

A+
Colorado
SHARPENING
PUBLIC
EDUCATION

**START WITH
THE FACTS**

DENVER PUBLIC SCHOOLS | **MAY
2017**

Acknowledgments

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Introduction

Denver Public Schools has recently received a slew of accolades: from ranking as the top district for school choice to having the second highest academic growth of large districts in the country, to gaining recognition for its structure for teacher leadership.^{1,2,3}

With all of this recognition it may be tempting to think the district is on target to reach the goals laid out in its strategic plan, Denver Plan 2020. By many measures, the district has made substantial progress. The district has rapidly moved from one of the lowest performing districts in the state to one in the middle. The district has more students reading and writing at grade level than other Colorado districts serving similar student populations.

However, at its current pace, the district will not reach its strategic academic goals. In five years, 80% of third graders are supposed to read on grade level; today only one in three do. Students are still under-prepared for college or a career after high school. ACT scores and college matriculation rates are flat. Of the DPS graduates who pursue a postsecondary degree, half still face the reality of having to pay for remedial classes. A high-quality education is still significantly more difficult to find for students from low-income families and students of color.

These are outcomes that the district needs to address. Indeed, the best district for choice in the country should be one in which families are choosing between multiple quality options without having to trade off academic outcomes, proximity, and school model. The highest rates of academic growth in the country should also mean that more students are mastering the content that will prepare them for life after high school.

The good news is that Denver already has many of the policies and systems in place to address these challenges. Now it is a question of how policies are being implemented, what is working, and what is being done to accelerate those initiatives. This report explores performance data from the past four years, showing that Denver has moved to the middle of the pack of Colorado districts. This next decade of work in Denver Public Schools will require that the district move from average to great. This will be even more challenging, and require collaboration and commitment from the district and the entire Denver community to ensure that all of our children receive an excellent education. It is no longer about whether the district has these systems in place; it is about the efficacy of these systems and how equitable they are.

But first, let's start with the facts.

¹ Grover J. (Russ) Whitehurst, *The 2016 Education Choice and Competition Index*. Center on Children and Families at Brookings. (March 2017). Accessed April 24, 2017. <https://www.brookings.edu/interactives/the-2016-education-choice-and-competition-index/>

² Education Resource Strategies Inc. *Denver Public Schools: Leveraging System Transformation to Improve Student Results* (March 2017). Accessed April 24, 2017. https://www.dpsk12.org/wpcontent/uploads/DPS_ERSreport_march17.pdf

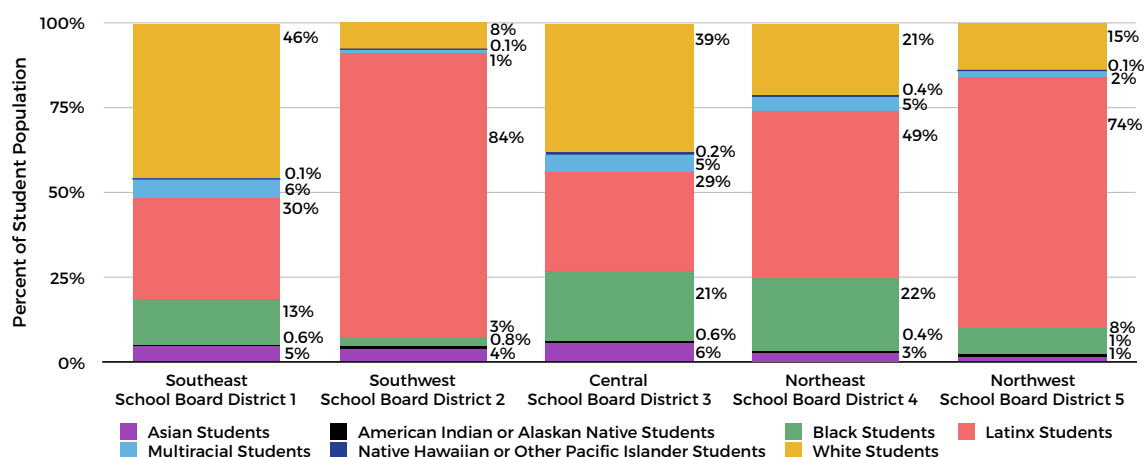
³ National Council on Teacher Quality. "2017 District Winners. Great Districts for Great Teachers." (2017). Accessed April 24, 2017 <http://www.greatdistricts.org/district/winners.do>

Who are DPS Students?

Denver Public Schools (DPS) is the largest and one of the most diverse districts in the state of Colorado. DPS has five different regional School Board Districts, each serving a different cross-section of DPS kids. Across all five board districts, the Latinx (a gender-neutral term for students who identify as Latino or Latina) population is either the largest or second largest population. In the Southwest and Northwest, Latinx students are by far the

largest student group. White students make up a larger portion of the population in the Southeast and Central parts of the district. The largest proportions of black students are in the Central and Northeast board districts. Asian students, multiracial students and Native Hawaiian or other Pacific Islander students make up a relatively small part of DPS' student population.

Figure 1: Race and Ethnicity of Denver Public Schools Students by Region (SY 2015-16)



The Southwest and Northwest DPS Board Districts have the highest proportion of students eligible for free or reduced price lunch, emerging multilingual students and

students with disabilities. The Central and Southeast Board Districts have the lowest proportions of those same student populations.

Figure 2: Eligibility for Free and Reduced Price Lunch and Students Receiving Specialized Instructional Programming by DPS Region (SY 2015-16)

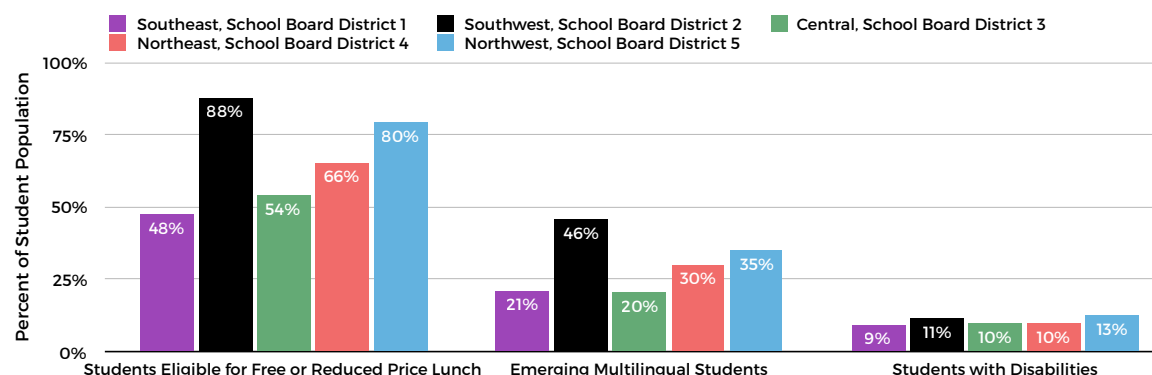
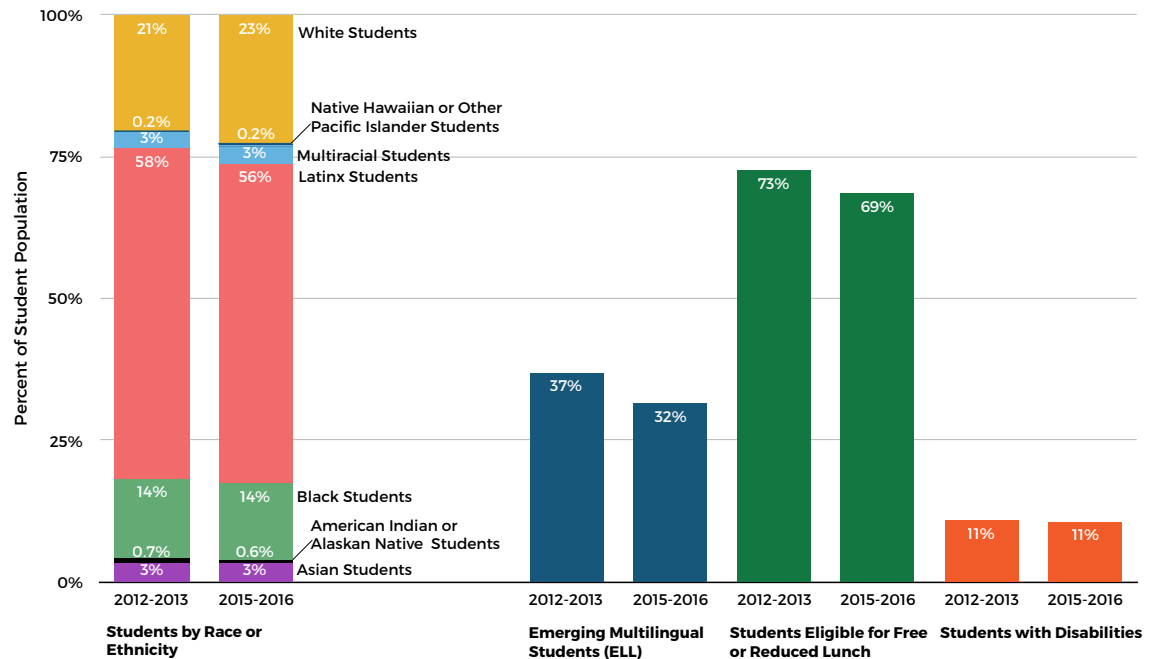


Figure 3: Denver Public School Student Demographics (SY 2012-13 to SY 2015-16)



Over the past three years, DPS' student population has seen a few important changes. Emerging multilingual students and students eligible for free or reduced price lunch are a smaller proportion of DPS kids than they were three years ago. There is also a smaller proportion of Latinx and black

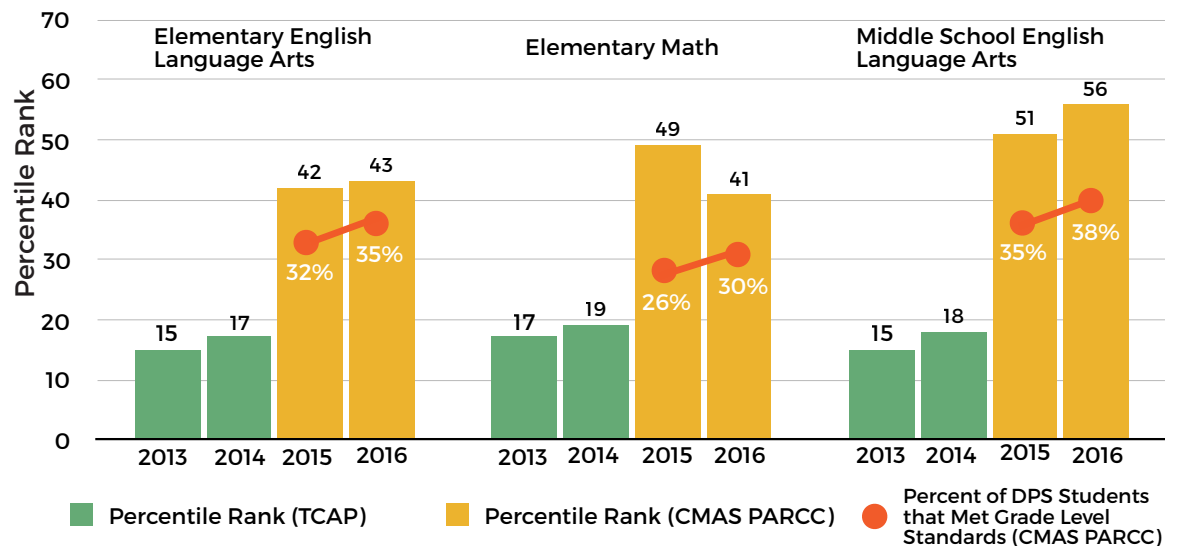
students in DPS. At the same time, white students and multiracial students are now a larger proportion of DPS students. Changing demographics in this large district could be the result of gentrification, increased rental prices, and low income families and families of color moving to outlying school districts.

How has DPS Performance Changed Over Time?

Performance on standardized assessments provides us with one indicator of what students are mastering in school. With the transition from TCAP to CMAS PARCC in 2015, results on the two assessments are not directly comparable. In light of this transition, A+ produced an analysis that compares how students in schools

and districts did relative to other students in Colorado schools and districts to better understand student performance over time. This percentile analysis method compares performance in districts to other districts, and performance in schools to other schools. For more on the methodology, see Appendix B.

Figure 4: Denver Public Schools' Relative Performance on Core Academic Assessments (2013-2016)



Last year, looking at only one year of CMAS PARCC data, A+ reported that Denver saw significant gains in academic performance relative to the rest of the state. There were big questions about whether this relative improvement would be reflected in the next year's data. In 2016 these trends by-and-large held. While three to four years ago performance in Denver consistently hovered in the bottom 15 to 20% of all districts in the state, in the past two years, academic performance in Denver is much closer to the middle of the state. To put this in context, there were few districts who saw gains in academic performance as large as those in Denver, and no district serving more than 10,000 students saw larger gains in relative performance than Denver.⁴

These improvements are considerable, and signal that Denver has drastically improved. With that said, it is equally important to note that this analysis shows that this improvement is relative to the rest of the state. To illustrate, the percent of students meeting grade level expectations in Denver was greater in 2016 than in 2015 across elementary ELA, elementary Math, and middle school ELA (even though relative performance in elementary Math was slightly lower). Further, the percent of students reaching grade level expectations—30% in elementary Math, 35% in elementary English Language Arts, 38% in middle school English Language Arts—is still far below what we should expect for students.

⁴ For more information on districts with gains in academic performance, see A+ Colorado's *The Outliers: The State of Colorado School Districts 2016*. <http://apluscolorado.org/reports/the-outliers-2016/>

Not only did the district as a whole show large gains in performance relative to other districts in Colorado, but also several schools in Denver made large gains relative to other schools. Figure 5 shows the three schools in each subject and level who have made the biggest gains relative to other schools.

These lists of the three schools with the largest gains in relative performance show that a variety of schools and educational programs have demonstrated improvement: from traditional district-run schools, to specialized programs, to charters and innovation schools. In some cases these improvements have coincided with changes in student demographics: in 2012-13, 68% of Valdez students qualified for free or reduced price lunch compared to 56% in 2015-16. At Merrill, in 2012-13, 75% of students qualified for free or reduced price lunch compared to 59% in 2015-16. In other schools, the socioeconomic background of the student population has remained relatively stable, including at Bryant Webster, Columbine and KIPP Sunshine Peak where most students qualify for free or reduced price lunch. All this to say that improvement can be, but is not necessarily, associated with changing student demographics. In schools with changing demographics it becomes even more important to ensure that improvements reach all groups of students.

Figure 6 shows the highest performing schools in Denver relative to all Colorado schools. Polaris at Ebert Elementary and Denver School of the Arts both have selective admissions processes. Bromwell, Steck, and Cory have attendance zones with some of the highest home prices in the district. It is clear that access to these highest performing schools is limited, and tracks closely to family affluence. DSST: Byers and McAuliffe offer slightly greater access to students from low-income backgrounds.

The district has considered expanding access to these latter two schools by authorizing additional DSST schools and creating McAuliffe at Manual, yet there is still room for expanding access to high quality programming. DPS must expand high quality arts programming like that seen at Denver School of the Arts with feeder schools in areas of the city that have been underserved.⁵ Additionally, strategies to expand access to the highest performing elementary

Figure 5: DPS Schools with the Biggest Improvements in Relative Performance (2013-2016)

Elementary English Language Arts

	Percentile Ranks			
	2013	2014	2015	2016
Valdez Elementary School	9	19	61	85
Kunsmiller Creative Arts Academy	7	11	31	48
Bryant Webster Dual Language ECE-8 School	12	28	21	46

Elementary Math

	Percentile Ranks			
	2013	2014	2015	2016
Valdez Elementary School	4	17	67	80
Palmer Elementary School	20	25	11	85
Columbine Elementary School	1	1	48	46

Middle School English Language Arts

	Percentile Ranks			
	2013	2014	2015	2016
KIPP Sunshine Peak Academy	16	33	74	69
Denver Green School	25	38	55	76
Merrill Middle School	10	16	42	58

Figure 6: DPS Schools with the Best Academic Performance Relative to Other Colorado Schools (2016)

Elementary English Language Arts

	2016 Percentile Rank
Polaris At Ebert Elementary School	100
Bromwell Elementary School	99
Steck Elementary School	99

Elementary Math

	2016 Percentile Rank
Polaris At Ebert Elementary School	100
Steck Elementary School	99
Cory Elementary School	99

Middle School English Language Arts

	2016 Percentile Rank
McAuliffe International School	98
Denver School Of The Arts	98
Slavens K-8 School	97
DSST: Byers Middle School	97

Note: In order to produce analyses that can shed light on student performance in schools across the state, A+ needs reliable publicly available data. Masked data can seriously complicate an A+ search for areas of promising practice and for schools that need additional support in delivering the education our students deserve. Some data has been masked by the Colorado Department of Education due either to small cohort sizes, or, more impactfully, other suppression rules. Masked data in the above schools include Kunsmiller Creative Arts Academy 3rd grade (suppression rule), Bryant Webster 4th grade (small cohort), Palmer Elementary 4th and 5th grade (suppression rules).

schools could include changing enrollment boundaries at the elementary level to better capture more diverse student populations and/or to reserve space at these top programs for out-of-boundary students who are eligible for free or reduced price lunch as is done in other DPS schools.

⁵ A+ Colorado. *A Retrospective on Arts Education in Denver* (March 2016). <http://apluscolorado.org/reports/a-retrospective-on-arts-education-in-denver/>

How are DPS Schools Doing Compared to Similar Schools?

Historically, academic opportunity has tracked along racial and socioeconomic lines. So has academic performance. However, there are exceptions to this trend, and demographics should not determine destiny. To uncover schools bucking this trend, A+ conducted an analysis to compare schools serving similar student demographics. A+ created a “School Demographic Index” for each school in Colorado based on the percent of students eligible for free or reduced price lunch, the percent of emerging multilingual students, the percent of students receiving special education services, and the school’s mobility rate. The following graph shows the schools that are “Outliers” and perform outside of the trend for elementary English Language Arts. For an explanation of the methodology and selection see Appendix C.

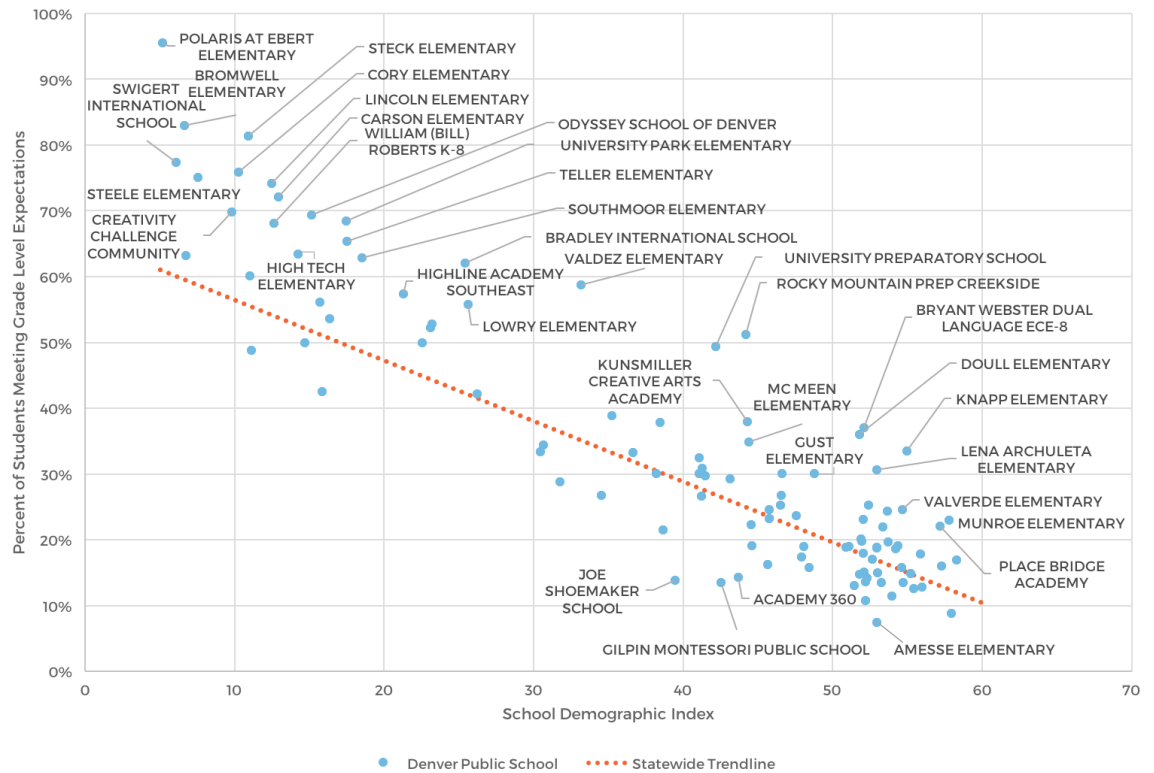
Figure 7 shows that many schools in Denver are “Outliers” compared to the state’s trend line for performance. More than one of every four Denver schools is a positive outlier, meaning at those schools students are reaching grade-level standards in elementary English Language Arts at higher rates than their peers in similar schools across the state. This is true at a number of schools serving a wide range of student populations, including schools serving primarily affluent students and with few emerging multilingual students like Steck, Bromwell, and Lincoln Elementaries, and at schools serving more students from low-income families, emerging multilingual students, and schools with higher mobility rates like Rocky Mountain Prep Creekside, Valdez Elementary, and University Prep.

A variety of school models and governance types break with performance trends. Positive outlier schools include charters, innovation, and district run schools. School models include

more structured programs, dual language programs, and experiential learning programs. It is also notable that schools with similar governance types or programs to these outliers are not necessarily bucking trends. That means that neither school model nor governance type is the ultimate answer to the question of how to create the best educational opportunities for Denver kids. Instead, it underscores the importance of developing a better understanding of what is working for students within these schools. How can we learn from those practices, regardless of curriculum, pedagogy, or governance? Sharing these lessons is vital. Denver must also ensure that all families have access to a variety of high-quality programs regardless of where they live in the city. There should not be certain types of schools for low-income families and other options for higher income families. All students need to have a real choice in finding a school that best fits their needs where they live.

While this analysis is helpful for understanding schools that provide better educational outcomes relative to similar schools, it does not provide information about gaps between groups of students within schools, particularly at schools with less homogeneous student populations. While the state has released information about the average scores of some different student groups, the Colorado Department of Education has yet to release information about whether these groups of kids are actually reaching grade level standards—the expectations the state has laid out for these students to ensure they are prepared for life after high school. Understanding how different student groups are doing, and whether or not they are on grade level, in different schools is essential for the community and the district to continue to improve schools.

Figure 7: Outlier DPS School Performance in Elementary English Language Arts Compared to Schools with Similar Student Demographics (2016)



Understanding this Chart:

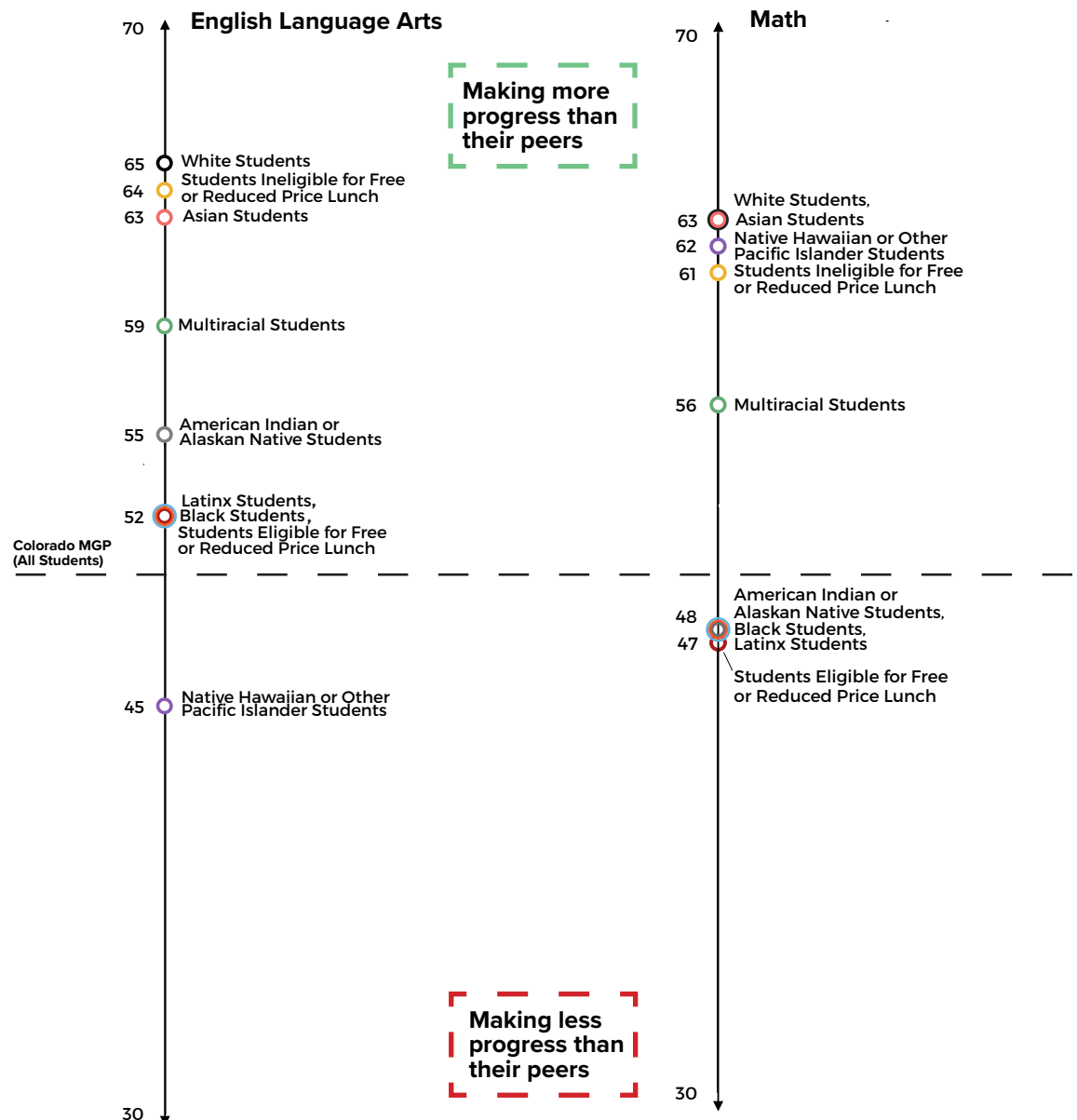
1. The School Demographic Index includes students qualifying for free or reduced price lunch, emerging multilingual students, students receiving special education services, and school mobility rates. See Appendix C for more information.
2. Each blue dot represents a Denver Public School serving elementary students. Labeled schools are Outliers in terms of the proportion of students reaching grade level expectations relative to schools across the state with similar demographics. See Appendix C for selection criteria.
3. All DPS schools serving Elementary Grades were included in the analysis except for Barrett Elementary, Beach Court Elementary and Escuela Tlatelolco as all data for those schools were masked due to suppression rules from the Colorado Department of Education. Other schools include only partial data when specific grade level results were suppressed by the Colorado Department of Education.

How Much are Students Learning?

In addition to understanding whether students are reaching grade level expectations, it is important to look at how students are progressing year to year. To look at this, we turn to student growth. Student growth, as calculated by the Colorado Growth Model, looks at how students are making progress year over year compared to their “academic peers”—students in Colorado with the same previous academic performance.⁶ This measure looks at students’ learning progress regardless of whether they are below, at, or well above grade level.

It is important to note that this measure of growth is a normative measure, meaning that results are purely based on how other students perform. This means that high growth does not necessarily indicate that improvements in proficiency will follow. Better said, students who have high growth relative to their peers may or may not have grasped a full year’s worth of content or caught up to grade level expectations. Therefore while growth is a critical metric, it must be placed in context with improvements in content mastery to truly understand its value.

Figure 8: DPS Academic Growth (MGP) by Student Group (2016)



⁶ To calculate growth, a student's performance on the test is compared to her “academic peers.” Academic peers are other students who had the same test score the previous year. Based on that comparison, the state calculates each individual student's growth percentile. Her student growth percentile shows whether she mastered more or less content than this group of students. The median growth percentile is the average growth percentile of all students within the school or district.

Looking at growth, we see again that opportunity is unevenly distributed. While Denver posted some of the highest median growth percentiles for white students and students ineligible for free or reduced price lunch in the state, the average growth that students eligible for free or reduced price

lunch, Latinx and black students see is significantly lower. These students are falling farther behind their peers. It should also be noted that there are other districts in Colorado that have higher growth scores for their students of color and low-income students than Denver.⁷

Figure 9: DPS Elementary and Middle Schools with the Highest Growth (MGP) (2016)

	English Language Arts	Math
Students Ineligible for Free or Reduced Price Lunch	1. STRIVE Prep- Federal (87.5) 2. McAuliffe International (87) 3. Creativity Challenge Community (85.5)	1. Valdez Elementary (93) 2. STRIVE Prep- Montbello (86) 3. Creativity Challenge Community (80)
Students Eligible for Free or Reduced Price Lunch	1. Valdez Elementary (84) 2. Southmoor Elementary (73.5) 3. Knapp Elementary (72.5)	1. DSST: Byers Middle (80.5) 2. Valdez Elementary (79) 2. Rocky Mountain Prep Creekside (79)
Asian Students	1. McAuliffe International (89) 2. DSST: College View Middle (74) 3. Kunsmiller Creative Arts (73.5)	1. DSST: College View Middle (75.5) 2. Henry World (72.5) 3. Florida Pitt-Waller (69)
Black Students	1. Southmoor Elementary (80) 2. Lena Archuleta Elementary (75) 3. SOAR at Green Vally Ranch (73.5)	1. DSST: Byers Middle (77) 2. Holm Elementary (71.5) 3. McMeen Elementary (68.5)
Latinx Students	1. Valdez Elementary (84.5) 2. University Prep (77) 3. Knapp Elementary (76)	1. Valdez Elementary (81) 2. DSST: Byers Middle (79) 3. Garden Place Elementary (77)
Multiracial Students	1. McAuliffe International (80) 2. DSST: Stapleton Middle (76) 3. William (Bill) Roberts K-8 (72)	1. Slavens K-8 (80) 2. McAuliffe International (75) 3. Hill Campus of Arts and Sciences (65)
White Students	1. McAuliffe International (88) 2. Denver Green School (85) 2. Creativity Challenge Community (85)	1. Valdez Elementary (93) 2. DSST: Byers Middle (81.5) 3. Creativity Challenge Community (79.5)

Note: A+ excluded high schools from this list; high school MGPs reflect growth of only 9th graders and so provide a limited view of the growth in the broader school. Elementary and middle schools are combined in this list as the state combines growth at K-8 schools.

Like the list of schools that were outliers (Figure 7), the list of schools with the highest median growth percentiles for different groups of students (Figure 9) is diverse in terms of school model and governance type. Many of these growth scores are particularly impressive and are some of the highest growth rates of any school in the state. There are certainly still gaps in opportunities: the top median growth percentiles are highest for white and more affluent students. However, there are a few schools where these trends are reversed, including Southmoor Elementary, where in English Language Arts students eligible for free or reduced price lunch had a median growth percentile of 73.5 and students who were ineligible for free or reduced price lunch had a median growth percentile of just 59. Other schools saw very little difference in the growth between those students who were eligible for

free or reduced price lunch and those who were not, including DSST: Byers and Knapp Elementary.

Particularly notable are schools showing growth for multiple groups of students and across multiple subjects including Valdez Elementary which shows some of the highest growth for Latinx students, white students, students who qualify for free and reduced price lunch, and those who are ineligible. DSST: Byers Middle School similarly showed some of the highest growth for both black, Latinx, and white students in math. These data points suggest that Valdez and DSST: Byers are more effectively reaching all groups of students, particularly those who have historically been left out of academic opportunities, and are strong examples that integrated schools can work well for all kids.

⁷ A+ Colorado. *The Outliers: The State of Colorado School Districts 2016*. (February 2017).

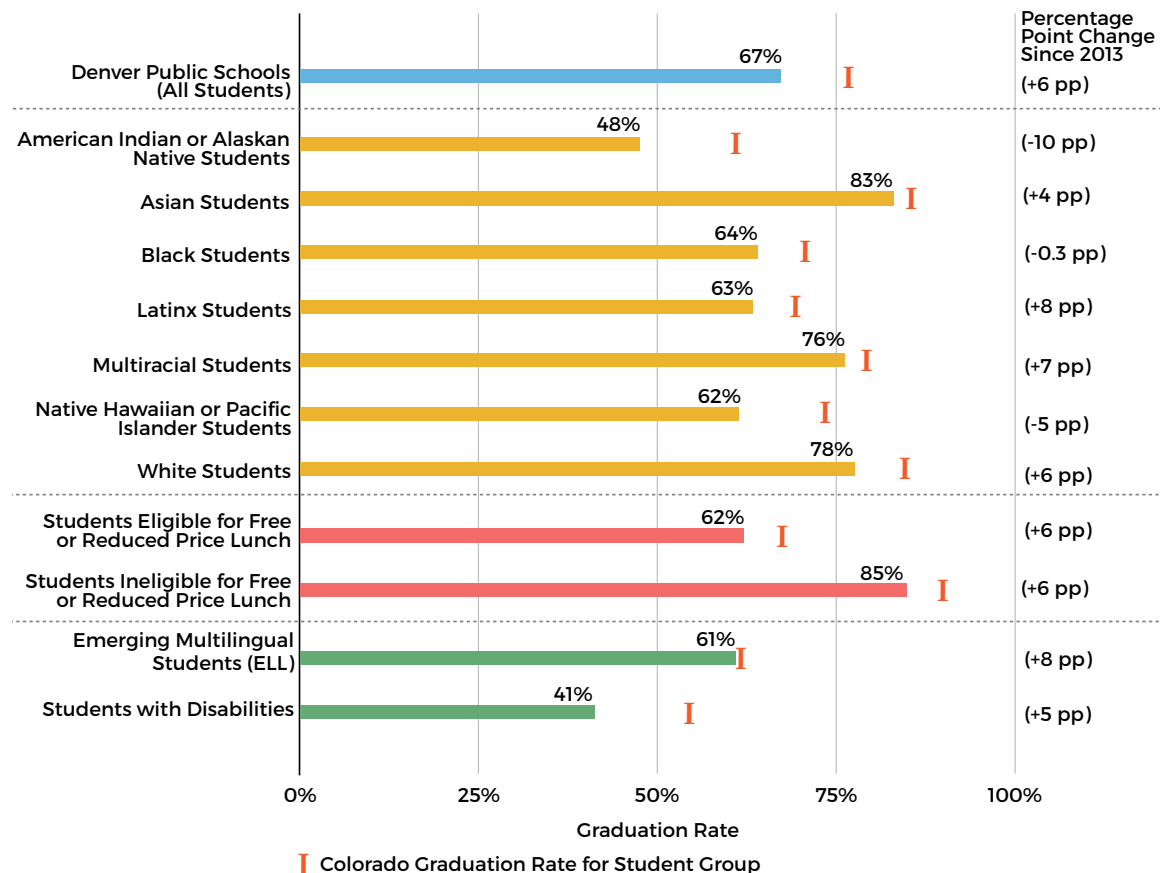
Are DPS Students Ready for What Comes Next?

High school should prepare students for the next step in their lives, whether that step is the workforce or continuing education. At a time when high school diplomas are less valuable than they have ever been historically, it is increasingly vital that schools prepare students to access some kind of postsecondary education. Unfortunately, a high school diploma is not enough for most students to access middle income jobs.⁸

In Denver, most student groups have increased graduation rates, which is also reflected in the overall graduation rate increase from 61% in 2013 to 67% in 2016. That six percentage point increase in graduation rate was the same for students eligible and ineligible for free or reduced price lunch. That means that the gap between these two student groups has remained at a steady 23 percentage points over the past three years. In working on increasing graduation rates, DPS must also make sure that it is working to decrease opportunity gaps; it is unacceptable that only 62% of students eligible for free or reduced price lunch are graduating on time and able to move on to postsecondary opportunities.

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Figure 10: 2016 DPS 4-Year Graduation Rates and Change from 2013 (percentage point change)



⁸ Kevin Mahnken "More HS Students Are Graduating, but These Key Indicators Prove Those Diplomas Are Worth Less Than Ever." The 74, (March 26, 2017). Accessed April 24, 2017 <https://www.the74million.org/article/more-hs-students-are-graduating-but-these-key-indicators-prove-those-diplomas-are-worth-less-than-ever>

To get a picture of Denver graduates' access to college programs, A+ looks at ACT scores. The ACT is an entrance exam for colleges and provides a measure for college readiness; a perfect score on the ACT is 36. An average composite ACT score of 20 meets expectations for the state of Colorado; ACT test makers set their own college-ready scores in English at 18, Reading at 22, Math at 22, and Science at 23.

In Denver, white students, students ineligible for free or reduced price lunch, multiracial students, and Asian students each had a composite ACT score above the Colorado benchmark of 20. On the other end, American

Indian or Alaskan Native students, black students, students eligible for free or reduced price lunch, and Latinx students each had ACT scores between 16.8 and 17.2, well below the Colorado benchmark for college readiness. Disparities in ACT scores between low-income students and higher income students reaffirm the large opportunity gaps between student groups. There are a handful of high schools where low-income students and students of color are showing significantly higher ACT scores than the average, listed in Figure 13. These schools may have important lessons to share with other high schools in the district.

Figure 11: DPS Composite ACT Scores by Student Group (2013-2016)

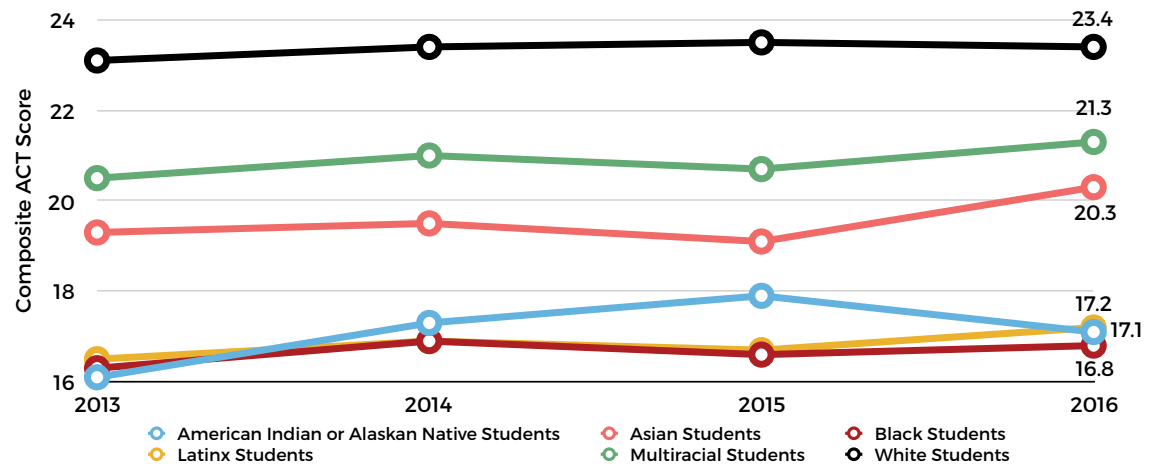


Figure 12: DPS Composite ACT Scores by Free or Reduced Price Lunch Eligibility (2013-2016)

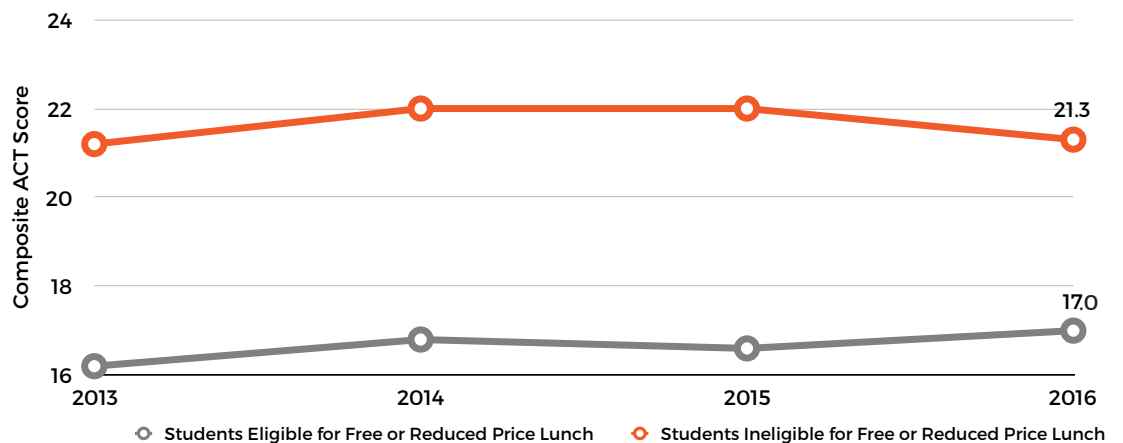


Figure 13: Top Composite ACT Scores in DPS High Schools by Student Group (2016)

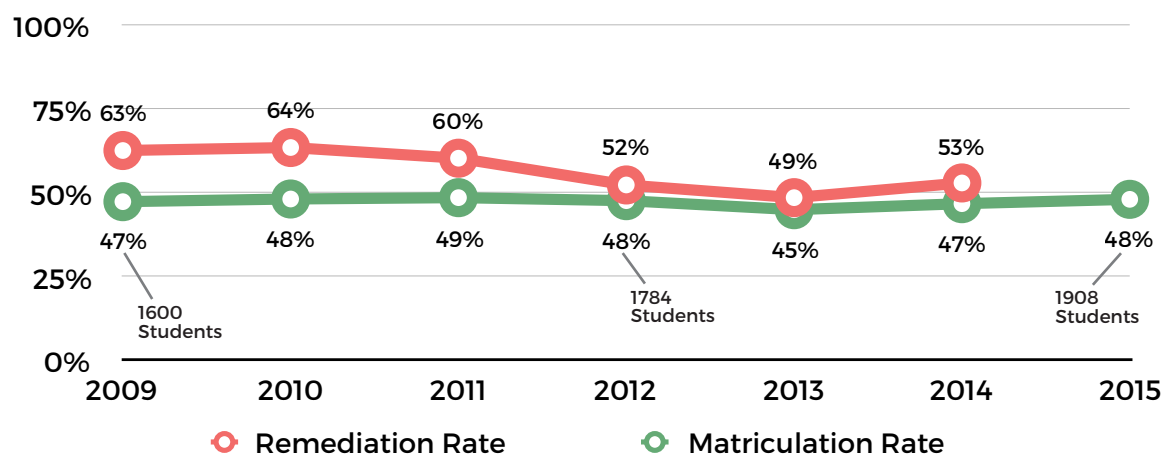
Student Group	School Name	Average Composite ACT Score
Students Ineligible for Free or Reduced Price Lunch	1. DSST: Stapleton High School	26.7
	2. Denver School of the Arts	25.1
	3. DSST: Green Valley Ranch High School	24
Students Eligible for Free or Reduced Price Lunch	1. DSST: Green Valley Ranch High School	22.3
	2. DSST: Stapleton High School	22.2
	3. Denver Center for International Studies	19.4
Asian Students	1. George Washington High School	21.8
	2. John F. Kennedy High School	20.8
	3. South High School	17.1
Black Students	1. DSST: Green Valley Ranch High School	23.2
	2. DSST: Stapleton High School	21.7
	3. Thomas Jefferson High School	18.5
Latinx Students	1. Denver School of the Arts	23.1
	2. DSST: Stapleton High School	21.9
	3. DSST: Green Valley Ranch High School	21.7
Multiracial Students	1. East High School	23.3
	2. Thomas Jefferson High School	20.9
White Students	1. DSST: Stapleton High School	28.9
	2. George Washington High School	26
	3. Denver School of the Arts	25.5

Note: In DPS, 3 schools had large enough cohorts (<16 students) of Asian students to report data; 2 schools had large enough cohorts (<16 students) of multiracial students to report data

Matriculation rates reveal the percentage of students who attend college after graduating from a DPS high school, and remediation rates let us know what percentage of those students needed to take remedial courses.⁹ Remedial courses cover high school level material that college students missed or need to relearn. These classes do not provide college credit but do cost as much as any other college course; they are not covered by Pell grants, meaning the cost comes out of the pockets of even our lowest-income students.

Though Denver's graduation rates since 2012 have increased, as have the numbers of DPS graduates enrolling in postsecondary programs, it has not come with a significant

increase in matriculation rates. While there has been improvement in remediation rates (down ten points in six years), the majority of DPS graduates are not college ready. Only about 1 in 3 students who start DPS in 9th grade will graduate on time and go on to enroll in college. Half of those students who do enroll will need to take remedial coursework. This raises the concern that DPS high schools are not preparing their graduates for college-level work. While college may not be the pathway for all students, all students should have the academic preparation to allow them to be successful in college, if that is their choice. Graduating without the requisite skills for college does not provide an equal opportunity for success.

Figure 14: Denver Public Schools Matriculation and Remediation Rates (Classes of 2009-2015)

⁹ Matriculation and remediation data retrieved for Colorado Department of Higher Education.

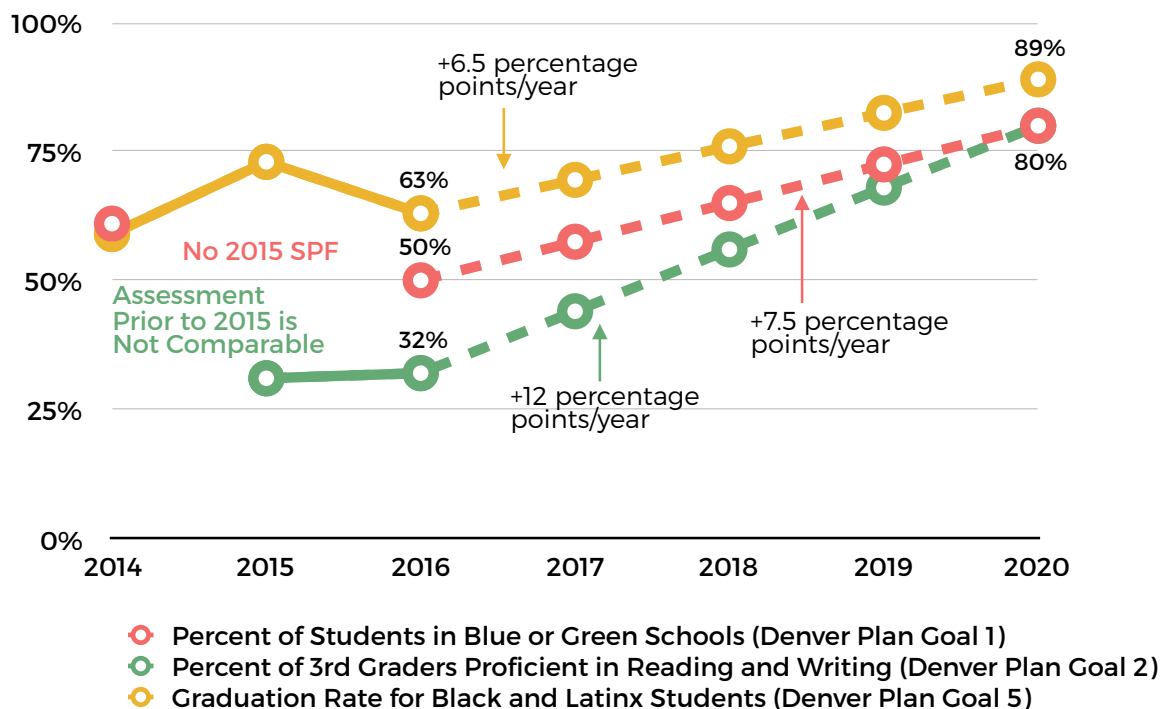
Conclusion

It is clear there are growing pockets of success within DPS. At every level there are schools where students are doing much better than they are in other parts of the state. DPS leaders and staff are without a doubt committed and working hard to improve outcomes for all students.

Continued improvement demands commitment and reflection on how best to accelerate improvement. There are still far too few great schools in all parts of the city. Denver is still far from reaching the goals of its strategic plan or what most of us expect of a quality school. Students of color and low-income students have limited access to existing quality schools, which is a contributing factor to the persistent gaps between the educational outcomes between these students and their more affluent and/or white peers.

While there are examples where improvements have reached these students, persistent gaps in opportunity and outcomes continue to be the primary challenge in the district. How can Denver move from the middle of the pack to become a great district? How can Denver turn around its lowest-performing schools? How will the district hone its strategy and process to replace low-performing schools? What is the strategy to match community needs with school options? How can Denver ensure there is a pipeline of new high quality school options of both district-run schools and charters? And how can Denver ensure improvements not only reach, but focus on, groups of students who continue to fall behind? We offer the following recommendations to continue to address these questions.

Figure 15: How Quickly Does DPS Need to Improve to Reach its Goals?



Develop a Vision for a “Quality School”

Ensuring students can read, write and do math is essential and is core to the district’s vision for its students. And it is not exhaustive of the educational outcomes we want for every student in this city. Further, we know that students thrive in different learning environments, have wide-reaching interests and needs. Denver’s goal of quality schools in every neighborhood is laudable. But there is a true opportunity to develop a vision for what “quality schools” look like. As the data shows, many school models can foster student’s learning, and families’ desires for quality programming go beyond the academic outcomes schools deliver. Denver should be thoughtful about improving access to different types of quality schools.

If we assume every student should be able to find a school where they have a high likelihood of learning to read, write and do math, should we not also strive to ensure that every family has the ability to choose the right fit for their student? That might be an arts program, or an expeditionary learning program, or the more structured academic program that DPS has been expanding more recently in both charter and district-run schools. Currently, the access to these types of programs are concentrated in certain parts of the district—leaving many students out. We recommend the district develop a more nuanced vision for what a portfolio of quality schools look like, including their geographic locations how to create the most robust mix of school choices, how to ensure access to that portfolio from every corner of the city, and most importantly, how to empower families to find the best school for their student.

Clarify the Intent of the School Performance Framework

A+ has long applauded Denver’s creation and use of the School Performance Framework as

a way to understand and communicate how schools are serving students, and whether students in the building are on track to be ready for the world after high school. 2016 marked the first year that Denver’s School Performance Framework incorporated information from the CMAS PARCC assessments. The process and results of this shift underscored, again, that the SPF serves too many purposes. DPS uses the SPF as a communication tool to help families understand school performance. It also uses the SPF as a performance management tool, helping schools understand whether efforts in the building are impacting students as intended. This leads to some mixed signals: schools are rated green where students have only a small likelihood of mastering grade-level content. These schools might be “on the right track” but have not yet met community expectations. We recommend further refining the SPF such that it better differentiates these two important, but distinct, messages.

Continue to Support Community Engagement During School Improvement Processes

Community engagement processes that support increasing student achievement require a set of clear systems, training, and expectations about when and how communities engage. DPS has made great strides to improve its own capacity for family and community engagement. Yet far more work is needed to improve existing schools and create new schools, there is an even greater need for the district and outside community organizations to engage in more in-depth conversations about how to work with families and communities to improve schools. There is an opportunity to intentionally incorporate community conversations throughout school improvement processes, such that high stakes decisions are not just informed by, but are reflective of community conversations.

Address Gentrification Patterns in the City and Prioritize Access for Low-Income Students and Students of Color

As the demographics of Denver change, there is critical work for the district to do to ensure that the schools themselves do not accelerate or exacerbate segregation. DPS must focus on equitable access to high quality programming. We are heartened to see Denver creating committees and processes for inquiry about gentrification and demographic changes in the district, particularly given data explored in this report that show improvements across the district are more significant for white and more affluent students. Yet there are some clear practices DPS can put in place to ensure low-income students and students of color have access to schools as neighborhoods gentrify. These practices could include reserving seats for low-income students at schools with more affluent attendance boundaries; creating diverse-by-design schools; improving transportation options for low-income students and students living in neighborhoods without high quality schools. The effects of fostering integration could be incredibly powerful, as in many cases it is integrated schools that are showing the best results for low-income students or students of color.

Invest in Program Evaluation—and Make Decisions Based on the Results

DPS has undertaken a number of broad initiatives in the past several years including (and certainly not limited to) new literacy programs, new teacher development, new principal development pipelines, new community partnerships, new staffing models, new curricular flexibility, new assessment practices. What is unclear is which practices and investments have been making a difference for students. Is it one or two specific initiatives that have made improvements district-wide? Are effects site-specific?

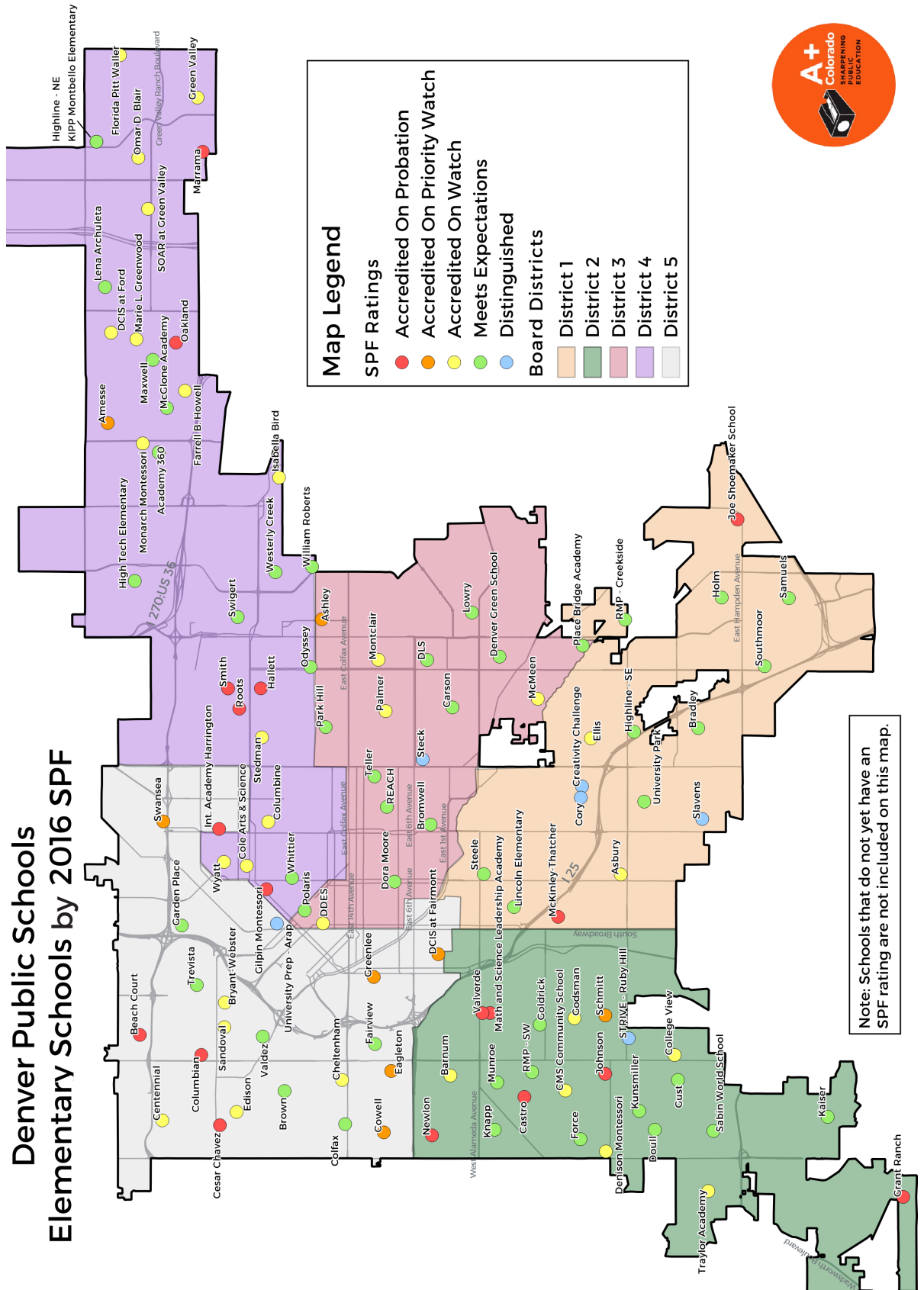
Are effects more determined by school-level decisions than district initiatives? What is scalable? And, perhaps more importantly, what should the district stop doing? These questions require reflection, resources, and the willingness to be wrong. It is time to address the persistent gaps between groups of students, which the district and schools cannot do with best guesses about what will work. There is need for evidence of the impact of the initiatives DPS has already launched, and of what DPS should wrestle with next.

Clarify the District's Human Capital Strategy

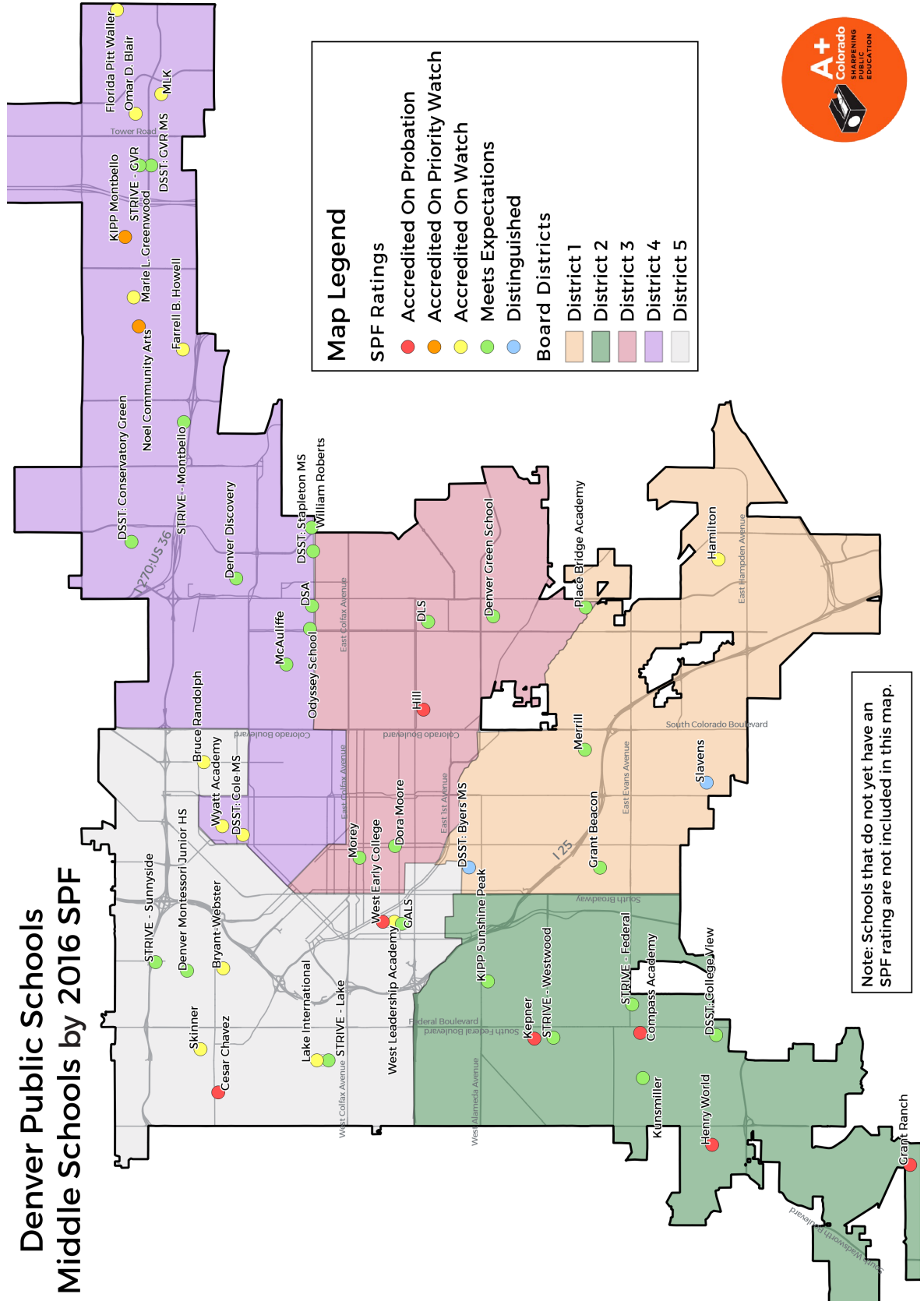
We would be remiss to ignore the impact teachers, principals, and others in the district have on students. There is a clear opportunity, with the renegotiation of the contract with Denver Classroom Teachers Association on the table, to create a system that works better for educators and for students than the current system. DPS—and educators in the district—should not be satisfied with the status quo. We urge the district to address the challenges and opportunities of ProComp as recently described in the A+ report *A Fair Share: A New Proposal for Teacher Pay in Denver*. Denver can do far more to align the different human capital strategies of the district like evaluation, compensation, and career pathways.

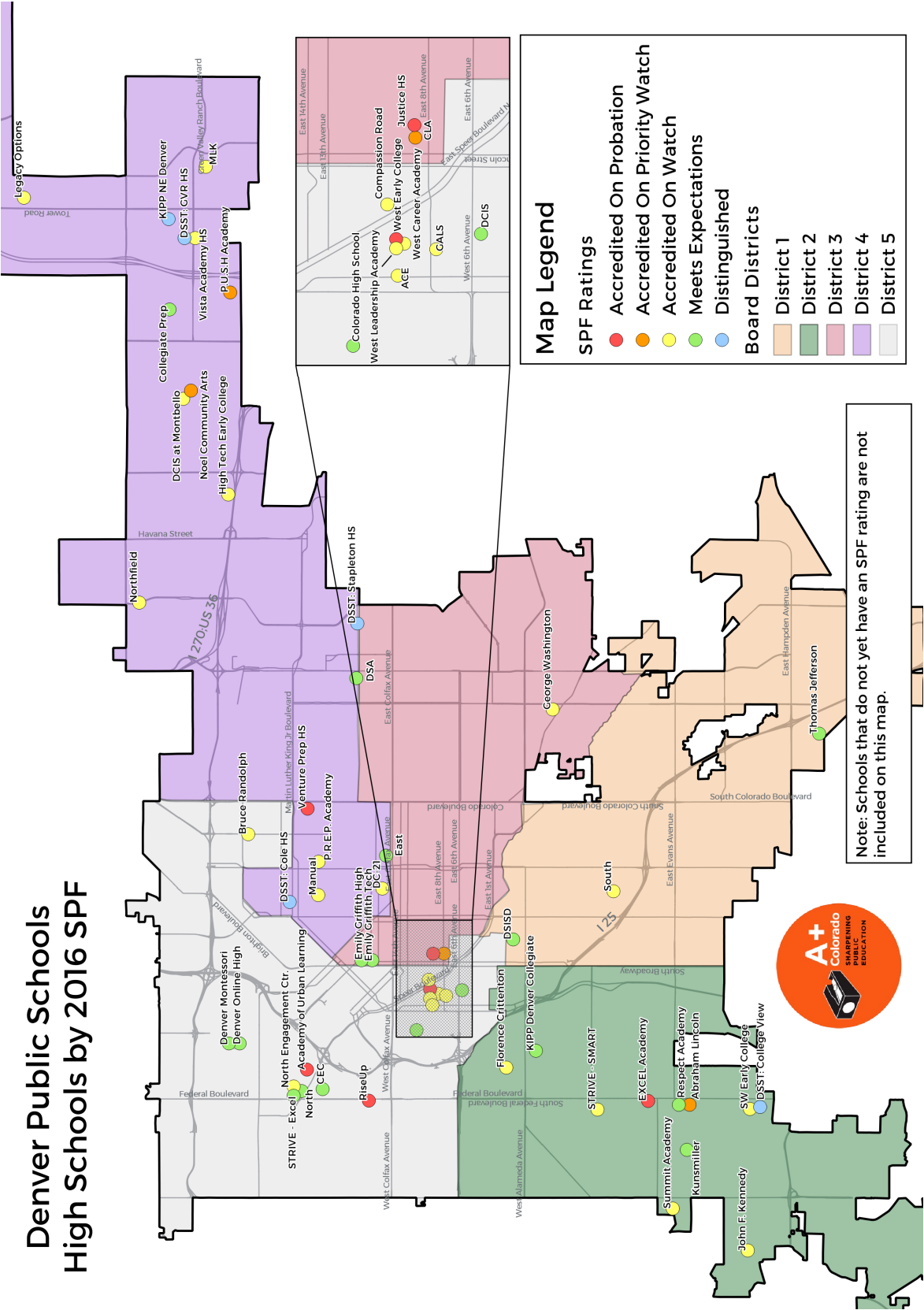
The questions DPS needs to grapple with are at once fundamental and increasingly nuanced. How does a district ensure diverse high-quality school options across a large district? How does a district not just talk about equitable educational outcomes, but realize them? How do communities become even more significant partners in the district's vision and in school improvement strategies? Now is the time for Denver to face the facts, and figure out how to move from an average district to one where an excellent education is the rule rather than the exception, particularly for low-income students and students of color.

Appendix A: Denver Public Schools Map



Denver Public Schools Middle Schools by 2016 SPF





Appendix B & C: Percentile Analysis & District Demographic Analysis

APPENDIX B:

The A+ percentile analysis in the Start with the Facts report compares the relative performance of Colorado districts and schools on previous and current tests: TCAP 2013 and 2014, and CMAS PARCC 2015 and 2016. The analysis includes results from Elementary English Language Arts, Elementary Math, and Middle School English Language Arts. Secondary math is not included given that students can choose between subject specific tests and are not necessarily comparable. High School English Language Arts is not included given that there are only results for a single grade (9th grade) and given low participation rates in some schools.

Methodology

Percentile ranks compare districts to districts and schools to schools on the basis of the percent of students who met the grade-level benchmark (level 4 and above on PARCC; meets or exceeds expectations on TCAP) in a particular test and grade range on the 2013 TCAP, 2014 TCAP, 2015 PARCC, and 2016 PARCC assessments.

Grades were grouped as follows:

- 3-5 (elementary students)
- 6-8 (middle school students)

This analysis relied on publicly available data. The Colorado Department of Education implemented additional data suppression rules in 2015 and 2016. These rules include:

- Minimum n-size = 16 (no reporting on cohorts of students with fewer than 16 students)
- Minimum cell-size = 4 (no reporting when a single cell, or the difference between valid scores and results cell, is less than 4)

For the 2016 analysis of PARCC scores, results from specific grades were included only if a) there were more than 15 valid scores, and b) results of the valid scores were reported. In 2015, results were included when a) there were more than 15 valid scores, b) results of the valid scores were reported or results could be estimated (this change in methodology in 2015 to 2016 is due to changed reporting rules from the Colorado Department of Education).

Calculation of percent of students at benchmark:

PARCC (Math and English Language Arts) and TCAP Math:

$$\text{\% of students at benchmark} = \frac{\text{N students at benchmark}}{\text{N valid scores}}$$

TCAP Reading and Writing (combined to provide a better comparison to 2015 PARCC English Language Arts exams):

$$\text{TCAP Reading and Writing \% at benchmark} = \frac{(\text{N students at benchmark in Reading} + \text{N students at benchmark in Writing})}{(\text{N valid scores Reading} + \text{N valid scores Writing})}$$

APPENDIX C:

Methodology

To better compare like-schools based on their demographics, every school in the state of Colorado was assigned a School Demographic Score. This methodology mirrors closely what Denver Public Schools uses to compare similar schools, and is based on research of student factors that are often correlated to academic performance on standardized tests. The Index was calculated according to the following formula:

$$\text{School Demographic Index} = \begin{aligned} & (40\% \times \text{proportion of students qualifying for free or reduced price lunch}) \\ & + (20\% \times \text{proportion of emerging multilingual students (ELL)}) \\ & + (20\% \times \text{proportion of students receiving special education services}) \\ & + (20\% \times \text{district mobility rate}) \end{aligned}$$

A+ then produced a correlation between student performance in the school (percent of students meeting grade-level standards on PARCC 2016) and the School Demographic Index.

Selection Criteria for Inclusion as an Outlier

To identify “Outliers,” A+ compared actual performance in a school to the correlated value based on the School Demographic Index and performance in schools across the state.

A+ calculated the range of the discrepancy between actual and correlated performance, and identified those schools that performed at least 0.8 standard deviations from the correlated value; 30-40% (depending on the subject area and grade level) of schools were identified as “Outliers,” falling outside the trend line.



ABOUT A+ COLORADO

The mission of A+ Colorado is to sharpen public education by building public will and advocating for the changes necessary to dramatically increase student achievement in schools and districts in Colorado. We are an independent, nonpartisan 501(c)(3) organization working to bring the power of data and research to challenge ourselves, educators and policymakers to rethink public education.

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