EmpowerK12

UPDATE ON UNFINISHED LEARNING IN DC

AS OF SPRING 2021

Throughout the 2020-21 school year, the COVID-19 pandemic continued to significantly impact the daily lives of District residents. Most students spent the entire school year receiving distance learning instruction from hard-working educators who adapted curricula and daily lessons plans for the virtual classroom. While District students demonstrated resiliency and tenacity to continue their educational endeavors, the challenge of keeping up with pre-pandemic growth rates was daunting.

We applaud the efforts of school leaders and support staff who worked overtime to prepare school buildings to meet new pandemic safety protocols that allowed many students to access a safe distance learning space at school and others to receive live in-person instruction. Our sample of local leveled reading and computer adaptive assessment data shows that educators' efforts helped stem devastating academic slide with students demonstrating some growth last year, though at slower rates than typical.

This brief utilizes assessment data collected by schools from spring 2021 and follows a similar methodology to our December 2020 report. We analyzed data to address two primary questions:

1. How does spring achievement from 2021 compare to pre-pandemic levels in 2019 among different groups of students?

2. How did academic growth rates throughout the 2020-21 school year compare with academic growth rates from fall, winter, and spring pre-pandemic?

KEY FINDINGS

On average, students across grades **K-8 ended the year with lower math and reading achievement** compared to pre-pandemic.

Achievement was lower for all student groups in spring 2020-21.

Students designated as **at-risk, Black, and Latinx students were disproportionately impacted**.

Academic growth rates throughout the 2020-21 school year **were lower than typical**; however, math growth, particularly in middle school, was closer to normal from winter-to-spring.

More time spent in-school **receiving live instruction likely translated to improved academic growth**, especially for students designated as at-risk.

The pandemic's academic **impact in the District** was **similar** to findings from **national studies**.

Estimates in this update likely present a better picture because untested students tended to have lower attendance and achievement.

NATIONAL CONTEXT

Earlier this fall, McKinsey & Company and the Northwest Evaluation Association (NWEA) released separate reports utilizing national datasets for assessments that we also analyzed for this report, iReady and Measures of Academic Progress (MAP). Both studies found greater amounts of unfinished learning in math and evidence of growing racial and socioeconomic performance gaps.

The McKinsey study observed that students averaged four months of unfinished learning in reading and five months of unfinished learning in math as the 2020-21 school year ended. Their evidence of growing performance gaps was identified based on school-level demographics with schools serving majority Black and Latinx learners averaging more unfinished learning.

CUMULATIVE MONTHS OF UNFINISHED LEARNING DUE TO THE PANDEMIC BY TYPE OF SCHOOL, GRADES 1 THROUGH 6

Learning gap	By race Schools that are majority . . .		By income Household average, per school		By location School site	
Math 5 months behind	Black	6	<$25K	7	City	5
	Hispanic	6	$25K–$75K	5	Suburb[1]	5
	White	4	>$75K	4	Rural	4
Reading 4 months behind	Black	6	<$25K	6	City	4
	Hispanic	5	$25K–$75K	4	Suburb[1]	4
	White	3	>$75K	3	Rural	3

Source: McKinsey 2021, COVID-19 and education: The lingering effects of unfinished learning

The NWEA brief focused on changes in average percentile rank of students from spring 2019 to 2021. Researchers calculated 8-12 percentile point drops in math performance and 3-6 percentile point drops in reading across grades 3-8. They also found evidence of the disparate impact on the achievement of student groups historically furthest from opportunity. Students in high-poverty schools averaged additional declines of 4-5 percentile points compared to low-poverty schools.
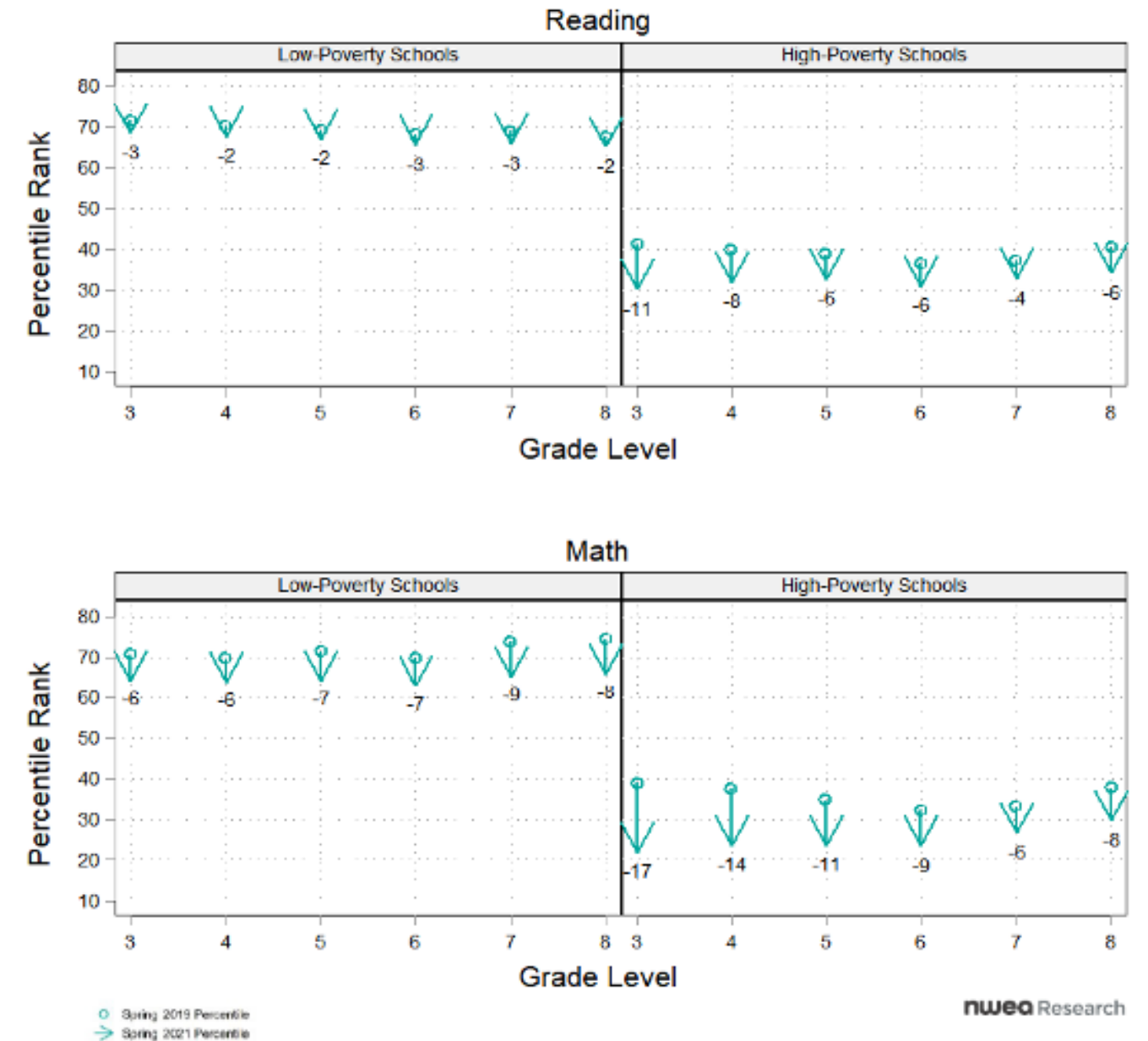
Source: NWEA 2021, Learning during COVID-19: Reading and math achievement in the 2020-21 school year

OUR SPRING SAMPLE AND METHODOLOGY

This summer, we organized a collection of leveled reading, iReady, and MAP assessment data from DC Public Schools and DC public charter schools that administered the same tests in both spring 2019 and during the 2020-21 school year.

We thank the following schools for graciously providing data to support analysis for this brief: Capital City PCS, Center City PCS, Cesar Chavez PCS, DC International PCS, DC Public Schools, Early Childhood Academy PCS, E.L. Haynes PCS, Friendship PCS, Inspired Teaching PCS, LAMB PCS, Lee Montessori PCS, Mundo Verde PCS, Paul PCS, Perry Street PCS, and Rocketship DC PCS. We also thank the DC Office of the State Superintendent of Education for providing additional audited enrollment data by student group and grade level that allowed us to better interpret how representative our test sample was of the larger District student population.

For additional details about the assessments utilized in this report, please read the December 2020 COVID slide study. We received more assessment scores for students in lower elementary grades, kindergarten through 2nd grade, than in upper elementary and middle school, in part due to more schools changing their assessment tools in those grades.

ESTIMATED PERCENT OF TOTAL DC ENROLLMENT INCLUDED IN OUR TESTED SAMPLE BY GRADE BAND

| GRADE BAND	% IN SAMPLE
EARLY ES (K-2)	87%
UPPER ES (3-5)	62%
MIDDLE (6-8)	49%

Students who are part of our study sample generally reflect the general DC enrollment population. However, there are small differences.

PARTICIPATING SAMPLE SCHOOLS' TESTED STUDENTS COMPARED TO DC K-8 ENROLLMENT IN 2020-21

DEMOGRAPHIC	TESTED STUDENTS AT SAMPLE SCHOOLS	DC ENROLLMENT
STUDENTS DESIGNATED AT-RISK	43%	48%
STUDENTS WITH DISABILITIES	16%	18%
ENGLISH LEARNERS	18%	13%
ASIAN	2%	2%
BLACK OR AFRICAN AMERICAN	57%	67%
HISPANIC OR LATINO OF ANY RACE	23%	18%
WHITE	18%	14%

Our December 2020 COVID impact report shares how some student groups were less likely to be captured in the assessment data. This past spring, about one in every eight students at participating schools did not complete their assessment. Untested students were not evenly distributed across all student groups. Students designated at-risk and students with disabilities were less likely to be tested. We analyzed attendance and historical achievement data of both tested and untested students, finding untested students had statistically significantly lower attendance during 2020-21 and lower achievement pre-pandemic.

This means the spring 2020-21 achievement and growth estimates in this brief are likely to present a slightly better picture than actual.

|	2020-21 Attendance Rate	2019-20 Avg Percentile
Tested	91	42
Untested	77	34

■ Tested ■ Untested
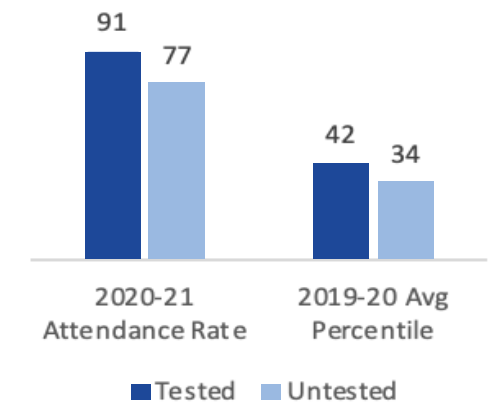
Since most students took their spring assessment from home while distance learning, we examined the test-taking characteristics of our sample population to check whether students were similarly engaged in completing their assessment like they would have been in a school setting. Like the fall 2020-21 data, we find significant portions of students took substantially longer than normal to finish their test while others sped through it or were flagged by test vendors for high guess rates. Sensitivity tests showed that students with exceptional test-taking characteristics performed atypically, and therefore, we limited our sample for analysis to only those students with the most reliable test-taking characteristics across all years.

After filtering for the most reliable tests, our sample for analysis represents an estimated 84% of early elementary students (K-2) in the District, 52% of upper elementary students (3-5), and 39% of middle schoolers (6-8).

Tests considered most reliable have a duration time between the 5th and 95th percentile of time taken pre-pandemic and were not flagged for excessive guessing.

# FEWER EARLY ELEMENTARY STUDENTS IN GRADES K-2 ARE READING ON GRADE LEVEL
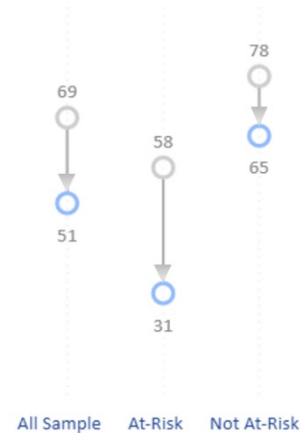
In early elementary grades, students read texts to their teacher as part of end-of-year leveled reading assessments. We find that 51% of all students assessed in grades K-2 in our sample demonstrated that they were on or above grade level in spring 2021, representing an 18-percentage point drop from their K-2 peers in 2019. Declines in reading achievement were more substantial for students designated at-risk, a 27-percentage point drop. Data for additional student groups can be found in a separate appendix.

STUDENTS IN GRADES 2-8 ARE ACHIEVING AT LOWER PERCENTILES THAN THEY WERE TWO YEARS AGO

Like the approach taken by NWEA for their report, we summarize changes in spring achievement this year compared to 2019 by calculating the change in median achievement percentile ranks for a cohort of students who took the same computer adaptive test (iReady or MAP) both springs and had reliable test-taking characteristics both times.

We find an average 9 percentile point drop for all sample students in English Language Arts (ELA) and 10-point decline in math. Students designated as at-risk show larger drops in ELA and math percentile rank (14 and 13 percentile points, respectively) compared to the peers who are not considered at-risk (5 and 8 percentile points). **Spring achievement declines were larger for Black and Latinx learners compared to their Asian American and White peers.**
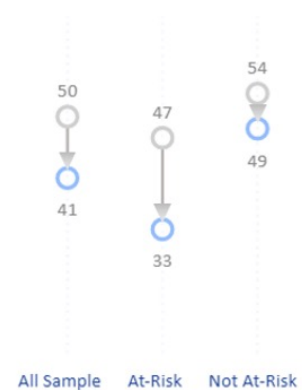
Students designated at-risk show larger drops in ELA percentile in grades 2-8 compared to their not at-risk peers.
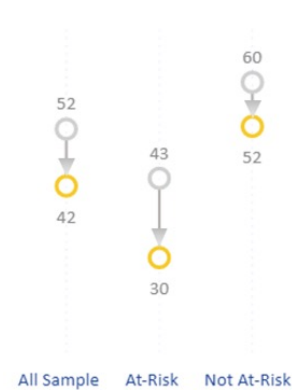
Students designated at-risk show larger drops in Math percentile in grades 2-8 compared to their not at-risk peers.

ACADEMIC GROWTH RATES THROUGHOUT THE 2020-21 SCHOOL YEAR WERE LOWER THAN TYPICAL

We first observe differences in scale score trends from fall to winter to spring, showing math achievement fell off sharply early in the pandemic, but middle school winter to spring growth rates returned to near normal. Reading experienced a smaller slide early on, but growth rates throughout 2020-21 significantly lagged pre-pandemic norms in all grades.

The good news is that **most students demonstrated some academic growth throughout the year**, rebuffing predictions that distance learning academic growth might more closely resemble the type of academic slide that is typical during the summer. **However, the slower growth rate means students on average fell behind where they were expected to finish in a normal year.**

MAP ELA Growth Rate in Grades 3-8 for 2018-19 and 2020-21 at Participating Schools

To quantify the amount of unfinished learning, we utilize the same approach taken by the McKinsey study. For MAP and iReady, each student who tests in the fall receives an annual growth target based on the typical pre-pandemic growth for students starting at the same baseline score. We analyzed fall-to-spring growth by finding the average percent of typical growth students achieve. For example, if a student is expected to make 10 points of growth and gets 9, then they achieved 90% of the target. Based on a 10-month academic calendar, the McKinsey study would translate this difference to one month of unfinished learning. As educators, we know academic growth is not necessarily linear, but for simplicity and comparative purposes, we follow the McKinsey methodology.

We find that students in grades 3-8 at participating sample schools saw drops of 50%-60% of growth target met compared to 2018-19 in ELA and math, representing approximately 5-6 months of unfinished learning. Students designated as at-risk were more likely to have unfinished ELA and math learning than their peers. Find additional results by student group, grade band, and subject in the appendix.
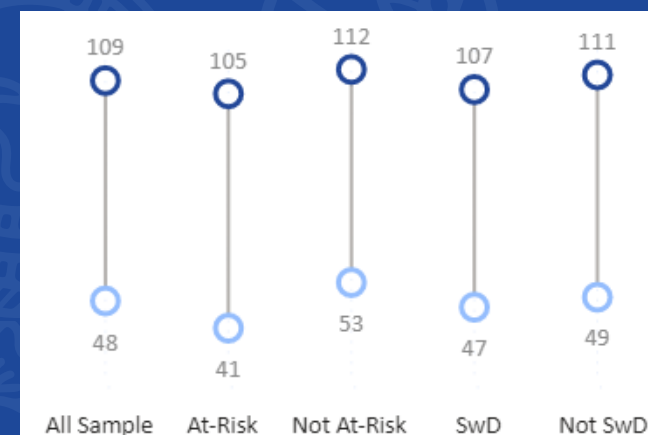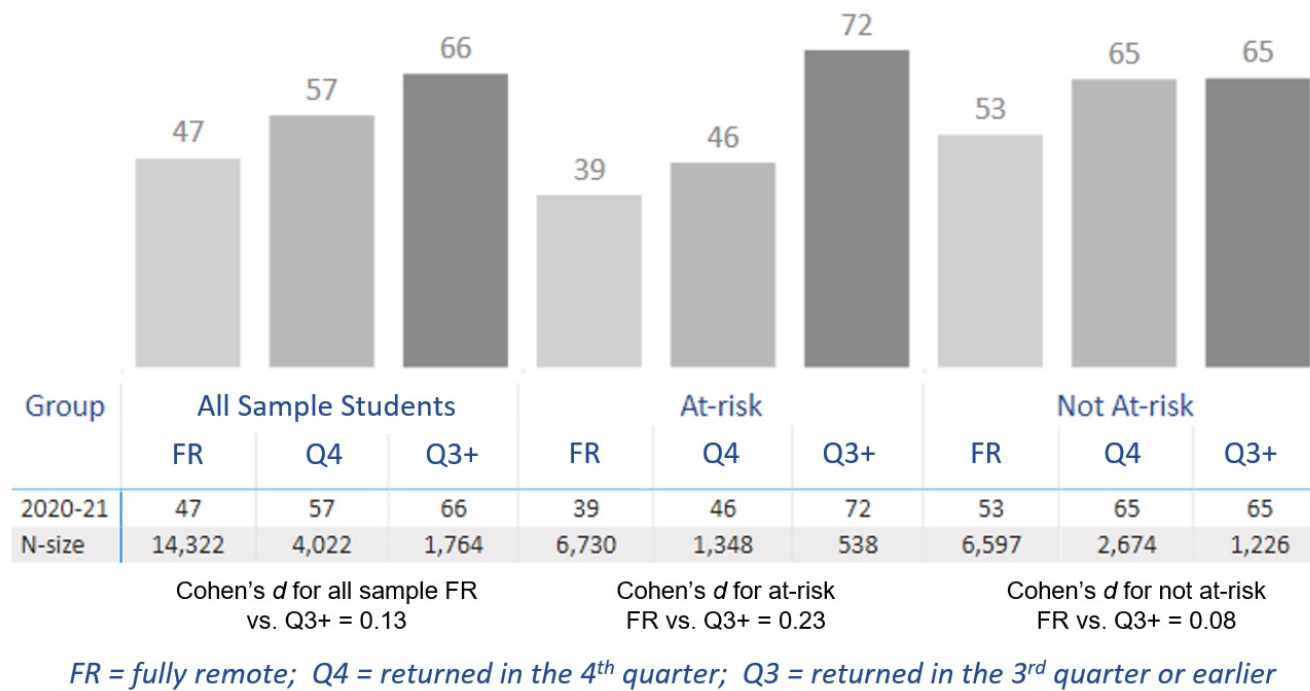

AVERAGE ELA AND MATH COMBINED PERCENT OF GROWTH TARGET MET FOR STUDENTS WITH MOST RELIABLE TESTING DATA GRADES 3-8 AT PARTICIPATING SCHOOLS

TIME SPENT IN-SCHOOL RECEIVING LIVE INSTRUCTION LIKELY TRANSLATED TO IMPROVED ACADEMIC GROWTH RATES

During 2020-21, some students returned to school in-person to receive live instruction. On average, students at participating schools received in-person instruction 4% of the school instructional days. We utilized attendance data provided by LEAs to identify the percent of instructional days a student was marked "Present In-Person," which meant they received live in-person instruction. Students in "CARES" classrooms who came to school to do their distance learning are not considered to meet this definition. We break students into groups that represent about the time those students returned for live instruction: those who were distance learning the full year, those who returned during the 4th quarter, and those who returned during the 3rd quarter or earlier.

DATA SUGGESTS THERE WAS A MODEST BENEFIT TO STUDENTS' ACADEMIC GROWTH RATES BY RETURNING FOR SOME LIVE INSTRUCTION TIME LAST YEAR.

Group	All Sample Students			At-risk			Not At-risk		
	FR	Q4	Q3+	FR	Q4	Q3+	FR	Q4	Q3+
2020-21	47	57	66	39	46	72	53	65	65
N-size	14,322	4,022	1,764	6,730	1,348	538	6,597	2,674	1,226
	Cohen's *d* for all sample FR vs. Q3+ = 0.13			Cohen's *d* for at-risk FR vs. Q3+ = 0.23			Cohen's *d* for not at-risk FR vs. Q3+ = 0.08		

FR = fully remote; Q4 = returned in the 4th quarter; Q3 = returned in the 3rd quarter or earlier

SOME SCHOOLS STOOD OUT FOR GROWTH RATES OF STUDENTS DESIGNATED AT-RISK THAT WERE NEAR PRE-PANDEMIC RATES

At participating schools in 2018-19, students designated as at-risk averaged achieving 105% of their growth target in ELA and Math combined. Recall that if a student's expected growth target from fall-to-spring is 10 points, then students designated as at-risk at participating schools were averaging 10.5 points, or approximately one-half month of learning above expected. In 2020-21, just three participating schools exceeded that average: Friendship Online, Cleveland ES, and Barnard ES, but there were a few more schools (across both DCPS and charter) who nearly met this measure.

AVERAGE ELA AND MATH COMBINED PERCENT OF GROWTH TARGET MET FOR STUDENTS DESIGNATED AT-RISK WITH MOST RELIABLE TESTING DATA IN GRADES 3-8 DURING 2020-21 AT PARTICIPATING SCHOOLS

2019 At-Risk % Growth Met: 105
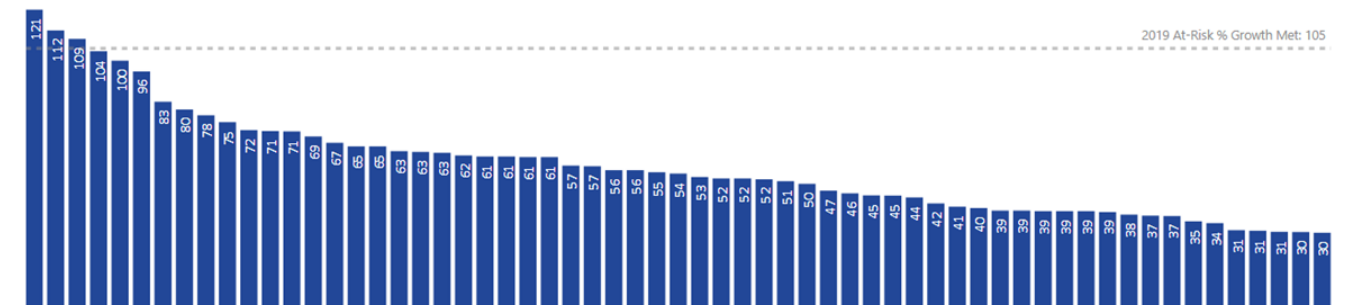
In our conversations with several school leaders at the standout schools with near normal growth for students designated as at-risk, leaders conveyed a sense of commitment to addressing students' social-emotional and physical wellbeing last year to handle pandemic stress and trauma, doing whatever it took to bring students back into their buildings, and using new data sources like wellbeing surveys and blended learning platform engagement data to better track their intervention decisions.

The DC Policy Center is actively interviewing leaders from all the standout schools, most have been EmpowerK12 Bold School award winners in the past, and will have a full report for their annual comprehensive State of DC Schools.

CALL TO ACTION

Our findings underscore the challenges facing our students and educators as life increasingly returns to "normal." We have one main takeaway:

Our students need bold goals, bold approaches, and bold stakeholder collaboration to move beyond simple recovery to an era where all District students, regardless of socioeconomic or disability status, can thrive in an increasingly global labor market.

We call on city leaders to **engage with our students, families, and educators to craft a set of remarkable goals we want for the next generation of students before this decade ends. Let's gather the most creative, boldest ideas from across the sector and stakeholder groups,** pressure testing them to determine which are worthy of full investment or a promising pilot investment. **Ideas should focus on both the academic and social-emotional wellbeing needs of historically underperforming student groups like students designated as at-risk and students with disabilities.**

After investments are decided, **we must commit to gathering and sharing frequent data as part of an improvement cycle that blends the art of teaching with the science of education.** The 2020's will be defined by the COVID-19 pandemic at the beginning and how we choose to respond. DC's Bold Schools taught us that remarkable gains for students designated as at-risk are possible when we balance the art and science of education and learn quicker, better, together. With inspiring talented educators utilizing a collaborative improvement science approach, we can boldly close opportunity gaps for students furthest from the opportunities they deserve.