

Trends in School Readiness and the Effect of PGPCS Prekindergarten Participation, 2015 through 2017

EXECUTIVE SUMMARY

Having expressed the singular goal of Prince George’s County Public Schools (PGCPS)—“Outstanding Academic Achievement for All Students”—begins with ensuring all students enter school ready to learn, district leaders and early childhood program officers were curious to know how well incoming kindergarteners had been prepared for school and whether participation in a PGPCS prekindergarten (pre-K) program impacted school readiness. Within this context we developed the following research questions:

1. *What is the trend of school readiness among first-time kindergarten entrants in PGPCS from SY2015 through SY2017?*
2. *To what extent does school readiness vary across different demographic groups?*
3. *To what extent does participation in different PGPCS pre-K programs impact school readiness for first-time kindergarten entrants?*

The data needed to complete this study were obtained from testing results available from the Department of Testing, Research, and Evaluation (DTRE) and the Office of Early Childhood Education. Enrollment data for the years considered in this study were provided by the Information Technology (IT) department. Specifically, we utilized Kindergarten Readiness Assessment (KRA) results from SY2015 through SY2017 and pre-K and Head Start enrollment files from SY2014 through SY2016.

To address the first research question, we used descriptive statistics to report the changes in school readiness over the three cohorts of first-time kindergarten entrants included in this study. The second research question was answered by disaggregating the school readiness measures for selected socio-demographic subgroups. To answer the third research question, we used the potential-outcomes estimation framework of the Average Treatment Effect (ATE) model, a quasi-experimental research design, to determine the impact of PGPCS pre-K program participation on school readiness.

School Readiness, SY2015 to SY2017

The findings showed that readiness for school among kindergarteners was higher in SY2016 compared with the previous baseline year. In SY2016 the district school readiness rate increased to 38.3% from 34.4%, a growth of 3.9 percentage points. In SY2017, however, the

district school readiness rate decreased to 34.3%, a decline of 4 percentage points. Compared to the baseline year of 2015, the percentage of school-ready students in 2017 is the same as 2015.

The findings also show that there are persistent gaps in school readiness among different socio-demographic groups. Male kindergarteners demonstrate lower rates of readiness in comparison to their female peers. Incoming kindergarteners who are Hispanic, English Language Learners (ELLs), come from poor families, or require special education services start school less prepared than students without those socio-demographic characteristics.

Prekindergarten experiences and Kindergarten Readiness, SY2015 to SY2017

The findings from the treatment effect analysis suggest that participation in a PGcps pre-K program would result in higher school readiness rates relative to non-participation in any PGcps pre-K program. The program effect of participating in PGcps pre-K on school readiness was 9.8, 12.1, and 16.4 percentage points, for the SY2015, SY2016, and SY2017 cohorts of incoming kindergarteners, respectively. For example, the SY2015 kindergarten cohort had a school-readiness rate of 34.4%; the model suggests that had the non-participants also been enrolled in a PGcps pre-K program for the school year immediately preceding kindergarten entry, the SY2015 readiness rate would have been 39%. Had all of the SY2016 incoming kindergarteners been enrolled in a PGcps pre-K program, the percentage of PGcps kindergarteners demonstrating school readiness would have been 44%; for SY2017 the readiness rate would have been 41.4%. Comparatively, the school-readiness rate among incoming kindergarteners across the state of Maryland was 47% for SY2015, 45% for SY2016, and 43% for SY2017. Thus, universal participation in a PGcps pre-K program among PGcps first-time kindergarteners would have resulted in their demonstrating readiness for school close to the state average for SY2016 and SY2017. Alternatively, if none of the students in the kindergarten cohorts had attended pre-K in PGcps the percent demonstrating readiness would have been 29.2, 31.8, and 24.7 for SY2015, SY2016 and SY2017, respectively. Therefore, we conclude that PGcps pre-K programs do a better job of preparing children for school than other pre-K settings experienced by incoming PGcps kindergarteners.

The findings further suggests that participating PGcps full-day pre-K or Head Start programs results in a higher school-readiness rate when compared to participating in PGcps half-day pre-K program. Specifically, we estimate that the school-readiness rate among incoming PGcps kindergarteners who attended PGcps pre-K programs would be higher by 6 to 7 percentage points had all students participated in full-day pre-K or Head Start programs

relative to participating in the half-day pre-K program. The conclusion, therefore, is that PGCPs full-day pre-K and Head Start programs are better than half-day programs at preparing children for school.

Recommendations

Determine the lasting effect of PGCPs pre-K education. Even though we determined that participation in a PGCPs pre-K program is associated with an increase in the school-readiness rate, it may be that kindergarten helps the not-yet-ready students to catch-up with their *already-ready* peers so that they are comparably prepared for first grade. Therefore, we recommend that we continue to follow these cohorts of kindergarten entrants over the first few years of elementary school in order to study and analyze their academic performance and its relationship, if any, to their pre-K preparation.

Conduct an analysis to determine the size of the investment necessary to increase the school-readiness rates. Using budget data and other sources of cost data, we could estimate the financial costs associated with meeting the district's school-readiness rate goals. It is only when we have a complete picture of the costs needed to realize the sought-after benefit that sound policy decisions about expansion of early childhood education can be made.