District of Columbia
Office of the State Superintendent of Education

2019 School Transparency and Reporting (STAR) Brief

November 26, 2019, updated December 18, 2019

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Executive Summary

The DC School Transparency and Reporting (STAR) Framework aims to provide transparency into school quality and student success. OSSE's goal in creating this system was to design a system that would accurately measure school-based outcomes across the city and provide a distribution that reflected meaningful differentiation. It was important that the system be designed in a way that performance on a single metric or from a single student group would not be the sole determinant of a school's accountability rating. Utilizing the flexibilities provided to DC under the federal Every Student Succeeds Act (ESSA), OSSE designed a system using metrics which provide schools multiple pathways to demonstrate their performance and success. This brief explores outcomes related to these goals and provides transparency into the STAR scores and ratings earned by schools in the second publication of the STAR Framework. Specifically, this brief will share citywide trends for STAR ratings, student group performance (e.g., students who are at-risk, students with disabilities, English learners, race/ethnicity groups), and the impact of growth metrics on the overall STAR rating.

In the 2019 STAR Framework, based on data from the 2018-19 school year, 65 percent of schools earned a rating of at least three stars. A higher percentage of charter schools earned three-star ratings than DCPS, which had more schools at both the upper and lower ends of the distribution. The distribution of ratings differs across the eight DC wards; however, each ward has at least one school earning five stars and multiple schools that earned four stars.

2019 scores are distributed similarly to 2018 scores, though more schools earned four- and five-star ratings and fewer schools earned two- and three-star ratings than in 2018. The percentage of schools earning four- and five-star ratings increased, while fewer schools earned one- and two-star ratings in 2019 than in 2018. Eighty-three percent of schools either maintained or improved their STAR rating from 2018.

- Three schools with one- or two-star ratings in 2018 improved by two stars.
- Twenty-six percent of schools (51) saw an increase of one star from 2018 to 2019.
- Fifty-six percent of schools (112) maintained their previous STAR rating.
- Sixteen percent of schools (31) received one fewer star in 2019 than in 2018.
- Three schools saw a decrease of two stars in their rating.
- The average STAR score increased by 1.44 percentage points, from 48.44 percent to 49.88 percent.
- Six schools received a STAR rating for the first time in 2019.

The STAR Framework both provides transparency into the performance of all student groups and encourages excellence for all students. OSSE recognizes the disparities across student groups in our city and is committed to equitable educational outcomes for all students. In the District of Columbia, 47 percent of students are part of the at-risk student group. Out of 115 schools with at least half of their students considered at-risk, 53 schools earned a STAR rating of three or higher, with 12 of those schools earning a rating of four stars or higher and two schools earning a rating of five stars. These findings demonstrate that schools with high percentages of students who are at-risk can and do perform well within the STAR Framework, yet the data show that we still have additional work to do to reach long-term goals and to close the performance gaps between student groups.

Growth plays an important role in the STAR accountability system, which includes two measures of academic growth for elementary and middle schools: median growth percentile and growth to proficiency. In addition,

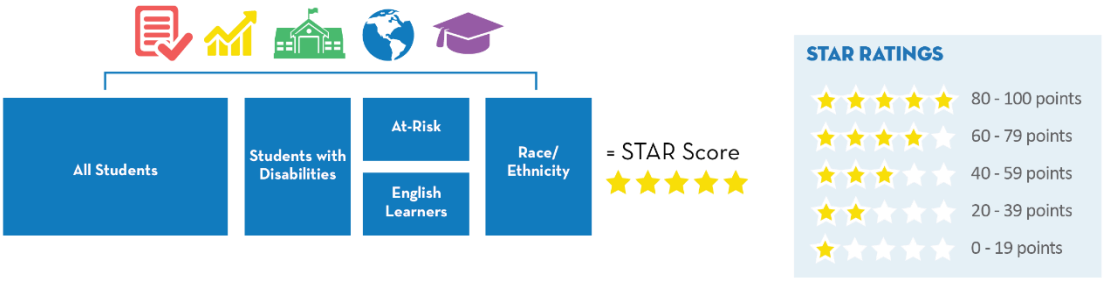
OSSE also utilized flexibilities within ESSA to incorporate two other growth measures in the framework: attendance growth and ACCESS growth. DC's STAR Framework includes multiple measures of growth in the Elementary, Middle, and Alternative frameworks, which collectively have a higher weighting than academic achievement. Analyses suggest that a school's performance on student growth metrics are generally less related to their school's student populations (e.g., percentage of students who are at-risk or are students with disabilities) than are academic achievement metrics. Without the inclusion of growth metrics, ten schools currently earning two- or three-star ratings would have been in the one-star range. Additional analysis confirms the importance of incorporating multiple measures in the accountability framework, as neither academic achievement nor growth were the sole determining factor for a school's STAR rating. These findings and other analyses support OSSE's goal of creating multiple pathways to success within the STAR Framework. The findings also support the belief that schools should be recognized for helping students grow, even when their students are not yet demonstrating high levels of proficiency.

Introduction

In November 2019, as required by the Every Student Succeeds Act (ESSA), the Office of the State Superintendent of Education (OSSE) released the second annual DC School Report Card for all public schools in the District. The DC School Report Card includes a School Transparency and Reporting (STAR) Framework rating of overall school performance from one to five stars. The STAR Framework provides comparable performance ratings for all public schools in the District, both DC Public Schools (DCPS) and public charter schools. This brief shares the citywide performance trends for frameworks, student groups, and metrics.

In order to understand the data in this brief, it is necessary to first understand how a STAR rating is calculated for each school. Several resources are available to help better understand the STAR Framework from the one-page At-A-Glance, the more detailed STAR Brochure, the explanatory video linked on the report card page, to the detailed DC School Report Card and STAR Framework Technical Guide. All of these resources can be found in the DC School Report Card Resource Library. In short, the STAR Framework calculates an overall school performance rating using student group scores comprised of measures of academic achievement, student growth, school environment, English language proficiency, and graduation rates for student groups in the school. The STAR Framework first measures a school's performance for all students for each of the applicable metrics and then measures performance for students with disabilities, students who are at-risk, English learners, and each racial/ethnic group in the school with more than ten students. All metrics for each student group have a target score, for which schools earn all possible points, and a floor, below which no points are earned.

Once the STAR Framework measures performance for each student group on each applicable metric, it adds all of the student group scores to produce the overall STAR score for the school from 0 to 100 points. The overall STAR score for the school equates to the overall STAR rating from one to five stars (see below).



In order to account for the different grades and students served by each school, the STAR Framework has four different frameworks: Elementary, Middle, High, and Alternative School. Each framework includes measures for all of the metrics that are applicable for the grades served by the school. For example, only schools that serve high school-age students are measured for graduation rate. Schools that serve multiple grade bands receive STAR framework scores for each framework in the grade bands served which are weighted to create the school's overall STAR score. For example, a school that serves grades K-8 receives an elementary school framework score, a middle school framework score, and an overall School level STAR score and STAR rating. In the displays of performance trends of grade level frameworks in this report, every framework score for each school is included.

Not all schools will receive a STAR rating using the STAR Framework. Schools that serve exclusively adults, exclusively pre-Kindergarten, and schools which are not diploma granting or pathway schools are not eligible to earn a STAR score. Additionally, some schools may not generate enough data points to earn a STAR Score, these include schools serving exclusively students in grades PK3 through grade 2 and schools that serve small numbers of students for which there were not enough data points populated by metrics of at least 10 students (the threshold established in the DC ESSA plan for minimum reporting size to maintain student confidentiality). In 2019, 206 schools in DC earned a STAR rating, compared to 203 schools in 2018.

This document's purpose is to continue and update the analyses initiated in 2018, when the STAR Framework was released for the first time. This brief provides a deeper review of the STAR Framework and aims to assist others in better understanding system. OSSE encourages interested parties to explore the data and analyses publicly available on the DC School Report Card site. Data is available at the DC, LEA, and school level and in downloadable files from OSSE's Report Card Data and Technical Resources website. OSSE will continue to analyze these results and plans to provide a deeper review of information in the coming months. Additionally, OSSE will work with other external research partners to further the analyses in an effort to continually improve the system. For questions about the STAR Framework Brief, please email dcschoolreportcard@dc.gov with "STAR Framework Brief" in the subject line.

Distribution of STAR Ratings

The STAR Framework is designed using a system by which schools earn points for performance of each student group across multiple metrics. Baseline performance targets for each metric were developed using the relative performance of student groups across the city using historical data. The percentage of points that a school earns on each metric depends on how well they are performing relative to the established baseline targets. For this reason, STAR ratings were somewhat normally distributed in the first year. These baseline and target scores for most metrics were established using 2016-17 data, and will remain fixed for data from the 2017-18, 2018-19, and 2019-20 school years. This provides the opportunity for schools to show improvement compared to a fixed target over time.

Citywide STAR Ratings

In the 2019 STAR Framework, based on data from the 2018-19 school year, 65 percent of schools earned a rating of at least three stars. A higher percentage of charter schools earned three-star ratings than DCPS, which had more schools at both the upper and lower ends of the distribution. The distribution of ratings differs across the eight DC wards; each ward has at least one school earning five stars and multiple schools that earned four stars.

Figure 1 shows the distribution of citywide 2019 STAR ratings across all public and public charter schools. The numbers inside each bar represent the total number and percentage of schools that earned the corresponding STAR rating. Figure 2 shows the same information for 2018.

STAR ratings in 2019 are normally distributed. Although most STAR ratings this year are clustered in the middle with a handful of schools earning one- or five- star ratings, the system does not guarantee that to be the reality every year. It is possible within the STAR Framework for no schools to earn a one-star rating. OSSE's goal is to see continued improvement and for the distribution of STAR ratings to shift to the right over time.

The percentage of schools earning four- and five-star ratings increased to 36.9 percent in 2019, compared with 27.6 percent in 2018. Fewer schools earned one- and two-star ratings in 2019, dropping from 36.5 percent to 34.5 percent. As shown in Figure 3, the overall distribution of STAR ratings has shifted slightly from 2018, but remains similar.[1] A comparable percentage of schools earned one- and five-star ratings in 2019, as compared to 2018, and most schools earned two, three, or four stars.

- Three schools with one- or two-star ratings in 2018 improved by two stars.
- Twenty-six percent of schools (51) saw an increase of one star from 2018 to 2019.
- Fifty-six percent of schools (112) maintained their previous STAR rating.
- Sixteen percent of schools (31) received one fewer star in 2019 than in 2018.
- Three schools saw a decrease of two stars in their rating.
- The average STAR score increased by 1.44 percentage points, from 48.44 percent to 49.88 percent.
- Six schools received a STAR rating for the first time in 2019.

[1] The two-sample Kolomogorov-Smirnov test is a nonparametric test that compares the distributions of two data sets. Findings indicated that the null hypothesis could not be rejected, with a p-value of 0.2964, indicating that the results between the 2017-18 and 2018-19 distribution of STAR scores shows stability.

Figure 1

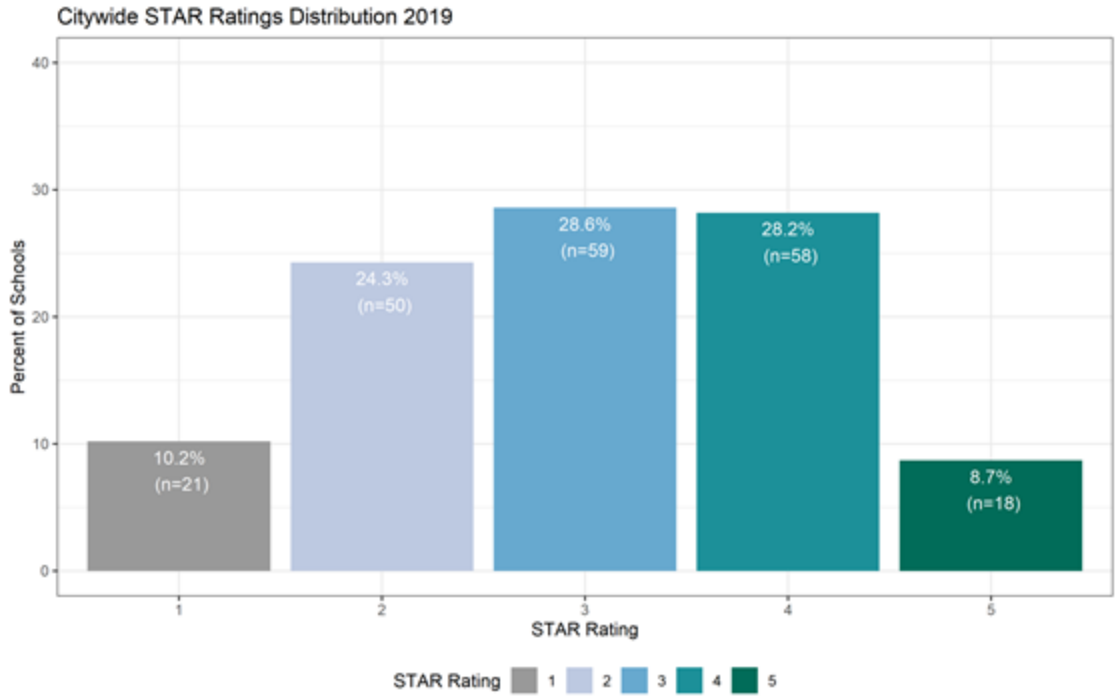


Figure 2

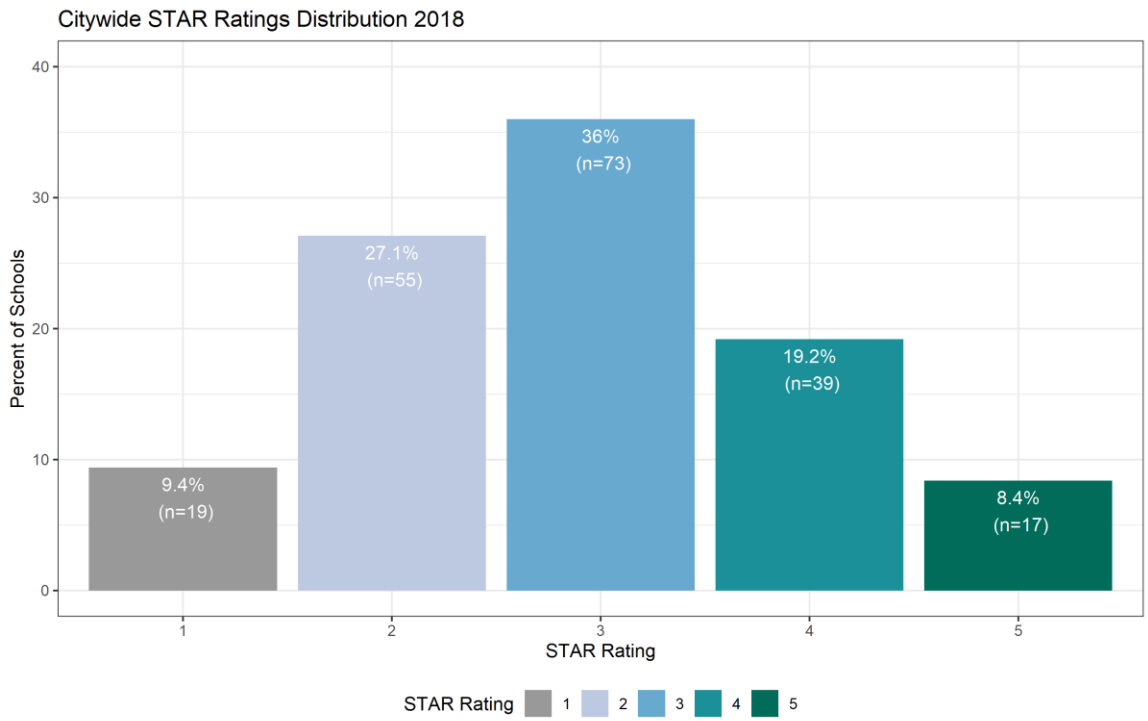
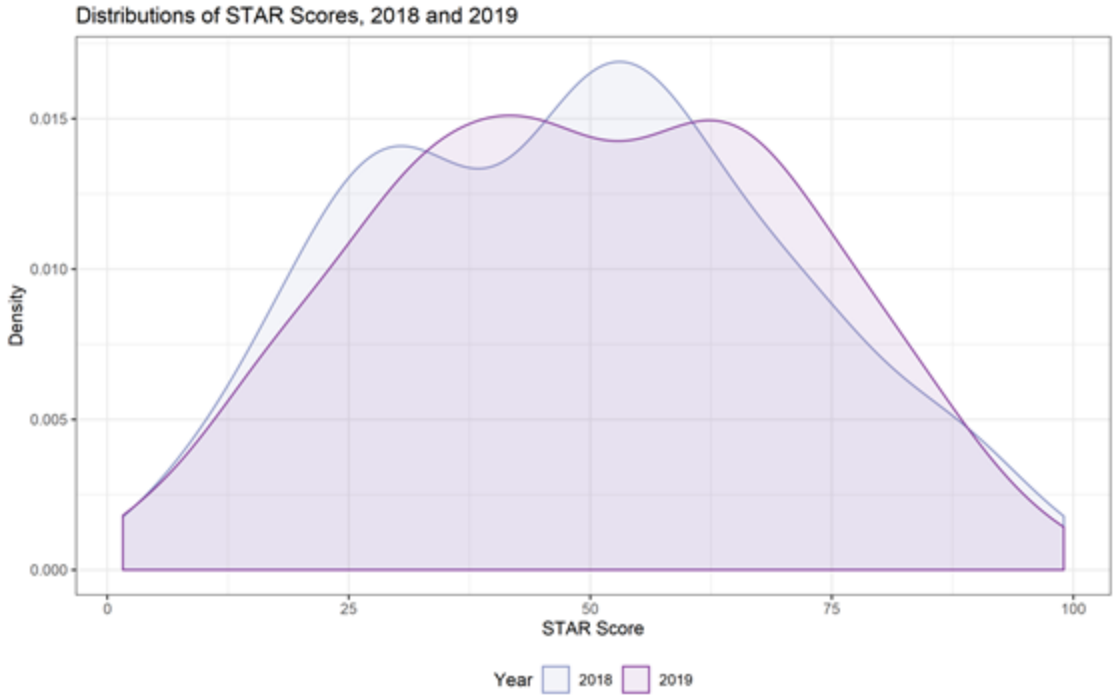


Figure 3 shows the distribution of STAR scores for 2018 and 2019, which are similar.[2]

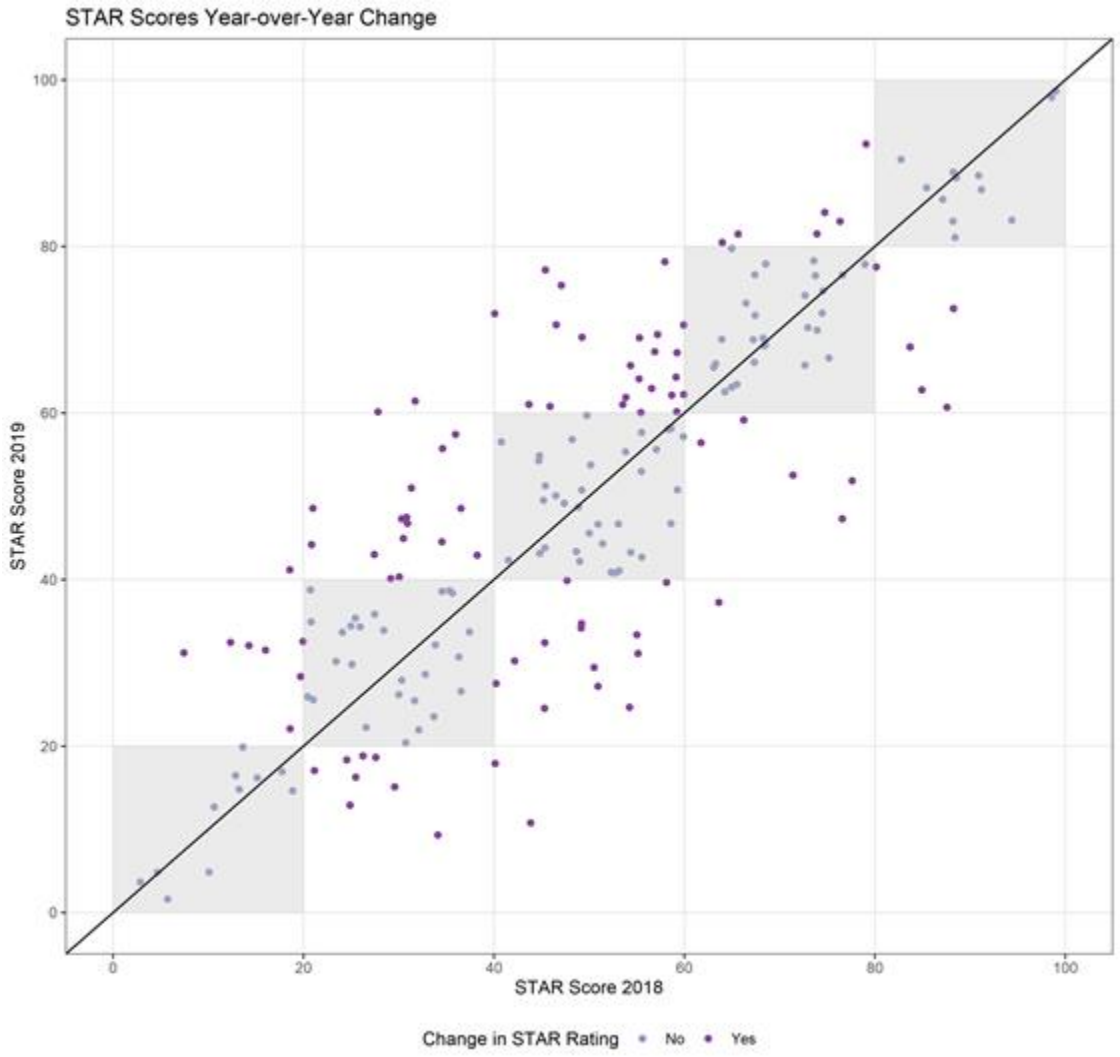
Figure 3



[2] As previously noted, the distributions were analyzed using the Kolomogorov-Smirnov test and found to show stability in results.

Figure 4 shows the changes from 2018 to 2019 STAR scores. Schools above the vertical line had a higher STAR score in 2019 than in 2018, while schools below the vertical line had lower STAR scores in 2019. The deep purple dots show where schools changed STAR ratings, with dots above the grey boxes indicating upward shifts and dots below the grey boxes showing downward shifts. Of the 200 schools with STAR scores in both 2018 and 2019, 107 saw increases in their STAR score, while 93 had decreases in their STAR score.

Figure 4



STAR Ratings by Sector

A comparison of DC public schools (DCPS) and public charter schools indicates that changes from 2018 to 2019 varied by sector. Figures 5 and 6 show the number of schools in each sector that earned each STAR rating, by year. A higher percentage of charter schools earned a three-star rating than DCPS, which had more schools at both the upper and lower ends of the distribution. DCPS saw a sizeable increase in the number of schools earning four stars in 2019.

The mean STAR score earned by DCPS and public charter schools in 2019 had no statistical difference, though the distribution of school STAR scores between sectors is quite different. In 2018, public charter schools had a higher median STAR score of 50.9 than DCPS at 45.4, but in 2019, the median STAR score of DCPS was higher at 50.1, compared to a median STAR score of 48.7 in public charter schools. Overall, both sectors had changes in STAR performance from 2018 to 2019, with more fluctuation occurring in DCPS scores in 2019. For additional comparisons of STAR ratings by sector, see Appendix A in the separate 2019 STAR Brief: Appendices document.

Figure 5

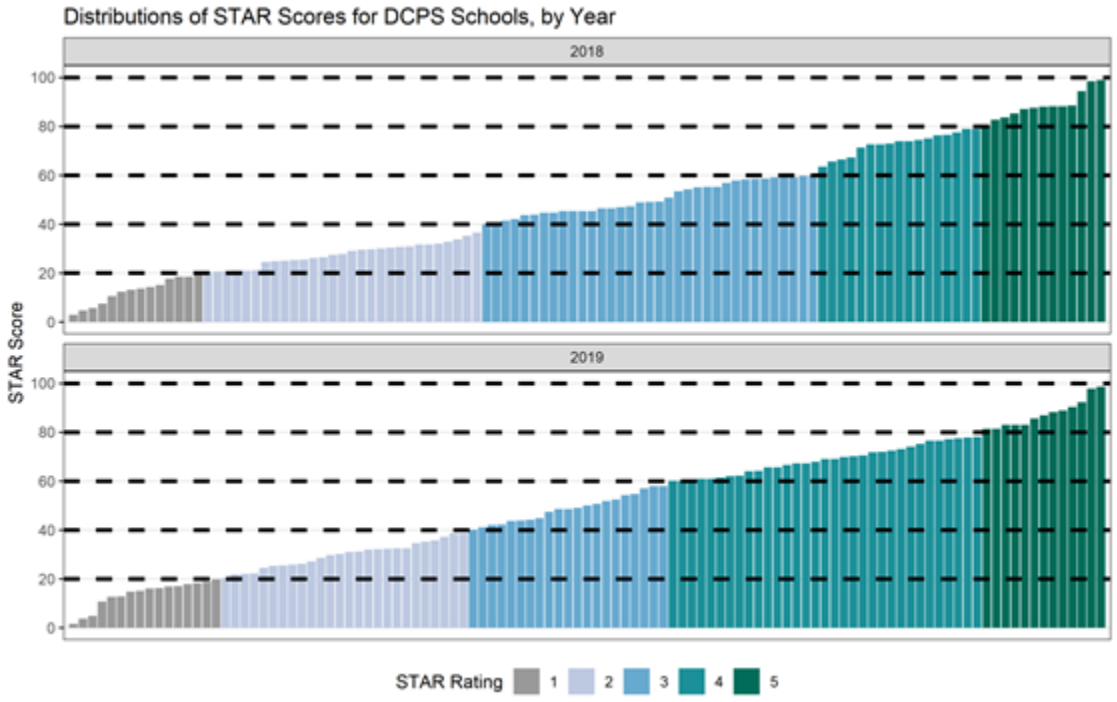
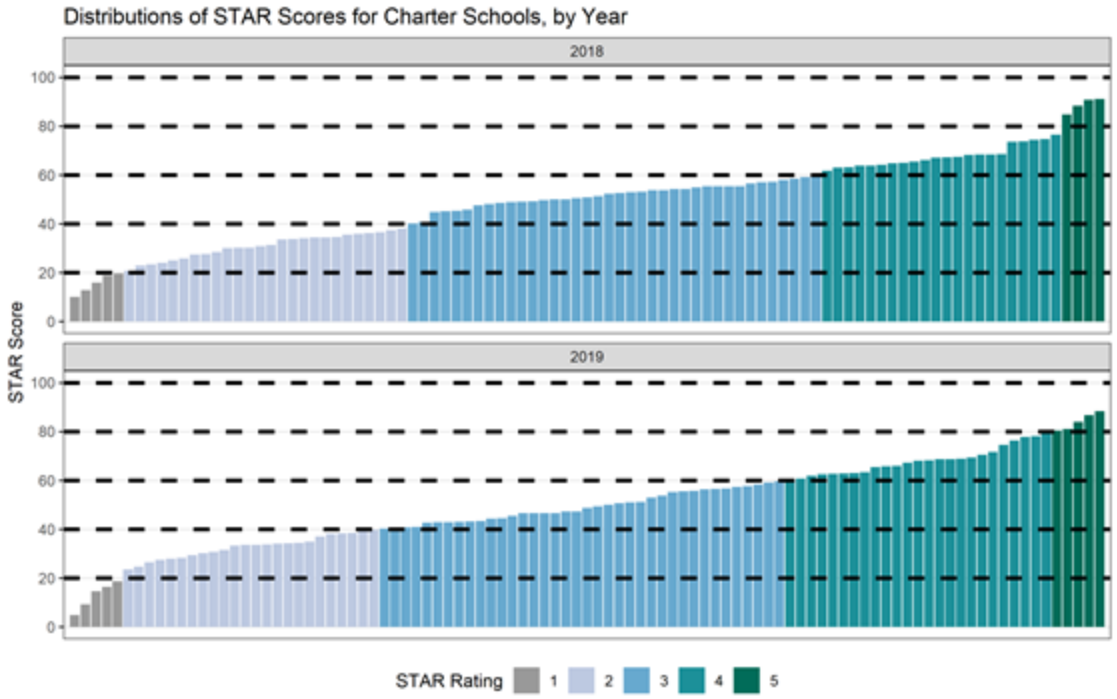


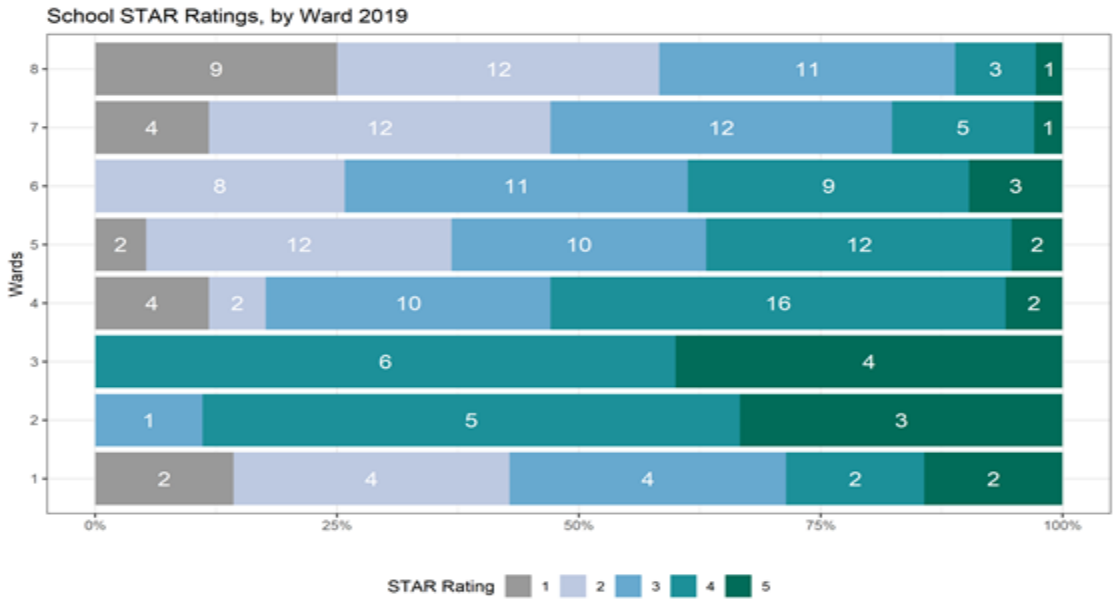
Figure 6


Distributions of STAR Scores for Charter Schools, by Year
2018
2019
STAR Score
100
80
60
40
20
0
STAR Rating
1
2
3
4
5

STAR Ratings by Ward

Highly rated schools are located in every ward of the city, with each ward having at least one five-star school and multiple four-star schools. Schools of each STAR rating are not evenly distributed throughout DC, however. Figure 7 displays the number and proportion of schools earning each STAR rating, by ward.

Figure 7



Student Groups and STAR Ratings

OSSE believes deeply in the potential of all DC students to learn and achieve at high levels. Currently, all student groups are not being supported and served at the same level, either nationwide or in DC. All students can achieve excellence, and some schools in DC demonstrate this, while additional work is needed to see more equitable outcomes in all schools. There is a robust body of literature that shows that academic achievement is, on average, lower for students who are at-risk. The STAR Framework provides transparency and highlights where schools have shown success for students of all student groups throughout the city.

The STAR Framework was designed to measure and include the performance of students who are at-risk, students with disabilities, English learners and all racial/ethnic student groups, in addition to the "all students" group (which in many states is the only group used in accountability calculations). The inclusion of student group scores in the STAR Framework provides transparency about each student group's performance and weights them in a way to promote equitable outcomes for all students.

The following analyses explore the relationship between school demographics and STAR ratings. See Appendices C and D for additional details and analyses.

Relationship between a School's Student Composition and STAR Score

A school's overall STAR rating has a close relationship with the percentage of its students that are considered at-risk, as shown in Figure 8. In the District of Columbia, 47 percent of students are part of the at-risk student group. Out of 115 schools with 50 percent or more of their students being at-risk, 53 schools earned a STAR rating of three or higher, with 13 of those schools earning a rating of four stars or higher and two schools earning a rating of five stars. Schools with a high percentage of students who are at-risk can perform well within the STAR Framework, as illustrated in the data below. However, there are still fewer schools with higher percentages of students who are at-risk that receive a four- or five-star rating compared to schools with low percentages.

Figure 8

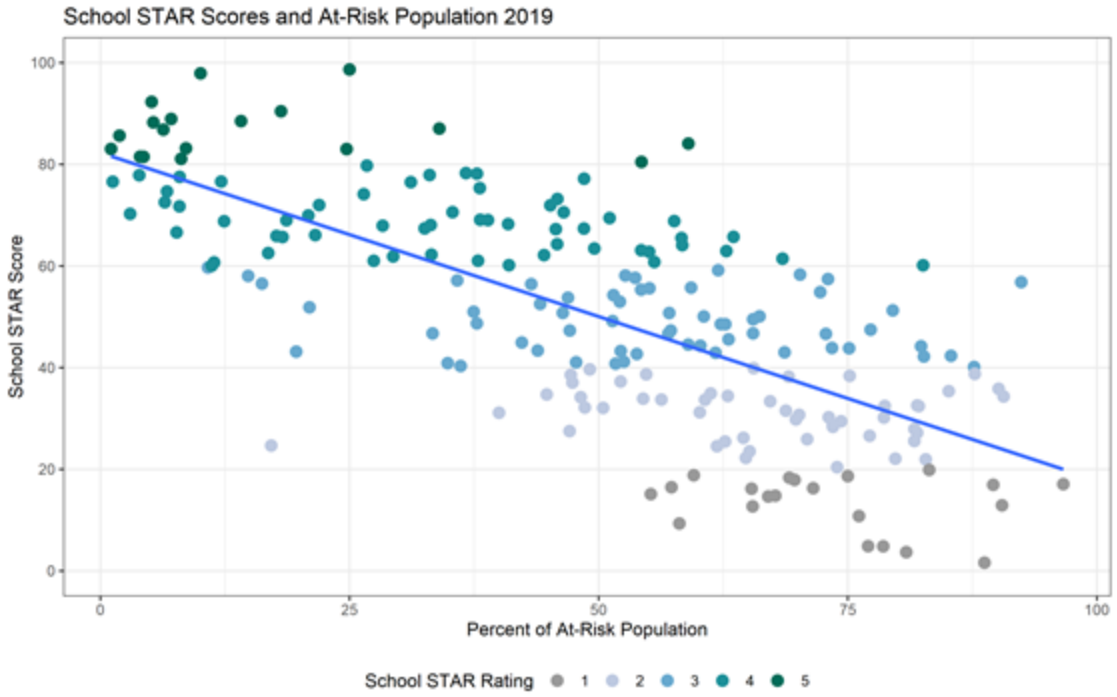


Figure 9 shows the proportion of students in each student group who were enrolled in schools of each star rating. There were increases in 2019 compared to 2018 of the percentages of students enrolled in four- and five-star schools across every student group, with the largest increases in the percentages of students with disabilities, Hispanic/Latino students, and English learners. Over 95 percent of students of two or more races, Asian students, and White students were enrolled in schools earning at least three stars. In contrast, only 59 percent of Black or African American students and 81 percent of Hispanic students were enrolled in schools earning at least three stars.

Thirty-four percent of students with disabilities were enrolled in four-, and five-star schools in 2019, as compared with 24 percent in 2018. Hispanic/Latino students also saw a 15 percentage point increase in the proportion of students who were in four- and five-star schools, but they also had a slight increase in the proportion of students in one- and two-star schools. English learners saw a similar pattern, with a 17 percentage point increase in the proportion of students who were in four- and five-star schools and a slight increase in the proportion of students in one- and two-star schools.

Black or African American students saw decreases in the proportion of students enrolled at one- and two-star schools and an increase in the proportion of students enrolled in three-, four-, and five-star schools, though the shifts for these students were small. The same was true for students who were at-risk.

Figure 9

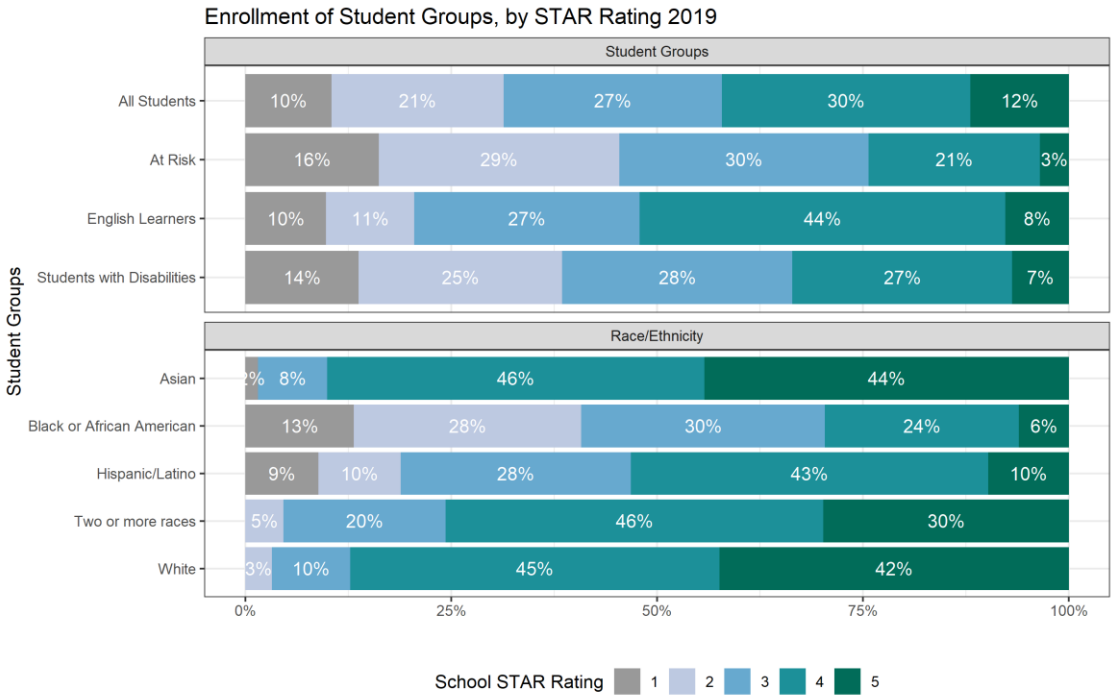
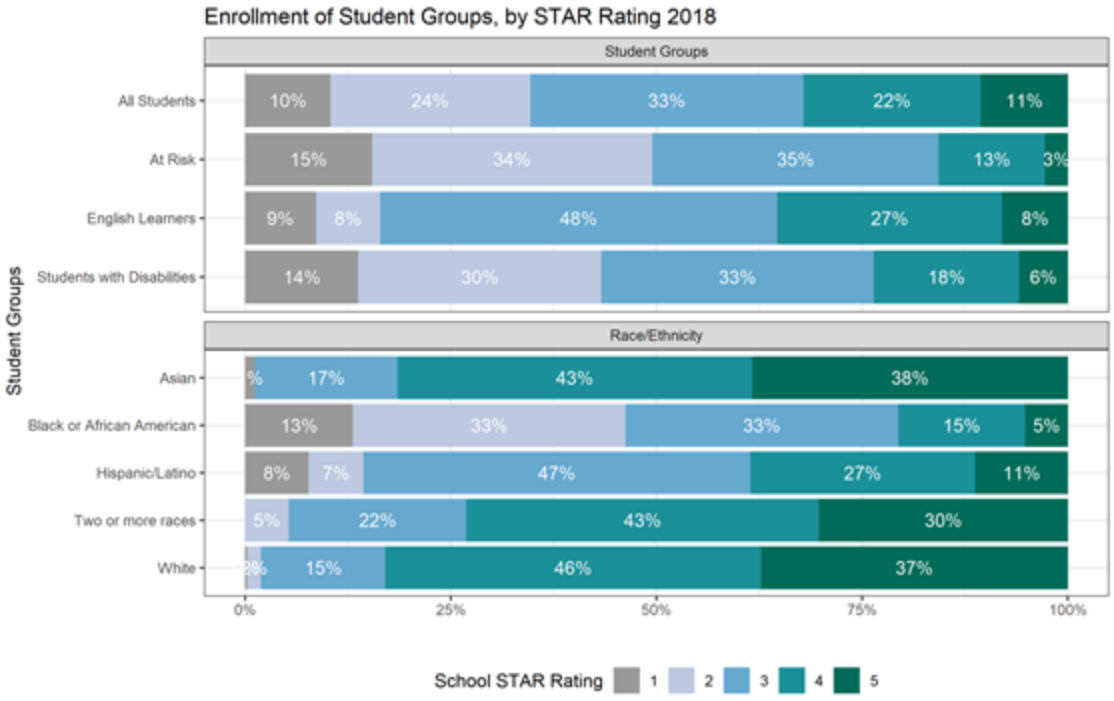


Figure 10



Growth Metrics and STAR Ratings

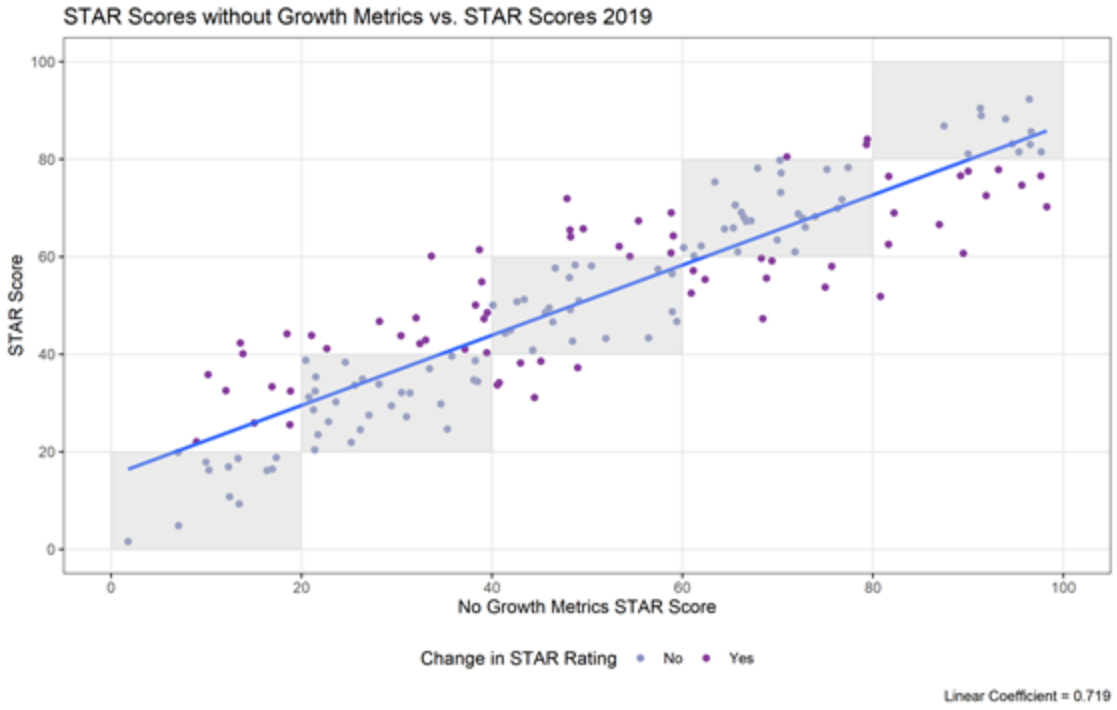
The STAR Framework includes multiple measures of growth so that schools can show the progress they are making for students, even if levels of academic achievement are not yet meeting or exceeding expectations. Many schools, especially those who serve high percentages of students who are at-risk, show higher rates of growth than achievement.

Figure 11 shows actual STAR scores (on the vertical axis) versus hypothetical scores if the STAR Framework excluded growth metrics (on the horizontal axis). Each point on the scatter plot represents a school STAR score (note that high schools are excluded, as they do not have academic growth metrics). When a school's dot is located in the shaded cells, it represents cases where the school's STAR rating would not have changed. If the dot is located above the shaded cell, that school's actual STAR rating is higher than a hypothetical rating that excludes growth. If the dot is located below the shaded cell, that school's actual STAR rating is lower than a hypothetical rating which excludes growth. This analysis illustrates the impact of academic growth metrics on STAR scores; OSSE is not suggesting removing growth from the STAR Framework. Additional hypothetical scenarios are provided in Appendix D of the separate 2019 STAR Brief: Appendices document.

This analysis shows that if all growth metrics were removed from the STAR Framework, STAR ratings would change for about half of schools. Specifically, ten schools would have earned a one-star rating without the inclusion of growth metrics, but earned two- or three-star ratings with the inclusion of growth metrics; fifteen schools would have earned a two-star rating without growth metrics, but earned a three- or four-star rating with the inclusion of growth metrics. These numbers are very similar to analyses conducted in 2018, when thirteen schools would have earned a one-star rating and sixteen schools would have earned a two-star rating without the inclusion of growth metrics.

The slope of the line is less than one, which indicates that schools at the lower end of the STAR rating distribution tend to benefit from the inclusion of growth metrics, whereas schools at the upper end of the STAR rating distribution would tend to benefit from the exclusion of growth metrics. The relationship between metrics with and without growth metrics remains similar from 2018 to 2019.

Figure 11


STAR Scores without Growth Metrics vs. STAR Scores 2019
STAR Score
No Growth Metrics STAR Score
0
20
40
60
80
100
Change in STAR Rating
No
Yes
Linear Coefficient = 0.719

Addressing Chronic Absenteeism

Ahead of the 2017-2018 school year, Mayor Bowser launched a citywide effort to emphasize the importance of student attendance, highlight its impact on student achievement, and promote District investments to help students and families overcome obstacles to attendance. The "Every Day Counts!" initiative includes a public campaign and a task force of education, health, and public safety leaders, as well as investments in data-driven strategies to reduce absenteeism. To emphasize and measure the value of attendance in school outcomes, OSSE incorporated two measures of chronic absenteeism into the STAR Framework, 90% Attendance and Attendance Growth. The 90% Attendance metric rewards schools with low rates of chronic absenteeism. Because absenteeism is an area of focus for many DC schools, the inclusion of Attendance Growth allows schools with lower rates of attendance to receive credit for improvements in their attendance rates from one year to the next.

The STAR Framework uses the "best of" the two attendance metrics for each student group, the higher of Attendance Growth and 90% Attendance. In year one, slightly more schools and student groups used the 90% Attendance metric than the Attendance Growth metric. This remained consistent in the 2018-19 data. There were some changes in the use of the metric across different student groups and different frameworks at the school level. However, there was no common reason for these changes across all schools, rather they are attributed to changes in attendance at the school level for individual student groups and not connected to a single rationale.

Please see Appendix E of the 2019 STAR Brief: Appendices document for a more detailed analysis of the 90% Attendance and Attendance Growth metrics and the DC Attendance Report for additional information on attendance in the District.

Conclusion

OSSE's goal is that all schools and students show growth toward the ambitious statewide targets established in DC's ESSA State Plan. Results this year show progress towards that goal.

Supplemental information can be found in the 2019 STAR Brief: Appendices. OSSE will be conducting additional analyses in the coming months to further explore the relationship between student groups, metrics, and the STAR Framework.

Note: On December 13, 2019, updates were made to percentages of students with disabilities and at-risk students in schools with a rating of four or five stars on pages 12 and 13 to correct an incorrect datapoint previously included on the graph.