A+

# THE OUTLIERS THE STATE OF COLORADO SCHOOL DISTRICTS I 2016 



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## Endorsements

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## Table of Contents

## I. Introduction I 5

II. Demographics I 6
III. K-12 Achievement I 8a. Who is Reading, Writing, and Doing Mathat Grade Level? I 9
b. Who is Bucking the Trend? I 11
c. Who is Making Headway Year over Year? I 14
IV. College/Career Readiness I 18
a. Who is Opening Doors for Graduates? ..... 22
b. What Happens Beyond K-12? ..... 27
V. Conclusion ..... 28
VI. Appendices I ..... 29

## List of Figures

1. Districts with the Largest Increases in Student Enrollment (2011-2015) I 6
2. Districts with the Largest Changes in Proportion of Students Qualifying for Free or Reduced Price Lunch (percentage points) 2011-2015 I 6
3. Racial and Ethnic Makeup of Colorado Students I 7
4. Districts with the Largest Changes in Proportions of Racial and Ethnic Student Groups (percentage points) 2011-2015 I 7
5. Districts with the Largest Changes in Proportion of Emerging Multilingual Students Learning English (percentage points) 2011-2015 I 7
6. Districts with Big Changes in Relative Performance in Elementary English Language Arts 2013-2016 । 10
7. Districts with Big Changes in Relative Performance in Elementary Math 2013-2016 I 10
8. Districts with Big Changes in Relative Performance in Middle School English Language Arts 2013-2016 । 10
9. The Outliers: Elementary School English Language Arts Percent of Students who Met Grade Level Standards Compared to Districts with Similar Demographics (2016) | 12
10. The Outliers: Elementary School Math Percent of Students who Met Grade Level Standards Compared to Districts with Similar Demographics (2016) | 12
11. The Outliers: Middle School English Language Arts Percent of Students who Met Grade Level Standards Compared to Districts with Similar Demographics (2016) I 13
12. Growth by Race or Ethnicity: CMAS PARCC English Language Arts (2016) | 15
13. Growth by Race or Ethnicity: CMAS PARCC Math (2016) । 16
14. Growth by Free or Reduced Price Lunch Eligibility: CMAS PARCC English Language Arts (2016) I 17
15. Growth by Free or Reduced Price Lunch Eligibility: CMAS PARCC Math (2016) | 17
16. Districts with Improved Four-Year Graduation Rates (2011-2015) । 18
17. Highest and Lowest Graduation Rates by Race or Ethnicity (2015) । 20
18. Highest and Lowest Graduation Rates for Emerging Multilingual Students (2015)| 21
19. Highest and Lowest Graduation Rates for Students Eligible for Free or Reduced Price Lunch (2015) I 21
20. Highest and Lowest Graduation Rates for Students with Disabilities (2015) | 21
21. ACT Scores by Race or Ethnicity (2016) | 24
22. ACT Scores by Free or Reduced Price Lunch Eligibility (2016) | 25
23. Schools with the Top Ten ACT Scores by Student Group I 26
24. Highest Matriculation Rates (Class of 2014) | 27
25. Lowest Matriculation Rates (Class of 2014) । 27
26. Highest Remediation Rates (Class of 2014) । 27
27. Lowest Remediation Rates (Class of 2014) | 27

## Introduction

Welcome to A+ Colorado's first annual report exploring how districts across the Centennial State are serving diverse student populations. We envision a state where every student has access to a high quality education: an education that provides students with the skills, knowledge, and opportunities needed for success in the 21st century.

The intent of The Outliers is to do just that- identify school districts that buck trends across the state. This provides a snapshot of where outcomes for students are different from the norm, where the promise of an excellent education shines bright, and where that light is still too dim. Above all this report identifies districts that are demonstrating success and merit further investigation.

Why the focus on school districts? In Colorado, a state that embraces local control, school districts hold a particularly important position in providing a high quality education. School districts are where the rubber hits the road. For example, districts are responsible for choosing school leaders, they determine staffing models, and, they can dictate school operations, with decisions from how to distribute funds to curriculum selection. Importantly, districts are responsible for ensuring their schools meet student performance expectations. This report looks specifically at student performance outcomes at the district level.

In compiling this report, we gathered publicly available information on all school districts across the state, and looked at trends over the past five years. Unless otherwise noted, data was gathered from the Colorado Department of Education. Some data, like disaggregated ACT scores, required a Colorado Open Records request. Other data, like disaggregated CMAS PARCC achievement data was not publicly available; therefore we are unable to provide insight such as which districts are closing the opportunity gap between students of different races and ethnicities, or different income levels for example.

We focus our analysis on districts serving more than 1,000 students across pre-kindergarten to twelfth grade. This represents 76 of 186 school districts and BOCES, ${ }^{1}$ and 96 percent of all Colorado students. We made this decision not because any sized district matters more or less than others, but we recognize that smaller school systems face unique challenges that our research does not address.

You can find the longitudinal data that has been used to develop this report for all school districts at apluscolorado.org.

1 Boards of Cooperative Educationa Services, or BOCES, are administrative agencies that provide educational services to two or more school districts that find it either advantageous or cost-effective to share services. For more information see coloradoboces.org


## Welcome to the West: How are School District Demographics Changing?



Demographic shifts help us understand a piece of the diverse experiences of Colorado's students. The state serves nearly 900,000 students, a number that has grown steadily over the past five years. The increase in the student population has primarily been driven by growth in the Denver Metro Area (which saw a 4.6 percent increase in students), urban-suburban communities outside of the Denver Metro area (which saw a 7.2 percent increase in students), and remote communities (which saw a 7.3 percent increase in students). Growth was not as strong in outlying towns and outlying cities. For a map of Colorado school districts, see Appendix A.


Figure 1: Districts with the Largest Increases in Student Enrollment (2011-2015) 50\%


Not Pictured Above: Byers 32 J authorizes several multi-district online schools which accounts for a drastic increase in enrollment ( $514.4 \%$ ) over the past five years: Colorado Digital Academy (beginning in 2014), Colorado Virtual Academy (previously authorized by Adams 12, authorized by Byers starting in 2014), Elevate Academy (starting in 2104), and Great Plains Academy (beginning in 2012).
Despite the fact that Colorado has shown strong recovery from the recession of 2008, the recovery has not been evenly distributed. 7.8 percent more students qualified for free or reduced price lunch (FRL, a proxy measure for students from low-income families) in 2015 than in 2011, outpacing growth of the student population statewide.

This is particularly true outside of the Denver Metro Area. During the same time period, the proportion of students qualifying for free or reduced price lunch jumped from 41 percent to 44 percent in urban-suburban communities outside Denver. In remote communities the proportion of students qualifying for free or reduced price lunch increased from 44 percent to 46 percent.
Figure 2: Districts with the Largest Changes in Proportion of Students Qualifying for Free or Reduced Price Lunch (percentage points) 2011-2015


Racial and ethnic demographics are also changing: the number of Latinx students (a gender-neutral term for students who identify as either Latino or Latina) grew twice as much as the student population overall. Students who identify as two or more races represent a small, but also growing proportion of the student population. In exploring academic outcomes by racial and ethnic groups, this report focuses primarily on the four largest categories in Colorado: white students, Latinx students, black students, and multiracial students.

Changes in racial and ethnic demographics have been far more rapid for specific districts, particularly in parts of the Colorado Springs metro area and the Denver metro area.

Figure 3: Racial and Ethnic Makeup of Colorado Students


Figure 4: Districts with the Largest Changes in Proportions of Racial and Ethnic Student Groups (percentage points) 2011-2015

| District | Black Students | District | Latinx Students | District | White Students | District | Multiracial Students |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Byers 32J | +4 | Byers 32J | +40.5 | Denver County | +2.3 | Harrison 2 | +4.8 |
| Ellicott 22 | +1.9 | Trinidad 1 | +8.9 | Valley Re-1 | +1.1 | Englewood 1 | +2.4 |
| Adams-Arapahoe 28J (Aurora) | +1.1 | Falcon 49 | +7.2 | Manitou Springs 14 | +1 | Pueblo County 70 | +2.4 |
| State of Colorado | -0.2 | Harrison 2 | +6.9 | State of Colorado | -2 | Widefield 3 | +2.3 |
| Englewood 1 | -1 | Adams 12 Five Star Schools | +6.1 | Harrison 2 | -6.4 | Cheyenne Mountain 12 | +2.2 |
| Cherry Creek 5 | -1 | State of Colorado | +1.6 | Platte Valley RE-7 | -6.6 | Fountain 8 | +2 |
| Widefield 3 | -1.7 | Garfield 16 | -1.1 | Adams 12 Five Star Schools | -6.7 | State of Colorado | +0.8 |
| Fountain 8 | -1.7 | Manitou Springs 14 | -1.6 | Trinidad 1 | -7.3 | Byers 32J | -1.5 |
| Falcon 49 | -1.8 | Denver County 1 | -2 | Archuleta County 50 JT | -9.4 | Ellicott 22 | -1.7 |
| Charter School Institute | -2.1 |  |  | Byers 32J | -44.6 |  |  |

## English Language Learners

Colorado students bring a rich linguistic diversity to the classroom. Over 128,000 students speak 251 home languages other than English between them; 88\% speak Spanish. While the number of emerging multilingual students who are learning English (English Language Learners or ELLs) increased over the past five years by 4.1 percent, the proportion statewide of ELL students stayed relatively consistent at 14.2 percent. The vast majority of ELLs (over 70 percent) live in the Denver Metro Area. ${ }^{2}$ ELL populations are significantly larger in a number of Colorado districts including Adams 14 (43\%), Westminster 50 (41\%), Adams Arapahoe 28 (Aurora) (39\%), Sheridan 2 (38\%), and Lake County (36\%).

[^0] Learners in Colorado: State of the State" (2015)

Figure 5: Districts with the Largest Changes in Proportion of Emerging Multilingual Students Learning English (percentage points) 2011-2015



## Climbing to New Heights? Student Achievement in Colorado Districts

Colorado school districts are diverse in their student populations and performance. Despite this diversity, Colorado's constitution requires the "establishment and maintenance of a thorough and uniform system of free public schools." The following section looks at student achievement outcomes and begs the question to what extent are our public schools providing a thorough and uniform education to every student? Are school districts improving outcomes for kids? Which systems are the most equitable, providing students, regardless of their background, an equal likelihood as their peers to be college and career ready?

With the adoption of the Colorado Academic Standards In 2009, Colorado set new expectations for what students should learn at each grade level across ten subjects. While Colorado has a twenty year history of measuring student mastery of content standards with standardized assessments, 2016 was only the second time Colorado students took CMAS PARCC, an assessment specifically aligned to these higher standards in English Language Arts and in Math. This assessment informs our understanding of where students are or are not in fact learning what we as
a state have determined to be important standards.

This summative assessment data is but one indicator of student performance. By no means does it exhaustively answer what is going on in certain school systems. And it certainly does not answer how education happens or is experienced in individual schools. The data should catalyze all of us to look at these systems to ask what is working, not working, and why. Educators, communities, and policymakers alike should be reflecting, learning, and sharing practices.

The data presented on the next few pages raise the following questions:
" Which districts have made big improvements over the past four years in getting more students to meet grade-level standards that will prepare them for college and career? Which districts have fallen off the mark in fulfilling this promise?
» In which districts are students outperforming their peers in districts serving similar students? Where are students underperforming relative to similar districts?

## Flying Blind? The Case of the Missing Data

The data collected through the statewide assessment system has one primary purpose: learning. It should expose what is working, direct inquiry, and share lessons across the state. The dataand the successes it can uncover- should be informing improvement strategies for schools and districts across the state, so that they can deliver the high-quality education our students deserve. Unfortunately, this mission has become increasingly more difficult to achieve. The Colorado Department of Education masks much of the data where student populations are small. In 2015, CDE also introduced new suppression rules for CMAS PARCC achievement data, whereby the department masks all information if fewer than four students either did or did not meet the expectations of the test. This has meant that an additional 6 percent of district level proficiency data and 9 percent of school level proficiency data is masked due to suppression rules other than the small cohort rule. All told, 36 percent of 2016 school and district level proficiency data is masked. Privacy has come at the expense of a clear understanding of how students, schools, and districts are doing.

In addition, due to the complications of the new suppression rules, the Department has not released any information about whether or not specific groups of students met expectations on the exam. This means it is impossible to compare performance of students of different races or ethnicities, or of students from different socioeconomic backgrounds. And that is a problem. It is no secret that the education system has historically been worse for students of color and low-income students than their white and more affluent peers. Yet Colorado has reverted back to a system where we are flying blind. This report explores what publicly available information exists on student performance. It creates proxies to measure how districts are serving low-income students, emerging multilingual students, and students in special education. Yet these cannot replace the invaluable information that Colorado used to provide that helped schools, districts, and communities identify and address opportunity gaps between students, and work to provide an equitable education to every student who stepped inside a Colorado school.

# Who is Reading, Writing, and Doing Math at Grade Level? 

Since 1997, Colorado has administered a summative assessment to measure what students know. Starting in 2015, Colorado shifted tests from TCAP/CSAP to CMAS PARCC. Because these are two separate tests, the results cannot be directly compared. In order to understand how schools and districts were doing from one year to the next, A+ conducted a percentile analysis that measured relative rankings of each district and school based on percent of students meeting grade level standards on each test. For more information see Appendix B. The charts on the following page show those districts with the biggest changes in relative performance between 2013 and 2016.

## Spotights

Some Districts With Many Low Income Students Made Big Gains
A variety of districts have made large gains in the percentage of students reaching proficiency benchmarks in multiple subject areas and school levels. Of particular note is the state's largest district: Denver, which in 2013 was consistently in the 15th to 20th percentile across subjects, has moved closer to the state average, landing in the 43rd percentile in Elementary English Language Arts (ELA), the 41st percentile in Elementary Math, and the 56th percentile in Middle School ELA.

Fort Morgan, a district of over 3,000 students, saw similar improvements to Denver in academic performance, with the percent of students meeting grade level standards at or above the state average in Elementary Math and Middle School ELA. Also impressively, Platte Valley, a district in Weld County with just over 1,000 students, moved from percentile ranks in the bottom third to half of the state in 2013 to now ranking in the top quartile.

## Questions in Low Performing Districts

There are several districts that have struggled to help students master grade level standards. For districts with relative declines in students meeting grade level standards compared to the rest of the state, has the shift to new standards been more difficult or not fully implemented? Is there sufficient support for students who are
struggling? Are teachers supported? Are school improvement strategies in place? For districts where fewer students are mastering content than in similar districts, are there systems for sharing practices across districts? What is the state's role in ensuring that these districts are supporting students to reach proficiency?

## A Case Against Some Online Schools?

Byers 32J authorizes four multi-district online schools: schools that provide "full-time education... primarily through online digital learning." ${ }^{3}$ Multi-district online schools, while authorized by a single entity (a school district, or state authorizer), may serve students across the state of Colorado. Indeed, Byers authorized schools serve over 2500 students from 107 different school districts.

Student performance in Byers 32J and Colorado Digital BOCES mirrors significant research on the impact of online schools. ${ }^{4}$ Not only do online schools have lower academic results than comparable brick-andmortar schools, but online schools tend to have a negative impact on their students when compared to students from similar backgrounds and with similar past academic performance. Dramatic drops in the proportion of students mastering grade level standards when compared to the rest of the state, and substantially lower performance than districts serving similar students, continues to challenge the value of these particular school options.

## Highlighting Participation

Participation is key to identifying and sharing best practices, as well as ensuring equitable access to a high quality education. The federal Every Students Succeeds Act (ESSA) requires 95\% of students participate in statewide assessments. In 2015, participation rates in Colorado dropped dramatically, particularly in higher grades. Participation rates improved in 2016 due to legislation passed reducing testing time and other adjustments. Yet pockets of low 2016 participation rates in specific grades and schools threatens our ability to gauge student achievement. This is particularly true in higher grades. Ensuring assessments are relevant (for example, college-entrance aligned), results are timely, and the information is accessible, can improve the impact and meaningfulness of Colorado's assessment program.


Figure 6: Districts with Big Changes in Relative Performance in Elementary English Language Arts 2013-2016


Figure 7: Districts with Big Changes in Relative Performance in Elementary Math 2013-2016


Figure 8: Districts with Big Changes in Relative Performance in Middle School English Language Arts 2013-2016
$>80,000$ students


## Who is Bucking the Trend?

The state has yet to release information about different student groups' achievement in 2016. This information is incredibly important, as many groups of students-low income students, students with disabilities, students learning English as a second language-get left out of the best educational opportunities the state has to offer. This contributes to the well-documented correlation between economic advantage and student achievement. To uncover districts that buck this trend, $A+$ conducted an analysis to compare district performance to other districts with similar student demographic populations, creating a District Demographic Index based on the population of students qualifying for Free or Reduced Price lunch, the proportion of students learning English as a second language, the proportion of students with disabilities, and the rate of students moving in and out of the district. The following charts show the districts that perform outside of the trend. For the explanation of the methodology and selection see Appendix C.

## Spotlights

## Some Districts with Many Low-Income Students Buck Trends

A district demographic analysis draws attention to school systems that buck trends based on
the students they serve. While there is a strong correlation between students' backgrounds (including family income, race and ethnicity, home language, and students with disabilities) and academic performance, there is significant variability in outcomes for students across schools and districts.

Steamboat Springs and East Grand 2, both smaller districts, serving approximately 2,500 and 1,300 students respectively, have significantly higher proportions of students meeting grade level standards than other districts with similar student demographics: the proportion of students reaching grade level standards is 15 to 20 percentage points higher than similar districts.

It is not just low poverty districts that achieve outlier results for students. Harrison 2 in Colorado Springs also significantly bucks the trend. Harrison serves a large proportion of students qualifying for free or reduced price lunch, emerging multilingual students (ELLs), special education students, and has a more mobile student population; the proportion of elementary students in Harrison meeting grade level expectations in English Language Arts is 15 points higher than similar districts. Other districts with higher proportions of at-risk students that also show signs of bucking demographic trends are Fort Morgan, Ellicott 2, Weld County S/D Re-8, Denver, and Delta.

Figure 9: The Outliers: Elementary School English Language Arts Percent of Students who Met Grade Level Standards Compared to Districts with Similar Demographics (2016)


Figure 10: The Outliers: Elementary School Math Percent of Students who Met Grade Level Standards Compared to Districts with Similar Demographics (2016)


Figure 11: The Outliers: Middle School English Language Arts Percent of Students who Met Grade Level Standards Compared to Districts with Similar Demographics (2016)


- Outlier Districts (Enrollment > 1000 Students) $\quad$. . . Trendline

Note: Districts included on chart fall well outside the trend line and serve at least 1,000 students. For more information about the methodology, see Appendix C.

## Who is Making Headway Year Over Year?

Information about proficiency rates helps guide inquiry about whether schools and districts are successfully helping students reach grade level expectations. However, students start at very different places in terms of their mastery of grade-level standards at the beginning of a school year. The Colorado Growth Model is critical to understanding whether students are making progress or falling behind their peers. Growth provides an important measure of whether schools are delivering value regardless of whether or not students enter the year on, above, or behind grade-level.

Growth is calculated by comparing a student's performance on the assessment to her academic peers-other students who had the same test score the previous year, resulting in the individual student growth percentile. A school or district is measured by the median growth percentile (MGP) of all its students in a given subject. The following charts explore where students of different racial and ethnic backgrounds, and students from different family income levels, are progressing on the state assessment relative to their peers. This information is particularly important given that the most recent school and district-level proficiency data-the number and percent of students who have mastered content previously explored in this report-is not publicly available for different groups of students. In districts with small cohorts of specific student groups, each student's performance carries more weight than in larger groups of students. This is important to keep in mind when reviewing and asking questions of the data.

The following charts explore the districts with the highest and lowest median growth percentiles for different groups of students. It is clear that some districts are greatly accelerating the learning of some students relative to their academic peers. Growth is critical to getting students on the path to mastering grade-level content. However, where students are behind,
as we see in many districts and schools, growth must be higher to ensure students can catch up to grade-level expectations. As a guidepost, based on this 2016 data, roughly fifteen percent of all Colorado schools had a median growth percentile of 65 or above, or "exceeded expectations" on growth on the state performance framework; roughly fifteen percent of all Colorado schools had a median growth percentile of 35 or below, or "does not meet expectations" on growth on the state performance framework. These are important scores to keep in mind while exploring growth results for different groups of students across the state.

## Spotlights

## Gaps in Growth

Across subjects white students and students ineligible for free or reduced price lunch are more likely to show growth than students of color and students eligible for free or reduced price lunch. What these growth gaps show then is that schools and districts continue to underserve students of color and low-income students. These students are simply not mastering as much content as their white and more affluent peers.

Of course, there are exceptions to this trend. East Grand 2 and Platte Canyon have median growth percentiles of 60 for their free and reduced price lunch students in English Language Arts and Math respectively. And while the student populations are small, black students show the highest growth in Fort Morgan and Lewis Palmer. Multiracial students post some of the highest growth percentiles and showed higher growth than their white peers in Roaring Fork, Cheyenne Mountain, Delta, Durango, and Summit.

Figure 12: Growth by Race or Ethnicity: CMAS PARCC English Language Arts (2016)


Figure 13: Growth by Race or Ethnicity: CMAS PARCC Math (2016)


Figure 14: Growth by Free or Reduced Price Lunch Eligibility: CMAS PARCC English Language Arts (2016)

Districts with the Highest Growth (MGP) State MGP for Student Group


Figure 15: Growth by Free or Reduced Price Lunch Eligibility: CMAS PARCC Math (2016)


## Manifest Destiny: <br> Who is Prepared for College, Career and Life?



The goal of our elementary and secondary education system should be to ensure that all students are prepared to succeed in college, career, and life. High school diplomas matter, but research shows that postsecondary education and credentials are increasingly critical for employment and earning a living wage today.

Colorado school districts have made significant progress in supporting more students to obtain a high school diploma. The four-year graduation rate in Colorado improved from $73.9 \%$ in 2011 to $77.3 \%$ in 2015 . Some districts have made even greater strides in getting students that cap and gown.

Figure 16: Districts with Improved Four-Year Graduation Rates (2011-2015)


| District | Percent point improvement |
| :--- | ---: |
| Colorado Digital Boces | 54 |
| Sheridan 2 | 39 |
| Garfield Re-2 | 25 |
| Monte Vista C-8 | 18 |
| Mapleton 1 | 13 |
| Adams 12 Five Star Schools | 12 |
| Adams-Arapahoe 28J | 11 |
| Brush Re-2(J) | 11 |
| Archuleta County 50 JT | 10 |
| Durango 9-R | 10 |
| Eaton Re-2 | 9 |
| Denver County 1 | 9 |
| Harrison 2 | 8 |
| Pueblo City 60 | 8 |
| Charter School Institute | 8 |

What are the right expectations for graduation rates, particularly given the significant progress Colorado has made?

A few attempts have been made to help navigate and set expectations. The most recent federal legislation, the Every Student Succeeds Act, requires states to focus efforts on improving schools with four-year graduation rates less than 67\%. Colorado uses a "best-of" $4,5,6$, or 7 - year graduation rate for its accountability system. The state of Colorado has set the bar for exceeding expectations at the $95 \%$ best-of graduation rate because the top 15 percent of schools in Colorado achieve
this rate or better. This report focuses on four year graduation rates as it is the goal of the vast majority of schools and districts across the state to support students to complete high-school within this time-frame. This also reflects the expectations set for students across the country through the federal legislation.

The following charts explore the districts that are excelling at ensuring students receive a high school diploma, and those districts where students need more support to reach that milestone, by groups of students. There continue to be large disparities in the background of students who make it to a graduation ceremony. The guideposts set by both the federal government and Colorado are helpful in understanding the magnitude of success, and some of the gaps we see.

## Spotlights

## Improved Statewide Graduation Rates Leave Some Groups Of Students Out

Graduation rates have improved across the state, enough such that the Colorado State Board of Education decided to adjust expectations in the accountability system to reflect the improvement. In Colorado, half of all schools have at least a $93.9 \%$ graduation rate. Fifteen percent of schools have at least a 99.3\% graduation rate.

And yet, not all groups across the state and within districts make it to graduation at these high rates. While the data looks at four year graduation rates, as opposed to best-of graduation rates like the accountability system, it is clear that many students are not receiving the support they need to graduate on time. And it is critical that these diplomas are meaningful and that they communicate what students know and can do. There is not a single district that serves more than 1,000 students that meets the "exceeds expectations" graduation benchmark for Black students, or students qualifying for free or reduced price lunch.

Notable Graduation Trends for Black Students
A couple districts were close to reaching the "exceeds expectations" graduation rate benchmark for black students: in 2015, St. Vrain Valley Re 1J and Fountain 8 had graduation rates for black students at 93\% and 90\% respectively. Cherry Creek 5, the district with the largest graduation base of black students other than Denver County 1 , tied for the 5th highest graduation rate (84\%) for black students amongst school districts in Colorado. St. Vrain Valley, School District 27J Boulder Valley, and Jefferson County R-1 were amongst the top five graduation rates for black students in 2015, having improved upon their 2011 graduation rate for those students by $16,21,24$, and 11 percentage points respectively.

> High school diplomas should be meaningful and connected to a student's. achievement.

## A Few Outliers Serving Colorado's Growing Latinx Population

Three districts cleared the exceeds expectations benchmark for Latinx students. Statewide only $68 \%$ of Latinx students graduated on time in 2015. Yet in Eaton (24\% Latinx students), Archuleta (27\% Latinx students), and Platte Valley (34\% Latinx students) that narrative was turned on its head with graduation rates of $97 \%$, $96 \%$ and $96 \%$ respectively.

Colorado Springs Districts Bucks the Trend for English Language Learners
Three Colorado Springs area school districts-Lewis-Palmer 38, Widefield 3, and Harrison 2-had some of the highest graduation rates for students learning English. They had 2015 graduation rates of $91 \%, 86 \%$, and $85 \%$ respectively for their emerging multilingual students.

Eaton $\mathrm{Re}-2$, though it has a small population of emerging multilingual students learning English, graduated all ten of their students in that cohort in 2015.

## Empty Graduation Ceremonies

Several districts have low graduation rates for all students. Specifically, graduation rates in Charter School Institute, Mapleton, Englewood, Westminster 50, Falcon 49, and Adams 14 fall significantly below expectations
for multiple groups of students in 2015. Within this group variable progress has been made in boosting these graduation rates in the past five years. For example, Mapleton has seen big gains in graduation rates for Asian students, black students, Latinx students, and emerging multilingual students; Westminster has improved for black students, and students with disabilities, has made little progress for Latinx students, and has seen declines in the graduation rate of white students; Falcon has seen a declining graduation rate for all groups of students.

## A Pause on Graduation Rates for Students with Disabilities

Students with disabilities represents a set of students with incredibly diverse learning needs: data is not reported separately for students with mild-moderate learning disabilities and students with severe learning disabilities. Some students might be best supported in a center-based program that serves them until they age out at age 21. Other students, especially students with mild needs, should be able to graduate on-time with the right supports. Given the variability in learning needs, we cannot derive much from the graduation rate of students with disabilities, but it is an important group of students and we would be remiss to exclude the information.

## Make Sure Diplomas are Meaningful

A high school diploma is incredibly valuable for students. Employment rates are higher, wages are higher, upward economic mobility is more likely, and health outcomes are better for high school graduates than their peers who don't receive a diploma. However, high school diplomas should be meaningful and should communicate that students have received a high quality education that has taught them to think critically, problem solve, and be ready for their next steps. Graduation rates are arguably the easiest metric of school success to improve. As such, it is critical that gains in graduation rates are linked to comparable gains in student achievement.

Figure 17: Highest and Lowest Graduation Rates by Race or Ethnicity (2015)


Figure 18: Highest and Lowest Graduation Rates for Emerging Multilingual Students (2015)

Highest Graduation Rates $\square$ State Graduation Rate by Student Group
Lowest Graduation Rates


Figure 19: Highest and Lowest Graduation Rates for Students Eligible for Free or Reduced Price Lunch (2015)
Highest Graduation Rates $\quad$ State Graduation Rate by Student Group
Lowest Graduation Rates


Figure 20: Highest and Lowest Graduation Rates for Students with Disabilities (2015)

Highest Graduation Rates
Lowest Graduation Rates
State Graduation Rate by Student Group


## Who is Opening Doors for Graduates?

High school diplomas should be a ticket to a career or college. Not all students will choose a four-year college or university after high school, but all should have the opportunity. All students should be prepared to enter the workforce or a training program after high school. After all, by 2025 seventy percent of jobs in Colorado will require some additional training or education after 12th grade.

The ACT assessment provides insight into how well students are prepared for college and career. Colorado requires all students to take the ACT during their junior year. While Colorado will shift to the SAT beginning in Spring 2017, the importance of a college admissions score is clear as it often acts as a gatekeeper to higher education. For example, 75\% of admitted students at Metro State University in Denver score at least an 18 out of 36 on the ACT. At the University of Colorado-Boulder 75\% of admitted students score at least a 24 . Too many Colorado students are excluded from these institutions because they have not developed the skills and knowledge, as measured by the ACT, through their time in the K-12 education system.

The charts on the following pages show districts with the highest and lowest average ACT composite scores (a combination of scores in English, Math, Reading, and Science) for different groups of students.

For reference, a school with an average ACT composite score of less than 17 would earn a "does not meet" on the state accountability framework. An average score of 20 "meets expectations." An average composite score above 22 would earn an "exceeds expectations" on the state accountability framework.

## Spotlights

## An Opportunity Chasm

The opportunity gap for students of color and low income students is well documented across a variety of educational data. Looking at information about success on the ACT, which is rarely presented for different groups of students, underscores this reality.

There is no district where the average ACT composite score for black students is over 22. There is no district where the average score for students qualifying for free or reduced price lunch is over 22. There is only one district that reaches this bar for Latinx students. And their white peers? There is no district where the average score for that group of students is below 17. Nor for multiracial students. And only two districts have average scores below 17 for students who are ineligible for free or reduced price lunch.

## College Readiness in Colorado Springs Area Districts

Districts in Colorado Springs have some of the highest average composite ACT scores across student groups. Academy 20 has some of the highest scores for black students and Latinx students. Cheyenne Mountain 12, Lewis-Palmer 38, and Academy 20 have the three highest average ACT scores for Latinx students. Those three districts, joined by neighboring Manitou Springs 14 , had some of the highest scores for students eligible for free or reduced price lunch. Cheyenne Mountain 12 and Lewis-Palmer 38 also had some of the highest average composite ACT scores for white students and students ineligible for free or reduced price lunch. Lewis-Palmer 38 also had one of the highest average scores for multiracial students.

## College Readiness in Suburban Communities

In addition to the Colorado Springs area suburban districts, including Academy 20, Lewis Palmer 38, and Cheyenne Mountain 12, other districts in suburban communities had some of the highest average composite ACT scores across student groups. The five districts with the highest average composite ACT scores for black students are all urban-suburban districts. The same is true for Latinx students, white students, and multiracial students. The exception to this trend is Aspen 1 which appears on the top districts for Latinx and white students. In fact, with the exception of two outlying towns, Aspen and Estes Park, all districts with the highest average composite ACT scores across student groups are urban-suburban districts.

## The School-Level Story

Which schools do the best job of opening doors for their students after graduation? A look at average school level ACT scores shows schools that offer students a greater chance of accessing higher education opportunities.

A few schools appear in the top ten schools by highest average composite ACT score for multiple groups of students. Two DSST campuses in Denver County appear in the top ten: DSST: Green Valley Ranch for black students and students eligible for free or reduced price lunch, and DSST: Stapleton High School for black students, Latinx students, White students, and for both students eligible and ineligible for free or reduced price lunch. Cherry Creek High School ranks in the top ten for black students, white students, multiracial students, and students ineligible for free or reduced price lunch. D'velyn Junior/Senior High School in Jefferson County ranks in the top ten for Latinx students (with a 27.4 average composite ACT score it is significantly higher than any other school for Latinx students), white students, and students ineligible for free or reduced price lunch.

Four Cherry Creek 5 high schools (Cherry Creek High School, Grandview High School, Cherokee Trail High School, and Eaglecrest High School) are amongst the top schools for highest average composite ACT scores for black students. Four high schools in Jefferson County 1 (Evergreen High School, Dakota Ridge Senior High School, Ralston Valley Senior High School, and Green Mountain High School) have amongst the highest average composite ACT scores for students eligible for free and reduced price lunch.

## Gaps at the School Level

DSST: Green Valley Ranch is the only school in the state where black students are scoring at least an average of 22 on the ACT. That is one school out of nearly 500 high schools in Colorado. Compare that to white students. There are over 90 schools in the state where white students score an average of at least 22, and white students score an average of 26 or above at the ten schools with the highest ACT scores for that group of students.

Figure 21: ACT Scores by Race or Ethnicity (2016)


Figure 22: ACT Scores by Free or Reduced Price Lunch Eligibility (2016)


Figure 23: Schools with the Top Ten Average ACT Scores by Student Group

Top Ten Schools for Black Students by Average ACT Composite Scores (2016)

| School | District | Average ACT |
| :--- | :--- | :---: |
| DSST: Green Valley | Denver <br> Ranch High School | County 1 |
| DSST: Stapleton High <br> School | Denver <br> County 1 | 21.2 |
| Cherry Creek High <br> School | Cherry <br> Creek 5 | 21.4 |
| Grandview High <br> School | Cherry <br> Creek 5 | 20.1 |
| Liberty High School | Academy <br> 20 | 19.8 |
| Cherokee Trail High <br> School | Cherry <br> Creek 5 | 19.5 |
| Eaglecrest High <br> School | Cherry <br> Creek 5 | 18.9 |
| Harrison High School | Harrison 2 <br> Thomas Jefferson <br> High School | Denver <br> County 1 |
| Sand Creek High <br> School | Falcon 49 | 18.7 |

Top Ten Schools for White Students by Average
ACT Composite Scores (2016)

| School | District | Average ACT |
| :---: | :---: | :---: |
| The Vanguard | Cheyenne | 29.1 |
| School (High) | Mountain 12 | 29.1 |
| DSST: Stapleton | Denver |  |
| High School | County 1 | 28.9 |
| Liberty Common Charter School | Poudre R-1 | 28.1 |
| Ridgeview Classical Charter Schools | Poudre R-1 | 27.5 |
| D'evelyn Junior/ <br> Senior High School | Jefferson County R-1 | 27.4 |
| Peak To Peak | Boulder | 26.4 |
| Charter School |  |  |
| Evergreen High School | Jefferson County R-1 | 26.3 |
| Telluride High School | Telluride R-1 | 26.2 |
| Cherry Creek High School | Cherry Creek 5 | 26 |
| George Washington High School | Denver County 1 | 26 |

Top Ten Schools for Students Eligible for Free or Reduced Price Lunch by Average ACT Composite Scores (2016)

| School | District | Average ACT |
| :---: | :---: | :---: |
| Evergreen High School | Jefferson County R-1 | 25.9 |
| DSST: Green Valley | Denver | 22.3 |
| Ranch High School | County 1 | 22.3 |
| DSST: Stapleton High School | Denver County 1 | 22.2 |
| Rock Canyon High School | Douglas | 2.1 |
| Dakota Ridge Senior High School | Jefferson County R-1 | 21.4 |
| Ralston Valley Senior High School | Jefferson County R-1 | 21.2 |
| Monarch High School | Boulder Valley Re 2 | 21.1 |
| Norwood Public Schools | Norwood R-2J | 21.1 |
| Fossil Ridge High School | Poudre R-1 | 21 |
| Green Mountain High School | Jefferson County R-1 | 21 |

Top Ten Schools for Latinx Students by Average ACT Composite Scores (2016)

| School | District | Average ACT |
| :---: | :---: | :---: |
| D'velyn Junior/Senior High School | Jefferson County R-1 | 27.4 |
| Denver School Of The Arts | Denver County 1 | 23.1 |
| Ralston Valley Senior High School | Jefferson County R-1 | 23.1 |
| Jefferson Academy High School | Jefferson County R-1 | 23 |
| Air Academy High School | Academy 20 | 22.5 |
| Discovery Canyon Campus High School | Academy 20 | 22.4 |
| ThunderRidge High School | Douglas County Re 1 | 22.4 |
| Palmer Ridge High School | Lewis-Palmer $38$ | 22.3 |
| Rock Canyon High School | Douglas County Re 1 | 22.2 |
| DSST: Stapleton High School | Denver County 1 | 21.9 |

Top Ten Schools for Multiracial Students by
Average ACT Composite Scores (2016)

| School | District | Average ACT |
| :---: | :---: | :---: |
| Fairview High School | Boulder Valley Re 2 | 26.2 |
| Palisade High School | Mesa County Valley 51 | 25.8 |
| Legend High School | Douglas County Re 1 | 25.3 |
| Cherry Creek High School | Cherry Creek 5 | 25.1 |
| Littleton High School | Littleton 6 | 24.8 |
| Arapahoe High School | Littleton 6 | 24.6 |
| Fossil Ridge High School | Poudre R-1 | 24.2 |
| Grandview High School | Cherry Creek 5 | 24 |
| Fruita Monument High School | Mesa County Valley 51 | 24 |
| Air Academy High School | Academy 20 | 23.6 |

Top Ten Schools for Students Ineligible for Free or Reduced Price Lunch by Average ACT Composite Scores (2016)

| School | District | Average ACT |
| :---: | :---: | :---: |
| The Vanguard School (High) | Cheyenne Mountain 12 | 28.2 |
| Liberty Common Charter School | Poudre R-1 | 28 |
| D'evelyn Junior/Senior High School | Jefferson County R-1 | 27.7 |
| Ridgeview Classical Charter Schools | Poudre R-1 | 27 |
| DSST: Stapleton High School | Denver County 1 | 26.7 |
| Peak To Peak Charter School | Boulder Valley Re 2 | 26.6 |
| Fairview High School | Boulder Valley Re 2 | 26.1 |
| Evergreen High School | Jefferson County R-1 | 26 |
| Cherry Creek High School | Cherry Creek 5 | 26 |
| Telluride High School | Telluride R-1 | 25.3 |

Would reach the "exceeds expectations" cut point on the State Accountability Framework (the 85th percentile of all schools)

## What Happens Beyond K -12?

Setting students up for success is a key goal of the education system, and a path to a two- or four-year postsecondary institution is better traveled in some districts. The following tables show the districts where the highest percentage of graduates matriculate to two- or four-year higher education institutions, and the proportion of those students who need remedial classes in at least one subject when they get there. ${ }^{4}$ Remedial coursework is high school-level work and is non-credit bearing, meaning students have to pay for these classes that do not count toward a degree.

## Spotlights

A Clearer Path to College in Districts that Set Students Up for Success
There is a clear relationship: those districts where the largest percentage of their graduates
matriculate to a higher education institution, also tend to have low remediation rates. In fact, half of the districts in the ten districts with the highest matriculation rates also have the lowest remediation rates in the state. Conversely, half of districts with the lowest matriculation rates in the state also have the highest remediation rates. What this suggests is that students from these districts often cannot access higher education, and when they do, they are often unprepared for the work.

There are opportunities for better pathways in these districts and scaffolded support to ensure students are ready to succeed in higher education settings. An important location for this work could be Trinidad 1 which has both the eleventh highest matriculation rate in the state, and the highest remediation rate.

4 Matriculation data was provided by the Colorado Department of Higher Education (CDHE). Unlike some CDHE reports which just include matricuIation to public Colorado institutions, the matriculation data included in this report includes matriculation to public and private institutions both within and outside Colorado, as tracked by the National Student Clearinghouse.

Remediation data was gathered from CDHE. The remediation rates included only capture students enrolled at public institutions. The district-level data was also aggregated from publicly available school-level data, some of which is masked due to small class sizes. The remediation data is thus an estimate, but important bellwether in understanding college readiness.

Figure 24: Highest Matriculation Rates (Class of 2014)

Highest Matriculation Rates

| Lewis-Palmer 38 | $75.2 \%$ |
| :--- | :--- |
| Littleton 6 | $72.9 \%$ |
| Cheyenne Mountain 12 | $72.5 \%$ |
| Douglas County Re 1 | $70.9 \%$ |
| Valley Re-1 | $70.5 \%$ |
| Steamboat Springs Re-2 | $70.1 \%$ |
| Boulder Valley Re 2 | $69.3 \%$ |
| Academy 20 | $68.7 \%$ |
| Aspen 1 | $68.6 \%$ |
| Summit Re-1 | $68.3 \%$ |
| Trinidad 1 | $67.7 \%$ |

Figure 25: Lowest Matriculation Rates (Class of 2014)

Lowest Matricluation Rates

| Weld County S/D Re-8 | $40.7 \%$ |
| :--- | ---: |
| Falcon 49 | $38.8 \%$ |
| Adams-Arapahoe 28J | $38.5 \%$ |
| Lake County R-1 | $37.1 \%$ |
| Mapleton 1 | $37.0 \%$ |
| Westminster 50 | $33.9 \%$ |
| Englewood 1 | $31.0 \%$ |
| Sheridan 2 | $30.9 \%$ |
| Ellicott 22 | $30.0 \%$ |
| Adams County 14 | $27.1 \%$ |

Both highest matriculation rate and lowest remediation rate
Both lowest matriculation rate and
highest remediation rate

Figure 26: Highest Remediation Rates (Class of 2014)

| Trinidad 1 | $69.4 \%$ |
| :--- | ---: |
| Weld County Re-1 | $68.9 \%$ |
| Westminster 50 | $65.4 \%$ |
| Fremont Re-2 | $64.7 \%$ |
| Adams County 14 | $64.1 \%$ |
| Monte Vista C-8 | $60.0 \%$ |
| Lake County R-1 | $60.0 \%$ |
| Englewood 1 | $59.0 \%$ |
| Weld County S/D Re-8 | $58.5 \%$ |
| Cañon City Re-1 | $54.4 \%$ |

Figure 27: Lowest Remediation Rates (Class of 2014)

| Bennett 29J | $18.5 \%$ |
| :--- | ---: |
| Elizabeth C-1 | $18.1 \%$ |
| Lewis-Palmer 38 | $16.2 \%$ |
| Strasburg 31J | $16.0 \%$ |
| Summit Re-1 | $15.5 \%$ |
| Valley Re-1 | $15.3 \%$ |
| Estes Park R-3 | $14.7 \%$ |
| East Grand 2 | $13.6 \%$ |
| Cheyenne Mountain 12 | $13.3 \%$ |
| Aspen 1 | $10.0 \%$ |

## Conclusion

The Outliers is a report intended to raise questions by providing a foundation of information about what is happening in Colorado school districts. School district leaders, local boards of education, the state board of education, and policymakers across the state should be taking a hard look not only at local student achievement, but at trends across the state. There are clear cases of success and improvement across the state where more students are receiving the promise of a high quality education. But these successes are not consistent enough, nor do they reach enough students. To ensure high quality education is the norm across the state, $A+$ recommends the following:

## Build an improvement culture

Across the state, education stakeholders, including educators, district leaders, policymakers, and communities, should be focused on continuous improvement within the district, asking questions about what is working well for students, and what is not working for students. A culture of improvement means there is a commitment to deep investigation about challenges within schools, and about potential solutions aligned to those challenges.
Share information and be transparent
Transparency about student and school performance with families and communities is important for a number of reasons. First, every family deserves to find the best educational fit for their child. That means that families should understand how schools are serving students, and whether students in the school are likely to meet grade-level standards.

Second, better transparency with families and communities can lead to more community-driven strategies for school improvement. Schools are more likely to meet community and student needs when families are empowered to define, advocate for, and hold policymakers and
school leaders accountable for meeting student needs.

## Ensure lessons are learned

Questions can only be asked, solutions can only be understood, if there is information about both the problem, and the strategies for improvement. But the state has taken major steps back in the amount of information about student performance that is publicly available by masking data about performance in small schools, suppressing additional results, and not releasing disaggregated data about student groups. If made available, this information can be transformational for educators and communities alike.

## Keep equity front and center

It is critical to focus attention on discrepancies in educational opportunities both within schools districts- between schools, regions, groups of studentsand between school districts. As a state, policymakers, educators, district leaders, and communities should be concerned about which students access advanced coursework, show greater growth, and reach academic expectations.

There should be concern about where academic opportunity is segregated. There should be equal awareness of places that are closing achievement gaps, and serving students who have historically been left out of educational opportunities, like students from low-income families and students of color, as well as their more affluent and white peers.

We hope this report sparks questions, and ultimately contributes to a foundational conversation about how to ensure every student in Colorado receives an excellent education.

## Appendix A: Colorado District Map



## Appendix B: Percentile Analysis

The A+ percentile analysis in the Outliers report compares the relative performance of districts 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 low participation rates in many districts.

## Methodology

Percentile ranks compare districts 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:
$\begin{aligned} & \text { \% of students } \\ & \text { at benchmark }\end{aligned}=\frac{\mathrm{N} \text { students at benchmark }}{\mathrm{N} \text { valid scores }}$
TCAP Reading and Writing (combined to provide a better comparison to 2015 PARCC English Language Arts exams):

| TCAP Reading and |
| :--- |
| Writing \% at benchmark |$=\frac{$|  (N students at benchmark in Reading +  |
| :---: |
| N  students at benchmark in Writing)  |}{\(\left(\begin{array}{l}(N valid scores Reading+ <br>

N valid scores Writing)\end{array}\right.\)}

## Selection Criteria for Inclusion as an Outlier

For each subject area, A+ calculated the range of percentile changes from 2013 to 2016. Districts with sufficient data from TCAP 2013 and PARCC 2016 were included.
"Outliers" were selected to be highlighted in the report if the percentile rank change was greater than one standard deviation from the average change. Those cut points are listed below:

Elementary English Language Arts
Average Percentile Change 2013-2016: 1.8
Standard Deviation (based on range of district percentile change 2013-2016): 22.8

Elementary Math
Average Percentile Change 2013-2016: -0.5
Standard Deviation (based on range of district percentile change 2013-2016): 27.5

Middle School English Language Arts
Average Percentile Change 2013-2016: -1.1
Standard Deviation (based on range of district percentile change 2013-2016): 23.8

While the percentile analysis, and change in percentile ranks, was calculated using the full set of districts with available data, A+ included only districts with an enrollment greater than 1,000 students in the reporting set.

## Appendix C: District Demographic Analysis

## Methodology

To better compare like-districts based on their demographics, every district was assigned a District 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:

| District | $(40 \% \times$ proportion of students |
| :--- | :--- |
| Demographic $=$ | qualifying for free or reduced |
| price lunch) |  |
| +(20\% $)$ |  |
| Index proportion of |  |
|  | emerging multilingual students |
|  | $($ ELL) $)$ |
|  | $+(20 \% \times$ proportion of students |
|  | receiving special education |
|  | services) |
|  | $+(20 \% \times$ district mobility rate $)$ |

A+ then produced a correlation between student performance in the district (percent of students meeting grade-level standards on PARCC 2016) and the District Demographic Index. Those correlations are below:

Correlation: Elementary English Language Arts and District Demographic Index
$r=-0.6$
$\mathrm{R}^{2}=.36$
Correlation: Elementary Math Performance and District Demographic Index
$r=-0.5$
$\mathrm{R}^{2}=.27$

Correlation: Middle School English Language Arts Performance and District Demographic Index
$r=-0.5$
$\mathrm{R}^{2}=.25$

## Selection Criteria for Inclusion as an Outlier

To identify "Outliers," A+ compared actual performance in a district to the correlated value based on the District Demographic Index and performance in districts across the state.

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

While the district demographic analysis, and correlation to performance, was calculated using the full set of districts with available data, A+ included only districts with an enrollment greater than 1,000 students in the reporting set.

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## 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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[^0]:    ${ }^{2}$ Colorado Department of Education. "Culturally and Linguistically Diverse

