

# Diversity in DC Public Charter Schools



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DC Public Charter School Board



There is considerable discussion about the benefits to students from all races attending diverse schools. The benefits cited by advocates that support diverse schools include “fostering tolerant adults and good citizens”<sup>1</sup>. These advocates cite national studies that have found that diverse schools improve academic results for students from all socio-economic and demographic backgrounds<sup>2</sup>.

DC has been widely recognized for its strong public charter schools. The purpose of this study was not to determine whether diverse or non-diverse school are better. It is clear that the district has outstanding diverse and non-diverse charter schools. Indeed, of the 22 Tier One schools in 2014, eight were diverse and 14 were non-diverse, as defined in this study. What this study sought to determine was whether any statistical conclusions could be drawn from DC’s charters about diverse and non-diverse schools.

DC PCSB looked at the results of DC’s public charter schools to determine the impact in DC of diverse schools in three areas:

- student proficiency,
- year to year academic growth of individual students (measured by median growth percentile – or MGP<sup>3</sup>), and
- the likelihood of being suspended from school.

It is important to note that our analysis did not attempt to assess many of the less-measurable benefits that are posited for diverse schools, such as greater tolerance and a better ability for students to live, study, and work with others from different backgrounds.

It is also important to note that our sample sizes are relatively small, and that school performance varies from year to year. National studies on the impact of diverse schools, because they draw on a larger sample, are likely more reliable in describing the broader impacts of diverse schools.

In our study, we conducted two separate analyses. The first compares diverse versus non-diverse schools. The second study looks at results within diverse schools and seeks to determine whether the percentage of whites in a diverse school changes outcomes for students of different races.

## **1. Study of Diverse vs. Non-Diverse School**

In the first analysis, we asked whether African American, Hispanic, White and “at risk”<sup>4</sup> students have different outcomes at “diverse” school as opposed to “non-diverse” schools.

In this first analysis “diverse schools” are those which are less than 80% African American. (African American’s make up 83% of all DC public charter school students.) Of the 112 public charter schools in 2014-15, 35 are “diverse” under this classification. However the study only included schools where more than 25 students took the DC CAS standardized test in the 2011 - 14 academic years. Thus the number of schools studied was 87, 60 (69%) of which were categorized as non-diverse and 27 (31%) were categorized as diverse.

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1 For an excellent review of the benefits of diverse schools, see Kahlenberg and Potter: “Diverse Charter Schools”, May 2012, published by the Century Foundation and the Poverty and Race Research Action Council.

2 See e.g., Mark Berends and Roberto V. Penaloza, “Increasing Racial Isolation and Test Score Gaps in Mathematics: A 30-Year Perspective,” *Teachers College Record* 112, no. 4 (2010): 978-1007. See also the “Research Briefs” series published by the National Coalition on School Diversity, [www.school-diversity.org](http://www.school-diversity.org).

3 Median growth percentile determines the median growth rate from year to year of a school’s students, with each student’s growth compared to a cohort of students with the same test results in the previous year. The average MGP result for DC schools is 50. Scores higher than 50 indicate that students, on the whole, made more year to year academic gains than at the typical school.

4 DC defines an “at risk” student as one who is homeless or in the foster care system, whose family receives food stamps (SNAP or welfare (TANF) payments, or who is a year or more behind in high school.

In this first analysis we found the following:

### **African American Students**

- African American students **showed statistically significantly higher proficiency rates in both reading and math** at diverse schools than at non-diverse schools.
- There was no statistically significant difference in African American students' year to year academic growth between diverse and non-diverse schools.
- African American students were **significantly less likely to be suspended** at diverse schools than at non-diverse schools.

### **Hispanic Students**

- There was no statistically significant impact between diverse and non-diverse schools in student proficiency rates, student growth<sup>5</sup>, or student suspension rates.

### **White Students**

- Due to the absence of sufficient White students at non-diverse schools we were unable to determine whether there was a difference in impacts on White students.

### **At-Risk Students**

- At-risk students **showed statistically significantly higher proficiency rates** in reading at diverse schools than at non-diverse schools. There was not a statistically significant difference in math results.
- There was no statistically significant difference in at-risk students' year to year academic growth between diverse and non-diverse schools.
- At-risk students were **significantly less likely to be suspended** at diverse schools than at non-diverse schools.

### **Study of Outcomes Within Diverse Schools**

Our second analysis looked at outcomes within diverse schools. Some diverse schools we studied are exclusively or almost exclusively African American and Hispanic, while others have White student populations ranging up to 43% of the student body. We have previously observed that the percent of White students attending a school is correlated with the size of the school's waitlist.

We asked the question of whether the percent of White students in the school impacts observable student outcomes in diverse schools.

We found the following in our second analysis:

### **African American Students**

- African American students' proficiency rates did not change significantly based on the percentage of White students in diverse schools.
- There was a **negative and statistically significant decline in African American students' year to year academic growth** in reading (but not in math) as the percentage of White students increased in the diverse schools.
- There was no statistically significant difference in African American students' likelihood of being suspended as the percentage of White students increased in the diverse schools.

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5 There were not sufficient Hispanic students in non-diverse schools to determine reading growth.

## Hispanic Students

- Hispanic students showed **statistically significantly higher proficiency rates in both reading and math** as the percentage of White students increased in the diverse schools.
- There was no statistically significant difference in Hispanic students' year to year academic growth in math as the percentage of White students increased in the diverse schools.
- There was no statistically significant difference in Hispanic students' likelihood of being suspended as the percentage of White students increased in the diverse schools.

## White Students

- Due to the absence of sufficient White students at non-diverse schools we were unable to determine whether a difference impacts White students.

## At Risk Students

- At Risk students' proficiency rates did not change significantly as the percentage of White students increased in the diverse schools.
- There was a **negative and statistically significant decline in At Risk students' year to year academic growth** in both math and reading as the percentage of White students increased in the diverse schools.
- There was no statistically significant different in At Risk students' likelihood of being suspended as diverse schools had higher percentages of white students.



# Appendix

## Diversity Analysis

### Criteria for Inclusion:

- Three years worth of academic data (2011-14) and two years worth of attendance and discipline data (2012-14)
- Diverse school: one in which less than 80% of the school is of the majority population
- Performance measures: median growth percentile (MGP; reading & math); percent proficient or advanced (reading & math); and lost instruction rate (LIR) due to out of school suspension
- Sample size: : n > 25 students in the school who took the DC CAS
- A total of 87 schools (60 non-diverse schools, 27 diverse schools)



### Analysis 1: Do Students in Diverse Schools Perform Better?

Statistically significant differences are indicated by red and green bold values.

#### All Students

	diverse	n	<i>Md</i>	<i>Mean</i>	<i>SD</i>
<b>Math percent proficient/advanced</b>	no	56	<b>48.0<sup>1</sup></b>	51.6	19.5
	yes	25	<b>62.2</b>	61.5	11.5
<b>Reading percent proficient/advanced</b>	no	56	<b>46.1<sup>2</sup></b>	46.8	14.1
	yes	25	<b>59.1</b>	62.4	12.4
<b>Math MGP</b>	no	40	51.1	52.4	12.2
	yes	13	49.0	48.4	11.0
<b>Reading MGP</b>	no	39	51.7	51.8	8.3
	yes	13	50.0	50.2	7.0
<b>In-seat attendance</b>	no	52	89.9	88.2	6.2
	yes	25	92.2	90.4	5.4
<b>Lost instruction rate</b>	no	52	<b>0.4<sup>3</sup></b>	0.5	0.5
	yes	25	<b>0.1</b>	0.2	0.2

## African American

	diverse	<i>n</i>	<i>Md</i>	<i>Mean</i>	<i>SD</i>
<b>Math percent proficient/advanced</b>	no	45	<b>47.8<sup>1</sup></b>	50.2	18.8
	yes	17	<b>59.7</b>	59.0	9.0
<b>Reading percent proficient/advanced</b>	no	47	<b>45.8<sup>2</sup></b>	47.3	15.7
	yes	19	<b>57.9</b>	59.3	9.5
<b>Lost instruction rate</b>	no	50	<b>0.4<sup>3</sup></b>	0.5	0.5
	yes	21	<b>0.1</b>	0.3	0.3
<b>Math MGP</b>	no	40	50.5	51.8	12.4
	yes	18	53.3	52.7	8.9
<b>Reading MGP</b>	no	40	49.5	50.6	8.3
	yes	18	53.3	52.3	8.9

1.  $p = .04$  (African American students in diverse schools have a higher math proficient/advanced rate than Black students in non-diverse schools.)

2.  $p = .001$  (African American students in diverse schools have a higher reading proficient/advanced rate than Black students in non-diverse schools.)

3.  $p = .008$  (African American students in diverse schools have a lower lost instruction due to suspension rate than Black students in non-diverse schools.)



## Hispanics

	diverse	<i>n</i>	<i>Md</i>	<i>Mean</i>	<i>SD</i>
<b>Math percent proficient/advanced</b>	no	20	58.9	58.4	27.2
	yes	19	57.7	60.4	15.7
<b>Reading percent proficient/advanced</b>	no	18	52.7	52.4	23.4
	yes	6	54.2	59.1	15.4
<b>Lost instruction rate</b>	no	33	0.1	0.4	0.5
	yes	21	0.1	0.1	0.1
<b>Math MGP</b>	no	18	53.4	54.3	14.0
	yes	17	48.1	50.3	11.7
<b>Reading MGP*</b>					

\*There were no Hispanic students in non-diverse schools that had 3-year MGP reported

### Whites

	diverse	<i>n</i>	<i>Md</i>	<i>Mean</i>	<i>SD</i>
<b>Math percent proficient/advanced*</b>	no	1	--	--	--
	yes	11	93.3	93.3	5.1
<b>Reading percent proficient/advanced</b>	no	3	88.9	63.0	54.8
	yes	11	94.3	94.8	3.8
<b>Lost instruction rate</b>	no	14	0.0	0.1	0.3
	yes	19	0.0	0.4	0.2
<b>Math MGP</b>	no	2	59.6	29.6	17.1
	yes	11	56.0	56.1	13.5
<b>Reading MGP</b>	no	2	48.7	48.7	34.3
	yes	11	65.0	64.4	7.4

\* There was only one non-diverse school that had enough White students to be included in the math percent proficient/advanced category. As a result, there are no descriptive statistics for White students in this category.

### At-Risk Students

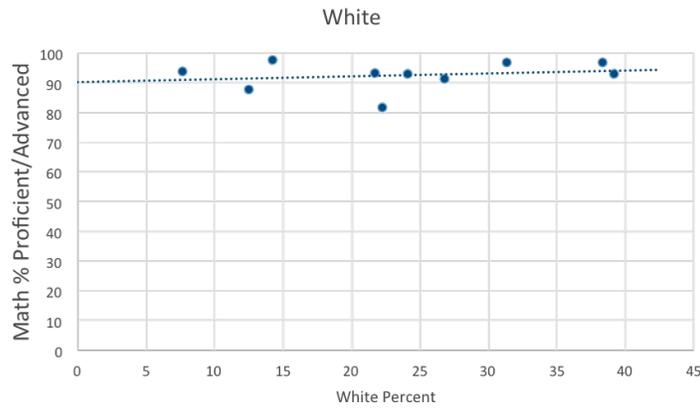
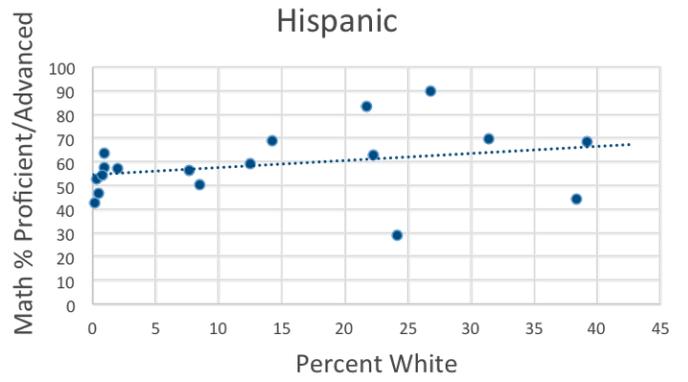
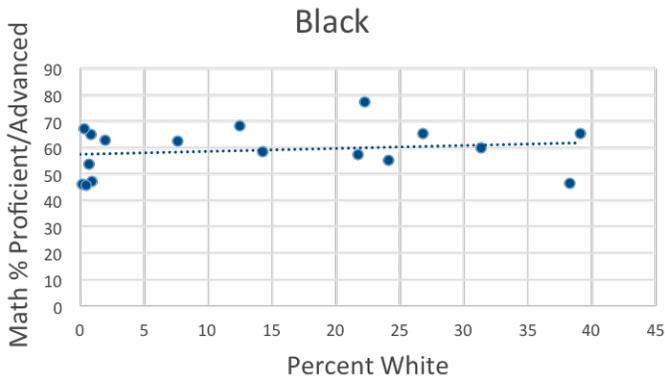
	Diverse	<i>n</i>	<i>Md</i>	<i>Mean</i>	<i>SD</i>
<b>Math percent proficient/advanced</b>	no	60	45.9	48.1	20.3
	yes	27	47.1	46.2	15.1
<b>Reading percent proficient/advanced</b>	no	60	39.7 <sup>1</sup>	42.8	15.3
	yes	27	49.4	49.6	13.9
<b>Lost instruction rate</b>	no	49	0.6 <sup>2</sup>	0.7	0.6
	yes	22	0.1	0.3	0.3
<b>Math MGP</b>	no	36	51.6	53.6	12.1
	yes	14	49.1	48.6	6.1
<b>Reading MGP</b>	no	35	49.0	51.0	8.6
	yes	15	47.9	49.7	6.6

## Study Two: What is the Impact on Student Outcomes in Diverse Schools as the Percent of White Students Grows

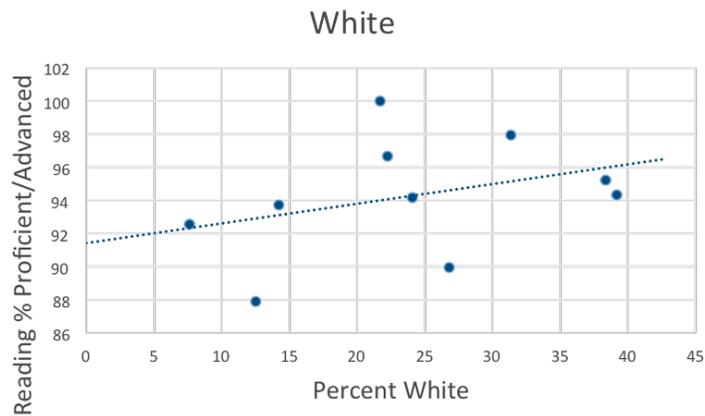
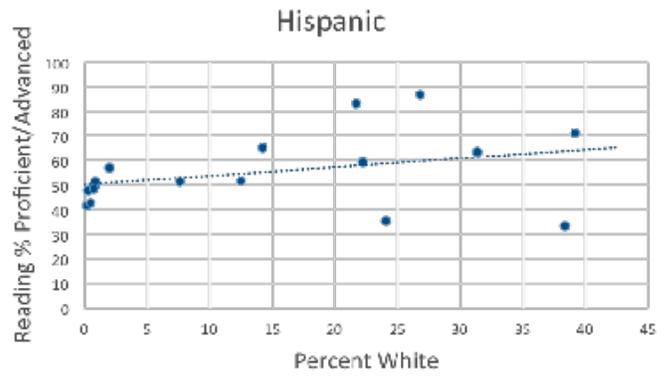
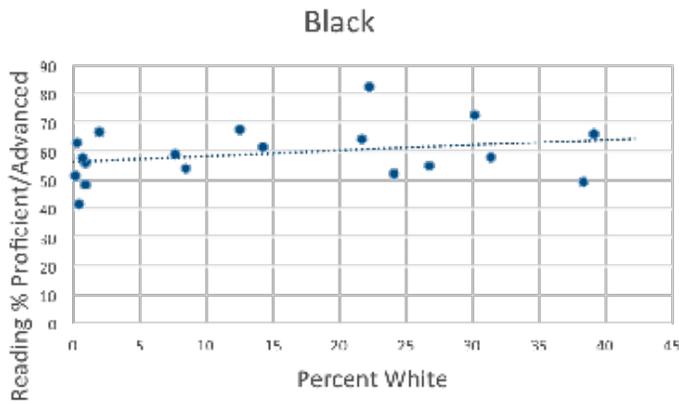
Looking at races separately, a significant relationship was found between the following races. It should be noted the relationship for African Americans was negative while the relationship for Hispanics was positive.

- African American: Reading MGP ( $p = .045$ )
- Hispanic: %proficient/advanced in math ( $p = .045$ )
- Hispanic: %proficient/advanced in reading ( $p = .01$ )
- At-Risk Math MGP ( $p = .04$ )
- At-Risk Reading MGP ( $p = .04$ )

## Math Percent Proficient/Advanced

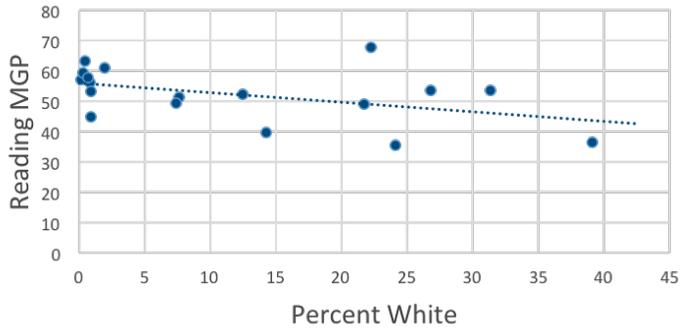


## Reading Percent Proficient/Advanced

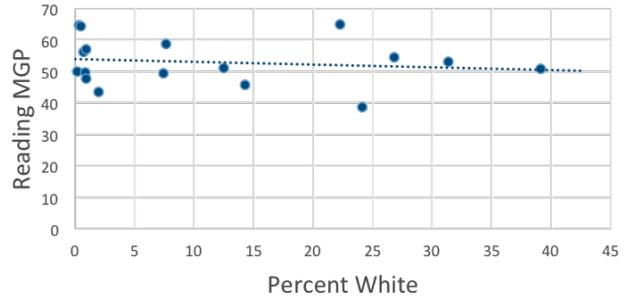


# Reading MGP

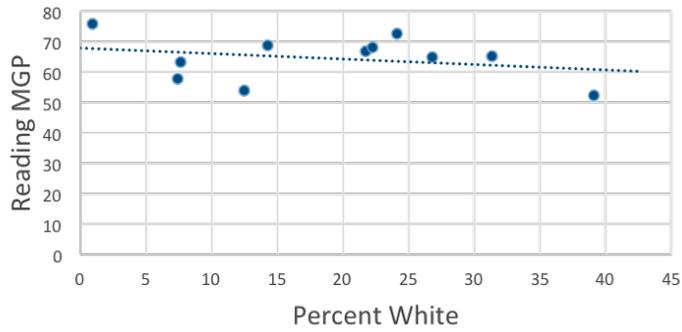
## Black



## Hispanic

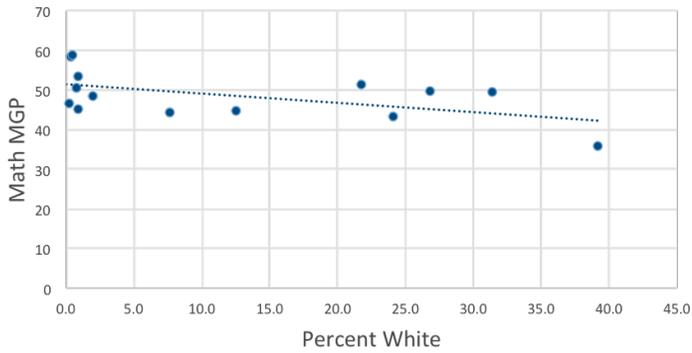


## White

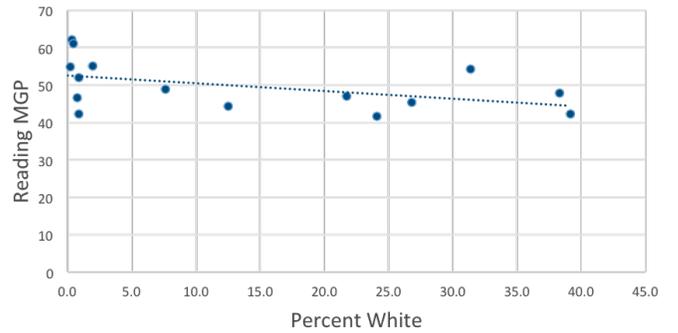


# At-Risk, Diverse Only: Math and Reading MGP

## At-Risk



## At-Risk



## Non-Diverse Schools

Academy of Hope Adult PCS  
 Achievement Preparatory  
 Academy PCS - Elementary  
 Achievement Preparatory  
 Academy PCS - Middle  
 AppleTree Early Learning PCS -  
 Oklahoma Ave  
 AppleTree Early Learning PCS -  
 Southeast  
 AppleTree Early Learning PCS -  
 Southwest  
 Arts and Technology Academy  
 PCS\*  
 Booker T. Washington PCS\*  
 Cedar Tree Academy PCS  
 Center City PCS - Capitol Hill  
 Center City PCS - Congress  
 Heights  
 Center City PCS - Trinidad  
 Cesar Chavez PCS for Public  
 Policy - Capitol Hill  
 Cesar Chavez PCS for Public  
 Policy - Parkside Middle School  
 Cesar Chavez PCS for Public  
 Policy - Parkside High School  
 Community Academy PCS - Amos  
 3\*  
 DC Bilingual PCS  
 DC Prep PCS - Benning  
 Elementary  
 DC Prep PCS - Benning Middle  
 DC Prep PCS - Edgewood  
 Elementary  
 DC Prep PCS - Edgewood Middle  
 DC Scholars PCS  
 Eagle Academy PCS - Capitol  
 Riverfront  
 Eagle Academy PCS -  
 Congress Heights  
 Early Childhood Academy PCS

Excel Academy PCS  
 Friendship PCS - Blow-Pierce  
 Friendship PCS - Chamberlain  
 Friendship PCS - Collegiate  
 Academy  
 Friendship PCS - Technology  
 Preparatory Academy  
 Friendship PCS - Southeast  
 Elementary Academy  
 Friendship PCS - Woodridge  
 Harmony DC PCS  
 Hope Community PCS -  
 Lamond  
 Hope Community PCS - Tolson  
 Hospitality High PCS\*  
 Howard Road Academy - MLK  
 Middle\*  
 Howard University Math & Science  
 PCS  
 IDEA PCS  
 Ideal Academy PCS  
 Ingenuity Prep PCS  
 Imagine Southeast\*  
 KIPP DC - AIM Academy PCS  
 KIPP DC - Arts & Tech  
 KIPP DC - Connect  
 KIPP DC -College Prep PCS  
 KIPP DC - Discover Academy  
 KIPP DC - Grow Academy  
 KIPP DC - Heights Academy  
 KIPP DC - KEY Academy PCS  
 KIPP DC - Lead Academy  
 KIPP DC - LEAP Academy  
 KIPP DC - Northeast Academy  
 KIPP DC - Promise Academy  
 KIPP DC - Quest Academy  
 KIPP DC - WILL Academy PCS  
 Mary McLeod Bethune Day  
 Academy PCS  
 Maya Angelou PCS- Evans High

School  
 Maya Angelou PCS - Evans  
 Middle School  
 National Collegiate Preparatory  
 PCHS  
 Options PCS\*  
 Paul International PCS - Middle  
 School  
 Paul International PCS - High  
 School  
 Perry Street Preparatory PCS  
 Potomac Lighthouse/Preparatory  
 PCS  
 Richard Wright PCS for  
 Journalism and Media Arts  
 Roots PCS  
 SEED PCS of Washington, DC  
 Sela PCS  
 Somerset Preparatory  
 Academy PCS  
 Septima Clark PCS\*  
 St. Coletta Special Education PCS  
 Thurgood Marshall Academy PCS  
 Tree of Life PCS\*  
 Washington Mathematics  
 Science Technology PCHS  
 William E. Doar, Jr. PCS for the  
 Performing Arts

\*Closed school

Schools in green were not included in the study due to lack of testing data during the study's time period.



## Diverse Schools

<p>AppleTree Early Learning PCS - Columbia Heights</p> <p>AppleTree Early Learning PCS - Lincoln Park</p> <p>BASIS DC PCS</p> <p>Bridges PCS</p> <p>Briya PCS</p> <p>Capital City PCS - Middle</p> <p>Capital City PCS - Lower</p> <p>Capital City PCS - High School</p> <p>Carlos Rosario International PCS</p> <p>Center City PCS - Brightwood</p> <p>Center City PCS - Petworth</p> <p>Center City PCS - Shaw</p> <p>Cesar Chavez PCS for Public Policy - Chavez Prep</p> <p>Community Academy PCS - Amos 1*</p>	<p>Community Academy PCS - Butler Global*</p> <p>Community Academy - Rand*</p> <p>Community Academy PCS - CAPCS Online*</p> <p>Creative Minds PCS</p> <p>DC Bilingual PCS</p> <p>DC International PCS</p> <p>E.L. Haynes PCS - Elementary</p> <p>E.L. Haynes PCS - Georgia Avenue</p> <p>E.L. Haynes PCS - High School</p> <p>Elsie Whitlow Stokes</p> <p>Community Freedom PCS</p> <p>Inspired Teaching</p> <p>Demonstration PCS</p> <p>Latin American Montessori Bilingual PCS</p> <p>LAYC Career Academy PCS</p>	<p>Lee Montessori PCS</p> <p>Meridian PCS</p> <p>Mundo Verde PCS</p> <p>Shining Stars Montessori Academy PCS</p> <p>St. Coletta Special Education PCS</p> <p>The Next Step/El Proximo Paso PCS</p> <p>Two Rivers PCS</p> <p>Washington Latin PCS - Middle School</p> <p>Washington Latin PCS - Upper School</p> <p>Washington Yu Ying PCS</p> <p>YouthBuild PCS</p>
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\*Closed school

Schools in green were not included in the study due to lack of testing data during the study's time period.

### Hispanic: Percent Math Proficient/Advanced

	Percent White	Percent Proficient/Advanced
Paul PCS - International High School	0	
Center City PCS – Brightwood	0.3	53.0
Center City PCS – Shaw	0.4	46.9
Center City PCS – Petworth	0.7	54.6
César Chávez PCS for Public Policy – Chávez Prep	0.9	63.9
Meridian PCS	0.9	57.7
Capital City PCS – High School	0.9	
Capital City PCS – Middle School	7.4	
E.L. Haynes PCS – Georgia Avenue	7.6	56.3
E.L. Haynes PCS – Kansas Avenue (High School)	8.5	50.3
Elsie Whitlow Stokes Community Freedom PCS	12.5	59.4
Washington Latin PCS – Upper School	14.2	68.9
E.L. Haynes PCS – Kansas Avenue (Elementary School)	15.4	
Latin American Montessori Bilingual PCS	22.2	62.9
Capital City PCS – Lower School	24.1	29.2
Washington Yu Ying PCS	26.8	90.0
BASIS DC PCS	30.2	
Two Rivers PCS	31.4	69.9
Inspired Teaching Demonstration PCS	38.3	44.5
Washington Latin PCS – Middle School	39.1	68.5
Creative Minds International PCS	42.5	

### Hispanic: Percent Reading Proficient/Advanced

	Percent White	Percent Proficient/Advanced
Paul PCS - International High School	0	
Center City PCS – Brightwood	0.3	48.1
Center City PCS – Shaw	0.4	42.6
Center City PCS – Petworth	0.7	48.7
César Chávez PCS for Public Policy – Chávez Prep	0.9	50.0
Meridian PCS	0.9	51.5
Capital City PCS – High School	0.9	
Capital City PCS – Middle School	7.4	
E.L. Haynes PCS – Georgia Avenue	7.6	51.3
E.L. Haynes PCS – Kansas Avenue (High School)	8.5	
Elsie Whitlow Stokes Community Freedom PCS	12.5	51.9
Washington Latin PCS – Upper School	14.2	65.2
E.L. Haynes PCS – Kansas Avenue (Elementary School)	15.4	
Latin American Montessori Bilingual PCS	22.2	59.3
Capital City PCS – Lower School	24.1	35.4
Washington Yu Ying PCS	26.8	86.7
BASIS DC PCS	30.2	
Two Rivers PCS	31.4	63.5
Inspired Teaching Demonstration PCS	38.3	33.3
Washington Latin PCS – Middle School	39.1	71.2
Creative Minds International PCS	42.5	

## Black: Reading MGP

	Percent White	Reading MGP
Paul PCS - International High School	0	
Center City PCS – Brightwood	0.3	59.3
Center City PCS – Shaw	0.4	63.4
Center City PCS – Petworth	0.7	57.8
César Chávez PCS for Public Policy – Chávez Prep	0.9	56.0
Meridian PCS	0.9	44.8
Capital City PCS – High School	0.9	53.1
Capital City PCS – Middle School	7.4	49.3
E.L. Haynes PCS – Georgia Avenue	7.6	51.2
E.L. Haynes PCS – Kansas Avenue (High School)	8.5	
Elsie Whitlow Stokes Community Freedom PCS	12.5	52.1
Washington Latin PCS – Upper School	14.2	39.7
E.L. Haynes PCS – Kansas Avenue (Elementary School)	15.4	
Latin American Montessori Bilingual PCS	22.2	67.9
Capital City PCS – Lower School	24.1	35.5
Washington Yu Ying PCS	26.8	53.4
BASIS DC PCS	30.2	
Two Rivers PCS	31.4	53.6
Inspired Teaching Demonstration PCS	38.3	
Washington Latin PCS – Middle School	39.1	36.4
Creative Minds International PCS	42.5	

## At-Risk Students in Diverse Schools

### At-Risk Students in Diverse Schools

	percent white	3 year math MGP	3 year reading MGP
Paul PCS - International High School	0.0		
Center City PCS – Brightwood	0.3	58.4	62.1
Center City PCS – Shaw	0.4	58.8	61.0
Center City PCS – Petworth	0.7	50.6	46.6
César Chávez PCS for Public Policy – Chávez Prep	0.9	53.5	51.9
Meridian PCS	0.9	45.2	42.3
Capital City PCS – High School	0.9		
Capital City PCS – High School	2.5		
Capital City PCS – Middle School	7.4		
E.L. Haynes PCS – Georgia Avenue	7.6	44.3	49.0
E.L. Haynes PCS – Kansas Avenue (High School)	8.5		
Elsie Whitlow Stokes Community Freedom PCS	12.5	44.8	44.3
Washington Latin PCS – Upper School	14.2		
E.L. Haynes PCS – Kansas Avenue (Elementary School)	15.4		
Latin American Montessori Bilingual PCS	22.2		
Capital City PCS – Lower School	24.1	43.3	41.7
Washington Yu Ying PCS	26.8	49.6	45.4
BASIS DC PCS	30.2		
Two Rivers PCS	31.4	49.6	54.2
Inspired Teaching Demonstration PCS	38.3		47.9
Washington Latin PCS – Middle School	39.1	35.9	42.3

