example:

> "We pay our teachers nearly $20,000 less than the average public school teacher when in theory they work longer hours with less support and less coverage/prep periods. This is not okay."
>
> *Head Start Administrator*

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[28] Compensation levels for UPK teachers are determined by union contract and/or at the discretion of site directors. DOE and ACS have offered all UPK sites "enhancement" funding to increase teacher salaries up to $44,000 for teachers with a bachelor's degree and certification and up to $50,000 for teachers with a master's degree and certification.

In terms of potential salary differences between teachers within sites, DOE-only administrators were most likely to report that all their teachers in 4-year-old classrooms receive the same salary (83.0% of DOE-only sites [p<.10]; 60.0% of Child Care sites; and 46.0% of Head Start sites), which may reflect, in part, the more streamlined contracting at DOE-only sites.

> "It is challenging in that teachers within my same school with same credentials are compensated differently depending upon whether or not they are in a UPK classroom."
>
> *Head Start Administrator*

IV.1.f. Fiscal Administration

> ***Key finding:*** Budgeting and allocating costs are more difficult for NYCEECs than for schools, and most difficult for Head Start sites. NYCEEC administrators—particularly Head Start administrators—agree most strongly that the UPK rules regarding budgeting and allocating costs are complicated and confusing, and that they lack sufficient budgeting support. (*Tables 5, 6, and 7 in Appendix A*)

IV.1.f.1. Differences by Setting

NYCEEC administrators reported having to devote significantly more time to budgeting and allocating costs than school administrators. On average, NYCEEC administrators spent 4.3 hours per week on budgeting and cost allocation, compared to 1.6 hours per week spent by school administrators (p<.05). A broader analysis of staff time reveals a more substantial gap between the time required for fiscal administration at NYCEECs and schools; the time per week spent by the entire program staff on budgeting and cost allocation was 18.0 hours in NYCEECs compared to 3.4 hours in schools (p<.05). NYCEEC administrators also agreed more strongly that the UPK rules regarding budgeting and cost allocation are complicated (p<.01), that the rules are confusing (p<.001), and that UPK administrators lack sufficient budgeting support (p<.05).

NYCEECs that operate independently appeared to carry a bigger burden regarding fiscal matters than NYCEECs that are affiliated with a chain or larger organization (*Table 6 in Appendix A*). Independent NYCEEC administrators were more likely than affiliated NYCEECs to report that either they themselves (50.0%; p<.01 compared to affiliated NYCEECs) or someone on their staff (40.0%; p<.10 compared to affiliated NYCEECs) was primarily responsible for budgeting and allocating costs. In contrast, most affiliated NYCEEC administrators (80.0%) reported that someone outside their site carried this primary responsibility. Accordingly, independent NYCEEC administrators reported spending an average of 7.0 hours per week on budgeting and cost allocation, compared to 2.9 on average at affiliated NYCEECs (p<.10).

Even so, school administrators reported their own challenges with budgeting, even though the time they devoted to it was smaller on average. For example:

> "Since I've been in this school there's been a deficit in our budget. So, while pre-K is a separate funding source, I can't really provide what I would like to, because of the [school-wide] budget constraints. And, you know, we're expected to reach out to partners, and reach out to our congressman and our assemblyman, but all of that takes time. But I have another six grades that I need to run, along with dealing with the community, and other things. So it does become very stressful."
>
> *School Administrator*

IV.1.f.2. Differences by Auspice

Few statistically significant differences were evident in the three auspice categories regarding budgeting and allocating costs. However, Head Start administrators, most of whom were navigating the disparate requirements of three programs (Head Start, Child Care, and UPK), agreed most strongly that the UPK rules regarding budgeting and cost allocation are complicated ($p<.001$), that the rules are confusing ($p<.001$), and that they lack sufficient budgeting support ($p<.05$). Adding to this complexity, five of the Child Care sites (31.3%) and two of the Head Start sites (15.4%) had concurrent DOE and ACS contracts for UPK.

Simultaneously, in our sample, Head Start sites were the least likely of the NYCEECs to operate independently (83.3% of DOE-only sites; 25.0% of Child Care Sites [$p<.05$]; and 7.7% of Head Start sites [$p<.001$]; *Table 7 in Appendix A*).[29] However, the possibility that they would receive administrative support from a larger organization does not appear to have mitigated the administrative burden they experience in managing multiple programs.

The time demands of administrative tasks may affect administrators' ability to work with their teachers. For example:

> "The amount of administrative work consumes time which could better be spent on directly interacting with teachers and children."
>
> *NYCEEC Administrator*

> "I think that there's just so much paperwork a lot of times that [our administrators] can't always get to us [teachers] the way [they] would like. Between the two different [Child Care and UPK] fundings, and their having to make sure the budget is right… All those different things take away from them being able to be in the classroom with us and do more. They're supportive. I'm sure they would like to do more if they had the time to do more."
>
> *Child Care Teacher*

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[29] Tests of statistical significance use DOE-only as the reference category.

School administrators feel time pressures too:

> "The worst thing is the scarcity of time to support curriculum/professional development/assessment."
>
> *School Administrator*

> "[The worst thing about being a UPK administrator is] time. I would like more time in the day to spend in the UPK classroom."
>
> *School Administrator*

IV.1.g. Multiple and Conflicting Agency Requirements

> ***Key finding:*** Many school and NYCEEC administrators say that compliance with UPK program requirements is difficult. Head Start administrators report the most difficulty, and both Head Start and Child Care administrators cite conflicts between agency expectations as the main reason. (*Tables 8 and 9 in Appendix A*)

IV.1.g.1 Differences by Setting

The NCCF survey asked administrators to report the difficulty of complying with UPK requirements in several areas, such as: 1) reporting and monitoring; 2) number of hours of programming per day funded by UPK; 3) early learning standards; 4) curriculum and assessments; and 5) engaging families. In each case, a minority of respondents (<50%) in all settings reported difficulty with program compliance, with few statistically significant differences among them (Figure 6). Nevertheless, among those who reported difficulty, important themes emerged.

Figure 6. Percentage of Administrators Who Had Difficulty Meeting UPK Requirements by Setting (n=57)
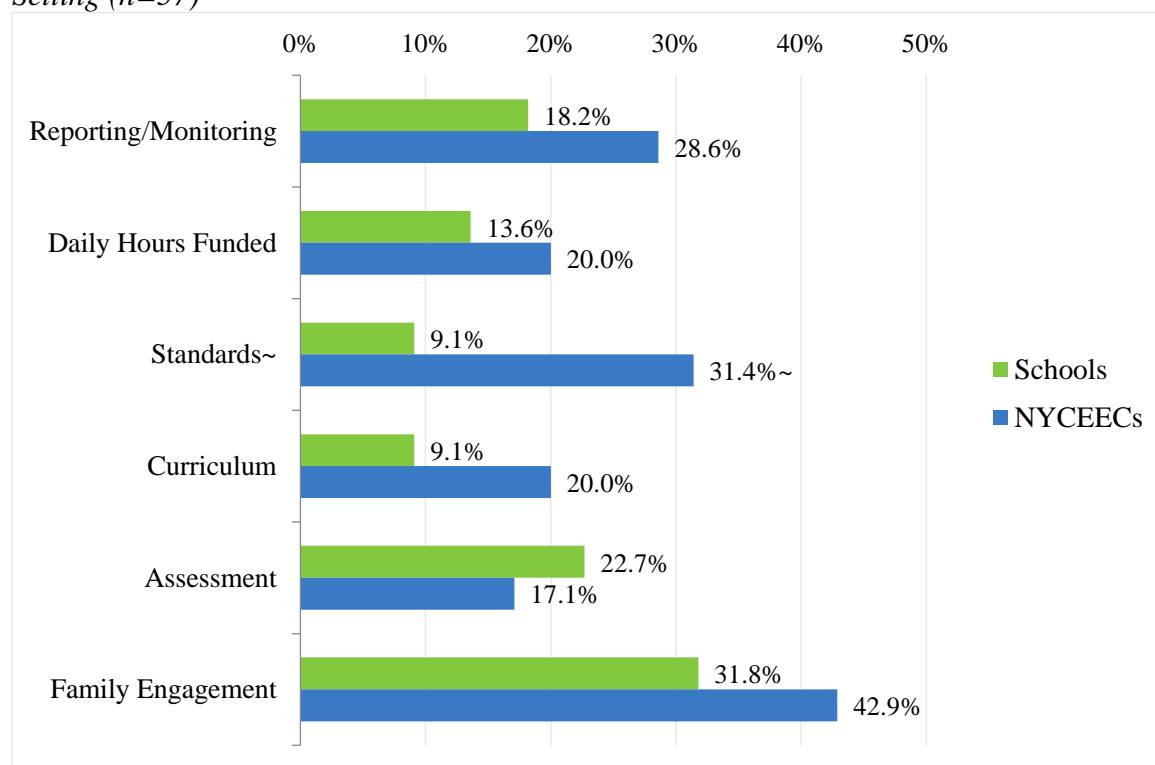
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

Reporting and monitoring. Several school administrators (18.2%) and NYCEEC administrators (28.6%) said that UPK reporting and monitoring requirements were difficult, and commonly cited the paperwork involved. NYCEEC administrators also cited conflicts or lack of coordination between different agencies. For example:

> "The reporting and monitoring process is lengthy and time consuming and should be streamlined. There is too much paperwork and reporting should be online…DOE's and ACS's opinions around program requirements are sometimes conflicting. They do not appear to communicate with each other, [and] this creates confusion and added work."
>
> *NYCEEC Administrator*

Daily hours covered by UPK funding. One out of seven school administrators (13.6%) and one out of five NYCEEC administrators (20.0%) said that fulfilling UPK requirements within the numbers of hours of funded programming per day was difficult. For example:

> "The cost of running a program, including rent and utilities, far exceeds what is given to us by ACS and DOE."
>
> *NYCEEC Administrator*

Some administrators said that time constraints leave little time for teachers to prepare lessons and activities. For example:

> "One of the issues that we have sometimes is doing paperwork during the downtime, where [public school teachers] have...prep times...we don't really have that. It's kind of difficult to get that, if we don't have the extra staffing for it. So, that becomes an issue."
>
> *NYCEEC Administrator*

Early learning standards. NYCEEC administrators (31.4%) found it more difficult to comply with the UPK early learning standards than school administrators (9.1%; p<.10).[30] Administrators in both settings cited difficulty in meeting the expectations articulated in the standards with children who have high social-emotional needs. For example:

> "Many of our students are in foster care or living the shelter system. The range of learners is very large in comparison to other schools I have worked in. It is hard to meet all the required standards when there are so many special-ed needs."
>
> *NYCEEC Administrator*

> "The difficulty [is] with students with great social-emotional issues."
>
> *School Administrator*

Curriculum and assessments. One out of five NYCEEC administrators (20.0%) and one in 11 school administrators (9.1%) said that complying with UPK requirements regarding curriculum was difficult, while similar percentages of administrators in both settings (17.1% of NYCEEC administrators and 22.7% of school administrators) found difficulty with UPK assessment requirements. Several NYCEEC administrators cited the challenges of meeting different agency requirements. For example:

> "ACS Early Learn demands we use TSG Gold; UPK expects us to implement EXPLORE - Building Blocks. These are very comprehensive programs with competing demands for administrators and teachers."
>
> *NYCEEC Administrator*

Engaging families. Many school (31.8%) and NYCEEC (42.9%) administrators said that complying with UPK requirements regarding family engagement was difficult. Both school and NYCEEC administrators cited parents who were either too busy or lacked interest as the reasons. For example:

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[30] New York State Department of Education. (2011). *New York State prekindergarten foundation for the common core*. Albany, NY: New York State DOE.

> "It's so hard to get [parents] in…We have a lot of single-parent families, families with two and three jobs. So, basically, we don't get to see them…We see them in the morning when they drop their kids off, and we don't really get to see them when they pick their kids up, because [the kids are] in after-school."
>
> *School Administrator*

> "We have an extremely, extremely hard time getting parents to join in any activities at the center. Our last workshop had only six parents attend. When asked, they always say they are too busy. Many parents look at this as day care, not school."
>
> *NYCEEC Administrator*

Some NYCEEC administrators cited lack of staff time or resources as an obstacle to meeting expectations regarding family engagement. For example:

> "Inadequate funding does not provide a full-time social worker on site. Directors are consumed with paperwork and cannot give the full attention to family engagement that it deserves."
>
> *NYCEEC Administrator*

IV.1.g.2. Differences by Auspice

In two instances, Head Start administrators reported the most difficulty with program compliance. Almost half of Head Start administrators (46.2%; p<.10) reported that compliance with UPK early learning standards was difficult, compared to 25.0% of Child Care administrators and 16.7% of DOE-only administrators. More than a third of Head Start administrators (38.5%; p<.10) said that complying with UPK curriculum requirements was difficult, while 12.5% of Child Care administrators and 0% of DOE-only administrators experienced such difficulty.

Both Child Care and Head Start administrators described the challenges of meeting multiple and competing requirements. For example:

> "It would be best for [DOE] to be the main agency overseeing UPK where the focus is on one specific curriculum. [DOE] UPK currently competes with ACS Early Learn and the agencies are overwhelmed by having social workers, implementation specialists, curriculum-specific mentors all converging on an already-established program under ACS."
>
> *Child Care Administrator*

The NCCF survey asked Head Start administrators how they manage both Head Start and UPK program requirements (Table 9 in Appendix A). Administrators responded that they follow both (44.4%), follow whichever is highest (33.3%), follow Head Start (11.1%), or follow their own

requirements (11.1%). One also reported seeking guidance from NAEYC's standards of best practice (11.1%).

> "We focus more on Head Start requirements because their standards are higher … Often ACS will just defer to Head Start standards because they themselves are confused."
>
> *Head Start Administrator*

> "It is a juggling act. Honestly, I'm not sure how we do it."
>
> *Head Start Administrator*

> "We do not follow the curriculum units provided by UPK. We utilize the Creative Curriculum, which aligns with the NYS Pre-K Common Core, the Head Start Child Outcomes Framework, … and our agency's School Readiness Goals. When UPK monitors question this, we provide them with proof of alignment."
>
> *Head Start Administrator*

IV.1.h. Family Engagement in Children's Learning and Program Activities

> *Key finding:* Schools and NYCEECs engage parents in similar ways, although schools are more likely than NYCEECs to send materials to parents to support their children's at-home learning at least weekly. DOE-only sites are the least likely to use parent boards or councils to engage families in program activities. (*Table 10 in Appendix A*)

IV.1.h.1. Differences by Setting

Schools and NYCEECs engaged parents in UPK their children's learning in similar ways, such as parent/teacher conferences, class events, and parent workshops. Schools and NYCEECs were also equally likely to communicate with parents about class activities (90.9% and 82.9% respectively) and their child's progress on at least a weekly basis (63.6% and 57.1%). One difference was apparent in how programs engage parents: Schools were more likely than NYCEECs to send parents materials to support their children's at-home learning at least weekly (77.3% vs. 48.6% respectively; p<.05).

IV.1.h.2. Differences by Auspice

Across the auspice categories, programs engaged parents in similar ways, with two exceptions. Child Care sites were least likely to send parents materials to support at-home learning at least weekly (25.0% of Child Care sites [p<.05]; 66.7% of DOE-only sites; and 69.2% of Head Start sites), while DOE-only sites were least likely to engage parents via parent board/council meetings (50.0% of DOE-only sites [p<.10]; 88.0% of Child Care sites; and 100% of Head Start sites).

IV.1.i. Services for Children

> ***Key finding:*** Schools and NYCEECs offer a similar array of services to children, via on-site provision or referrals, although schools are more likely to provide children with on-site speech and/or occupational therapy. Child Care sites are the least likely to provide on-site speech and/or occupational therapy. (*Table 11 in Appendix A*)

IV.1.i.1. Differences by Setting

Schools and NYCEECs offered a similar array of services for children (through on-site provision or referral), such as basic health screenings, developmental assessments, speech or occupational therapy, mental health services, and medical services (an average 4.1 types of child services provided or referred by schools vs. 4.1 provided or referred by NYCEECs). However, schools were more likely than NYCEECs to provide *on-site* speech or occupational therapy to children; half of schools (50.0%) offered such therapeutic services on site, compared to one in nine NYCEECs (11.4%; p<.01).

When asked to name the most difficult part of their job, both school and NYCEEC administrators described a lack of services for children:

> "Not being able to provide services to children who are not having positive experiences in the pre-K program because they need additional supports that we cannot provide."
>
> *School Administrator*

> "Students with social-emotional issues do not receive timely (or sometimes any) services."
>
> *School Administrator*

> "There's always a barrier [to getting sufficient services]…trying to find a speech pathologist, trying to find an occupational therapist to come to our site has been a challenge…We get stuck with the low-quality providers that are left at the bottom that nobody else wanted."
>
> *NYCEEC Administrator*

The DOE has tried to expand access to such services by providing visits from licensed social workers to each site. However, some administrators said the social workers' role could be improved in terms of the frequency of supports provided. For example:

> "Social workers needed to be present more…As a social worker you can't fully service and support a family when you're just coming by once…every other week, once a month, for like an hour, and you're only looking at the child in isolation."
>
> *NYCEEC Administrator*

IV.1.i.2. Differences by Auspice

Of the three auspice categories, Child Care sites were least likely to provide on-site therapeutic services to children (0% of Child Care sites [p<.01]; 16.7% of DOE-only sites; and 23.1% of Head Start sites).

IV.1.j. Services for Families

> ***Key finding:*** NYCEECs offer a wider array of services to families than schools and provide more of them on site. Head Start sites offer the most family services and provide more of them on site than any other setting. (*Table 11 in Appendix A*)

IV.1.j.1. Differences by Setting

NYCEECs offered a wider array of services to children's families—such as mental health, housing assistance, employment assistance, parenting classes, and government application assistance—than schools (an average 4.8 types of family services offered or referred by NYCEECs vs. 2.8 offered or referred by schools; p<.01; Figure 7). NYCEECs also provided more services for families on site, rather than referring families to outside providers (an average 1.2 types of family services provided on site by NYCEECs vs. 0.5 provided by schools; p<.05).

Figure 7. Number of Family Services at UPK Sites by Setting (n=57)
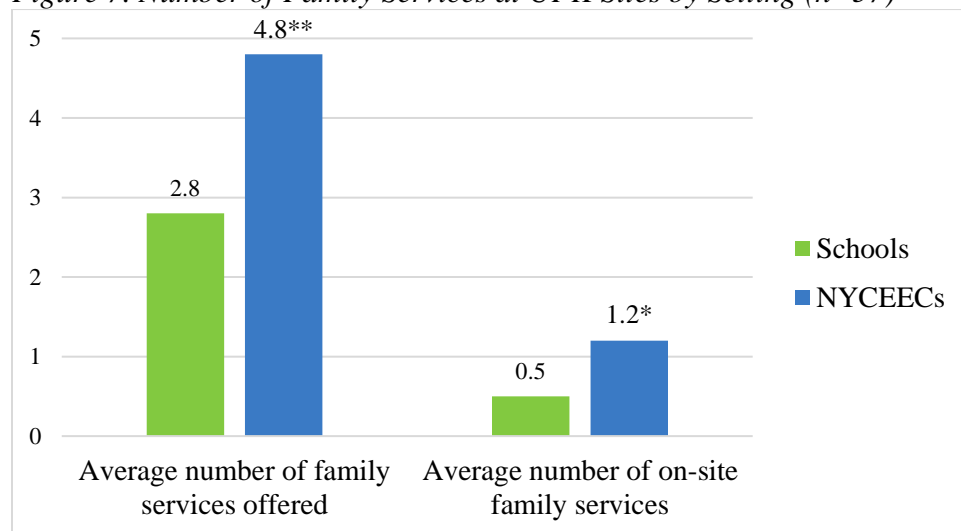
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

Among the types of family services provided on site, NYCEECs were over three times more likely to provide mental health services (31.4% of NYCEECs vs. 9.1% of schools; p<.10), and housing and/or food assistance (11.8% vs. 0% respectively; p<.10; Figure 8).

Figure 8. Types of Family Services at UPK Sites by Setting (n=57)
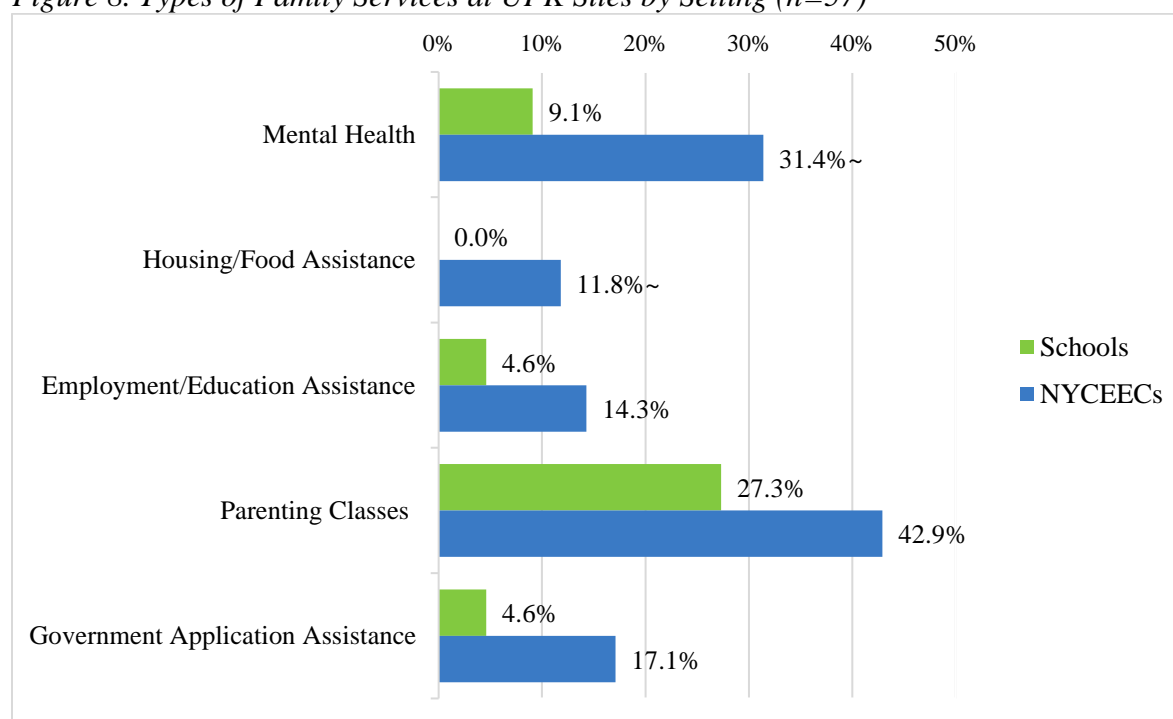
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.1.j.2. Differences by Auspice

Head Start sites offered the widest array of services to their families (5.7 on average; p<.01), more than Child Care sites (5.0 on average; p<.05), and twice as many as DOE-only sites (2.7 on average). Head Start sites were also most likely to provide family services on site (1.5 at Head Start sites [p<.10]; 1.1 at Child Care sites; and 0.7 at Child Care sites). Head Start administrators describe these services as a core part of their mission:

> "We don't get funding for all the extras, so we need to make it happen. And in my case, it is developing partnerships within the community, like [the] School of Social Work, like Long Island University School of Nursing, like in-house, our own partnership with our workforce placement program, that's sort of a pipeline to— within the community—to different job openings."
>
> *Head Start Administrator*

> "If the DOE continues *not* to change…then a lot of the family services, or any of these additional supports…will not exist. It will be very child-focused…You have to include the family…[But] it's not like more money's coming, it's just money is being shifted. So if we want to stay true to the original mission of really focusing and supporting the family, we're going to still continue to have to find those services on our own."
>
> *Head Start Administrator*

IV.1.k. Transitions to Kindergarten

> **Key finding:** Schools and NYCEECs help their children transition to kindergarten in similar ways, but they meet different challenges in doing so. (*Table 12 in Appendix A*)

IV.1.k.1. Differences by Setting

Schools and NYCEECs helped their children transition to kindergarten in similar ways, such as sending information about kindergarten home to parents, providing workshops for parents on the transition, helping families apply to kindergarten, and having teachers discuss the transition with children. However, schools were more likely than NYCEECs to have all their UPK children visit kindergarten classrooms (95.5% of schools vs. 71.4% of NYCEECs; p<.05). Moreover, most school administrators (72.7%) said their UPK teachers participate in PD with their kindergarten teachers. The content of these joint PD trainings included literacy and math instruction, standards, the Common Core, assessments, using data, and aligning the UPK and kindergarten curricula.

The challenge of nurturing smooth kindergarten transitions for UPK children is different for schools than for NYCEECs because most children in school-based UPK continue at the same school for kindergarten. Three-quarters of school administrators (76.2%) said that their UPK children usually stay at their school for kindergarten; among those who said they do not (23.8%), administrators said children typically disperse among six or seven schools for kindergarten (6.8 on average).

In contrast, none of the NYCEEC-based UPK children stay for kindergarten, which complicates the challenge of fostering smooth transitions. Only 20.7% of NYCEEC administrators said that all their UPK children go to the same school for kindergarten. Among the 79.3% who said their UPK children tend to move on to a number of different schools, administrators said their children typically disperse among five or six schools for kindergarten (5.6 on average).

Even so, one school administrator said the worst thing about being a UPK administrator was not having the capacity to keep all of her UPK children for kindergarten:

> "[The worst thing is] that pre-K students don't automatically go to kindergarten at the same site. We have more pre-K rooms than [kindergarten rooms, so] only about half can go to our school."
>
> *School Administrator*

IV.1.k.2. Differences by Auspice

DOE-only sites were least likely to have all their children visit kindergarten classrooms (50.0% of DOE-only sites [p<.01]; 75.0% of Child Care sites; and 76.9% of Head Start sites) and to send information regarding kindergarten to all children's families (83.3% of DOE-only sites [p<.10]; 93.8% of Child Care sites; and 100% of Head Start sites.

IV.2. Administrator Characteristics and Well-being

Summary of Key Findings:

> **Administrator Experience, Education, and Compensation:**
>> Despite similar levels of experience and education, school administrators receive higher compensation than NYCEEC administrators. School administrators are also more likely to have employer- or union-sponsored health insurance and/or retirement plans. Administrators at DOE-only sites are the least likely to have employer or union-sponsored health insurance. A small percentage of NYCEEC administrators receive some type of government assistance, such as cash or housing assistance, FRP lunch for their children, or food stamps.

> **Administrator Stress and Satisfaction:**
>> Across all settings and auspice categories, administrators report high levels of job-related stress. Many cite the challenge of managing multiple and sometimes conflicting agency requirements. Yet, administrators in both settings also describe rewarding aspects of their job.

IV.2.a. Administrator Experience, Education, and Compensation

> *Key finding:* Despite similar levels of experience and education, school administrators receive higher compensation than NYCEEC administrators. School administrators are also more likely to have employer- or union-sponsored health insurance and/or retirement plans. Administrators at DOE-only sites are the least likely to have employer- or union-sponsored health insurance. A small percentage of NYCEEC administrators receive some type of government assistance, such as cash or housing assistance, FRP lunch for their children, or food stamps. (*Table 13 in Appendix A*)

IV.2.a.1. Differences by Setting

School and NYCEEC administrators had similar years of experience at their sites (an average 5.0 and 4.0 years respectively), and similar years of experience as an early childhood director at any site (7.6 years and 10.7 years respectively). All school administrators (100%) and most NYCEEC administrators (88.6%) had a master's degree or higher.[31]

Despite these similarities, salary differences between administrators were substantial (Figure 9). While school administrators earned $117,044 per year on average, NYCEEC administrators earned $64,016 on average—just over half as much (p<.001). School administrators were also more likely than NYCEEC administrators to have household incomes over $100,000 (85.0% vs. 33.3% respectively; p<.001).

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[31] Note that administrators were not asked in what area they earned their master's degree; therefore, whether the master's (or higher) was earned in an education field is not known.

Figure 9. Differences in Average Administrator Salaries by Setting (n=48)
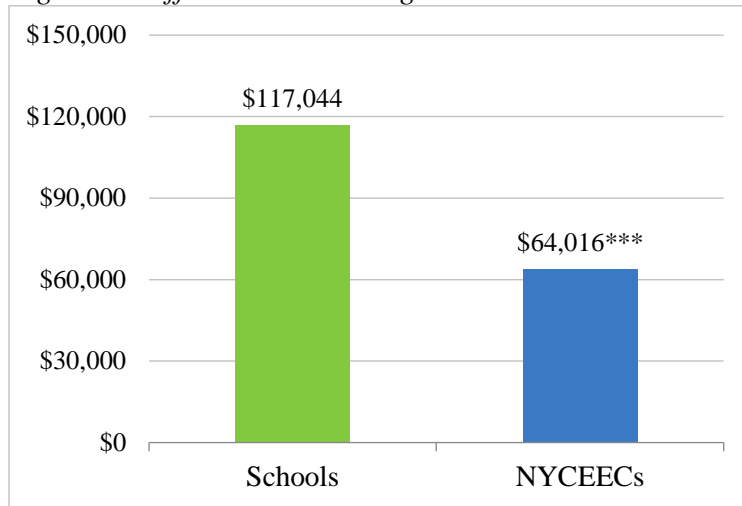
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

These differences are likely to reduce the number of qualified candidates who are willing to provide sustained leadership at NYCEECs. For example:

> "The pay makes it very difficult to stay long term…It's a great stepping stone to learn leadership and flexibility. However, it is not a viable long-term option."
> *NYCEEC Administrator*

Compensation disparities extend beyond salary (Figure 10). While most school and NYCEEC administrators had health insurance (95.5% and 97.1% respectively), school administrators were more likely to have insurance through an employer- or union-sponsored plan (90.9% vs. 71.4% respectively; p<.10). One in six NYCEEC administrators (17.1%) got health insurance through their spouse's employer, while 5.7% purchased health insurance directly.

In addition, school administrators were more likely to have an employer- or union-based retirement plan than NYCEEC administrators (95.5% vs. 57.1% respectively; p<.01). About one in twenty NYCEEC administrators (5.7%) received some type of government assistance (cash assistance, housing assistance, FRP lunch for their own children, or food stamps).

Figure 10. Differences in Administrator Health Insurance and Retirement Plans by Setting (n=57)
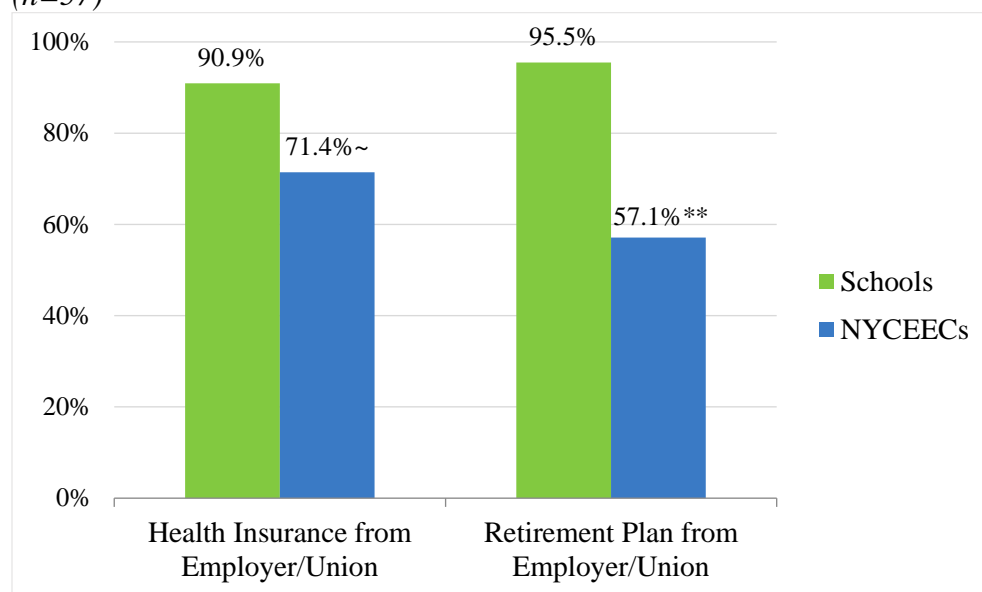
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.2.a.2. Differences by Auspice

In the auspice categories, NYCEEC administrators had similar years of experience, but differed somewhat in their education. DOE-only administrators were the most likely to have only a high school degree (16.7% of DOE-only administrators [p<.10]; 0% of Child Care and Head Start administrators), while Child Care administrators were most likely to have only a bachelor's degree (18.8% of Child Care administrators [p<.10]; 0% of DOE-only and Head Start administrators).

Even so, average salaries were similar across the three auspice categories ($67,963 at Head Start sites [p<.001]; $62,062 at Child Care sites [p<.001]; and $62,000 at DOE-only sites [p<.001]). Administrators at DOE-only sites were the least likely to have employer- or union-sponsored health insurance (33.3% of DOE-only administrators [p<.05]; 76.9% of Head Start administrators; and 81.3% of Child Care administrators).

IV.2.b. Administrator Stress and Satisfaction

Key finding: Across all settings and auspice categories, administrators report high levels of job-related stress. Many cite the challenge of managing multiple and sometimes conflicting agency requirements. Yet, administrators in both settings also describe rewarding aspects of their job. (*Table 14 in Appendix A*)

IV.2.b.1. Differences by Setting

The NCCF survey asked administrators the extent to which they agreed with five statements reflecting job-related stress. No significant differences in their responses were evident by either setting or auspice. However, the results are noteworthy simply because the average stress levels were high in several respects. On a scale of 1 to 4 (1=strongly disagree to 4=strongly agree), many school and NYCEEC administrators agreed with the following stress-related statements: "I am under a lot of pressure at work" (an average 3.0 for both school and NYCEEC administrators), "Red tape and required paperwork absorb too much of my time" (an average 3.0 for school administrators and 3.3 for NYCEEC administrators), and "I worry about school problems while at home" (an average 3.1 and 3.2 respectively). For many administrators, running a UPK program is a stressful job. For example:

> "[The worst part is] constant staffing turnover. Lack of funding. [A] poor relationship with ACS."
>
> *NYCEEC Administrator*

> "The overall stressors of the job are things that are not in my control. So, again, in this particular district, we share space. So that affects pretty much everything in my school building: when I get to give the teachers their preparation periods, their breaks, their lunchtimes; when the kids have an opportunity to go in the gym; when they have an opportunity to go in the technology lab. I can't give the kids as much gym time as I would like to, because I have to schedule it around the other school. Also, playground, outdoor play—that's affected. I didn't have a pre-K school yard for a long time. So, we shared just the Parks Department yard. So, I had to figure that out, write some grants and get that. So, the biggest stress is sharing space."
>
> *School Administrator*

When asked to identify the best part of their jobs, many administrators described the rewards of helping children and families. For example:

> "It is very rewarding to see how children learn 'how to learn.' They begin to form their attitudes toward school and to see themselves as learners. Strong preschool experiences will help a child think, 'I am a good learner. I can find problems to solve. I can master a difficult task.'"
>
> *School Administrator*

> "[The best thing is] coming to work knowing I am positively impacting families."
>
> *NYCEEC Administrator*

Some NYCEEC administrators liked the support they receive as a UPK program. For example:

> "The best thing is that UPK sends support for the teaching staff and myself. This year we were able to have a social worker, a UPK coordinator, and a coach from our curriculum track."
>
> *NYCEEC Administrator*

When administrators were asked what advice they would offer someone considering becoming a UPK administrator, several recommended being patient, flexible, and focused. For example:

> "Be flexible, creative, and patient. Hire staff that can serve multiple functions. Build a solid partnership with community resources."
>
> *NYCEEC Administrator*

> "Make sure you have patience, know there will be unpredictable hours, have a sense of humor, be willing to put on different hats, from custodian to cook to teacher to assistant and everything in between. Also…don't expect to get rich."
>
> *NYCEEC Administrator*

Several school administrators recommended hiring a full-time social worker:

> "Have a social worker on site to support scholars and families in the program. One that will work diligently to get needed services for the scholar."
>
> *School Administrator*

> "Get your own social worker!
>
> *School Administrator*

IV.2.b.2. Differences by Auspice

No statistically significant differences in administrator stress and satisfaction were evident in the three auspice categories.

IV.3. Teacher Characteristics and Well-being[32]

Summary of Key Findings:

> ➢ **Teacher Experience, Education, Certification, and Credentials:**
> > While school and NYCEEC teachers have similar years of experience, school teachers are more likely to have post-graduate degrees and to be certified in early

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[32] Recall that all teacher data pertain only to Lead Teachers. In UPK classrooms, Lead Teachers are required to be either 1) certified teachers with at least a bachelor's degree; or 2) teachers with at least a bachelor's degree who are on a study plan toward obtaining certification.

childhood teaching. Teachers in Child Care sites are the least likely to have a master's degree, be certified, or have a credential.

➢ **Teacher Compensation:**
School teachers have higher salaries on average than NYCEEC teachers and are more likely to have employer- or union-sponsored retirement plans. Average salaries among the NYCEEC auspice categories are similar, but union membership is different, with DOE-only teachers the least likely to be union members. DOE-only teachers are also the least likely to have health insurance.

➢ **Teacher Race/Ethnicity:**
School teachers are more likely than NYCEEC teachers to be white. Among NYCEECs, distinct differences in race/ethnicity are evident: Almost every teacher at the DOE-only sites is white, while almost every teacher at Child Care and Head Start sites is a racial/ethnic minority.

➢ **Teacher Bilingualism and Cultural Competence:**
Although NYCEEC teachers are more racially/ethnically diverse than school teachers, teachers in NYCEECs and schools are equally likely to be bilingual. Teachers in both settings are generally confident in their ability to teach DLLs effectively, but fewer say they adapt their practice to children's cultural backgrounds.

➢ **Teacher Stress and Satisfaction:**
Across all settings and auspice categories, teachers report similarly high levels of job-related stress. Many teachers, particularly in NYCEECs, say that not having enough time to prepare lesson plans, document student progress, and complete other paperwork is a source of stress. Yet, once again, teachers in both settings also describe rewarding aspects of their jobs.

➢ **Teacher Support:**
Both school and NYCEEC teachers generally report that they are supported by supervisors and teachers in their school or center. However, school teachers are more likely than NYCEEC teachers to agree that they discuss challenges and try to find solutions with their peer pre-K teachers.

IV.3.a. Teacher Experience, Education, Certification, and Credentials

> *Key finding:* While school and NYCEEC teachers have similar years of experience, school teachers are more likely to have post-graduate degrees and to be certified in early childhood teaching. Teachers in Child Care sites are the least likely to have a master's degree, be certified, or have a credential. (*Table 15 in Appendix A*)

IV.3.a.1. Differences by Setting

School and NYCEEC teachers reported similar levels of experience with teaching children under age 5 (about nine years on average, for both). However, salient differences in teachers' education, certification, and credentials were evident. All school teachers (100%) had a master's

degree or higher, compared to two-thirds of NYCEEC teachers (65.9%; p<.001; Figure 11).[33] Almost one-third of NYCEEC teachers (31.8%; p<.01) had a bachelor's degree, and a small number (2.3%) had only high school degrees.

Figure 11. Differences in Teacher Education by Setting (n=66)
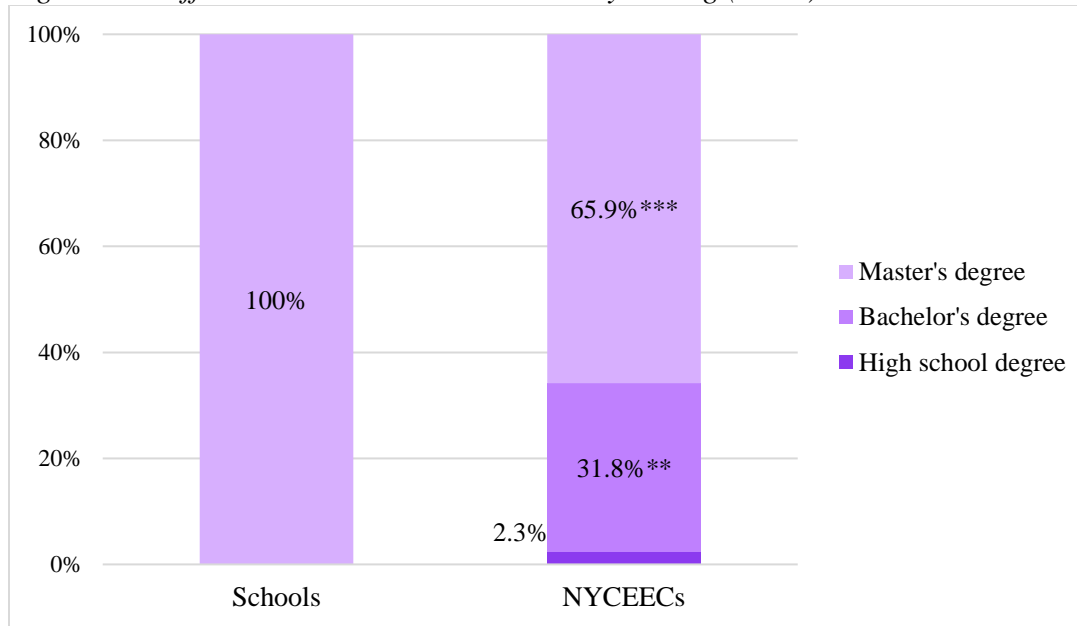
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

In terms of certification and credentials, nine out of 10 school teachers (90.9%) were state-certified, compared to two-thirds of NYCEEC teachers (65.9%; p<.05), and school teachers were more likely than NYCEEC teachers to be certified in early childhood teaching (81.8% vs. 54.5% respectively; p<.05) and/or elementary teaching (54.5% vs. 20.5% respectively; p<.01; Figure 12). Just one in 20 school teachers (4.5%), compared to one out of five NYCEEC teachers (20.4%; p<.10) had no certification or credential.

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[33] Note that teachers were not asked in what area they earned their master's degree; therefore, whether the master's (or higher) was earned in an education field is not known.

Figure 12. Differences in Teacher Certification by Setting (n=66)
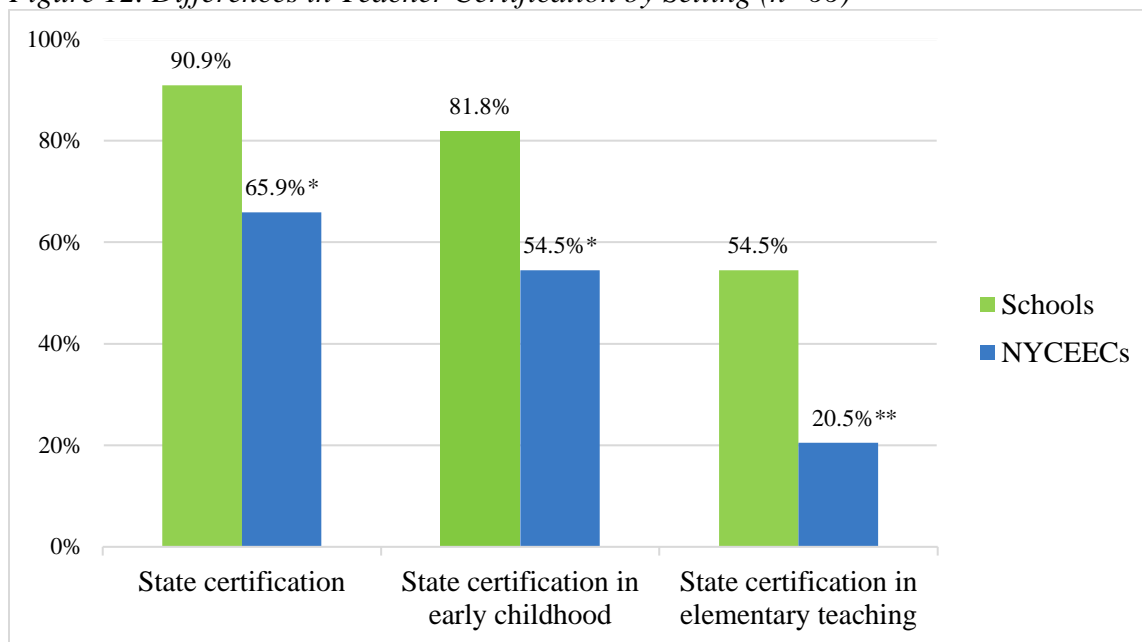
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.3.a.2. Differences by Auspice

Education levels, as well as the rates of certification and credentials, were lowest among teachers at Child Care sites. Teachers at Child Care sites were the least likely to have a master's degree or higher (60.9% of teachers at Child Care sites [p<.05]; 73.3% at Head Start sites; and 66.7% at DOE-only sites). Teachers at Child Care sites were also the least likely to be state certified (52.2% of teachers at Child Care sites [p<.05]; 80.0% at Head Start sites; and 83.3% at DOE-only sites); to be certified in early childhood teaching (39.1% at Child Care sites [p<.05]; 66.7% at Head Start sites; and 83.3% at DOE-only sites), and/or in elementary teaching (13.0% of Child Care sites [p<.05]; 26.7% of Head Start sites; and 33.3% of DOE-only sites; Figure 13).

Figure 13. Differences in Teacher Certification by Auspice (n=66)
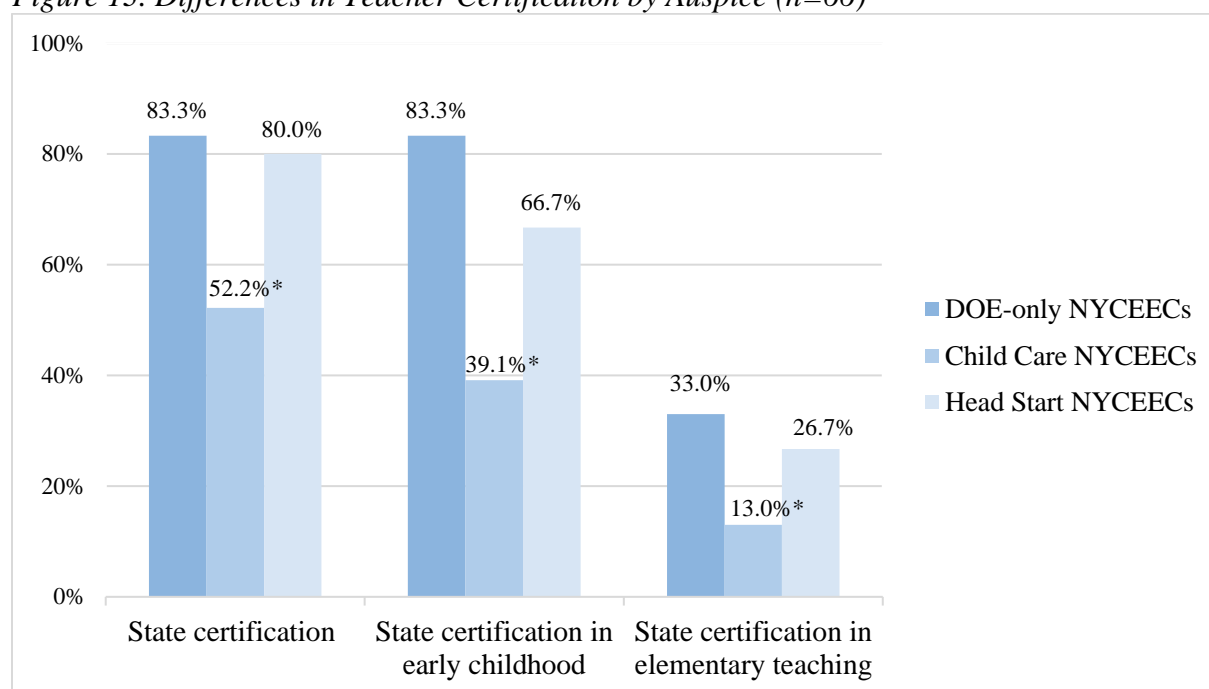
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.3.b. Teacher Compensation

Key finding: School teachers have higher salaries on average than NYCEEC teachers and are more likely to have employer- or union-sponsored retirement plans. Average salaries among the NYCEEC auspice categories are similar, but union membership is different, with DOE-only teachers the least likely to be union members. DOE-only teachers are also the least likely to have health insurance. (*Table 15 in Appendix A*)

IV.3.b.1. Differences by Setting

Substantial differences in schools and NYCEEC teacher compensation were evident (Figure 14). On average, school teachers earned $73,471 per year, more than NYCEEC teachers, who earned an average salary of $43,660 (p<.001). It is noteworthy that data from the administrator survey suggest that this teacher salary gap of about $30,000 would be even larger without the use of DOE's funding enhancements to ameliorate salary disparities. Most NYCEEC administrators (81.5%) reported using the enhancements and in sites that used them, average teacher salaries were $10,000 higher than in sites that did not. Moreover, teachers in schools were more likely to have a household income over $100,000 than teachers in NYCEECs (50.0% vs. 2.5% respectively; p<.001).

Figure 14. Differences in Average Teacher Salaries (n=61)
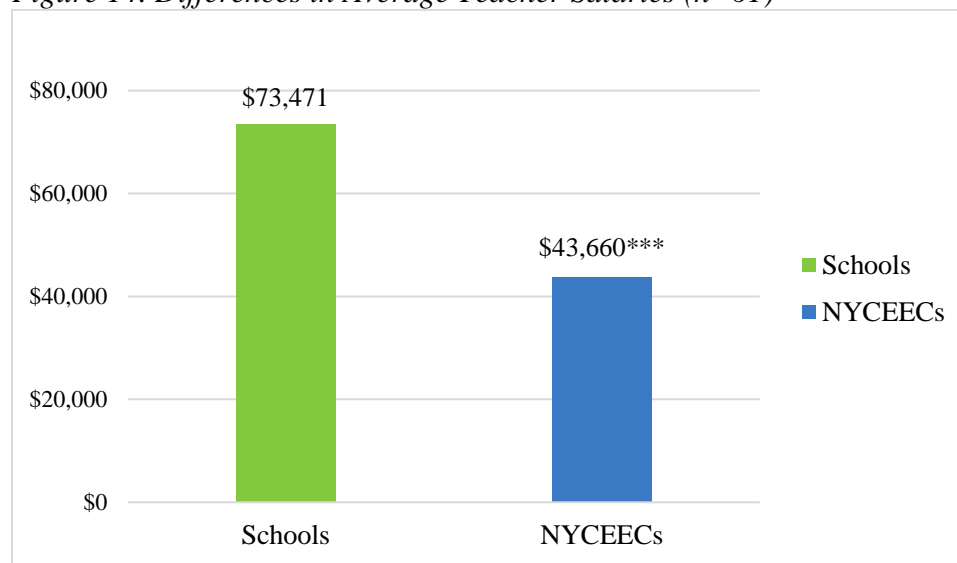
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

School and NYCEEC teachers were equally likely to have health insurance (100% vs. 97.7% respectively), but NYCEEC teachers were less likely to have it through their employer or union (86.4% of school teachers vs. 47.7% of NYCEEC teachers; p<.01; Figure 15). One out of seven NYCEEC teachers (14.0%) got health insurance through their spouse's employer, one out of 11 of them (9.3%) bought health insurance directly from an insurance company, and an equal number of NYCEEC teachers (9.3%) received Medicaid. Three NYCEEC teachers (7.0%) received Medicare.

School teachers were also more likely to have employer- or union-sponsored retirement plans (86.4% of school teachers vs. 61.4% of NYCEEC teachers; p<.05). Additionally, two NYCEEC teachers (4.5%) said they received some type of government assistance, such as cash assistance, housing assistance, FRP lunch for their own children, or food stamps.

Corresponding with these compensation disparities, union membership differed across school and NYCEEC settings. The majority of school teachers (86.4%) reported belonging to a union, compared to 65.9% of NYCEEC teachers (p<.10). [34] Of the 19 school teachers who named their unions, most (94.7%) were members of the UFT, and one (5.3%) was a member of an Archdiocese union. Of the 29 NYCEEC teachers who named their unions, most (75.9%) said they were members of District Council 1707, two (6.9%) were members of Local 205, two (6.9%) were members of the UFT, and one (3.5%) was a member of Local 95.

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[34] Note that in our analyses, the "schools" category includes independent schools, which is why not all school teachers are unionized.

Figure 15. Differences in Teacher Health Insurance, Retirement Plans, and Union Membership by Setting (n=66)
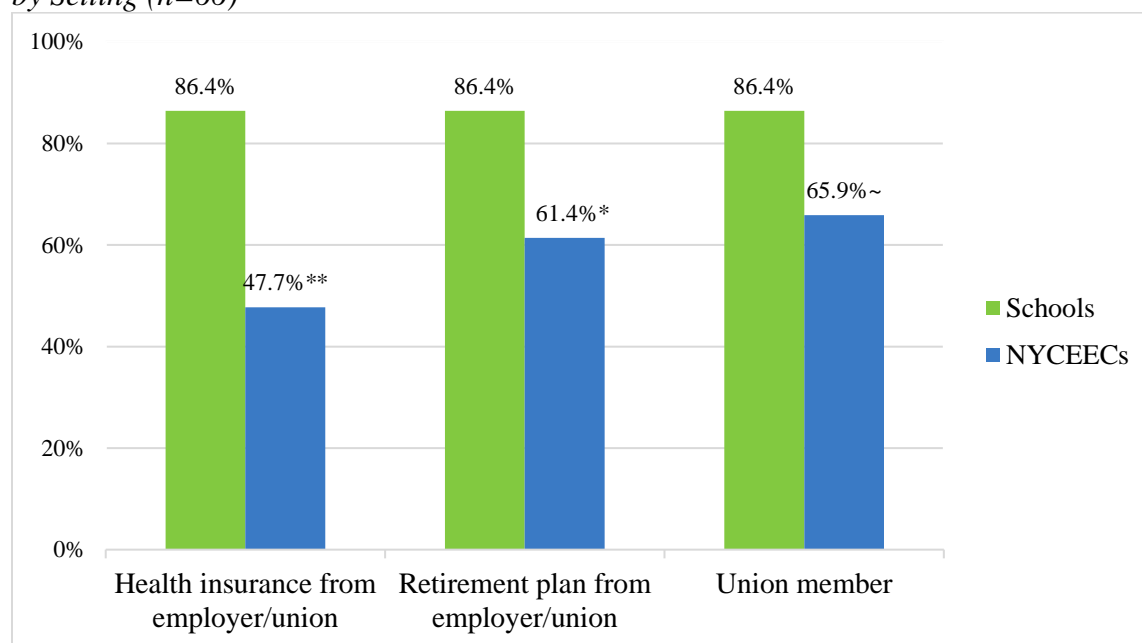
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

Many NYCEEC teachers described frustration with these compensation differences, particularly the wide differences in salary. For example:

> "I think it is very unfair that teachers in the community-based organization with their master's and certification make $10,000 less than those in public schools. If you are in an ACS Pre-K for All classroom, you are open all year round with very limited holiday[s] and burn out early on in the year. The expectations of teachers are standard but the compensation for teachers is unbalanced."
>
> *NYCEEC Teacher*

> "I just wished there would be more financial support such as a test for certification waiver or loan forgiveness. Daycare doesn't pay as much, but not being certified, even with a master's, is a bit of an issue with centers and paying teachers a good salary."
>
> *NYCEEC Teacher*

Importantly, this frustration fosters movement of teachers from NYCEECs to schools.

> "It's not a mystery why there are few certified teachers in agencies like [ours]. They jump to the public school as soon as they get their professional teacher's license. The physical work (moving the tables, the chairs, the sleeping cots, serving meals, cleaning the room after meals) in the classroom is just as hard as the intellectual work we provide to our children. With this kind of work, we don't feel like we're white-collar professional teachers. We feel we're more like blue-collar factory workers."
>
> *NYCEEC Teacher*

63

IV.3.b.2. Differences by Auspice

Average annual salaries were similar in the auspice categories, ranging from $41,829 at Child Care sites (p<.001) to $47,000 at Head Start sites (p<.001). Teachers at DOE-only sites were the least likely to have any health insurance (83.3% of DOE-only teachers [p<.05]). In contrast, every Child Care and Head Start teacher (100%) had health insurance. Similar percentages of teachers in each auspice category had employer- or union-sponsored retirement plans (65.2% of Child Care teachers; 60.0% of Head Start teachers; and 50.0% of DOE-only teachers).

In contrast, union membership was quite different across the auspice categories. Almost every teacher at Child Care sites (82.6%; p<.05) belonged to a union, while 60.0% of teachers at Head Start sites and only 16.7% of teachers at DOE-only sites were union members.

IV.3.c. Teachers' Race/Ethnicity

> *Key finding:* School teachers are more likely than NYCEEC teachers to be white. Among NYCEECs, distinct differences in race/ethnicity are evident: Almost every teacher at the DOE-only sites is white, while almost every teacher at Child Care and Head Start sites is a racial/ethnic minority. (*Table 15 in Appendix A*)

IV.3.c.1. Differences by Setting

As shown in Figure 16, NYCEEC teachers were more likely to be racial/ethnic minorities (50.0% of school teachers vs. 77.3% of NYCEEC teachers; p<.05). In particular, NYCEEC teachers were more likely than school teachers to be Hispanic/Latino/a (9.1% of school teachers vs. 27.3% of NYCEEC teachers; p<.10). These results parallel the child demographic data (*Section IV.1.b*; *Table 2 in Appendix A*), which indicate that children enrolled at NYCEECs were less likely than children enrolled at schools to be white (18.6% of children at schools vs. 7.3% of children at NYCEECs; p<.05).

Figure 16. Teacher Race/Ethnicity in UPK Programs by Setting (n=66)
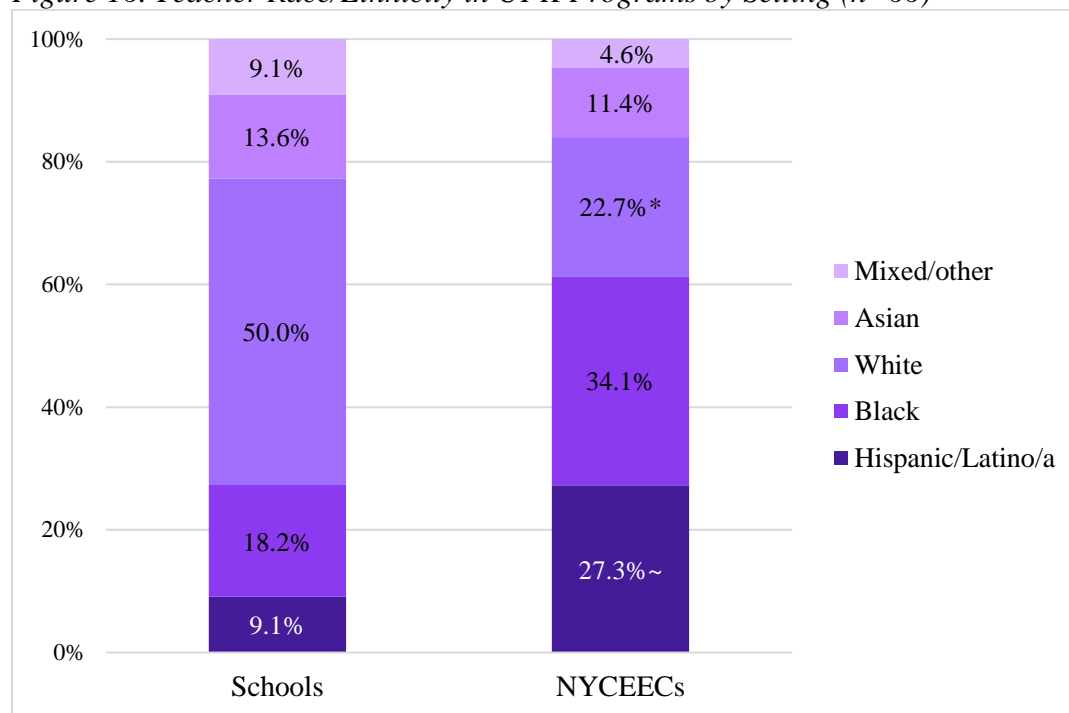
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.3.c.2. Differences by Auspice

The differences in teachers' race/ethnicity in the NYCEEC auspice categories were striking. Almost all teachers at DOE-only sites (83.3%) were white, while only about one in eight teachers at Child Care and Head Start sites (13.0% of Child Care teachers; p<.05 and 13.3% of Head Start teachers; p<.10) were white (Figure 17). In contrast, almost all Child Care teachers (87.0%; p<.05) and Head Start teachers (86.7%; p<.10) were a racial/ethnic minority; only 16.7% of teachers at DOE-only sites were minorities.

Figure 17. Teacher Race/Ethnicity in NYCEECs by Auspice (n=44)
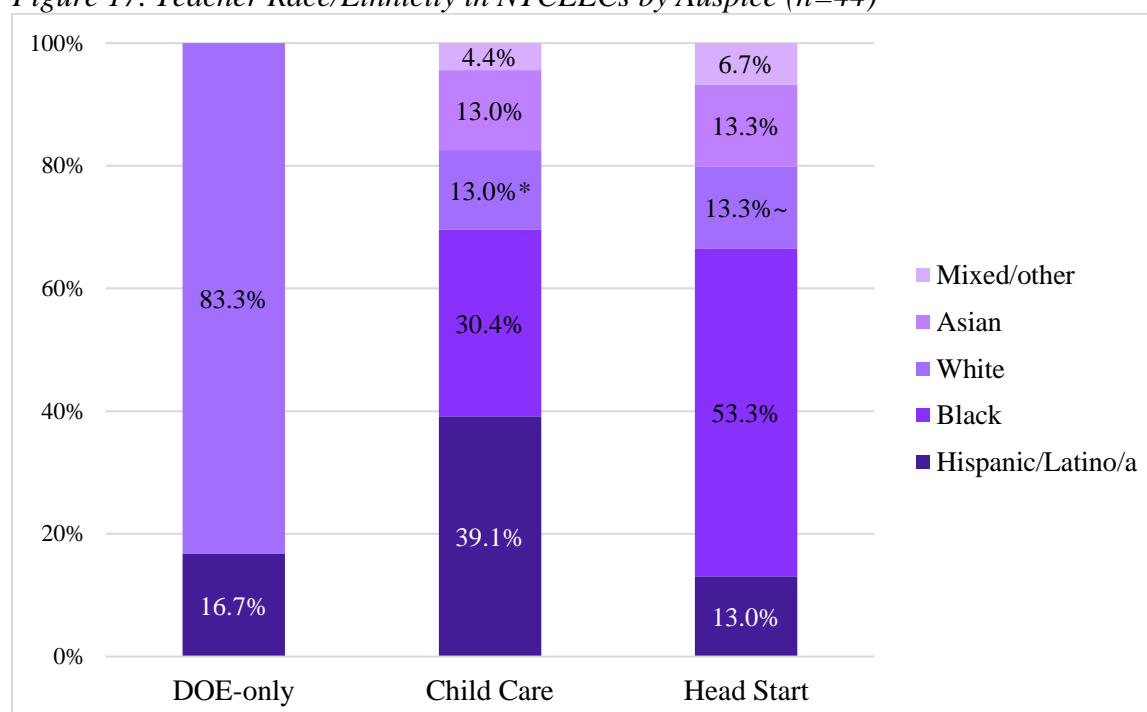
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.3.d. Teacher Bilingualism and Cultural Competence

> ***Key finding:*** Although NYCEEC teachers are more racially/ethnically diverse than school teachers, teachers in NYCEECs and schools are equally likely to be bilingual. Teachers in both settings are generally confident in their ability to teach DLLs effectively, but fewer say they adapt their practice to children's cultural backgrounds. (*Table 16 in Appendix A*)

IV.3.d.1. Differences by Setting

Despite differences in the racial/ethnic diversity of the teaching workforce, school and NYCEEC teachers were equally likely to speak Spanish in addition to English (36.4% vs. 43.2% respectively). Further, many teachers in both settings spoke any second language in addition to English (54.6% and 63.6% respectively). In the aggregate, the languages spoken by teachers in both settings represent a rich array, including Mandarin, Cantonese, Arabic, Haitian, Creole, Urdu, Tagalog, French, Russian, Italian, and Greek.

Teachers in both schools and NYCEECs similarly reported a spectacular range of languages spoken by the children in their classrooms, including Spanish, Bengali, French, Greek, Hebrew, Hausa, Hungarian, Japanese, Korean, Polish, Russian, Swedish, Thai, and Twi. Many teachers in both schools and NYCEECs said that they sometimes needed an interpreter to help them talk to their students' parents; more than half of school teachers (59.1%) and just under half of NYCEEC teachers (47.7%) said they had needed such assistance.

Teachers in schools and NYCEECs expressed a similar level of confidence in their ability to effectively teach children who were DLLs. On average, both school and NYCEEC teachers *disagreed* (on a scale of 1 to 5; 1=strongly disagree to 5=strongly agree) with the statement, "The languages spoken by children in my classroom make it hard for me to be an effective teacher" (an average 2.1 for school teachers and 1.8 for NYCEEC teachers).

Teachers in both settings also agreed with the statement that they "have a good understanding of the cultural backgrounds and practices of the parents whose children are in [their] classroom," (an average 4.1 for both), but fewer agreed with the statement that they "change how [they] teach the children in [their] classroom depending on their cultural backgrounds" (an average 3.6 for school teachers and 3.7 for NYCEEC teachers).

IV.3.d.2. Differences by Auspice

No statistically significant differences in the auspice categories were evident in teachers' bilingualism, need for interpreters, or perceptions of their capacity to teach DLLs and culturally diverse children.

IV.3.e. Teacher Stress and Satisfaction

> *Key finding:* Across all settings and auspice categories, teachers report similarly high levels of job-related stress. Many teachers, particularly in NYCEECs, say that not having enough time to prepare lesson plans, document student progress, and complete other paperwork is a source of stress. Yet, once again, teachers in both settings also describe rewarding aspects of their jobs. (*Table 17 in Appendix A*)

IV.3.e.1. Differences by Setting

The NCCF survey asked teachers to rate the extent to which they agreed with seven statements reflecting job-related stress (on a scale of 1 to 4; 1=strongly disagree to 4=strongly agree). In several instances, teachers' responses in both settings reflected notably high levels of stress. For example, school and NYCEEC teachers generally agreed with the statements, "I worry about school problems while at home" (an average 3.1 and 3.0 for school and NYCEEC teachers respectively). NYCEEC teachers were more likely than those in schools to agree that they are "often frustrated at work" (an average 2.0 for school teachers vs. 2.4 for NYCEEC teachers; p<.05).

In their open-ended survey response, many teachers in NYCEECs described the stresses of their job. For example:

> "The implementation of UPK by the DOE has added tremendous record keeping, bureaucracy, and stress to teaching these kids…Since we are funded by ACS, we must follow their mandates…which are in conflict with the DOE. The way to survive is to speak the language of whomever is coming that day…DOE has education demands they want implemented and ACS would like us to be a social worker agency."
>
> *NYCEEC Teacher*

A salient theme among teachers in both settings was the stress related to the behavioral issues of children in their classrooms and the lack of adequate services for children with special needs. For example:

> "We have a class of 15 students yet nine have special [needs]. Six [have] been evaluated and it was determined that they have special needs but only three get services. The DOE says they do not have the staff to send. To work constantly in this setting without frequent breaks is very difficult it drains most of my energy at times. There are days I wake up and just don't want to come to work."
>
> *NYCEEC Teacher*

> "They expect us to build vocab and…to get ready for kindergarten, as well as work together with the kindergarten teachers. But behaviors of the students interfere with the learning process."
>
> *School Teacher*

Several NYCEEC teachers described their lack of dedicated prep time as a source of stress:

> "It's really challenging now, because you have to keep a big balance of being with kids and doing all this paperwork…it's totally different from public school pre-Ks, because they have more prep time, we don't have it. So, I have to use magic to find the time to do lesson plan[s] [and] do observation[s]."
>
> *DOE-only Teacher*

> "I would say any time that I get to lesson plan or do my assessments, 90% of it is at home…I don't get prep-time."
>
> *DOE-only Teacher*

> "We have no designated prep-time. The very limited prep-time we get is constantly interrupted by staff absence, weather, [and] administrative demands."
>
> *Child Care Teacher*

Even so, many teachers in both settings described the joy of seeing children progress and thrive. For example:

> "[I] love working with pre-K children, and I love to see them grow and develop. I am a life-long teacher, but most importantly I am a life-long learner."
>
> *NYCEEC Teacher*

IV.3.e.2. Differences by Auspice

No statistically significant differences in teacher stress were evident in the three auspice categories.

IV.3.f. Teacher Support

> ***Key finding:*** Both school and NYCEEC teachers generally report that they are supported by supervisors and teachers in their school or center. However, school teachers are more likely than NYCEEC teachers to agree that they discuss challenges and try to find solutions with their peer pre-K teachers. (*Table 18 in Appendix A*)

IV.3.f.1. Differences by Setting

Teachers in both school and NYCEECs generally said they received support from their supervisors, with similar levels of agreement on statements such as, "My supervisor supports my actions and ideas" (an average 3.2 for school teachers and 3.3 for NYCEEC teachers on a scale of 1 to 4) and, "My supervisor allows me input into decisions that affect me" (an average 3.2 and 3.1 respectively). Teachers in both settings similarly agreed that the teachers in their school or center generally support one another (an average 3.2 and 3.1 for respectively). However, school teachers (89.5%) were more likely than NYCEEC teachers (68.8%) to say that they discuss challenges and try to find solutions with their peer pre-K teachers (p<.10).

IV.3.f.2. Differences by Auspice

No statistically significant differences in school/center and peer support were evident in the three auspice categories.

IV.4. Instructional Approach, Practice, Content, and Quality[35]

Summary of Key Findings:

> ➤ **Use and Monitoring of Curricula:**
>> Schools and NYCEECs often use and monitor the use of curricula differently. Among the NYCEECs, DOE-only sites take a different curricular approach than Child Care and Head Start sites.

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[35] PKA requires its programs to implement a pedagogy that emphasizes "purposeful play and exploration through student-initiated and teacher facilitated activities [and] opportunities for students to engage in individual, small, and whole-group learning through a balance of student-initiated and teacher-facilitated activities." Teachers are expected to use a curriculum that aligns with the New York State Prekindergarten Foundation for the Common Core and "draws on research-based practices about how young children develop and learn." In addition to publicly available curricula, such as the Creative Curriculum, UPK programs may use the DOE's Interdisciplinary Units of Study, such as Explore or Create, a series of ten thematic curricular units that combine inquiry with content. UPK programs are also expected to use an "authentic assessment system to monitor developmental progression and plan instruction." NYC DOE & NYC ACS. (2015). *Pre-K for all policy handbook: Part I, 2015-2016*. New York: NYC DOE.

➢ **Use and Monitoring of Assessments:**
   Schools and NYCEECs often choose, use, and monitor child assessments
   differently. NYCEECs in the three auspice categories take different approaches to
   assessments.

➢ **Changes in Assessment Use Since the Advent of PKA:**
   A minority of school and NYCEEC administrators report an increase in the
   importance of conducting child assessments since the beginning of PKA. Every
   school and NYCEEC administrator says that completing assessments is currently
   very or extremely important, with Head Start administrators most likely to place
   such high importance on completing assessments.

➢ **Administrator Views Regarding School Readiness Skills:**
   With the notable exception of the self-regulatory skill of being able to sit still and
   pay attention, school and NYCEEC administrators express similar views of which
   skills are important for children to have to be ready for kindergarten.

➢ **Teacher Views Regarding School Readiness Skills:**
   School and NYCEEC teachers express similar views of which skills are important
   for children to have to be ready for kindergarten. Head Start teachers are most likely
   to cite the importance of children knowing their letters and do so with unanimity.

➢ **Instructional Practices and Pedagogies:**
   Despite some differences in curriculum use, teachers in schools and NYCEECs
   employ similar instructional practices and pedagogies in their classrooms.

➢ **Alignment of Teacher Beliefs, Practices, and Expectations:**
   School and NYCEEC teachers similarly report that their current classroom practices
   "somewhat closely" match their personal beliefs. However, NYCEEC teachers
   report a bigger discordance between their current classroom practices and what is
   expected of them.

➢ **Instructional Approach with DLLs:**
   NYCEEC teachers are less likely than school teachers to speak only English in the
   classroom and more likely to offer home language pull-out instruction for DLLs.

➢ **Classroom Quality:**
   On average, schools have higher overall scores on the CLASS observations than
   NYCEECs. While schools and NYCEECs have equally high scores on the domain
   of Emotional Support, NYCEECs have lower scores on the domains of Classroom
   Organization and Instructional Support, on average, than schools. Among the
   NYCEECs, Head Start sites have the lowest overall scores, reflecting lower average
   levels on Classroom Organization and Instructional Support.

➢ **Teacher Characteristics in Higher-Scoring Classrooms:**
   Teachers in higher-scoring classrooms are paid more and place less emphasis on
   teacher-initiated activities.

IV.4.a. Use and Monitoring of Curricula

> *Key finding:* Schools and NYCEECs often use and monitor the use of curricula differently. Among the NYCEECs, DOE-only sites take a different curricular approach than Child Care and Head Start sites. (*Table 19 in Appendix A*)

IV.4.a.1. Differences by Setting

Schools and NYCEECs tended to use different curricula. Specifically, schools were more likely than NYCEECs to use one or more of the DOE curricula (72.7% of schools vs. 48.6% of NYCEECs; p<.10) while NYCEECs were more likely than schools to use the Creative Curriculum (18.2% of schools vs. 74.3% of NYCEECs; p<.001). Schools were also more likely to use a curriculum they had developed themselves (22.7% of schools vs. 8.6% of NYCEECs; p<.10). Within sites, all schools and almost all NYCEECs reported that all teachers in their 4-year-old classrooms used the same curricula.

In both schools and NYCEECs, most administrators monitored curricular implementation themselves (90.9% of school administrators and 82.9% of NYCEEC administrators), but school administrators were less likely than NYCEEC administrators to say their UPK instructional coach monitored the implementation of curricula (45.5% of school administrators vs. 68.6% of NYCEEC administrators; p<.10).

IV.4.a.2. Differences by Auspice

Curricular choices among the three auspice categories differed. While all DOE-only sites (100%) used one or more of the DOE curricula (e.g., the Units of Study, such as Explore or Inspire, or other curricula included in the instructional tracks, such as Building Blocks), only 31.3% of Child Care sites (p<.10) and 46.2% of Head Start sites did so. Child Care and Head Start sites were most likely to use the Creative Curriculum (87.5% of Child Care sites [p<.001]; 76.9% of Head Start sites [p<.01]; and 33.3% of DOE-only sites).

IV.4.b. Use and Monitoring of Assessments

> *Key finding:* Schools and NYCEECs often choose, use, and monitor child assessments differently. NYCEECs in the three auspice-categories take different approaches to assessments. (*Table 19 in Appendix A*)

IV.4.b.1. Differences by Setting

As with curricula, schools and NYCEECs also tended to use different assessments. Schools were more likely to use Work Sampling (77.3% of schools vs. 17.1% of NYCEECs; p<.001), while NYCEECs were more likely to use Teaching Strategies GOLD (22.7% of schools vs. 85.7% of NYCEECs; p<.001). Within sites, all schools and NYCEECs said the teachers in their 4-year-old classrooms use the same assessments. Importantly, NYCEEC administrators were more likely than school administrators to say that the content of their assessments was very or extremely consistent with their curricula (63.6% of school administrators vs. 85.7% of NYCEEC administrators; p<.10), which may reflect the close alignment between the Creative Curriculum and Teaching Strategies GOLD commonly used at NYCEECs.

In both schools and NYCEECs, most administrators monitored the implementation of assessments themselves (77.3% of school administrators and 88.6% of NYCEEC administrators)

and were equally likely to receive additional support on assessment monitoring from a UPK instructional coach (40.9% of school administrators and 40.0% of NYCEEC administrators).

School and NYCEEC administrators were both likely to say that assessment data were used daily for instructional improvement (72.7% and 62.9% respectively), while NYCEECs were more likely than schools to also use assessment data for periodic reporting to parents (68.2% of schools vs. 97.1% of NYCEECs; p<.01). In both schools and NYCEECs, many administrators reported using assessments to inform decisions about programming and instruction at the beginning and/or the end of the school year (59.1% of schools and 62.9% of NYCEECs at the beginning of the year; 63.6% of schools and 71.4% of NYCEECs at the end of the year). Some used assessments for decisions regarding promotion to kindergarten (27.3% of schools and 20.0% of NYCEECs).

Among sites that used assessments periodically for instructional improvement, more than half of the schools and NYCEECs (56.3% and 65.4% respectively) required teachers to conduct assessments three or four times per year. A few required them to do so only about twice a year (6.3% of schools and 3.8% of NYCEECs), while one in five (18.8% of schools and 19.2% NYCEECs) required them to do so about weekly. Among sites that used assessments periodically for reporting to parents, most reported to parents either three or four times per year (66.7% of schools and 58.8% of NYCEECs) or twice a year (20.0% and 29.4% respectively).

IV.4.b.2. Differences by Auspice

Once again, the three NYCEEC auspice categories used different assessment tools. Head Start and Child Care sites were most likely to use Teaching Strategies GOLD (92.3% of Head Start sites [p<.001]; 87.5% of Child Care sites [p<.001]; and 66.7% of DOE-only sites). In contrast, Head Start and Child Care sites were least likely to use Work Sampling (15.4% in Head Start sites [p<.01]; 6.3% in Child Care sites [p<.001]; and 50.0% in DOE-only sites). Even so, administrators in all three auspice categories were likely to say that the content of their assessments was very consistent with their curricula (83.3% of DOE-only administrators; 81.3% of Child Care administrators: and 92.3% of Head Start administrators).

The oversight and frequency of assessments was similar across the three auspice categories, with all three types of NYCEECs likely to conduct assessments for instructional improvement about three or four times a year, and for reporting to parents about two to four times per year.

IV.4.c. Changes in Assessment Use Since the Advent of PKA

> *Key finding:* A minority of school and NYCEEC administrators report an increase in the importance of conducting child assessments since the beginning of PKA. Every school and NYCEEC administrator says that completing assessments is currently very or extremely important, with Head Start administrators most likely to place such high importance on completing assessments. (*Table 20 in Appendix A*)

IV.4.c.1. Differences by Setting

Only a minority of school and NYCEEC administrators reported an increase in the importance of completing child assessments since the beginning of the pre-K expansion (36.4% of school administrators and 17.7% of NYCEEC administrators). NYCEEC administrators were more likely to say that completing assessments had been very or extremely important in the year prior to the expansion (63.6% of school administrators vs. 94.1% of NYCEEC administrators; p<.05). In 2016-17 (i.e., the year respondents were surveyed), every school and NYCEEC administrator rated completing assessments as very or extremely important (100% in both settings), suggesting that the PKA emphasis on completing assessments had an impact, albeit with a minority of administrators.

IV.4.c.2. Differences by Auspice

In the auspice categories, no differences were evident in percentages of administrators who reported an increase in the importance of assessments. However, Head Start administrators rated the importance of completing assessments the highest (a rating of 3.9 by Head Start administrators [p<.05]; 3.6 by Child Care administrators; and 3.3 by DOE-only administrators).

IV.4.d. Administrator Views Regarding School Readiness Skills

> *Key finding:* With the notable exception of the self-regulatory skill of being able to sit still and pay attention, school and NYCEEC administrators express similar views of which skills are important for children to have to be ready for kindergarten. (*Table 21 in Appendix A*)

IV.4.d.1. Differences by Setting

The NCCF survey asked administrators to rate the importance of several skills to a child's readiness for kindergarten. Almost all school and administrators said that two aspects of children's approaches to learning, "initiative and curiosity" (86.4% and 94.3% respectively) and "enthusiasm for learning" (95.5% and 97.1%), were very important or essential to children's kindergarten readiness. Social-emotional skills were also rated highly; most school and NYCEEC administrators similarly cited "pride in accomplishments" and "sensitive to others' feelings" as very important or essential.

Similar—and lower—percentages of school and NYCEEC administrators rated "knows letters" (63.6% of school administrators and 71.4%% of NYCEEC administrators) and "can count to 20" (50.0% and 60.0% respectively) as very important or essential. A notable difference was the higher importance placed by NYCEEC administrators on "sits still and pays attention," which almost two-thirds of NYCEEC administrator (62.9%; p<.10) rated as very important or essential, compared to only about one-third of school administrators (36.4%).

IV.4.d.2. Differences by Auspice

No statistically significant differences in administrator views regarding the skills that are important for children's readiness for kindergarten were evident across the three auspice categories.

IV.4.e. Teacher Views Regarding School Readiness Skills

> ***Key finding:*** School and NYCEEC teachers express similar views of which skills are important for children to have to be ready for kindergarten. Head Start teachers are most likely to cite the importance of children knowing their letters and do so with unanimity. (*Table 22 in Appendix A*)

IV.4.e.1. Differences by Setting

Teachers in both schools and NYCEECs placed a high emphasis on aspects of children's approaches to learning, with nearly every teacher saying that "initiative and curiosity" (95.5% and 93.2% respectively) and "enthusiasm for learning" (95.5% and 88.6%) were very important or essential to children's school readiness. Most school and NYCEEC teachers also cited "pride in accomplishments" (90.9% and 88.6% respectively) and "sensitive to others' feelings" (95.5% and 90.9%) as very important or essential. Teachers in both settings also placed high emphasis on the importance of "knows letters" (63.6% of school teachers and 81.8% of NYCEEC teachers) and "can count to 20" (59.1% and 72.7% respectively). More than half of both school and NYCEEC teachers cited the importance of "sits still and pays attention" (59.1% and 68.2% respectively).

Teachers in both settings also agreed on what they consider the highest priorities in terms of the areas of children's learning and development. Every teacher rated social-emotional development as a high priority or essential; almost every teacher said the same about language and literacy instruction, and about children's positive approaches to learning. Teachers in both settings were somewhat less likely to rate math, science, and technology as a top priority, as well as children's gross motor skills.

IV.4.e.2. Differences by Auspice

Teachers in all three auspice categories placed high importance on children's approaches to learning and social-emotional skills ("initiative and curiosity," "enthusiasm for learning," "pride in accomplishments," and "sensitive to others' feelings"). Consistent with Head Start program requirements, every Head Start teacher cited the importance of children knowing their letters and did so with unanimity (100%; $p<.10$), compared to 78.3% of Child Care teachers and 50.0% of DOE-only teachers. Across the three auspice categories, teachers expressed similar priorities in terms of children's areas of development.

IV.4.f. Instructional Practices and Pedagogies

> ***Key finding:*** Despite some differences in curriculum use, teachers in schools and NYCEECs employ similar instructional practices and pedagogies in their classrooms. (*Table 23 in Appendix A*)

IV.4.f.1. Differences by Setting

Though PKA does not mandate the use of particular curricula, most teachers in both settings reported having no choice in the curricula that they use in their UPK classrooms (59.1% of school teachers and 75.0% of NYCEEC teachers), suggesting that administrators are making the choice for them. NYCEEC teachers were more likely than school teachers to say that they used the Creative Curriculum (13.6% of school teachers vs. 52.3% of NYCEEC teachers; p<.01). Similar percentages of school and NYCEEC teachers said they used one more of the DOE curricula (54.5% of school teachers and 52.3% of NYCEEC teachers). A minority of school and NYCEEC teachers said they use a curriculum that they themselves developed (13.6% and 6.8% respectively). Two NYCEEC teachers (4.5%) and two school teachers (9.1%) reported using no curriculum at all.

School and NYCEEC teachers reported similar levels of emphasis on planning activities and lessons, documenting children's progress, and using data from child assessments. Most teachers rated the planning of activities and lessons (95.5% of school teachers and 93.2% of NYCEEC teachers) and the documentation of children's progress (90.9% of school teachers and 88.6% of NYCEEC teachers) as a high priority or essential. However, slightly fewer teachers in both settings rated the *use* of assessment data as highly (81.8% of school teachers and 86.4% of NYCEEC teachers).

School and NYCEEC teachers prioritized similar pedagogical approaches, with both school and NYCEEC teachers (77.3% and 72.7% respectively) likely to say that teacher-initiated activities were a high priority or essential. Almost all teachers in both settings said that play activities (100% of school teachers and 95.5% of NYCEEC teachers) and child-initiated activities (100% and 88.6% respectively) were a high priority or essential. For example, a school teacher described the positive effect of UPK pedagogies on her practice:

> "When I first was an assistant, they did the dot-to-dot writing, where they traced it over. And when I was told [that in] UPK, it's just free-write, I was like, 'How are they going to learn how to do it?' And then the improvement that you see is insane. They've done their research with the techniques. So, I definitely see and support what they're doing with that."
>
> *School Teacher*

Yet, some NYCEEC teachers expressed misgivings about applying UPK pedagogy to their practice within the UPK schedule. For example:

> "In the past three years, I see a big change reflected from DOE. In the past, children [had a] more appropriate and child friendly schedule, that was more flexible for children's needs. Right now, the schedule is so timed and tight that the children don't have time to be comfortable in the classroom…The rules that are given to DOE public schools cannot be expected in CBO settings because the circumstances are different in each setting. Our students come to school at 7:30 am and leave at 6:00 pm and it is a very long day for students who are only 4 years old."
>
> *NYCEEC Teacher*

> "The child-initiated activities [are] hard to apply with[in] the daily schedule."
>
> *NYCEEC Teacher*

Some teachers expressed conflicting views about the UPK emphasis on play. For example:

> "I am more concerned about preparing them for kindergarten academically. [The] curriculum practices focus more on them engaging [in] play."
>
> *NYCEEC Teacher*

> "This age group lives and breathes to play. They learn much from playing. These [UPK] practices are redundant and boring. The children tire easily of the activities and want to play."
>
> *NYCEEC Teacher*

IV.4.f.2. Differences by Auspice

In the three auspice categories, differences in teachers' curriculum use were apparent. None of the DOE-only teachers said they used Creative Curriculum, compared to 56.5% of Child Care teachers ($p<.05$) and 66.7% of Head Start teachers ($p<.01$). However, in terms of pedagogy, teachers in all three categories were unanimous or nearly so in prioritizing child-initiated activities and play.

IV.4.g. Alignment of Teacher Beliefs, Practices, and Expectations

> *Key finding:* School and NYCEEC teachers similarly report that their current classroom practices "somewhat closely" match their personal beliefs. However, NYCEEC teachers report a bigger discordance between their current classroom practices and what is expected of them. (*Table 24 in Appendix A*)

IV.4.g.1. Differences by Setting

The NCCF survey asked teachers how closely their classroom practices matched their personal priorities as a teacher (on a scale of 1=not at all; 2=somewhat closely; 3=very closely; and 4=extremely closely). Both school and NYCEEC teachers generally said that their practices

match their personal priorities "somewhat closely" (an average 2.2 for school teachers and 2.1 for NYCEEC teachers).

Additionally, the survey asked teachers how closely their classrooms practices matched what is expected of them. NYCEEC teachers were more likely to respond "somewhat closely" or "not at all" than school teachers (an average 2.4 for school teachers vs. 2.0 for NYCEEC teachers; $p<.10$), suggesting that NYCEEC teachers were more likely to see a bigger mismatch between their current practices and what is expected of them.

In the open-ended survey responses, teachers spoke at length about the alignment (or misalignment) between their personal priorities, their classroom practices, and what is expected of them. Several NYCEEC teachers said that the demands of UPK take away from time they want to spend with children. For example:

> "Many of these [assessment] practices are done and maintained on the computer. This tremendously reduces face time and interaction with the children."
>
> *NYCEEC Administrator*

Some teachers said that children's social, emotional, and behavioral needs prevented them from teaching as they would like or as they are expected to teach. For example:

> "It is impossible to attend to the social-emotional needs of students who need the extra support…while attending to the whole group."
>
> *NYCEEC Teacher*

At the same time, some teachers said that their personal priorities, their classroom practices, and what is expected of them are closely aligned. Many of them cited the value of child-centered teaching and learning and the emphasis on social and emotional development. For example:

> "These practices match my personal priorities because children learn best when they are having fun. This means allowing [them] to have child-initiated activities to help them learn in ways that best suit them."
>
> *NYCEEC Teacher*

> "Being a former kindergarten teacher, I believe in these practices [regarding social-emotional development]. [They are] an essential part of a child's development in getting them ready for kindergarten."
>
> *School Teacher*

IV.4.g.2. Differences by Auspice

No statistically significant differences in the alignment of teacher priorities, practices, and what is expected of them were evident in the three auspice categories.

IV.4.h. Instructional Approach with DLLs

> **Key finding:** NYCEEC teachers are less likely than school teachers to speak only English in the classroom and more likely to offer home language pull-out instruction for DLLs. (*Table 25 in Appendix A*)

IV.4.h.1. Differences by Setting

NYCEEC teachers were less likely than school teachers to speak only English in the classroom (72.7% of school teachers vs. 45.5% of NYCEEC teachers; p<.05; Figure 18). NYCEEC teachers were also more likely than school teachers to conduct pull-out instruction in a child's home language (0% of school teachers vs. 13.6% of NYCEEC teachers; p<.10).

Figure 18. Approaches to Instruction with DLLs by Setting (n=66)
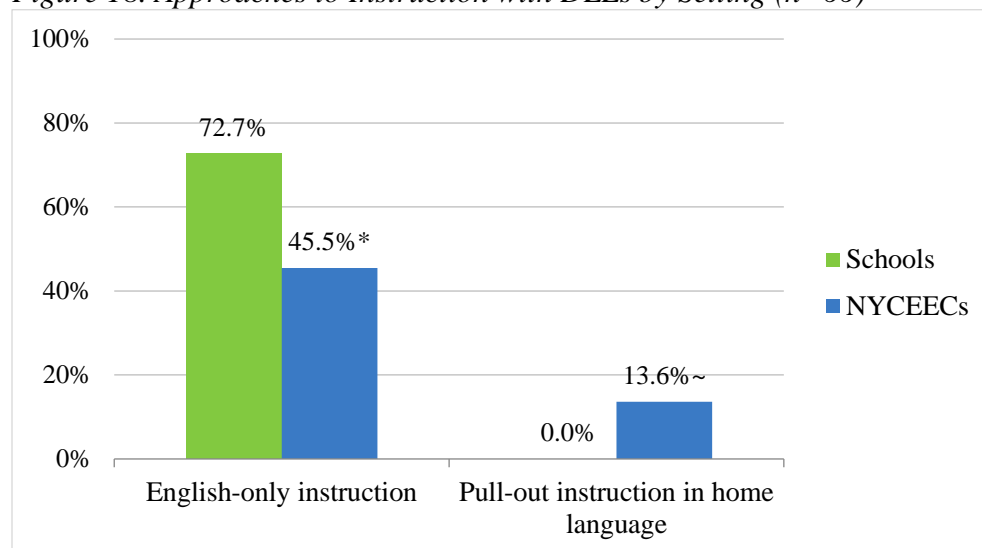
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.4.h.2. Differences by Auspice

No statistically significant differences in teachers' instructional approach with DLLs were evident in the auspice categories.

IV.4.i. Classroom Quality

> *Key finding:* On average, schools have higher overall scores on the CLASS measure of classroom quality than NYCEECs. While schools and NYCEECs have equally high scores on the domain of Emotional Support, NYCEECs have lower scores on the domains of Classroom Organization and Instructional Support, on average, than schools. Among the NYCEECs, Head Start sites have the lowest overall scores, reflecting lower average levels on Classroom Organization and Instructional Support.[36] (*Table 26 in Appendix A*)

IV.4.i.1. Differences by Setting

As shown in Figure 19, UPK classrooms in schools had higher overall scores, representing the average of the three domains of the CLASS, than UPK classrooms in NYCEECs (5.4 in school classrooms vs. 5.0 in NYCEEC classrooms; p<.05).

On the CLASS domain of Classroom Organization, school-based UPK classrooms scored higher, on average, than NYCEEC-based UPK classrooms (6.1 vs. 5.7 respectively; p<.05). Within this domain, school classrooms scored higher than NYCEEC classrooms on the dimensions of Behavior Management (6.4 vs. 5.9 respectively; p<.10) and Instructional Learning Formats (5.8 vs. 5.4; p<.10). The difference between schools and NYCEECs on the dimension of Productivity (6.2 and 5.9 respectively) was not statistically significant.

School classrooms also scored higher, on average, than NYCEEC classrooms on Instructional Support (3.6 vs. 2.9 respectively; p<.01). Within the domain, school classrooms scored higher than NYCEEC classrooms on all three dimensions: Concept Development (3.2 vs. 2.4 respectively; p<.05), Quality of Feedback (3.6 vs. 2.9; p<.05), and Language Modeling (4.0 vs. 3.2; p<.01).

In contrast, no difference was found between schools and NYCEECs on Emotional Support (6.5 and 6.4 respectively). School and NYCEEC classrooms scored equally well on the dimensions of Positive Climate (6.7 for both), Negative Climate (6.9 and 6.8 respectively), Teacher Sensitivity (6.3 and 6.2), and Regard for Student Perspectives (6.0 for both).

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[36] Recall that "above-threshold" classrooms represent those that were above the thresholds for effectiveness in all three CLASS domains (5.0 for Emotional Support and Classroom Organization, 3.25 for Instructional Support; per Burchinal et al., 2010); "below-threshold" classrooms represent those that were below the thresholds in one or more of the three CLASS domains.

Figure 19. Differences in CLASS Scores by Setting (n=66)
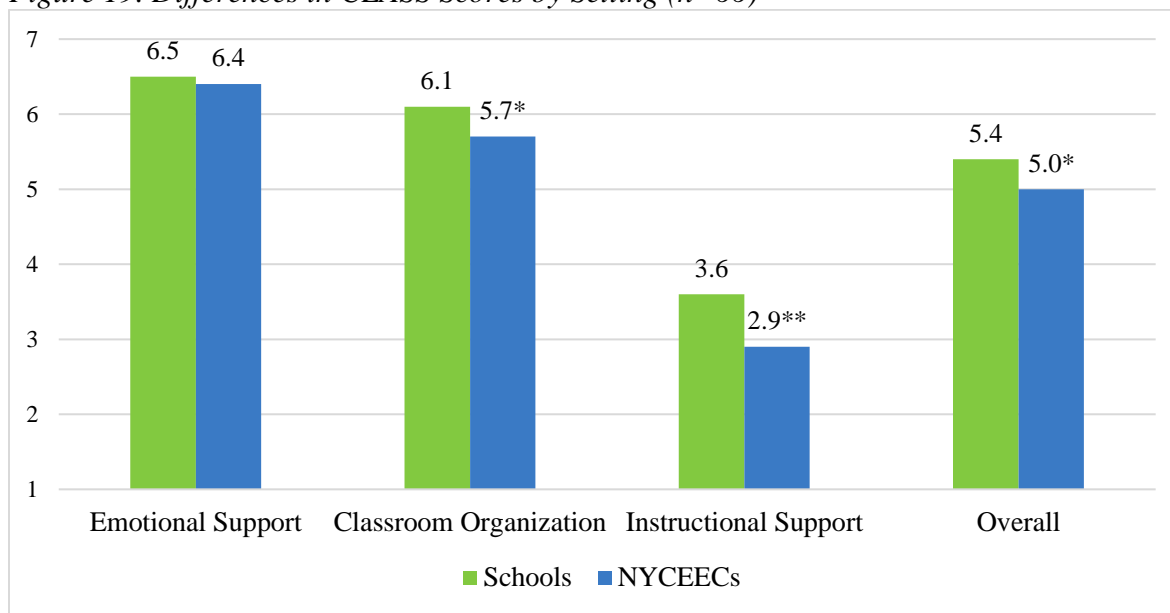
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

The CLASS results should be taken with the two caveats. First, while the CLASS scores in both settings are lowest on the domain of Instructional Support, research literature has identified lower thresholds on Instructional Support than on the other two domains that are nonetheless associated with children's learning. This suggests that the scores on Instructional Support do not have to be as high as those on Classroom Organization and Emotional Support to achieve child-level gains.[37] Second, the CLASS is not intended to be a comprehensive measure of quality; it privileges responsive teacher-child interactions, classroom organization, and emotional dimensions of teaching practice that are supported by the research literature, but that are not meant to be definitive indicators of quality. Instead, the results can be used to inform resource allocation, as well as site-level and teacher-level PD and coaching.

IV.4.i.2. Differences by Auspice

As shown in Figure 20, in the three auspice categories, Head Start classrooms had the lowest overall scores (4.6 in Head Start classrooms [p<.01]; 5.1 in Child Care classrooms; and 5.3 in DOE-only classrooms).

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[37] Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly*, *25*(2), 166-176; threshold scores are 3.25 on Instructional Support and 5.0 on both Emotional Support and Classroom Organization.

Figure 20. Differences in CLASS Scores by Auspice (n=44)
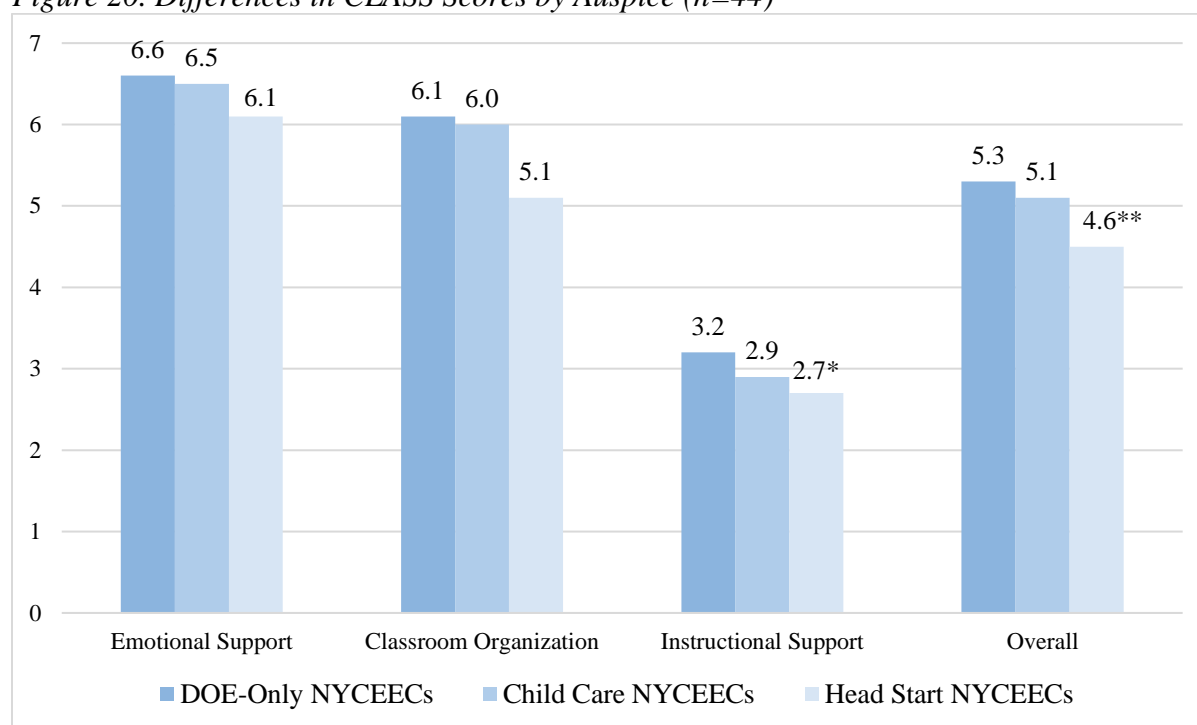
On the domain of Classroom Organization, Head Start classrooms had the lowest average score (5.1 in Head Start classrooms [p<.01]; 6.0 in Child Care classrooms; and 6.1 in DOE-only classrooms). Within the domain, Head Start classrooms were the lowest on all three dimensions: Behavior Management (5.3 in Head Start classrooms [p<.01]; 6.2 in Child Care classrooms; and 6.4 in DOE-only classrooms), Productivity (5.3 in Head Start classrooms [p<.05]; 6.1 in Child Care classrooms; and 6.3 in DOE-only classrooms), and Instructional Learning Formats (4.8 in Head Start classrooms [p<.01]; 5.6 in Child Care classrooms; and 5.9 in DOE-only classrooms).

On the domain of Instructional Support, Head Start classrooms were again, on average, the lowest-scoring category (2.7 in Head Start classrooms [p<.05]; 2.9 in Child Care classrooms; and 3.2 in DOE-only classrooms). However, Head Start classrooms were lowest on only one dimension, Language Modeling (2.9 in Head Start classrooms [p<.05]; 3.3 in Child Care classrooms; and 3.7 in DOE-only classrooms).

On the domain of Emotional Support, no differences in the three auspice categories were evident.

IV.4.j. Teacher Characteristics in Higher-scoring Classrooms

> *Key finding:* Teachers in higher-scoring classrooms are paid more and place less emphasis on teacher-initiated activities. (*Tables 27 and 28 in Appendix A*)

As described in *Section II.3*, for purposes of analysis, we sorted classrooms into either an "above-threshold" category, representing those that were above the thresholds for effectiveness

on all three CLASS domains, or a "below-threshold" category, representing those that were below the thresholds on one or more of the three domains.[38] Overall, almost two-thirds of all school-based classrooms (63.6%) were above-threshold on all three CLASS domains, compared to just under one-third of all NYCEEC-based classrooms (31.8%).

We then examined correlates of the two categories in the following areas: 1) Teacher education and credentials, 2) Teacher compensation, 3) Instructional approach and practice.

1. *Teacher education and credentials*. A comparison of teacher characteristics in the above- and below-threshold categories found no significant differences in teacher education levels, contrary to what might be expected. For example, 73.7% of below-threshold teachers had a master's degree or higher, compared to 82.1% of above-threshold teachers, a non-significant difference. Below- and above-threshold teachers were similarly likely to be state-certified (71.1% and 78.6% respectively) and were likely to have similar years of experience in UPK classrooms (an average 4.5 and 5.0 years respectively).

2. *Teacher compensation*. A significant difference of almost $10,000 in annual salary was evident; below-threshold teachers made an average of $49,686 annually, compared to $59,212 for above-threshold teachers (p<.10; Figure 21). The higher percentage of NYCEECs in the below-threshold category may explain this gap; NYCEECs comprised 78.9% of the below-threshold sites, compared to only 50.0% of the above-threshold sites (*Table 28 in Appendix A*). The results are thus consistent with findings from the comparisons by setting: Differences in annual salary are not explained by teachers' personal characteristics such as their education and qualifications (see above), but rather by the workplace policies in the settings in which they work.

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[38] Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly*, *25*(2), 166-176; threshold scores are 3.25 on Instructional Support and 5.0 on both Emotional Support and Classroom Organization.

Figure 21. Differences in Teacher Salary by Below- and Above-Threshold CLASS Scores (n=66)
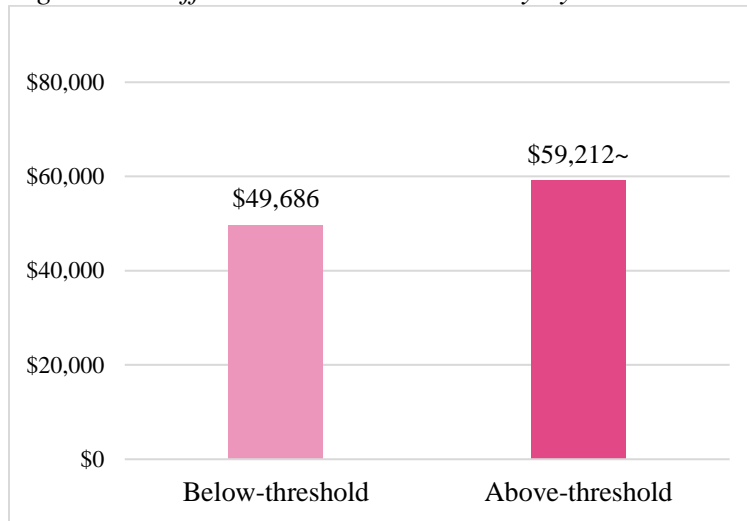
3. *Instructional approach and practice*. Few notable differences between below- and above-threshold teachers were evident. Below- and above-threshold teachers reported using the same curricula, though 14.3% of above-threshold teachers reported using no curricula, compared to none (0%) of the below-average teachers (p<.05). Teachers in both categories were likely to prioritize planning classroom activities or lesson plans (94.7% and 92.9% respectively), documenting children's progress (86.8% and 92.9%), and using data from child assessments (84.2% and 85.7%).

A difference in pedagogy was evident in the emphasis teachers placed on teacher-initiated activities. Below-threshold teachers were more likely to say that teacher-initiated activities were a high priority or essential to them on a typical day than were above-threshold teachers (84.2% vs. 60.7%; p<.05). This difference was not evident in the comparisons by setting, in which school and NYCEEC teachers were equally likely to prioritize teacher-initiated activities.

Overall, most classrooms in both settings did quite well on both Emotional Support and Classroom Organization, but fewer were in the above-threshold category on Instructional Support (Figure 22).

Figure 22. Percentage of Classrooms with Above-Threshold CLASS Scores by Setting (n=66)
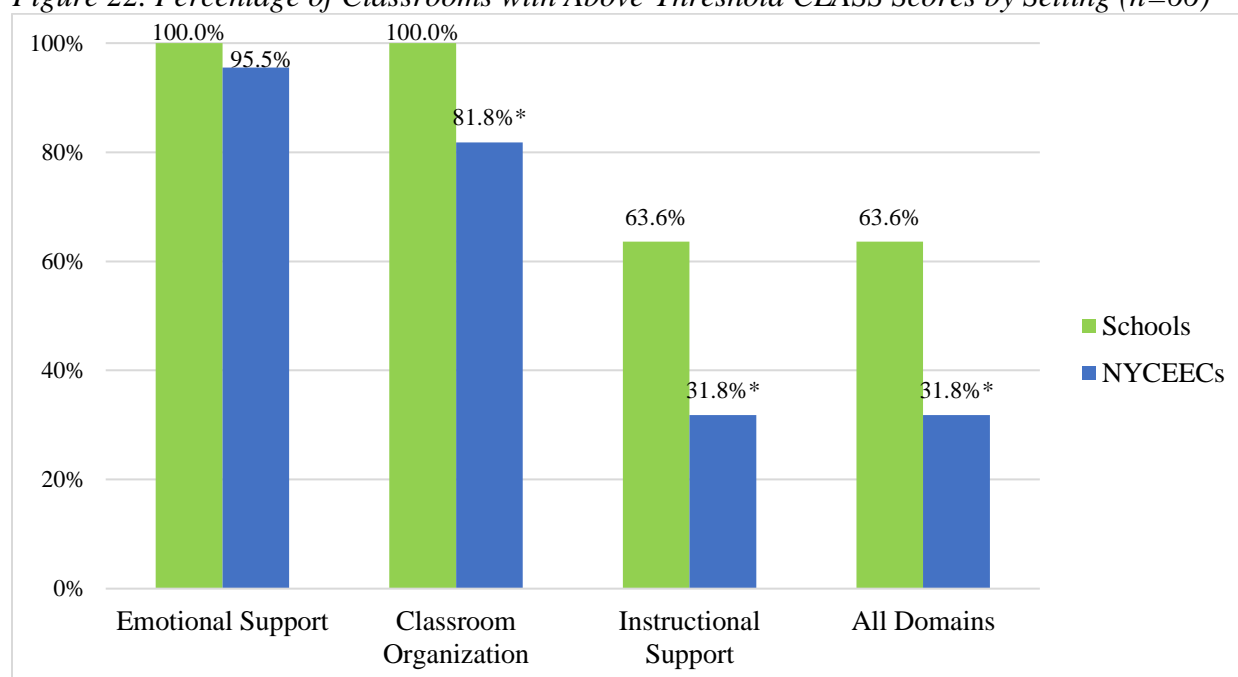
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.5. Professional Development

Summary of Key Findings:

➢ **Administrator Views on Type and Amount of PD for Teachers:**
School and NYCEEC administrators say that their teachers receive somewhat different types of PD. Few administrators in either setting say that the amount of PD for teachers has increased since the year before the PKA expansion. NYCEEC administrators also say that lack of coverage for their teachers inhibits their ability to send teaching staff to offsite DOE trainings.

➢ **Administrator Views on the Quality of PD for Teachers:**
Administrators generally agree that they can select the PD that best meets their teachers' needs and that the DOE-provided PD is high quality.

➢ **Teacher Participation in PD Workshops:**
School and NYCEEC teachers report equal rates of participation in at least one PD workshop in the past year, but school teachers attend workshops less frequently than NYCEEC teachers. NYCEEC teachers, and particularly Child Care teachers, are more likely to attend workshops monthly, to be paid for workshop attendance, and to attend workshops conducted by their own program staff.

➢ **Teacher Participation in Coaching:**
Instructional coaching is reaching almost all school and NYCEEC teachers, though less than half of teachers in both settings receive coaching at least monthly. Most teachers in both settings receive coaching from DOE-affiliated coaches.

- ➢ **PD Workshops, Coaching, and Changes in Teacher Practice:**
  Overall, teachers are more likely to say that coaching changed their classroom practice "a lot" than did PD workshops. Moreover, the intensity of coaching appears to influence the likelihood that coaching will affect teacher practice. Coaching that occurs at least monthly is positively associated with NYCEEC teacher reports of changes in their practices, particularly among teachers in Child Care sites.
- ➢ **Choice and Content of Teacher PD:**
  In both settings, teachers report having little choice in the PD they receive.
  The content of PD in both workshops and coaching differs between schools and NYCEECs. Teachers in schools are more likely to get workshops on literacy and coaching on cultural diversity and using data, while teachers in NYCEECs are more likely to get workshops on improving teacher-child interactions.
- ➢ **Alignment of Teacher Needs with PD Content:**
  Teachers in schools and NYCEECs describe similar PD needs, though NYCEEC teachers are more likely to say they need PD on differentiating instruction to children with diverse cultural, linguistic, and ability backgrounds. Most school and NYCEEC teachers report that the content of PD workshops and coaching does not match their needs. School teachers who attend workshops that match their needs are more likely to say that the workshops change their practice "a lot."
- ➢ **Application of Teacher PD:**
  Administrators in schools and NYCEECs are equally likely to oversee the application of PD into the practice of their teachers. However, school administrators are more likely than NYCEEC administrators to have additional support in overseeing PD application from a member of their staff. Only about half of administrators in both settings have a master teacher on site.
- ➢ **Administrator PD:**
  Administrators in schools and NYCEECs are generally offered similar types of PD, but only about half of administrators in both settings say they can choose the PD that meets their needs. School administrators are almost five times more likely than NYCEEC administrators to report an increase in the amount of PD offered to administrators since the advent of PKA.

IV.5.a. Administrator Views on Type and Amount of PD for Teachers

Key finding: School and NYCEEC administrators say that their teachers receive somewhat different types of PD. Few administrators in either setting say that the amount of PD for teachers has increased since the year before the PKA expansion. NYCEEC administrators also say that lack of coverage for their teachers inhibits their ability to send teaching staff to offsite DOE trainings. (*Table 29 in Appendix A*)

IV.5.a.1. Differences by Setting

School and NYCEEC administrators said that their teachers received somewhat different types of PD. Most administrators in both schools and NYCEECs said that their teachers received series of PD workshops (81.8% and 77.1% respectively) and coaching from someone from outside the

site, such as the UPK instructional coach (95.5% and 82.9% respectively). However, only 40.9% of teachers in schools and 28.6% of teachers in NYCEECs were offered the opportunity to visit other programs. Every administrator in schools (100%) and almost every administrator in NYCEECs (96.8%) also indicated that all teachers across their 4-year-old classrooms received the same types of PD.

Among the 10 school and 16 NYCEEC administrators who had been in their role since before the PKA expansion (2013-14 school year), half of school administrators (50.0%) but only one-third of NYCEEC administrators (31.3%) experienced an increase in the amount of PD offered to their teachers since the advent of PKA, with the overall majority feeling that the amount of PD offered to teachers had decreased or remained the same.

Many administrators, particularly those in NYCEECs, said the biggest challenge related to PD was the lack of teacher coverage for DOE workshops, making it difficult to send all staff members to these trainings. For example:

> "It has been nearly impossible to send my teachers to any of the Department of Education professional developments that they're supposed to be in…because of the lack of coverage. So, if I send three of my UPK teachers out that means I have three teachers out of the building, which means that we're out of ratio in our classrooms, which means other teachers have to then take those kids. It becomes a scheduling nightmare."
>
> *NYCEEC Administrator*

> "Sometimes we don't have that type of money in our budget [to get coverage], and we don't have the flexibility as they may have in the public schools…I don't have a floater…We just don't have that flexibility to do that… [With DOE workshops,] there's training offered in different places…but under ACS…they would actually come to your program and offer a lot of the trainings."
>
> *NYCEEC Administrator*

The lack of coverage for teachers who need to be away from the classroom for PD or other reasons also disrupts teaching and learning. For example:

> "We don't have any funding for substitute teachers. So, when a teacher takes a vacation or calls out sick, that means that we have to either move children around, close classrooms, or find alternative sources of coverage, whether it be me, another member of an admin team, or even [someone] from another department within our building. So, I find the hardest part of my job is making sure teachers are living sustainable lives and taking care of themselves."
>
> *Head Start Administrator*

IV.5.a.2. Differences by Auspice

No statistically significant differences were evident in the types of PD offered to teachers.

IV.5.b. Administrator Views on the Quality of PD for Teachers

> *Key finding:* Administrators generally agree that they can select the PD that best meets their teachers' needs and that the DOE-provided PD is high quality. (*Table 30 in Appendix A*)

IV.5.b.1. Differences by Setting

Almost two-thirds of administrators in both settings (63.6% of school administrators and 62.9% of NYCEEC administrators) agreed that they could choose the PD that best meets the needs of their teachers, and most (81.8% of school administrators and 82.9% of NYCEEC administrators) said that the DOE's PD was high quality.

Several administrators expressed positive views on the value of the DOE's PD support, particularly as compared to ACS. For example:

> "We feel the impact more with the support [that DOE] give[s] to the teachers—than ACS. [In] ACS…the people that supervise us either haven't been in the classroom for a very long time or have always been administrators."
>
> *NYCEEC Administrator*

IV.5.b.2. Differences by Auspice

No statistically significant differences in administrative views on PD quality were evident by auspice.

IV.5.c. Teacher Participation in PD Workshops

> *Key finding:* School and NYCEEC teachers report equal rates of participation in at least one PD workshop in the past year, but school teachers attend workshops less frequently than NYCEEC teachers. NYCEEC teachers, and particularly Child Care teachers, are more likely to attend workshops monthly, to be paid for workshop attendance, and to attend workshops conducted by their own program staff. (*Table 31 in Appendix A*)

IV.5.c.1. Differences by Setting

In both settings, participation in PD workshops was high, with 95.5% of teachers in both schools and NYCEECs participating in some type of workshop in the past year. However, NYCEEC teachers were more than twice as likely as school teachers to have attended workshops at least monthly (31.8% of school teachers vs. 65.9% of NYCEEC teachers; p<.01; Figure 23). Even so,

school and NYCEEC teachers reported spending a similar number of hours in total in PD workshops (an average 39.8 hours and 47.6 hours respectively). This suggests that NYCEEC teachers attended more frequent, but shorter workshops.

Figure 23. Percentage of Teachers Attending PD Workshops by Setting (n=65)
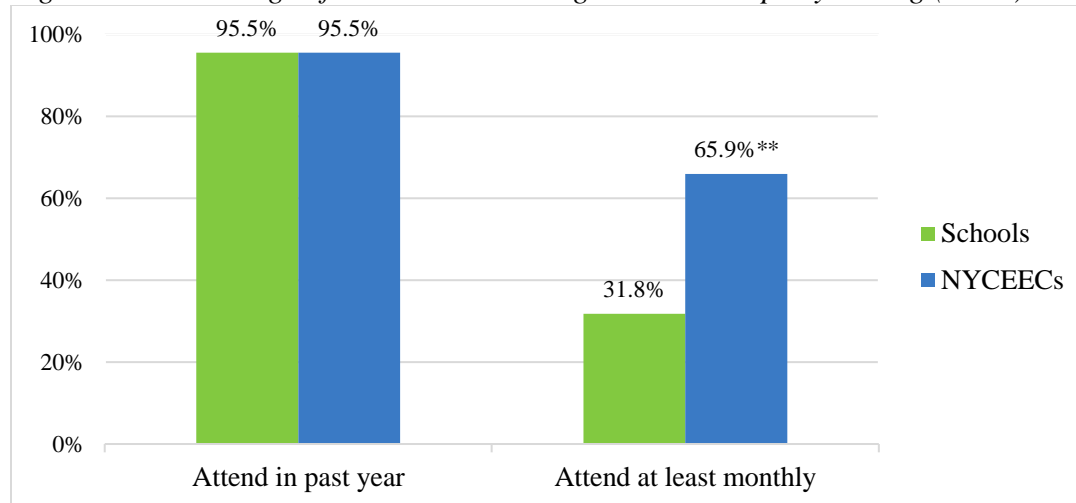
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

More than half of NYCEEC teachers (54.6%) said that workshops were led by members of their program's staff, compared to less than a quarter of school teachers (22.7%, p<.05; Figure 24). Additionally, most NYCEEC teachers (80.1%) reported that at least some of their workshops were held on site, compared to 52.4% of school teachers (p<.05). Almost all NYCEEC teachers (92.9%) were paid for time spent in at least some workshops, compared to 61.9% of teachers in schools (p<.01).

Figure 24. Characteristics of PD Workshops by Setting (n=66)
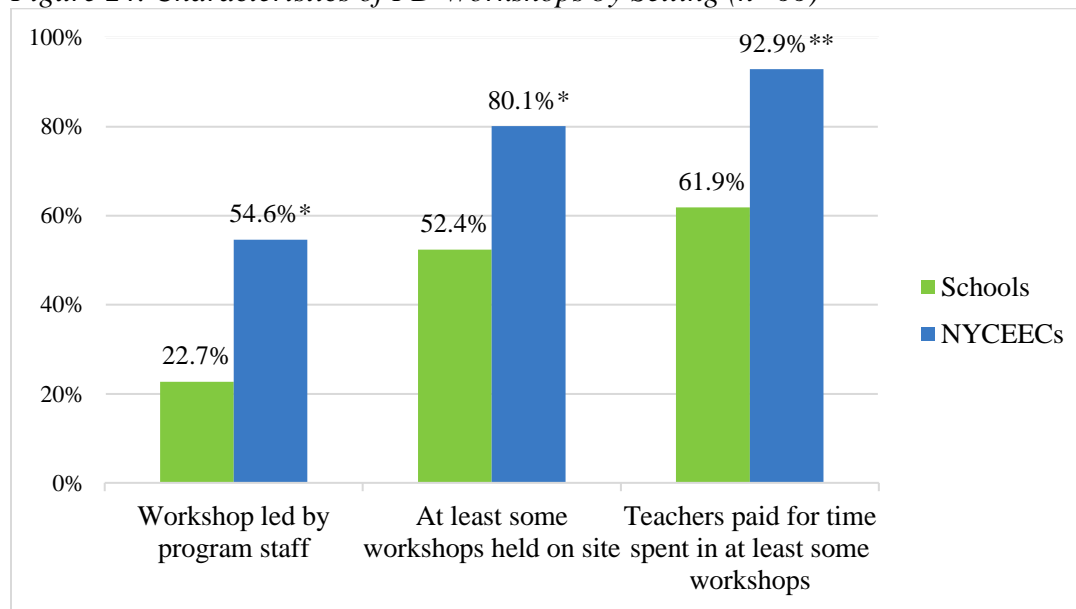
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

IV.5.c.2. Differences by Auspice

Child Care teachers were most likely to attend workshops at least monthly (73.9% of Child Care teachers [p<.05]; 50.0% of DOE-only teachers; and 60.0% of Head Start teachers). Additionally, Child Care teachers were most likely to say their workshops were led by program staff (60.9% of Child Care teachers [p<.10]; 33.3% of DOE-only teachers; and 53.3% of Head Start teachers), and were most likely to be paid for time spent in at least some workshops (100% of Child Care teachers [p<.05]; 83.3% of DOE-only teachers; and 85.7% of Head Start teachers).

IV.5.d. Teacher Participation in Coaching

> ***Key finding:*** Instructional coaching is reaching almost all school and NYCEEC teachers, though less than half of teachers in both settings receive coaching at least monthly. Most teachers in both settings receive coaching from DOE-affiliated coaches. (*Table 32 in Appendix A*)

IV.5.d.1. Differences by Setting

All school teachers (100%) and most NYCEEC teachers (93.2%) reported receiving some form of instructional coaching in the past year, and the average length per session was similar in both settings (an average 67.2 minutes in schools and 71.4 minutes in NYCEECs). Fewer than half of teachers in both settings said they received coaching at least monthly (36.4% of school teachers and 45.5% of NYCEEC teachers).

Most teachers in schools and NYCEECs received coaching from DOE-affiliated coaches (90.9% of schools and 81.4% of NYCEECs), while about a quarter had a coach based in their program (22.7% of schools and 27.9% of NYCEECs).

IV.5.d.2. Differences by Auspice

Across the auspice categories, NYCEECs reported similar frequency in their receipt of coaching, as well as who coached them.

IV.5.e. PD Workshops, Coaching, and Changes in Teacher Practice

> ***Key finding:*** Overall, teachers are more likely to say that coaching changed their classroom practice "a lot" than did PD workshops. Moreover, the intensity of coaching appears to influence the likelihood that coaching will affect teacher practice. Coaching that occurs at least monthly is positively associated with NYCEEC teacher reports of changes in their practices, particularly among teachers in Child Care sites. (*Tables 31 through 36 in Appendix A*)

IV.5.e.1. Differences by Setting

Less than half of both school and NYCEEC teachers reported that workshops changed their classroom practices "a lot" (42.9% of schools and 31.0% of NYCEECs). More teachers in both

settings said that coaching changed their classroom practice "a lot" (40.9% in schools and 58.5% in NYCEECs). Overall, teachers across both settings were more likely to say that coaching changed their classroom practice "a lot" (52.4%) than did PD workshops (34.9%; p<.05).

The intensity of coaching was positively associated with NYCEEC teacher reports of changes in their practices. When we compared the data for teachers who received coaching at least monthly and those who received it less frequently (Table 33 in Appendix A), we found that NYCEEC teachers who received coaching at least monthly were more likely to say that coaching changed their classroom practice "a lot" (75.0% of NYCEEC teachers who received coaching at least monthly vs. 42.9% of NYCEEC teachers who received coaching less often; p<.05). This result was not evident for school teachers, however.

In addition, NYCEEC teachers who received coaching at least monthly scored significantly higher on the CLASS Instructional Support domain than their peers who received coaching less often (an average score of 3.3 vs. 2.5 respectively; p<.05; Table 34 in Appendix A). While this association cannot be interpreted causally, it is notable that NYCEEC classrooms receiving monthly coaching had Instructional Support scores much closer to school classrooms (3.3 and 3.6 respectively).

Many teachers said that the DOE's PD workshops did not change their practice a lot because the content was familiar to them. For example:

> "Many of the items discussed at the workshops have already been discussed at prior workshops and [have] been implemented in some form in the classroom's daily activities and assessments of the students."
>
> *NYCEEC Teacher*

> "The information and support that is presented during both NYC Thrive/Parent Corps and our own institution's professional development barely scratches the surface of our need for training."
>
> *NYCEEC Teacher*

Even so, several teachers said that workshops helped them to focus on content and learn from other teachers' experiences. For example:

> "These workshops are really helpful because [they] find new approaches to teach to my students. It's nice to see what works for other teachers and what I can try as well to switch things up as an educator."
>
> *School Teacher*

> "[The workshops are helpful] because I learned different strategies in dealing with children with social-emotional issues."
>
> *NYCEEC Teacher*

Many teachers spoke positively about the extent to which coaching improved their classroom practice. For example:

> "The instructional coordinator encourages new techniques to be practiced in the classroom and follows up to see that we are practicing these techniques, and whether or not they work. Many of the practices that I was introduced to by the instructional coordinator are practices that I now use daily and will continue to use in future classroom[s]."
>
> *NYCEEC Teacher*

> "Some of the PDs are really great, and some of them are just repetitive…whereas [with] the coaching, they come in…and specifically ask, what do I feel needs to be worked on. And they'll gear it toward that and they'll assist us in that."
>
> *NYCEEC Administrator*

Some teachers said they felt they would benefit more from more frequent visits:

> "I wish [visits] could be more frequent… In 2014, we had [coaches] who came regularly. This year, I've heard that they're short-handed."
>
> *School Teacher*

> "I think the program, on paper, is an excellent thing…They have coaches and things like that [but] they're assigned to 20 schools. They're not going to be able to do that. You can't run someone ragged like that."
>
> *School Teacher*

IV.5.e.2. Differences by Auspice

No statistically significant differences were found by auspice in teacher perceptions of how much workshops changed their practice. However, differences were evident in teacher perceptions of how much coaching changed their practice.

Child care teachers who received coaching at least monthly were twice as likely to report that coaching substantially changed their classroom practices (72.7%) as Child Care teachers who were coached less frequently (36.4%, p<.10; *Table 35 in Appendix A*). Curiously, Head Start teachers who received coaching at least monthly were more likely to say that *workshops* changed their classroom practice "a lot" (33.3% of Head Start teachers who receive coaching at least monthly vs. 0% of Head Start teachers who received coaching less often; p<.10).

Teachers who received coaching at least monthly also had higher Instructional Support scores than those who did not in both DOE-only (4.0 vs. 2.5; p<.10) and Child Care classrooms (3.4 vs. 2.4; p<.05; *Table 36 in Appendix A*), though this pattern did not hold within Head Start classrooms. In addition, DOE-only teachers with coaching at least monthly scored higher than

those with less frequent coaching on both Emotional Support (6.9 vs. 6.2; p<.10) and Classroom Organization (6.7 vs. 5.4; p<.05).

IV.5.f. Choice and Content of Teacher PD

> *Key finding:* In both settings, teachers report having little choice in the PD they receive. Notably, the content of PD in both workshops and coaching differs between schools and NYCEECs. Teachers in schools are more likely to get workshops on literacy and coaching on cultural diversity and using data, while teachers in NYCEECs are more likely to get workshops on improving teacher-child interactions. (*Table 37 in Appendix A*)

IV.5.f.1. Differences by Setting

Most teachers in both schools and NYCEECs reported that they had no choice in selecting their PD (72.7% and 65.9% respectively).

Some teachers said they would like to be more involved in selecting the PD they receive. For example:

> "It would be nice in that sense of having a conversation at the beginning of the year like, 'Okay, what is your strength? What is your weakness?' I say, 'Okay, well, science is my weakness. You know, I try to get some things, but do you have any ideas?'…Those kind of conversations [would be useful]."
>
> *NYCEEC Teacher*

Teachers in schools were more likely than those in NYCEECs to receive workshops on literacy (54.6% vs. 29.6% respectively; p<.05) and less likely to get workshops on improving teacher-child interactions (36.4% vs. 70.5% respectively; p<.01). Additionally, school teachers were more likely than NYCEEC teachers to receive coaching that addressed cultural diversity (27.3% vs. 9.1% respectively; p<.10) and using data on children (72.7% vs. 27.3% respectively; p<.001).

IV.5.f.2. Differences by Auspice

Across the auspice categories, no statistically significant differences were evident in how much choice teachers said they had in the PD they received. At least half of teachers in in each auspice category said that they had no choice in selecting their PD (66.7% of DOE-only teachers; 72.7% of Child Care teachers; and 53.9% of Head Start teachers).

Teachers in Child Care sites were the most likely to get workshops focused on teacher-child interactions (78.3% of Child Care teachers [p<.05]; 66.7% of Head Start teachers; and 50.0% of DOE-only teachers). Coaching content was least likely to be focused on using data on children among Child Care teachers (21.7%; p<.01) and Head Start teachers (26.7%; p<.05), compared to DOE-only teachers (50.0%). No significant differences were evident in the auspice categories regarding how much choice teachers had in selecting their PD experiences.

IV.5.g. Alignment of Teacher PD Needs with PD Content

> ***Key finding:*** Teachers in schools and NYCEECs describe similar PD needs, though NYCEEC teachers are more likely to say they need PD on differentiating instruction to children with diverse cultural, linguistic, and ability backgrounds. Most school and NYCEEC teachers report that the content of PD workshops and coaching does not match their needs. School teachers who attend workshops that match their needs are more likely to say that the workshops change their practice "a lot." *(Tables 38 and 39 in Appendix A)*

IV.5.g.1. Differences by Setting

When asked what single content area of PD teachers felt they needed most, teachers in both settings described similar needs. For instance, about one in five teachers in both settings said that they most needed PD on children's social and emotional development (18.9% of school teachers and 22.7% of NYCEEC teachers). However, no teachers in schools (0%) felt that they most needed support related to differentiating instruction for children with diverse cultural, linguistic, and ability backgrounds, compared to 13.6% of teachers in NYCEECs (p<.10).

To learn how well PD content aligned with what teachers said they needed, we examined whether the needs expressed by teachers matched the content they received in workshops and/or coaching sessions (i.e., "content match"). The majority of teachers in both settings reported that workshop content (59.1% of school teachers and 54.5% of NYCEEC teachers) and/or coaching content (40.9% and 61.4% respectively) did not match their needs (Figure 25). This contrasts with the finding that most administrators in both settings said they could choose the PD that best meets the needs of their teachers.

Figure 25. Match Between Teacher Needs and PD by Setting (n=66)
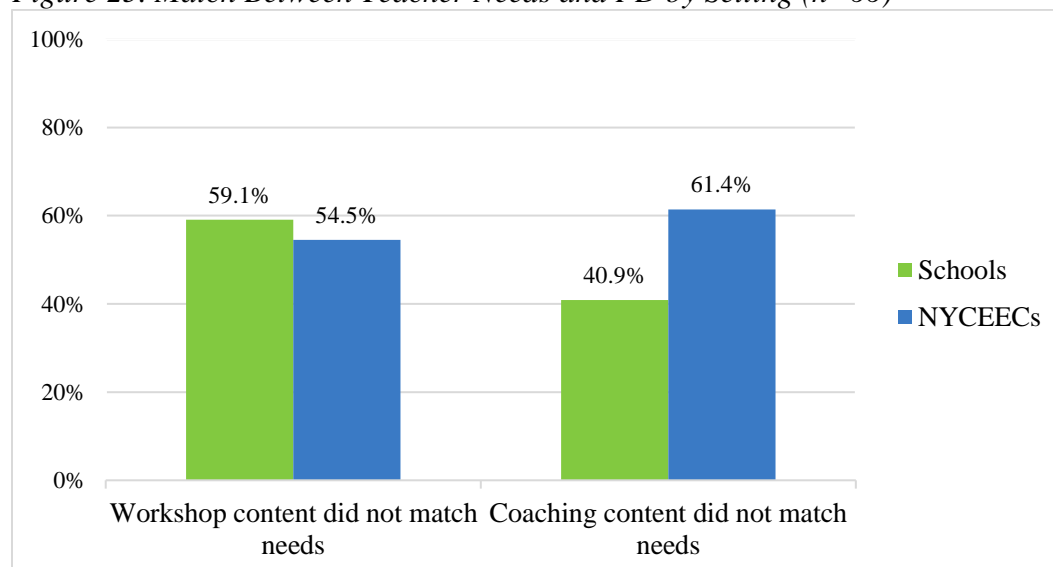
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category for statistical comparisons is schools.

Teachers in both settings expressed frustration that their PD did not align with what they needed. For example:

> "One or two PDs [on social-emotional learning] is great…but I would love to see other PDs…They have these tracks, but I get social-emotional, somebody [else] gets Building Blocks, and then they get all this math background; they're lacking the social-emotional. I get all the social-emotional background; I'm missing the math…[I'd like] more diversity in topics…If I go to PDs about the same thing for four or five times in a year, what happens to all the other things?"
>
> *NYCEEC Teacher*

> "We ended up with [the] social-emotional track, and it was so boring for me and my group because we're very strong with that."
>
> *School Teacher*

Importantly, a match between teacher needs and PD workshop content was associated with school teachers' reporting that PD changed their practice. School teachers who attended workshops whose content matched their needs were more likely to say that the workshops changed their practice "a lot," compared to school teachers for whom the workshop did not match their needs (66.7% vs. 25.0% respectively; p<.10; *Table 39*). However, no significant differences by workshop content match for NYCEEC teachers were evident, or by coaching content match in either schools or NYCEECs.

IV.5.g.2. Differences by Auspice

No statistically significant differences by auspice were found in teacher PD needs or content match.

IV.5.h. Application of Teacher PD

> *Key finding:* Administrators in schools and NYCEECs are equally likely to oversee the application of PD into the practice of their teachers. However, school administrators are more likely than NYCEEC administrators to have additional support in overseeing PD application from a member of their staff. Only about half of administrators in both settings have a master teacher on site. (*Table 40 in Appendix A*)

IV.5.h.1. Differences by Setting

School and NYCEEC administrators reported different patterns in whom they rely upon for support in ensuring that PD is applied to teacher practice. Administrators in both settings were likely to oversee teachers' PD application themselves (86.4% of school administrators and 82.9% of NYCEEC administrators); most administrators in both settings also reported having support from the UPK instructional coach in applying PD to practice (63.6% of schools and 71.4% of NYCEECs). However, school administrators were more likely to rely on another staff member to

support PD application, while NYCEEC administrators were unlikely to have this assistance (40.9% vs. 17.1% respectively; p<.05).

Only about half of school and NYCEEC administrators had a master teacher, (50.0% and 48.6% respectively). In both settings, this teacher was likely to serve as an advisor, consultant, mentor, and coach to teachers (70.0% of schools that had master teachers and 58.3% of NYCEECs that had master teachers).

IV.5.h.2. Differences by Auspice

No statistically significant differences were evident by auspice in the support of PD application.

IV.5.i. Administrator PD

> **Key finding:** Administrators in schools and NYCEECs are generally offered similar types of PD, but only about half of administrators in both settings say they can choose the PD that meets their needs. School administrators are almost five times more likely than NYCEEC administrators to report an increase in the amount of PD offered to administrators since the advent of PKA. (*Table 41 in Appendix A*)

IV.5.i.1. Differences by Setting

School and NYCEEC administrators said they were offered similar types of PD. Most school and NYCEEC administrators said they received a series of workshops (63.6% of school administrators and 60.0% of NYCEEC administrators), and one-time workshops or summer institutes (63.6% and 48.6% respectively). About half of administrators in both settings said they were offered ongoing coaching and consultation (59.1% of school administrators and 48.6% of NYCEEC administrators).

Of the school and NYCEEC administrators who had been in their job since the 2013-14 school year (the year prior to PKA expansion), school administrators were more likely to say that the amount of PD they received had increased since the advent of PKA (60.0% of school administrators vs. 12.5% of NYCEEC administrators; p<.01). In both settings, only about half of administrators agreed that they could choose the PD that met their needs (54.6% of school administrators and 57.1% of NYCEEC administrators).

IV.5.i.2. Differences by Auspice

No statistically significant differences regarding administrator PD were evident by auspice.

V. Results and Findings from Analyses by Neighborhood Resource Level

The results of the analyses by the three neighborhood resource levels rendered few statistically significant differences. For example, no notable differences were found in teacher characteristics nor CLASS data (*Tables 42 and 43 in Appendix A*). These results are somewhat surprising given an extensive research literature that has found generally lower-quality preschool options for high-poverty populations.[39] It is possible that, given the relatively small study sample, the paucity of statistically significant differences reflects a lack of statistical power to detect such differences. Additionally, upon examining the criteria used to designate each Community District (CD) as low-, moderate-, or high-resource, we noted that the low- and moderate-neighborhoods are, in some ways, quite similar (Figure 26; *Table 44 in Appendix A*). For example, median income in the low and moderate neighborhoods overlapped, ranging from $27,506 to $38,698 in low-resource CDs, and from $33,985 to $48,202 in moderate-resource CDs. In contrast, median income ranged from $60,951 to $94,198 in the high-resource CDs.

Figure 26. Median Income Ranges in the Low-, Moderate-, and High-Resource CDs (n=9)
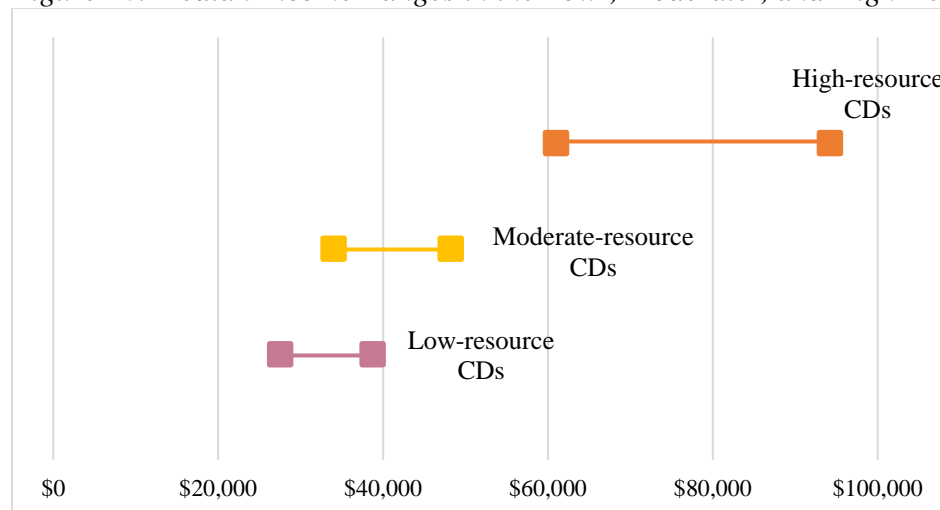
Because of these similarities, we combined the data for low- and moderate-resource neighborhoods, and then compared data from this combined category with data from high-resource neighborhoods. The results of the analyses by the two neighborhood resource levels (low/moderate vs. high) are presented below in four topic areas:

1. Program Characteristics and Experience with PKA
2. Administrator and Teacher Characteristics
3. Instructional Approach, Practice, Content, and Quality
4. Professional Development

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[39] Burchinal, M., Nelson, L., Carlson, M., & Brooks-Gunn, J. (2008). Neighborhood characteristics and child care type and quality. *Early Education and Development, 19*(5), 702-725; Fuller, B., Kagan, S. L., Loeb, S., & Chang, Y. W. (2004). Child care quality: Centers and home settings that serve poor families. *Early Childhood Research Quarterly*, *19,* 505-527.

Although the two-category analyses rendered more statistically significant differences than the three-category analyses, still far fewer differences were evident when compared to the analyses by setting and auspice, underlining the greater importance of setting and auspice in the implementation of PKA. Hence, much less data are presented in this section (and in the tables in *Appendix A*) than were included in the analyses by setting and auspice, because we excluded most of the data (and tables) that contained no significant differences. For each statistically significant comparison, we provide p-values that use high-resource neighborhoods as the category of comparison, unless otherwise specified.

V.1 Program Characteristics and Experience with PKA

Summary of Key Findings:

➢ **Enrollment Composition:**
Low/moderate and high-resource sites are equally likely to serve children with IEPs and children who are DLLs. However, sites in low/moderate-resource neighborhoods serve a higher-poverty, higher-racial/ethnic-minority population than sites in high-resource neighborhoods. Enrollment at low/moderate sites is also more likely to be comprised of 90% or more racial/ethnic minority children.

➢ **Child Recruitment:**
Recruiting children for UPK has been harder for sites in low/moderate-resource neighborhoods than those in high-resource neighborhoods. Many low/moderate administrators cite competition for children from other UPK sites in their area.

➢ **Child and Family Services:**
Low/moderate sites are more likely than high-resource sites to provide medical services for children on site.

V.1.a. Enrollment Composition

> *Key finding:* Low/moderate and high-resource sites are equally likely to serve children with IEPs and children who are DLLs. However, sites in low/moderate-resource neighborhoods serve a higher-poverty, higher-racial/ethnic-minority population than sites in high-resource neighborhoods. Enrollment at low/moderate sites is also more likely to be comprised of 90% or more racial/ethnic minority children. (*Table 45 in Appendix A*)

The percentage of children with IEPs enrolled was almost equal in the low/moderate and high-resource categories (7.8% of low/moderate and 9.5% of high), as was the percentage of DLLs (36.1% and 36.3% respectively; Figure 27). Not surprisingly, UPK sites in low/moderate-resource neighborhoods were more likely to serve poor children than sites in high-resource neighborhoods (63.2% vs. 43.4% respectively; p<.01).[40]

Low/moderate sites were more likely to serve Hispanic or black children (84.1% of children in low/moderate vs. 55.8% of children in high; p<.001). The concentration of racial/ethnic minority

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[40] Again, the data are likely to underestimate the number of poor children enrolled at NYCEECs.

children within sites also differed, with low/moderate sites more likely than high-resource sites (82.5% vs. 47.1% respectively; p<.01) to enroll a population of children who were almost entirely racial/ethnic minorities (i.e., 90% or more of total enrollment at the site).

Figure 27. Characteristics of Children Enrolled in UPK Programs by Neighborhood Resource Level (n=57)
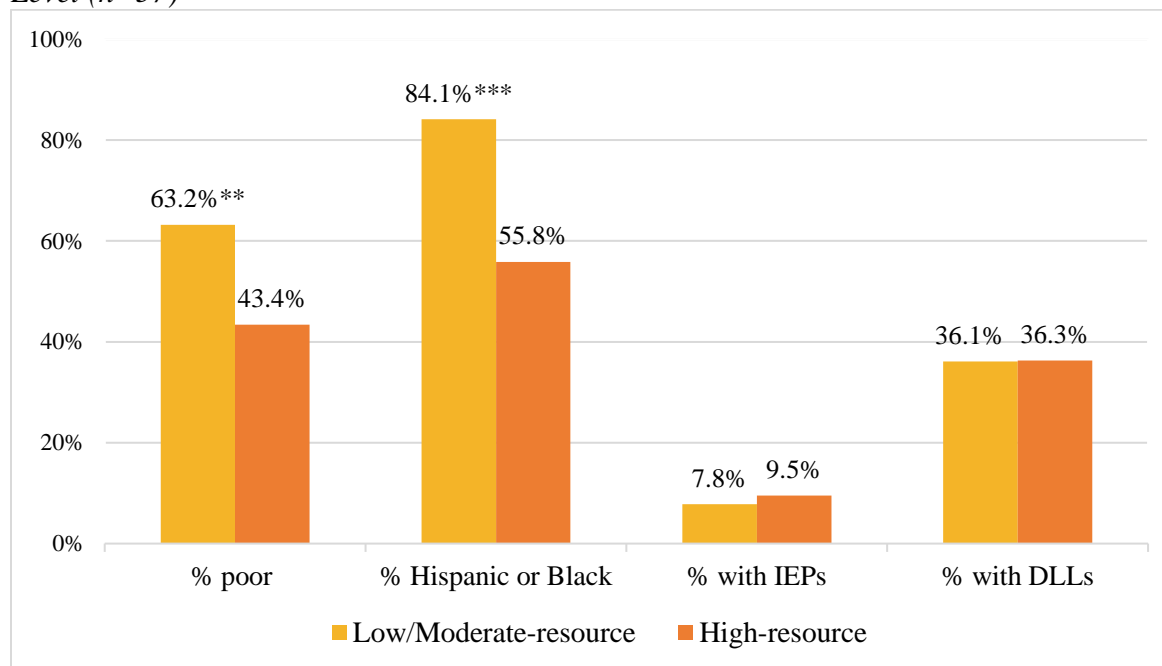
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category is high-resource neighborhoods.

V.1.b. Child Recruitment

> ***Key finding:*** Recruiting children for UPK has been harder for sites in low/moderate-resource neighborhoods than those in high-resource neighborhoods. Many low/moderate administrators cite competition for children from other UPK sites in their area. (*Table 46 in Appendix A*)

Almost half (47.5%) of the administrators in low/moderate neighborhoods said that recruiting children for their UPK programs was difficult, compared to only one in six (17.7%) of the administrators high-resource neighborhoods (p<.05; Figure 28). Of those who said that child recruitment was difficult, many administrators in both low/moderate- and high-resource neighborhoods cited competition from schools (23.5% and 33.3% respectively). Some low/moderate administrators (29.4%) cited both schools and NYCEECs. A third of administrators in both low/moderate and high-resource neighborhoods said that child recruitment was difficult because families prefer school-based settings (35.3% and 33.3% respectively).

Figure 28. Percentage of Sites in Which Recruiting Children Was Difficult by Neighborhood Resource Level (n=57)
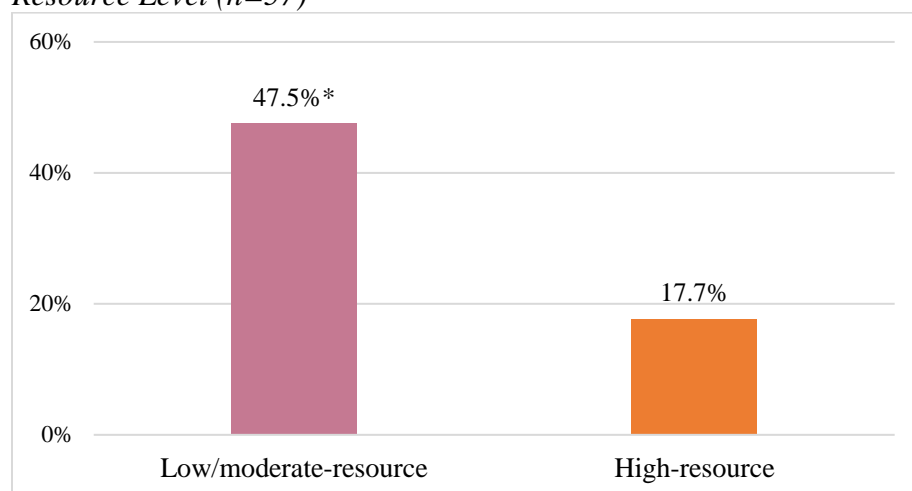
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category is high-resource neighborhoods.

Addressing the challenge of child recruitment, some NYCEEC administrators cited the close proximity of other programs:

> "[The] free UPK Initiative has created 30 UPK classrooms operating in a 10-mile proximity to our center."
>
> *Moderate-resource Neighborhood NYCEEC Administrator*

> "There are many pre-K programs in the area."
>
> *Low-resource Neighborhood NYCEEC Administrator*

V.1.c. Child and Family Services

> **Key finding:** Low/moderate sites are more likely than high-resource sites to provide medical services for children on site. (*Tables 47 and 48 in Appendix A*)

Only one statistically significant difference was found regarding the child and family services provided (or referred) by low/moderate and high-resource sites: Low/moderate sites were more likely to provide medical services on site (20.0% of low/moderate sites vs. 0% of high-resource sites; p<.05), which is likely to reflect the higher number of Head Start sites in those neighborhoods (*Table 48 in Appendix A*).

V.2.   Administrator and Teacher Characteristics

Summary of Key Findings:

➢ **Administrator Characteristics:**
There are few differences between low/moderate and high-resource neighborhoods in the experience, education, and compensation of administrators and teachers, although turnover is more common for administrators in high-resource neighborhoods than for those in low/moderate-resource neighborhoods.

➢ **Teacher Characteristics and Well-being**
Teachers in low/moderate-resource neighborhoods are more likely to say that morale is low at their UPK sites than teachers in high resource-neighborhoods.

V.2.a. Administrator Characteristics

> ***Key finding:*** There are few differences between low/moderate and high-resource neighborhoods in the experience, education, and compensation of administrators and teachers, although turnover is more common for administrators in high-resource neighborhoods than for those in low/moderate-resource neighborhoods. (*Table 49 in Appendix A*)

Notably few significant differences were evident in administrator experience, education, and compensation. Average salaries for low/moderate and high-resource administrators were virtually equal ($83,950 and $83,786 respectively).

A difference was evident in the years that administrators had been working at their current UPK site; those in low/moderate neighborhoods had been there for longer (5.2 years on average) than administrators in high-resource neighborhoods (2.5 years on average). Because administrators in both neighborhood categories had similar years of experience as an early childhood director at any site (9.6 years and 9.2 years respectively), the results suggest that administrators in high-resource neighborhoods may change jobs more often, or may have been more recently recruited for new UPK sites.

V.2.b. Teacher Characteristics and Well-being

> ***Key finding:*** Teachers in low/moderate-resource neighborhoods are more likely to say that morale is low at their UPK sites than teachers in high-resource neighborhoods. (*Tables 50 and 51 in Appendix A*)

No significant differences were evident in teacher experience, education, and compensation in the two neighborhood categories. As with administrators, teachers in low/moderate and high-resource neighborhoods earned virtually equal average salaries ($52,322 and $55,552 respectively). However, teachers in low/moderate-resource neighborhoods were more likely to agree with the statement, "The morale of this school/center is low," than teachers in high-resource neighborhoods (an average 3.0 for low/moderate teacher vs. 2.5 for high teachers on a

scale of 1 to 4; 1=strongly disagree to 4=strongly agree; p<.05; *Table 51 in Appendix A*). Even so, teachers in low/moderate neighborhoods were more likely to agree that "My supervisor provides helpful feedback about my teaching" (an average 3.2 in low/moderate-resource vs. 2.8 in high-resource; p<.10).

V.3. Instructional Approach, Practice, Content, and Quality

Summary of Key Findings:

➢ **Use and Monitoring of Curricula:**
While teachers' curricular practices are similar in low/moderate and high-resource neighborhoods, teachers in low/moderate neighborhoods are less likely to use a curriculum that they developed themselves. Administrators in low/moderate neighborhoods are also less likely to receive support in monitoring curricula from someone on their staff or the UPK instructional coach.

➢ **Use and Monitoring of Assessments:**
While child assessment use is similar in low/moderate and high-resource neighborhoods, administrators in low/moderate neighborhoods are less likely to receive support in monitoring child assessments from someone on their staff or the UPK instructional coach.

➢ **Classroom Quality:**
The results of the CLASS observations indicate that classrooms in low/moderate and high-resource neighborhoods have similar *overall* scores, on average, on the CLASS measure of classroom quality. Even so, classrooms in low/moderate neighborhoods have lower scores on the domains of Emotional Support and Classroom Organization than classrooms in high-resource neighborhoods, while classrooms in the two neighborhood categories have equal scores on Instructional Support.

➢ **Classroom Quality by Setting Within Neighborhoods:**
Differences in CLASS scores between schools and NYCEECs are more significant within low/moderate-resource neighborhoods than within high-resource neighborhoods.

V.3.a. Use and Monitoring of Curricula

> *Key finding:* While teachers' curricular practices are similar in low/moderate and high-resource neighborhoods, teachers in low/moderate neighborhoods are less likely to use a curriculum that they developed themselves. Administrators in low/moderate neighborhoods are also less likely to receive support in monitoring curricula from someone on their staff or the UPK instructional coach. (*Tables 52 and 53 in Appendix A*)

Teachers in low/moderate and high-resource neighborhoods generally used the same curricula. However, a lower percentage of teachers in low/moderate neighborhoods said they use a curriculum that they developed themselves (4.4% vs. 19.1% respectively; p<.10). Additionally, administrators in low/moderate neighborhoods were more likely than those in high-resource neighborhoods to oversee the use of curricula themselves (92.5% vs. 70.6% respectively; p<.05; *Table 53 in Appendix A*). Only one in five (20.0%) administrators in low/moderate

neighborhoods received curricular support from someone else on their staff, compared to more than half (58.8%) of those in high-resource neighborhoods (p<.01). Administrators in low/moderate neighborhoods were also less likely to receive curricular support from the UPK instructional coach (52.5% vs. 76.5% respectively; p<.10).

V.3.b. Use and Monitoring of Assessments

> ***Key finding:*** While child assessment use is similar in low/moderate and high-resource neighborhoods, administrators in low/moderate neighborhoods are less likely to receive support in monitoring child assessments from someone on their staff or the UPK instructional coach. (*Table 53 in Appendix A*)

While no significant differences were evident in the assessments that were used, only one in four administrators (27.5%) in low/moderate neighborhoods received help with assessment monitoring from someone else on their staff, compared to more than half of those in high-resource neighborhoods (52.9%; p<.10). Administrators in low/moderate neighborhoods were also less likely than those in high-resource neighborhoods to receive assistance with assessment monitoring from the UPK instructional coach (32.5% vs. 58.8% respectively; p<.10).

V.3.c. Classroom Quality

> ***Key finding:*** The results of the CLASS observations indicate that classrooms in low/moderate and high-resource neighborhoods have similar *overall* scores, on average, on the CLASS measure of classroom quality. Even so, classrooms in low/moderate neighborhoods have lower scores on the domains of Emotional Support and Classroom Organization than classrooms in high-resource neighborhoods, while classrooms in the two neighborhood categories have equal scores on Instructional Support. (*Table 54 in Appendix A*)

Overall, classrooms in low/moderate and high-resource neighborhoods received similar overall scores on the CLASS (5.0 and 5.3 respectively; Figure 29). However, significant differences were evident on two of the three CLASS the domains. On Emotional Support, low/moderate-resource classrooms scored lower, on average, than high-resource UPK classrooms (6.4 vs. 6.6 respectively; p<.10). Low/moderate classrooms also scored lower, on average, than high-resource classrooms on the domain of Classroom Organization (5.7 vs. 6.4 respectively; p<.05). No statistically significant differences were found on the Instructional Support domain (3.1 vs. 3.0 respectively).

Figure 29. Differences in CLASS Scores by Neighborhood Resource Level (n=66)
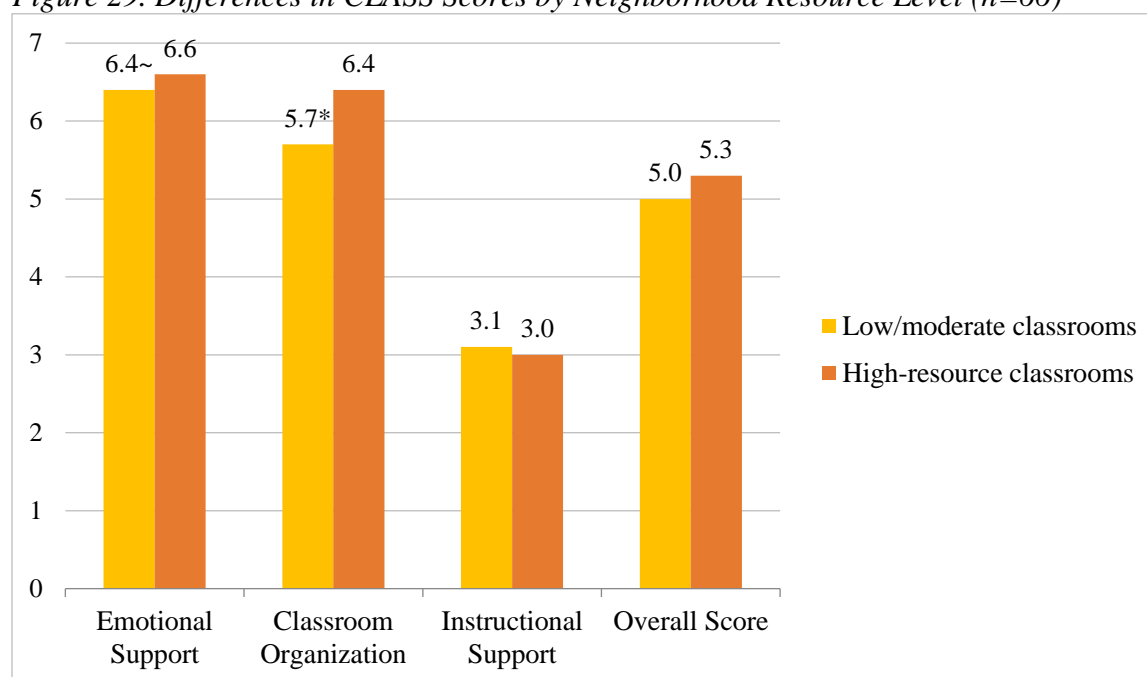
Note: ~p<.10, *p<.05, **p<.01, ***p<.001. Reference category is high-resource neighborhoods.

Despite the differences on Emotional Support and Classroom Organization, overall, the same percentage of sites (42.2% of low/moderate sites and 42.9% of high-resource sites) in each of the two neighborhood categories scored above the thresholds identified for effectiveness on all three domains of the CLASS.

V.3.d. Classroom Quality by Setting Within Neighborhoods

> *Key finding:* Differences in CLASS scores between schools and NYCEECs are more significant within low/moderate-resource neighborhoods than within high-resource neighborhoods. (*Table 55 in Appendix A*)

To learn more about how the differences in CLASS scores by neighborhood-resource level might interact with the differences in CLASS scores that were evident by setting (*Section IV.4.i.*), we compared school and NYCEEC CLASS scores *within* the two neighborhood-resource categories (low/moderate and high). The results indicate that within low/moderate-resource neighborhoods, NYCEEC classrooms had lower overall CLASS scores on average than schools (5.5 for schools vs. 4.8 for NYCEEC; p<.01). Yet, no difference was found in the overall CLASS scores for schools and NYCEECs in high-resource neighborhoods (5.2 and 5.3 respectively).

Differences in the overall CLASS scores were also evident on the domains of Classroom Organization and Instructional Support, but again, *only* in low/moderate-resource neighborhoods. As shown in Figure 30, within low/moderate-resource neighborhoods, on Classroom Organization, schools scored 6.1 on average, while NYCEECs scored 5.5 on average (p<.05); on Instructional Support, schools scored 3.8 on average, while NYCEECs scored 2.7 on average

(p<.01). On the domain of Emotional Support, no differences were found between schools and NYCEECs in either of the neighborhood-resource categories.

Figure 30. Differences in CLASS Scores by Setting Within Low/Moderate-Resource Neighborhoods (n=66)
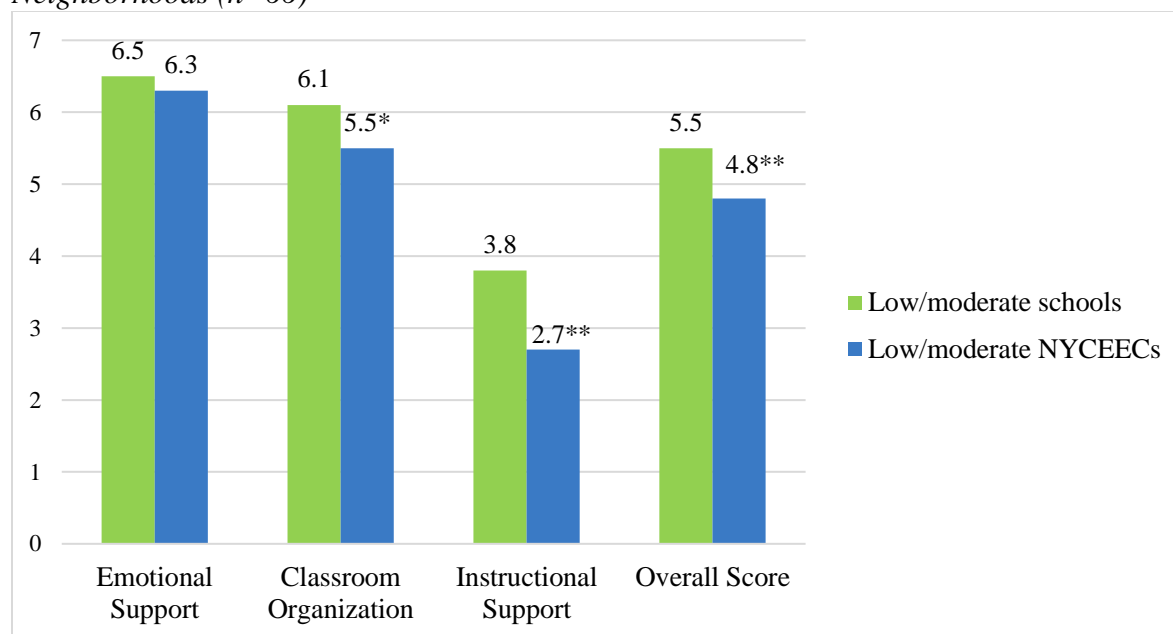
Note: ~$p<.10$, *$p<.05$, **$p<.01$, ***$p<.001$. Reference category for statistical comparison is schools.

The concentration of these significant differences in low/moderate neighborhoods suggests that the challenges that hinder NYCEECs interact with the challenges inherent in low/moderate-resource neighborhoods to suppress classroom quality. This finding points to the need for careful targeting of support and resources for NYCEECs in lower-resource neighborhoods.

V.4.   Professional Development

Summary of Key Findings:

➢ **Administrator Views on PD for Teachers:**
   Administrators in both low/moderate and high-resource neighborhoods say their UPK teachers receive similar types of PD. Low/moderate administrators are less likely than high-resource administrators to rate the quality of teacher PD as high.

➢ **Teacher Participation in PD and Views on Content:**
   Teachers in low/moderate and high-resource neighborhoods are equally likely to participate in PD workshops, and to be paid for their time attending workshops. However, the content of both workshops and coaching differs somewhat, as well as the type of PD that teachers feel they need most.

➢ **Application of Teacher PD:**
   Administrators in low/moderate and high-resource neighborhoods are equally likely to oversee the application of PD among their teachers. However, administrators in low/moderate neighborhoods are less likely than those in high-resource

neighborhoods to have additional support in overseeing PD application from a member of their staff. Only about half of administrators in both neighborhood categories have a master teacher on site.

> **Administrator PD:**
> Administrators in low/moderate neighborhoods are less likely than those in high-resource neighborhoods to be offered one-time workshops or summer institutes or to report an increase in the amount of PD offered to them since the advent of PKA.

V.4.a. Administrator Views on PD for Teachers

> *Key finding:* Administrators in both low/moderate and high-resource neighborhoods say their UPK teachers receive similar types of PD. Low/moderate administrators are less likely than high-resource administrators to rate the quality of teacher PD as high. (*Table 56 in Appendix A*)

Low/moderate and high-resource administrators reported that their teachers received similar types of PD, and almost all administrators in both low/moderate and high-resource neighborhoods said that within their sites, all their pre-K teachers received the same types of PD (97.4% and 100% respectively). However, low/moderate administrators were less likely than high-resource administrators to rate the quality of teacher PD as high (75.0% vs. 100% respectively; p<.05).

V.4.b. Teacher Participation in PD and Views on Content

> *Key finding:* Teachers in low/moderate and high-resource neighborhoods are equally likely to participate in PD workshops, and to be paid for their time attending workshops. However, the content of both workshops and coaching differs somewhat, as well as the type of PD that teachers feel they need most. (*Tables 57 and 58 in Appendix A*)

Almost every teacher in both low/moderate and high-resource neighborhoods said they attended a PD workshop in the past year (96.0% and 95.0% respectively), and just over half of teachers in both categories said they had done so at least monthly (55.6% and 52.4% respectively). Similar percentages of teachers in both types of neighborhoods were also paid for their time in PD workshops (86.1% and 75.0% respectively).

However, the content of their PD and coaching varied somewhat (*Table 58 in Appendix A*). Teachers in high-resource neighborhoods were more likely than teachers in low/moderate neighborhoods to participate in PD focused on bilingual education (4.0% of teachers in low/moderate vs. 19.0% of teachers in high; p<.10). In contrast, teachers in low/moderate neighborhoods were more likely to participate in PD focused on lesson planning (40.0% of teachers in low/moderate vs. 14.0% of teachers in high; p<.05), and to receive coaching on lesson planning (51.0% vs. 24.0% respectively; p<.05).

Teachers also differed regarding what type of PD they felt they needed the most. One in five teachers in high-resource neighborhoods (19.1%) said they needed help differentiating

instruction for children with different cultures, languages, and/or special needs, compared to less than one in 20 teachers in low-moderate neighborhoods (4.4%; p<.10).

V.4.c. Application of Teacher PD

> *Key finding:* Administrators in low/moderate and high-resource neighborhoods are equally likely to oversee the application of PD among their teachers. However, administrators in low/moderate neighborhoods are less likely than those in high-resource neighborhoods to have additional support in overseeing PD application from a member of their staff. Only about half of administrators in both neighborhood categories have a master teacher on site. (*Table 59 in Appendix A*)

Administrators in low/moderate and high-resource neighborhoods reported different patterns in whom they rely upon for support in ensuring that PD is applied to teacher practice. Administrators in both neighborhood categories were likely to oversee teachers' PD application themselves (87.5% of low/moderate administrators and 76.5% of high administrators); most administrators in both neighborhood categories also reported having support from the UPK instructional coach in applying PD to practice (67.5% and 70.6% respectively). However, high-resource administrators were more likely to rely on another staff member to support PD application, while low/moderate administrators were unlikely to have this assistance (17.5% of low/moderate administrators vs. 47.1% of high administrators; p<.05).

Only about half of administrators in both neighborhood categories had a master teacher on site (47.5% and 52.9% respectively). In both neighborhood categories, this teacher was likely to serve as an advisor, consultant, mentor, and coach to teachers (68.8% of low/moderate sites that had master teachers and 50.0% of high-resource sites that had master teachers).

V.4.d. Administrator PD

> *Key finding:* Administrators in low/moderate-resource neighborhoods are less likely than those in high-resource neighborhoods to be offered one-time workshops or summer institutes or to report an increase in the amount of PD offered to them since the advent of PKA. (*Table 60 in Appendix A*)

Administrators in low/moderate neighborhoods were less likely than those in high-resource neighborhoods to report being offered one-time workshops or summer institutes (45.0% vs. 76.5% respectively; p<.05). Low/moderate administrators were also less likely to report an increase in the amount of PD offered to them since the beginning of PKA (22.7% of low/moderate administrators vs. 75.0% of high-resource administrators; p<.05).

VI. Framing Ideas and Policy Recommendations

From inception, the PKA initiative, like previous NYC early childhood initiatives, confronted an uneven structural landscape with program administration divided among city agencies. Cognizant of the obstacles and challenges presented by this extant landscape, the city tried to align program quality by providing PKA policy and standards documents to guide programs in all settings, building program capacity with differentiated PD, offering compensation incentives, assisting with teacher recruitment, and supporting site-level social work. The results of the analyses indicate that the city has much to be proud of in this regard. However, important differences in quality endure, perpetuating concerns regarding structural inequities and inefficiencies, with some favoring schools and some favoring NYCEECs.

The findings are particularly important to consider as the city moves forward to expand UPK for 3-year-olds and move ACS Early Learn contracts to the DOE. While consolidating administration of UPK and Early Learn contracts will likely create opportunities to increase program efficiency and alignment, it will not by itself remedy the obstinate structural divisions evident in the findings here. Child Care and Head Start sites will still need to juggle multiple program requirements, while issues of compensation, recruitment, retention, higher-need children, inadequate staffing, and workforce development will continue to roil the NYCEECs. Meanwhile, schools will continue to lack the breadth of services and bilingual instruction that many of their children and families require, and the hours of operation that parents' work schedules demand. Sites that are thus under-resourced to serve the needs of diverse children and families will not be able to produce the consistently high outcomes that the city seeks.

At the same time, the city's governance reforms create an extraordinary opportunity to craft inventive ways to implement a renewed vision for a unified system. In this evolving, challenging, and, we would emphasize, highly promising context, we propose five ideas to frame the city's policy thinking, followed by six areas of concrete policy changes to make UPK programs more equitable in their quality across settings, auspices, and neighborhoods, and to make the delivery of their services more efficient.

VI.1. Framing Ideas for Policy Recommendations

As the city considers policy changes to strengthen its UPK programs, the following ideas should frame its thinking.

➤ *Framing Idea #1*: Young children need more than pedagogically high-quality classrooms to learn and thrive. A "high-quality" program offers both exemplary pedagogy *and* the comprehensive services required to sustain children and families.
➤ *Framing Idea #2*: Lessons from the two-track system for UPK provision offer a path to higher-quality pedagogy *and* more comprehensive services.
➤ *Framing Idea #3*: The lower the income of children's families, or the more profound their needs, the more comprehensive and intense the services should be.
➤ *Framing Idea #4*: Achieving equal UPK outcomes requires different inputs that respond to site-level needs.

➢ *Framing Idea #5*: Program quality will meaningfully change only when teachers and administrators are involved in its planning.

These ideas support the conceptual basis for policy changes, described in several areas below, that would reflect an appropriately robust conceptualization of program quality, efficient targeting of resources to promote greater equity in the access that families have to truly excellent programs, and the authentic engagement of the administrators and teachers upon whom policy implementation depends. With these framing thoughts in mind, we offer below six sets of recommendations for PKA policy that are ripe for change:

1) A commission to build a unified UPK system
2) Equitable compensation
3) Quality pedagogy
4) Comprehensive services
5) Program leadership
6) Equitable enrollment distribution

We indicate the short-term (roughly 2-3 years) and/or long-term (roughly 3 or more years) nature of the policy recommendations and offer some implementation options for the city's consideration, many of which could be written into the city's RFP for PKA in 2020. Certainly, they are not all easy changes and need not be enacted all at once. Yet, by committing to their implementation, the city would nationally distinguish itself as a leader, not only in the number of children it serves, but also in the equity, quality, and efficiency of its services.

VI.2. Policy Recommendations

Recommendation #1: A Commission to Build a Unified UPK System

➢	***Create a commission to align program quality across UPK settings by identifying strategies to ameliorate the structural differences that persist between school and NYCEEC programs for young children.***
	Time frame: Short-term for establishing a commission, long-term for implementing its recommendations

To help bridge the structural gap between schools and NYCEECs, the city should create a commission with a circumscribed charge to address *structural* issues that hinder the quality, equity, and efficiency of the city's UPK programs. The commission should be: 1) composed of agency leaders, administrators, teachers, parents, and scholars; and 2) adequately funded and staffed to perform its work carefully and comprehensively within three to five years. Perhaps named the *Commission on the Structure of Early Childhood Education in New York City*, the commission would serve an advisory role and report to the mayor.

Commensurate with the findings in this report, the commission's charge would include assessing and addressing the following structural and functional components of UPK policy and the provision of specific policy guidance that would *apply to all UPK settings*:

- ➢ A comprehensive assessment of the financing needs of the UPK system and an inventive plan to meet them with durable and sufficient financing mechanisms
- ➢ A strategy to streamline funding, and the attendant demands of budgeting and cost-allocation, to reduce its complexities at NYCEECs
- ➢ An agenda to develop program leadership and provide administrators with the support they need to foster quality programs
- ➢ A plan to establish equitable compensation for teachers and administrators
- ➢ A plan to create a financially incentivized career ladder for teachers
- ➢ A staffing plan to support high-quality pedagogy
- ➢ A comprehensive child and family services plan, differentiated by community needs
- ➢ A system for common program performance standards and child assessments
- ➢ A comprehensive data system that chronicles the use of 3-K and UPK programs and the trajectory of child enrollees, linked to each child's ID
- ➢ An agenda to fund and engage the research community in ongoing analyses that are directly pertinent to UPK policy and provision
- ➢ An index of program quality that recognizes multiple measures of quality, including both classroom pedagogy and comprehensive services
    - o The index should serve as an accountability mechanism for the above components of the commission's mandate.

This is a broad and ambitious charge, and as such, would require adequate staffing and time. In each of these areas, the independent commission would span administrative boundaries and offer strategies to align program outcomes, recognizing the need for differentiated policies that bolster program assets and address program weaknesses. This transcendent approach could provide critical guidance to the city as it reorganizes the governance of UPK programs and strives for consistently high levels of quality.

Recommendation #2: Equitable Compensation

➢	***Establish equitable hourly wages for UPK teachers and administrators that apply to all settings and eliminate pay disparities for equal work.***
	Time frame: Short-term for increases in enhancement funding, long-term for union-contract negotiations and durable funding mechanisms

The findings indicate wide compensation disparities between schools and NYCEECs, for both administrators and teachers. We know that the city recognizes this issue and is conducting internal research on the nature and extent of compensation gaps, and that the city increased compensation for NYCEEC teachers in the 2016-20 labor contract between the Day Care Council of New York and District Council 1707 and Local 205. To further these efforts, we propose the creation of an equitable *hourly* wage that would apply to all UPK teachers, regardless of setting. Similarly, to recruit and retain a talented pool of program leadership, we propose the creation of an equitable *hourly* wage that would apply to all UPK administrators, regardless of setting. In contrast to the DOE's current "enhancement funding," which can be spent in several ways, the requisite investment would be targeted exclusively to pay increases. In the short-term, the city can increase this enhancement funding, and in the long-term, union

negotiations will provide the contractual basis for establishing an equitable wage structure. These long-term efforts will need to be supported by durable financing mechanisms.

Specifically, the DOE and ACS should consider establishing a UPK teacher wage and a UPK administrator wage that would be defined by per-hour metrics that adhere across all settings:

- Wage levels would vary according to teachers' and administrators' education, qualifications, years of experience, responsibilities (such as the number of children served), and continuing education units.
- Weekly teacher salaries could be determined by multiplying weekly contact hours with children by the hourly wage
- Weekly administrator salaries could be determined by multiplying the requisite hours per week they work by the hourly wage.

An alternative implementation strategy would be to set NYCEEC teacher UPK salaries to be equivalent to the UFT-negotiated annual salaries (based on qualifications and years of experience) that public school teachers receive for the 180-day school year, with additional stipends provided to teachers who work over the summer. Teachers in public schools seeking summer employment could then work in NYCEECs to earn additional funds, allowing NYCEEC teachers to take summers off if they so desire.

Implementing equitable wages would eliminate deleterious salary gaps between school-based and NYCEEC-based UPK teachers, but substantial challenges will remain. Most salient are persistent differences in teachers' and administrators' health insurance and retirement plans. In addition, increasing pay for UPK teachers will concurrently *widen* the salary gap with non-UPK teachers within their centers, a significant inequity that requires further attention and investment.[41] Addressing this problem will become harder to defer when DOE assumes responsibility for all Early Learn contracts, which cover all NYCEEC teachers of infants, toddlers, and preschool-age children. Devising a long-term plan for reconciling these compensation gaps should be a central component of the commission's charge.

Recommendation #3: Quality Pedagogy

➢	***Build workforce capacity for high-quality pedagogy in all settings by using needs-driven, intensive PD; preparing teachers to teach culturally and linguistically diverse children; building career ladders for teachers; promoting successful kindergarten transitions for children; and guaranteeing that all teachers have adequate time to develop reflective practice.***
	Time frame: Short- and long-term options, as noted below

The city's effort to develop its UPK workforce requires a more customized approach to assure the efficient use of resources and foster quality pedagogy across all settings. We suggest five areas of priority in this regard:

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[41] McLean, Dichter, & Whitebook (2017).

✓ **1. Tailor more intensive PD to the needs of teachers and administrators in both settings by engaging teachers and administrators in determining the type, content, and frequency of their PD and devote more resources to increase PD participation and frequency. (short-term)**

Despite the city's efforts to differentiate its PD by site-level needs, the findings indicate frequent misalignment between what administrators and teachers receive and what they say they need. The findings also indicate that the intensity of PD affects whether it leads to actual changes in teacher practice. Finally, some NYCEEC administrators lack adequate coverage to allow their teachers to attend PD. To improve both the efficacy and efficiency of the PD that administrators and teachers receive, the DOE and ACS should consider the following policy ideas and implementation strategies to: a) engage teachers and administrators in planning the PD they need; and b) devote more resources to increase PD participation and frequency.[42]

a) *Engage teachers and administrators in planning the PD they need.*

- Reconfigure the beginning-of-year needs assessment for teacher PD to design more comprehensive and customized plans for targeted support, integrating:
  - Teachers' own preferences for PD type (e.g., workshops, coaches, professional learning communities, content, and frequency);
  - Initial observations by the UPK instructional coach and site administrators; and
  - Percentage of children who have special needs and who speak languages other than English at home.
- Allow teachers to choose their own instructional tracks, and to change instructional tracks as their needs change, in consultation with their UPK instructional coach and administrator. In addition to engaging teachers in their own PD planning, allowing teachers within sites to participate in different tracks may create opportunities for informal learning among UPK teachers.
- Expand the menu of instructional tracks to give teachers more choices for their PD content and allow for smaller trainings that will be more meaningful for teachers.
- Create an end-of-year self-evaluation for teachers to assess their PD needs, how well they were met, and how well they felt they applied what they learned to their practice. This evaluation should be used to inform future decisions regarding individualized teacher PD. Other countries offer models for how to systematically engage teachers in PD planning.[43]
- Conduct a rigorous survey of administrators to discern the format and content of PD that will best support site leadership.
- Engage administrators in a beginning-of-year individual assessment of the type, content, and frequency of the PD that they need.
- Develop and offer a new content-based workshop series for administrators, aligned to administrator needs and interests to encourage attendance, engagement, and utility.

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[42] See for example: Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, Published online; DOI: 10.3102/00346554318759268.

[43] Kagan, S. L. (Ed.) (2018). T*he early advantage: Early childhood systems that lead by example*. New York: Teachers College Press.

b) Devote more resources to increase PD participation and frequency.

- Guarantee that all UPK classrooms have adequate coverage to allow teachers to attend all DOE PD workshops, rather than leaving it to site discretion and funding availability. This would require that NYCEECs lacking such coverage should receive funding to hire more staff, such as additional assistant teachers, aides, or "floaters."
- Create a pilot program for training master teachers, which should include intensive consultation with experienced UPK instructional coaches. Master teachers-in-training could shadow UPK instructional coaches during site visits, and should be provided with corresponding PD opportunities, along with a stipend to incentivize participation. By building capacity for coaching at the site level, master teachers could help fulfill the goals of providing more frequent *and* more individualized coaching to UPK teachers.
- Create opportunities for teachers to participate voluntarily in ongoing communities of practice with peer UPK teachers within and beyond their sites.
- Increase access to dedicated coaching/mentorship support for all UPK administrators, and particularly for NYCEEC administrators in low/moderate neighborhoods, and for those who seek more intensive coaching.
- Create opportunities for administrators to voluntarily participate in ongoing communities of practice with peer UPK administrators outside their sites.
- Increase the frequency of coaching across all sites, and particularly in NYCEECs, to be at least monthly and up to weekly for sites and teachers who need more support, and particularly for teachers who seek more intensive coaching.
- Increase the frequency of coaching for administrators across all sites, and particularly in NYCEECs, to be at least every other month and up to weekly for sites that need more support.
- Devote resources to increase the number of UPK instructional coaches to reduce their caseloads and allow them to concentrate their efforts in fewer sites.

✓ **2. Meet the pedagogical needs of culturally and linguistically diverse children in all settings. (short-term)**

The findings indicate that despite equal levels of bilingualism between school and NYCEEC teachers, school teachers are less likely than NYCEEC teachers to use their bilingual capacities when teaching their children. Moreover, while school teachers are more likely than NYCEEC teachers to get coaching on cultural diversity, NYCEEC teachers are more likely than school teachers to say they need PD on differentiating instruction to children with diverse cultural and linguistic backgrounds. These findings suggest that determining ways the city could do more to foster quality pedagogy requires careful attention to the cultural and linguistic differences that affect how children learn, regardless of where they attend UPK. For example, the DOE and ACS should consider the following policy ideas and implementation strategies:

- Provide PD (both workshops and coaching) that will build bilingual teaching capacity, particularly in schools where such capacity is lacking.
- Provide funding for teachers who seek certification in bilingual instruction.

- Reinstate the instructional track to support culturally responsive teaching, which should develop teachers' ability to adapt their practice to the cultural backgrounds of their students and to build equitable communities of learners in diverse UPK classrooms.
- Issue an advisory statement for all UPK sites regarding teachers' use of home-language instruction in their classrooms.
- Provide PD that attends to children's social-emotional development in varied cultural contexts.[44] This type of PD is particularly important because cultural differences in children's emotional expression and behaviors may be misunderstood by teachers as disciplinary challenges.

✓ **3. Promote children's successful transitions to kindergarten across all settings. (short-term with the exception of the long-term creation of a secure data system)**

The findings indicate that both schools and NYCEECs understand the importance of smooth and coherent transitions from UPK to kindergarten, and that NYCEECs in particular undertake impressive efforts to support their children's progression as they disperse among multiple schools. With UPK now present in almost every public elementary school citywide, the DOE can explore innovative ways to strengthen these efforts in a coherent P-12 system. In particular, the DOE and ACS should consider the following policy ideas and implementation strategies:

- Create a data system that seamlessly transfers formative assessment data from 3-K teachers to UPK teachers, and from UPK teachers to kindergarten teachers, in order to foster transitions from one year to the next. This will likely require more long-term efforts to assure both the system's efficacy and its security.
- Fund and coordinate joint PD for UPK, kindergarten, and 1st grade teachers. For example, some of the UPK PD days could be coordinated with Early Learn PD days to allow for joint workshops that include both NYCEEC and school teachers.
- Assess the alignment of the multiple curricula used by UPK sites and elementary schools to assure that alignment exists for children as they traverse 3-K, UPK, kindergarten, and first grade. This analysis could be conducted in the short-term and should not imply that the curriculum must be precisely the same, but rather that the content areas should be similar and learning progressions should be developmentally sequenced and appropriate irrespective of the chosen curriculum.
- Create and fund the position of transition coordinator in schools, who would work with all UPK programs (school-based or NYCEEC-based) that are serving their incoming kindergartners. This person could:
  - Design and execute individual transition plans.
  - Foster and sustain relationships between NYCEECs (and schools) and the elementary schools that their children attend for kindergarten.
  - Lead collaborative efforts with schools to align pedagogy, curriculum, and content from 3-K to 3rd grade.

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[44] Preliminary data from 36 PKA sites suggests that administrators and teachers receive more support in general social-emotional development than in culturally responsive practices, though these constructs are inextricably linked. Source: Lamb-Parker, F., & Smith, S. (forthcoming). *Linking Social Emotional Development to Culturally Responsive Practice in Pre-K Settings: An Examination of Diversity and Inclusion as a Lever for Change*. To be presented at the 2018 Annual Meeting of the American Educational Research Association, New York, NY.

> o   Lead collaborative efforts between NYCEECs and schools to conduct joint PD workshops and coaching with 3K, pre-K, and K-3 teachers.

✓ **4. Develop a career ladder for teachers that applies in all settings. (short-term for mentor teachers; long-term for incentivized career ladder)**

The findings indicate that qualified teachers are leaving NYCEECs to pursue jobs in schools that pay more for fewer working hours. To help develop and retain teaching talent in NYCEECs, the city should build a career ladder that adheres across all settings. Often done in other countries, this would guide the professional trajectories of UPK teachers and reward them for pursuing advancement. While future negotiations will provide the contractual basis for a system-wide career ladder with financial incentives, the DOE and ACS can begin now with the following steps:

- Use the wage ladders included in the current UFT and DC 1707 contracts that reward teachers who seek additional education (beyond their BA) and credentials (beyond state certification) as a starting framework for a UPK career ladder that provides teachers with a path toward increased responsibility and compensation within sites.
- Create UPK-wide job titles, such as assistant teacher, lead teacher, senior/mentor teacher, and education/program director. These jobs should be defined by increasing qualifications, compensation, and responsibility for tasks such as nurturing teaching quality, leading collaborative teams, programming leadership, and program management. In the short term, the city could create the mentor teacher position described above. In the long term, these UPK-wide jobs could be embedded in union contracts.
- Provide funding to support salary increases that correspond with these UPK-wide jobs.[45] The city can draw upon similar career-track innovations in countries such as Australia and Singapore, which offer exemplars of such ladders for the entire early care and education workforce irrespective of their funding source or program setting or auspice.[46]
- Integrate these career ladders into DOHMH policy related to the enforcement of Article 47, to promote their consistent application across sites.

✓ **5. Guarantee that all teachers have adequate time to develop reflective practice. (short-- term)**

The findings indicate that NYCEEC teachers are less likely than school teachers to have adequate prep time, which is an important mechanism for allowing teachers to review assessment data, prepare lessons, and engage in reflective practice.[47] While teachers in public schools are guaranteed five preparation periods each week, NYCEEC teachers enjoy no such guarantee.

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[45] To coordinate with prior efforts, the rungs of the ladder could also correspond with the qualification levels defined in the New York State Early Childhood Career Ladder
https://www.nyworksforchildren.org/Portals/0/NYS%20Early%20Childhood%20Career%20Ladder.pdf.

[46] Kagan, S. L. (Ed.) (2018). T*he early advantage: Early childhood systems that lead by example*. New York: Teachers College Press.

[47] Jay, J. K., & Johnson, K. L. (2002). Capturing complexity: A typology of reflective practice for teacher education. *Teaching and Teacher Education, 18*, 73-85.

Specifically, to establish equity in this important component of quality pedagogy, the DOE and ACS should:

- Guarantee that *all* NYCEEC teachers have five dedicated, out-of-classroom preparation periods each week. Provide the necessary coverage so that this occurs consistently. Again, this would require that NYCEECs lacking such coverage should receive funding to hire more staff, such as assistant teachers, aides, or "floaters."
- Inscribe this guarantee in the 2020 RFP for new contracts.

Recommendation #4: Comprehensive Services

➤	***Build program capacity in all settings to serve the multiple needs of all children and families.***
	Time frame: Short-term

The findings suggest that many administrators in both settings have inadequate staffing to attend to the myriad needs of their children and families. Additionally, UPK teachers in both settings describe the challenges of teaching effectively to address the social-emotional and behavioral challenges among their children. Sites that serve the highest number of high-need children should receive the most intensive support in this regard. To address these resource deficits, the DOE and ACS should consider the following policy ideas and implementation strategies:

- Reconfigure the social worker's job to be more effective and efficient. The job could:
  - Be more precisely defined to help teachers with behavioral issues in the classroom, in addition to working with families.
  - Be more precisely defined to help families get the community-based services they need, particularly in schools where services are less commonly provided on site.
  - Be more precisely defined to support families' engagement in their children's learning. Reaching out to families that are working, stressed, and distracted requires resources that many programs, especially NYCEECs, do not have.
  - Be more intensive. Hiring additional social workers to reduce caseloads would allow each social worker to devote more time at each site.
- Support all sites, and especially schools, in identifying a list of partners within their communities to whom they can refer parents or who can provide services that their children and families require, including critical health and medical services for children. This would require more funding to support the school-based or community-based provision of services to UPK children and their families. To implement this strategy, the DOE and ACS could:
  - Allow the site-level social worker, as re-conceptualized above, to support administrator efforts to forge and sustain these relationships, by working with service providers directly to assure that children and families are accessing the individualized services they require.

- o   Expand funding for community schools that provide UPK and consider keeping all schools that offer 3K/UPK open as day-long and year-round hubs of community resources.

Recommendation #5: Program Leadership

➢	***Provide additional administrative support, particularly to NYCEEC administrators, to assure that they have adequate time and resources to exercise effective program leadership.***
	Time frame: Short-term

The findings indicate that many administrators in both settings, and particularly those in NYCEECs, are highly stressed and stretched thin. While city policymakers cannot eradicate all the stresses from a job that is inherently demanding, they can take steps to assure that all administrators have the support and resources they require to do their jobs successfully. Given the results that indicate administrative demands and staff shortages are more acute at NYCEECs, this policy area represents a prime example of where different inputs are required to sustain equitable outcomes. To serve a higher-need population, particularly in low/moderate-resource neighborhoods, some NYCEECs may need more funding and staffing than their school counterparts to run a high-quality program that effectively serves their children and families.

Several of the policy recommendations (and corresponding implementation strategies) above will advance this goal: the reconfiguration of the social worker position, increased staffing to provide coverage for absent teachers, greater support for time-consuming transition efforts, increased resources for comprehensive services, and individualized PD for administrators. Additionally, the DOE and ACS should consider the following policy ideas and implementation strategies:

- • Simplify the UPK and Early Learn contracting process so as to reduce its complexities. Moving Early Learn contracts to the DOE offers a rare opportunity to do so.
- • Provide adequate budgeting support for administrators to reduce the number of hours they must devote each week to budgeting and cost allocation. This policy could be implemented by providing funding for additional budgeting staff, providing access to budgeting consultants who work with multiple sites, and/or offering individualized PD on how to budget and allocate costs when meeting multiple program requirements.
- • Conduct a needs assessment of the location of programs across the city, how well they meet the needs of families in their area, and where to open new programs to reflect an efficient use of scarce resources. The results could be used in the 2020 contracting process to foster a more efficient distribution of resources by reducing excess capacity and mitigating the extent to which administrators spend time struggling to fill slots.

Recommendation #6: Equitable Enrollment Distribution

➢	***Create opportunities to reduce the concentration of high-need children, particularly in NYCEECs.***
	Time frame: Short-term

The findings indicate that NYCEECs serve a higher-need population of children. This finding is not surprising, given the income eligibility requirements that characterize the Child Care and Head Start programs. Nonetheless, the research literature indicates that when higher-need children are concentrated in UPK settings, promoting and sustaining quality becomes more difficult.[48] The results indicate that NYCEECs in low-resource neighborhoods are particularly challenged in this regard, as they confront the double disadvantage of serving a high concentration of high-need children and families in an under-resourced neighborhood. The city is taking steps to ameliorate this concentration and should expand its efforts. To promote more economically diverse sites, the DOE and ACS should consider the following policy ideas and implementation strategies:

- Strengthen the UPK enrollment system to facilitate parent choices that promote more diverse programs. By allowing parents to register their preferences among sites across the city, the enrollment process has the potential to transcend the residential segregation that constrains efforts to diversify K-12 classrooms. For example, the DOE and ACS could:
  - Assure that parents have easy access to information about programs outside their neighborhood, on paper, online, or through UPK recruiters. Because some parents indicate that they prefer UPK programs where their children can stay for kindergarten, they could be willing to go outside their neighborhood for UPK programs that allow them to do so. Others might choose UPK programs that are close to their place of work, which may be outside their neighborhood.
  - Assure that UPK-only families are given the option of enrolling at NYCEECs that might otherwise focus solely on income-eligible families.
- Encourage NYCEECs to recruit UPK-only children and guarantee adequate funding to do so. This strategy could be most useful in sites that are having difficulty filling their seats.
- Encourage Head Start sites to use the federal allowance to have up to 10% of their enrollees be children living above the poverty line; programs may also serve an additional 35% of children from families with incomes between 100% and 130% of the poverty line, as long as all eligible families below the poverty line have been served.
- Expand the city's pilot program to promote diversity in UPK programs by increasing the number of schools that give priority enrollment to children who are FRP-lunch recipients, DLLs, in the child welfare system, and/or affected by incarceration. Schools in high-resource neighborhoods should practice such priority enrollment.
- Expand kindergarten capacity in schools where inadequate space prevents UPK children from staying after UPK. School administrators say that capacity constraints mean they lack enough kindergarten slots to allow children who attend their UPK programs from outside their district to stay for kindergarten. Out-of-district children may be a source of economic diversity when they cross district lines that demarcate residential segregation.
  - The 2020 contracting process presents an opportunity to consider such capacity needs and can be informed by the city-wide needs assessment described above.

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[48] Reid, J. L. (2015). The racial and ethnic composition of pre-kindergarten classrooms and children's language development, *Pennsylvania State Law Review*, *119*(3), 645-685; Reid, J. L., & Ready, D. D. (2013). High-quality preschool: The socio-economic composition of preschool classrooms and children's learning, *Early Education and* Development 24(8), 1082–1111; Weiland, C., & Yoshikawa, H. (2014). Does higher peer socio-economic status predict children's language and executive function skills gains in prekindergarten? *Journal of Applied Developmental Psychology, 35*, 422-432.

VI.3. Other Ideas for Consideration

Recognizing the city's dedicated pursuit of policies that equitably serve its children and families, we offer the following additional ideas for consideration. While these ideas do not directly emanate from the findings presented here, they could nevertheless support the city's efforts to create a quality, equitable, and efficient system for UPK provision. The city could consider:

- Moving oversight of kindergarten into the DOE's Division of Early Childhood Education (DECE) to foster smooth transitions, sustained cross-site collaborations, and cohesive pedagogy and practice between 3-K, UPK, kindergarten, and the early elementary grades. The city is already taking a step in this regard by consolidating its 3K/pre-K and K-2 literacy coaches in the DECE.
- Extending UPK services beyond the 180-day school year. Children's learning and parents' need for high-quality child care do not end when school is out.
- Subsidizing public transportation for parents who want to enroll their children in UPK centers outside their immediate neighborhoods. Doing so would enhance parent choice of UPK programs and foster the creation of more diverse UPK programs by allowing parents to attend programs beyond the confines of neighborhoods that are homogenous in race/ethnicity and/or income levels.

VI.4. Conclusion

New York City has much to be proud of in its ambitious launch and implementation of the PKA initiative. The city is also to be commended for supporting efforts in the research community to mount a series of studies that will shed light on these accomplishments and render suggestions for future improvement. The recommendations offered in this study will likely be among the most difficult to implement in that they challenge decades of conventions and schisms between the care and early education communities. Having noted the inherent difficulties in overcoming deeply entrenched structural divide, this study points out distinctions, some of them very positive, that should be fully understood as the UPK expansion continues to unfold. It is to that understanding, and to the cause of improving the quality of services for all young children, that this work is dedicated.