

Cincinnati Preschool Promise (CPP) exists to ensure that preschool is accessible and affordable for families in the Greater Cincinnati area. CPP offers tuition assistance for families, quality improvement grants for child care providers, and cost-of-quality wages for teaching staff. To better understand the impact of Cincinnati Preschool Promise, a supplemental evaluation to gauge kindergarten readiness was completed for children who received tuition assistance to attend quality rated CPP preschools.

Cincinnati Preschool Promise Sample for Year 1

CPP tuition assisted (TA) preschool providers served a total of 1,341 children during 2017-18. Among these children, 693 met the age cutoff for the 2018-19 kindergarten class (i.e., were at least five years of age by September 30, 2019). Of this group of kindergarten eligible participants, 411 CPP TA participants were matched to Cincinnati Public Schools (CPS) Kindergarten Readiness Assessment (KRA) scores. This linkage with CPS records allowed for additional demographic data to be acquired and carefully examined including gender and race/ethnicity. In addition, socioeconomic characteristics were estimated for 410 CPP TA participants through a partnership with the Community Building Institute (CBI) at Xavier University. The sample of 410 children with complete records was used for all subsequent analyses.

SES Quartiles – The Geocoding Process

Socioeconomic characteristics were provided by CBI for all recipients of the KRA in CPS in 2018-19, including the CPP TA participants. CBI geocoded student home addresses to determine their neighborhood of residence. Neighborhoods were categorized by CBI into socioeconomic status (SES) quartiles ranking from 1 to 4, where lower ranked neighborhoods have a larger concentration of families with socioeconomic risk factors as measured by the American Community Survey. The quartiles are described as follows by the accompanying literature (The Social Areas of Cincinnati, An Analysis of Social Needs, 5th Edition by Michael Maloney and Christopher Auffrey): SES 1 (High Problem Areas), SES 2 (Second Stage Neighborhoods), SES 3 (Where Front Yards Begin), and SES 4 (The Upper Quartile). The risk indicators used to rank neighborhoods are based on median family income, percent of adults with a bachelor's degree or higher, poverty rate, unemployment rate, SNAP eligibility rate, and the percent of families headed by a single parent.

Though SES quartiles are a strong proxy for socioeconomic and social factors, experiences may still differ between children who live within the same quartile (e.g., parent education, number of parents in household, family income etc.). Differences in may be attributed to the SES quartile being based on the general socioeconomic makeup of the neighborhood of residence, rather than the individual socioeconomic circumstances of each child. Therefore, caution is necessary when interpreting SES quartiles.

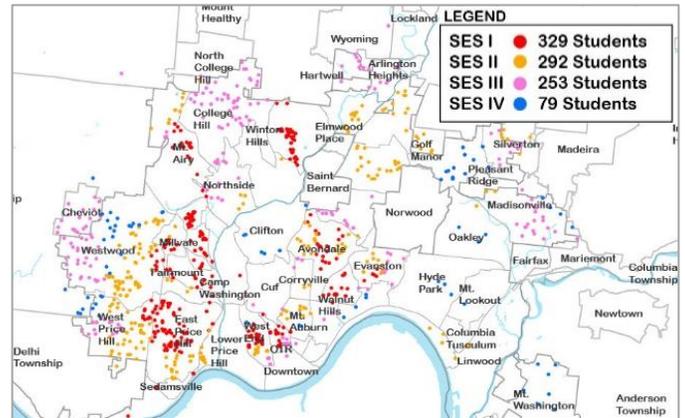


Illustration provided by Community Building Institute containing 953 geocoded CPP tuition assistance participants plotted and color-coded by SES quartile. Geographical data courtesy of CAGIS 2019, Innovations, and The Social Areas of Cincinnati, An Analysis of Social Needs, 5th Edition by Michael Maloney and Christopher Auffrey.



CPS Kindergarten Comparison Group

To assess the impact of CPP on academic performance in kindergarten, a comparison group was selected from a pool of CPS kindergarteners administered the KRA in 2018-19 and no documented participation in CPP TA. Kindergarteners that did not participate in CPP TA, but did have other documented CPS or Head Start preschool experience were excluded from the selection pool. The comparison group comprised of 820 CPS kindergarteners without CPP TA from the selection pool that were matched to the 410 CPP TA participants on gender, race/ethnicity, and SES quartile. The method used was a proportionate stratified random sample where the demographics of the comparison group are identical in proportion to that of the CPP TA participants. For every one CPP participant, there are two individuals with identical demographic characteristics selected randomly from the comparison group (a 2:1 match). For instance, if a CPP participant is female, black/African-American, and in the third SES quartile, then two individuals with identical gender, race/ethnicity, and SES quartiles are randomly selected from the selection pool and placed into the comparison group.

The gender, race/ethnicity, and SES quartile percentages of the two groups are identical and can be viewed in Table 1. This collection of kindergarteners were 76.3% black/African-American, much greater than the percentage of black/African-American students in the 2018-19 KRA cohort, overall (60%). Nearly 90% of the observed students fell between SES quartiles 1-3, with only 10.2% in SES 4 neighborhoods (i.e., high income and low risk neighborhoods).

Table 1. Demographic Characteristics

Demographics		CPP TA Participants (N=410)	Comparison Group (N=820)
Gender	Female	49.0%	49.0%
	Male	51.0%	51.0%
Race	Black/African-American	76.3%	76.3%
	White	12.9%	12.9%
	Hispanic	4.4%	4.4%
	Asian	1.0%	1.0%
	Multi-Racial	5.4%	5.4%
SES Quartile	SES 1	31.0%	31.0%
	SES 2	30.2%	30.2%
	SES 3	28.5%	28.5%
	SES 4	10.2%	10.2%

Overview of 2018-19 KRA Performance

CPP TA participants scored higher on average on the overall KRA and language and literacy subtest. Eighty percent of CPP TA participants scored either within the approaching or demonstrating performance level on the KRA as opposed to 68.8% of the comparison group – an 11.2 point difference (Fig 1). Likewise, 68.8% of CPP TA participants met the “on-track” status on the Language and Literacy subtest (i.e., scoring at or above a scaled score of 263). This percentage is greater than the comparison group’s (53.4%) by 15.4 points (Fig 2).

At Year 1, CPP TA is exhibiting measurable benefits to participants entering CPS kindergarten compared to their peers. These findings are also heightened by the controls put in place to reduce biases introduced by gender, race/ethnicity, and socioeconomic factors.

Fig. 1. CPP Overview: Overall 18-19 KRA Performance Levels by Group

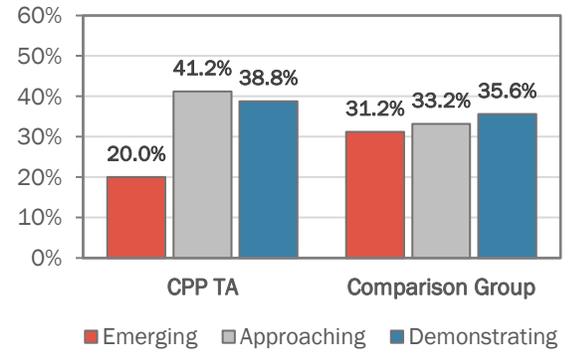
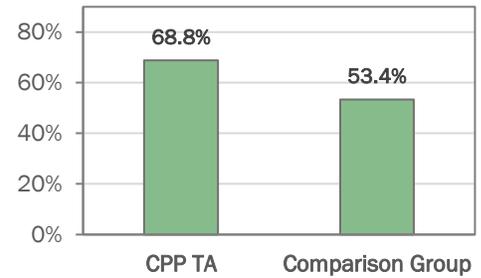


Fig. 2. CPP Overview: Percent “On-Track” on 18-19 Language and Literacy Subtest



CPP Impact by Socioeconomic and Social Factors

Figures 3 and 4 illustrate academic benefits as measured by the KRA within SES quartiles 1-3. CPP TA participants scored within either the approaching or demonstrating performance level on the overall KRA at greater frequency than the comparison group by 14.1 points for SES 1, 12.9 points for SES 2, and 10.7 points for SES 3. Similarly, CPP TA participants were “on-track” on the Language and Literacy subtest more frequently by 15.0 points for SES 1, 23.0 points for SES 2, and 13.7 points for SES 3. Within SES 4, KRA performance varied very little between groups and this may be due to other, undocumented predictors of academic achievement that were not available for this analysis such as other community pre-k experiences or differences in family income, education, and occupation. An interesting finding is that for both the KRA overall and Language and Literacy subtest, SES 1 CPP TA participants performed, on average, comparably to SES 3 students within the comparison group.

Fig. 3. SES Quartiles: Percent Approaching or Demonstrating Readiness in 18-19

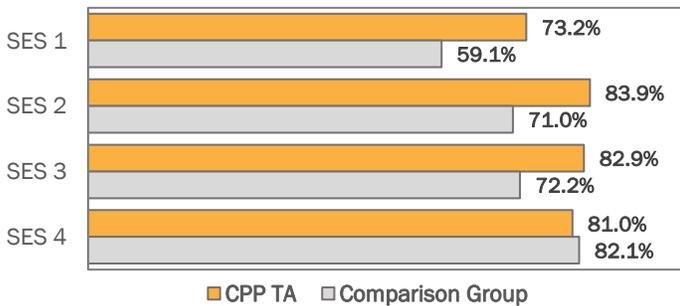
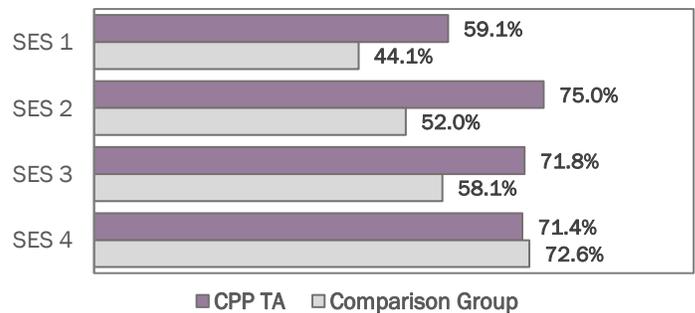


Fig. 4. SES Quartiles: Percent “On-Track” on 18-19 Language and Literacy Subtest



Summary

KRA scores for 410 CPP TA participants were compared to a comparison group of 820 non-CPP TA participating peers matched on gender, race/ethnicity, and socioeconomic characteristics:

- CPP TA participants show stronger academic readiness in kindergarten than non-participating peers.
- CPP TA programs have improved school readiness in children living in SES 1-3 neighborhoods.
- The improvements in school readiness for children in SES 1 and 2 are even more pronounced than for children in SES 3 which demonstrate the effectiveness of CPP TA programs in the most high-needs neighborhoods.
- CPP has demonstrated the impact that quality preschool has on school readiness throughout the CPS district.