



Denver and Aurora High Schools:
Crisis and Opportunity
April 2013

A+ REPORT

Table of Contents

| | |
|--|-----------|
| Letter of Introduction | 1 |
| College Remediation Rates | 5 |
| Advanced Placement | 7 |
| American College Test | 9 |
| Conclusion | 16 |
| Appendix A: ACT Data (DPS) | 20 |
| Appendix B: Remediation Rates (DPS & APS) | 26 |
| Appendix C: AP Pass Rates (DPS) | 27 |
| Appendix D: TCAP Scores (APS & DPS) | 29 |
| Appendix E: ACT (APS) | 35 |
| Works Cited | 37 |



Letter of Introduction

Dear Reader,

The purpose of this report is to present a call to action among Denver citizens to support and demand high school reform. We recognize that some progress has been made by schools and districts, but point to slow-changing and paltry outcomes.

Calls for change: a brief history of high school reform in Denver

If you've been in Colorado long, this is not the first you've heard of Denver's urban high school challenges—both in Denver Public Schools (DPS) and Aurora Public Schools (APS). Over the past decade, dozens of reports, commissions, newspaper accounts and bills have exposed existing problems, and in some cases recommended or legislated proposed solutions. In April of 2001, a *Denver Post* headline announced that the Bill & Melinda Gates Foundation would invest \$8 million into Colorado's high schools to turn them around. In 2004, the Closing the Achievement Gap Commission set out to continue the work Gates had initiated. The Commission wrote that it was "essential for districts to confront structural and systemic change." In 2005, the Denver Commission on Secondary School Reform published "A Call to Action for Transforming Denver High Schools." Three years later, in 2008, Governor Ritter pledged to cut the dropout rate in half. This pledge was accompanied by a detailed roadmap called Colorado's Achievement Plan for Kids (CAP4K), which would take us through 2015. By 2012, for example, all high school students were to be enrolled in a postsecondary and workforce readiness program.

Progress so far

As spring arrives in 2013, despite at least six commissions over the past decade, most recommendations have been ignored, dismissed, or implemented halfheartedly.¹ In fairness to schools and district leaders, many of the recommendations were so vague that it is hard to know if they were implemented or not. CAP4K, which has had the most detail and political power behind it, has seen many of its timelines extended. Even the Gates Foundation, which saw more success in Colorado than in most other states, eventually withdrew from the task of tackling the high school problem.

Despite not seeing the kind of change many had hoped, Denver's urban districts (and in particular Denver Public Schools) have shifted the way they evaluate, manage and develop schools.

Shift in expectations: evaluation and incentives are changing

In tandem with the state, districts like DPS and APS have shifted school evaluation metrics from inputs (how many teachers, what kinds of programs) to outcomes (are students on grade level and prepared for college). When accountability measures were implemented in the early 2000s, schools were judged mainly based on static, school-wide test scores. Now, evaluation is based on individual student growth, which allows observers to identify schools where kids are learning the most, not just schools that have a higher-income student body. Additionally, DPS schools are incentivized (through the School Performance Framework) to provide rigorous coursework and prepare as many students as possible for college. APS also uses college readiness as an indicator of high school quality. While most high schools do not yet have the capacity to prepare most kids for college, districts and states have indicated that this is both the need and the expectation.

School governance

A second major change over the past decade in DPS (and to a lesser extent, APS) has been a different way of governing schools. DPS has recruited and opened school buildings to charter schools, and has given existing schools more autonomy (innovation schools). Meanwhile, Aurora Public Schools opened four autonomous high schools (1 pilot, 1 innovation P-20 campus, 2 charter). This is relevant to high school reform because autonomy is a necessary condition for creating and executing school designs that don't adhere to the traditional school structure—around which union and district rules have been written. The shift toward a decentralizing control (more in DPS than APS) has led to pockets of growth in achievement and college readiness.

New school development

Historically most public schools have looked like clones of one another. A decade ago, high school options in Denver were very limited. Denver School of the Arts provided (and still has) a phenomenal arts education; and there were a couple of specialized programs at East High School and George Washington High School. But during the past 20 years, new schools have been designed (and in some cases, existing schools have been re-designed) to cater to learning styles, values, changing student demographics, and expectations. We have seen "progressive" student-centered schools, highly structured schools, teacher-led schools, dual-language schools, schools that focus on the environment, and one that uses physical activity as an organizing principle. There are schools with a career and tech bent, science and math schools, and a new arts school. There is currently just one school, Denver School of Science and Technology (DSST), with a socially and ethnically diverse student body that has strong outcomes and a differentiated model. DSST has been a remarkable success and will eventually have six high schools serving approximately one-fifth of Denver's graduates.

With the exception of DSST, we have had little success in creating *high schools* that are mission-driven toward a specific outcome (like college) for most or all students, serve a mixed or low-income student body *and* are academically high performing (high

performing is a moving target, but generally refers to a majority of students performing at or above grade level). The jury is out on new schools replacing Montbello and West (Collegiate Preparatory Academy, DCIS, High Tech Early College, and KIPP Montbello) and two Aurora schools showing promise (Vista Peak and Aurora West). Other schools—like William Smith and KIPP Denver Collegiate High—have improved, but almost no high schools are consistently preparing students for college.²

Remaining Challenges

Despite the changes summarized above (and others not mentioned), the "high school problem" persists in Denver, and almost every urban city. The only real across-the-board improvement in Denver has been an increase in high school graduation rates by about 20.1 percentage points since 2006.³ More students are also taking AP and college-level classes while in high school, and are enrolling in college at higher rates. Unfortunately, while kids are staying in school longer, and are enrolling in more rigorous classes, few students are at grade level or truly prepared for college-level work. What David Tyack and Larry Cuban famously called the "grammar of the American high school" has not changed much. In other words, despite hundreds of program changes, curriculum changes, new standards, larger or smaller classes, block scheduling, new administrators, and so on, the basic institutional patterns of schooling persist.

Colorado is ready for change. There is a near consensus that at least three-fourths of high school graduates *should* be college ready. Even blue-collar jobs are increasingly requiring some postsecondary training, and there is a general understanding that large numbers of dropouts mean higher crime rates.

A+ believes that as difficult, circular, and mistake-ridden as high school reform is, it's too important to give up on, and we have a greater opportunity now than ever to make lasting improvements. With the goal of improving high schools in mind, we are convening a meeting of school heads, district leaders, CMOs, and national thought leaders to talk about how we can make and sustain real changes in the classroom. The following paper looks at the status of Denver's and Aurora's major high schools, including recent progress, and concludes with a set of recommendations about how we might start to tackle remaining problems.

Sincerely,

A handwritten signature in black ink, appearing to read 'Van Schoales', written in a cursive style.

Van Schoales
Chief Executive Officer, A+ Denver

Are Students College Ready?

A glance at newspaper headlines over the past few years gives the impression that reforms are working, and we are seeing real progress in Colorado—in particular, Denver. Headlines have declared that: *Denver Public Schools performances on rise (2011)*;⁴ *State scores mostly flat, but growth in Denver (2012)*;⁵ and *Colorado high schoolers who are enrolled in college classes up 15 percent (2013)*.⁶ While there has been some improvement, most of the major gains in Denver have been at the middle and elementary school level.

Except for increased graduation and college-going rates in Denver Public Schools (DPS)⁷ and Aurora Public Schools (APS),⁸ prospects are still fairly grim for high school students. In DPS and APS, more than a *third* of students consistently score below 15 on the ACT. Forty-three percent of poor students in DPS and 39% of poor students in APS scored less than 15. For a sense of scale, consider that the military requires enlistees to earn at least a 31 on the ASVAB ASQT—the ACT equivalent of about a 15.⁹ In other words, about a third of students in DPS and APS would not qualify for basic military service. The average freshman at the University of Colorado, Boulder scores a 26; meanwhile just a single student from North High School last year earned a 24 or better.

College readiness is the truest and most consistent benchmark of high school success. Being college ready does not mean that every student will choose to enroll in college or a postsecondary institution, but that they graduate high school with enough skills to make the choice and to take college-level (non-remedial) classes if they do attend college. This is important because by 2018 almost twice as many jobs as not will require some kind of postsecondary training.¹⁰ ACT points out that 55% of the five fastest-growing career fields call for at least a 2-year degree.¹¹

The three indicators of college readiness we examine here are:

1. **College remediation rates (post-12th grade)**
2. **Advanced Placement success (typically 11th and 12th grades)**
3. **ACT scores (typically 11th grade)**

The Georgetown University Center on Education and the Workforce shows that by 2018, we will need 22 million new college degrees—but will fall short of that number by at least 3 million postsecondary degrees, Associate's or better. In addition, we will need at least 4.7 million new workers with postsecondary certificates. At a time when every job is precious, this shortfall will mean lost economic opportunity for millions of American workers.*

College Remediation Rates

Denver and Aurora have worked over the past several years to increase graduation rates and college enrollment. Both DPS and APS have thousands of students taking Advanced Placement (AP) classes and/or have students that are concurrently enrolled in college classes while in high school. DPS graduation rates have climbed 12.4 points since 2009, while APS' have gone up four points.¹² During the same period, college enrollment increased.

The problem, as pointed out by EdNews Colorado, is that taking college-level classes in high school or enrolling in college does not guarantee college readiness.¹³ More than half of those students who enroll in college from DPS or APS high schools must first take remedial classes before enrolling in college-level (credit-bearing) classes. As shown in Figure C, the remediation rate in Denver and Aurora far exceeds that of other school districts.

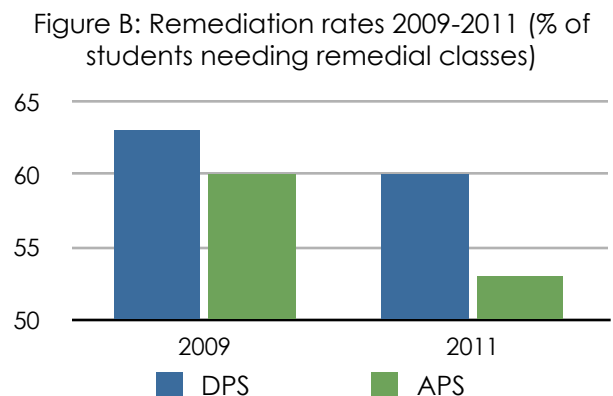
In the first version of this report, we said remediation rates had climbed between 2009 and 2011. However, the state recalculated the rates based on different methodology and found that instead of climbing, they fell about 2 points in DPS (from 62.5% to 60.4%) and fell 7 points in APS (from 60% to 52.3%).¹⁴ While the previous data had shown increasing rates at many high schools between 2009 and 2011, the new data do not illustrate the same trend (see appendix B for school by school remediation rates 2009-2011, which has been updated with the new data). We hope that this signals a move in the right direction, but we still have a long way to go.

High remediation rates signal a lack of college preparation, and have negative consequences for students once they enroll. These include a high likelihood of dropping out (non completion) and a high financial cost.

Students that take remedial coursework are less likely to graduate

The Colorado Department of Higher Education tracked those students who took remedial college classes in public institutions in Colorado between 2004 and 2011. They found that: "Thirty percent of students not needing remediation graduated within four

Nearly one out of every 10 students taking remedial classes in the entire state of Colorado is a DPS or APS graduate.



years, compared to 9 percent of students who needed remediation.¹⁵ This means that, based on DPS' and APS' remediation rate, for every 100 students who matriculate to college from DPS or APS, 17 will graduate in four years.¹⁶

There is a high cost to dropping out of college

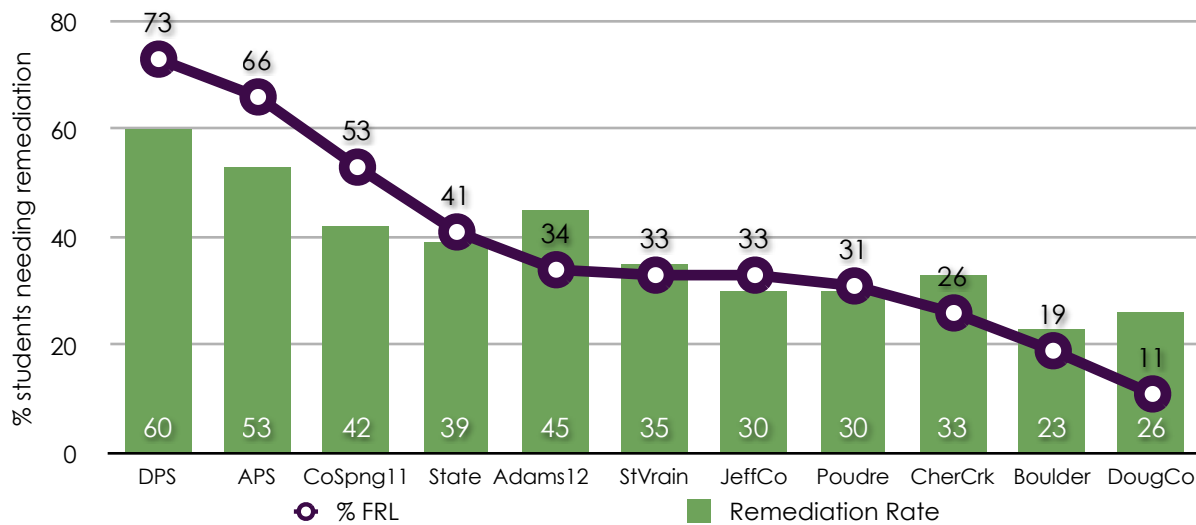
There is a case to be made that some college is better than none because of the experiences and learning gained, but there is also a cost associated with dropping out. Many students take out large loans to pay for the remedial classes, drop out before earning credit, and are left with the burden of the loans. This is particularly devastating to those low-income students who are at a higher risk of taking remedial classes to begin with. According to the Colorado Department of Higher Education, The estimated cost associated with remedial courses was approximately \$58 million in 2011-12. Of that total, \$39 million fell to the students for tuition costs while the state's share was \$19 million.¹⁷

The estimated cost associated with remedial courses was approximately \$58 million in 2011-12 (Colorado Department of Higher Education).

Remediation Data

The version of the report you are reading includes remediation rates released in April 2013. The methodology for calculating remediation rates was revised in 2013. Using the new method, remediation rates decreased slightly.

Figure C: Remediation rates in CO's 10 largest districts (2011)



Advanced Placement

Advanced Placement data was not provided by Aurora Public Schools by the time of this publication. This section therefore omits APS.



"This whole push to use AP as a reform effort strikes me as putting the cart before the horse. If a student can't do high school work, why do we think they'll be able to do college-level work?" -Kristin Klopfenstein, founding executive director of the Education Innovation Institute at the University of Northern Colorado in Greeley. (Denver Post, 5/5/11)

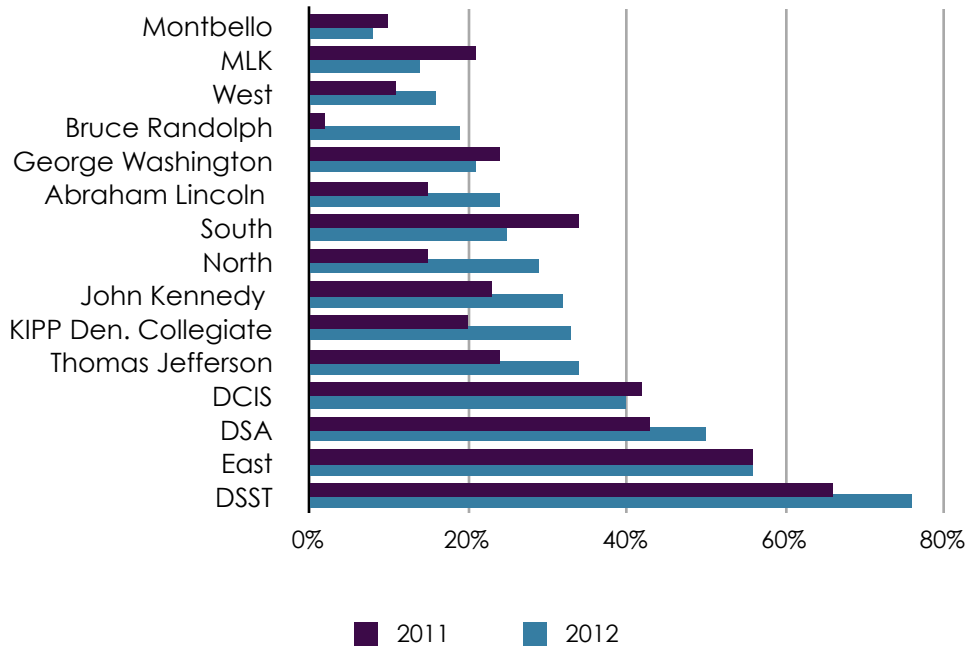
Advanced Placement classes are designed by the College Board to be consistent across states, districts and schools. They are often adopted as a way to increase rigor and provide an opportunity for students to earn college credit while in high school (by earning a 3, 4 or 5 on the AP exam).

To incentivize AP participation over the past few years, DPS has offered School Performance Framework points to schools who enroll students in AP classes (and/or encourage them to take the AP exams). The intention on DPS' part is to "make sure our students are ready for the next step in their education, so that they have a real shot at the future they see for themselves."¹⁸ These incentives to increase AP participation have worked. Between 2008 and 2012, 2,095 additional AP tests were taken in Denver—a 174% jump and substantial increase considering that student population in the district only rose 14% over this period. These statistics have been used to imply that more students are college ready, and it is true that as more students have tested, more have passed.¹⁹

However, a consistently low percentage of students continue to pass the AP tests. The national pass rate is 56% while Denver's hovers around 37%. At seven high schools, fewer than one in four students pass the exam. These low pass rates signal that while many students take the AP classes, few master the material.

**"We are put into AP automatically if we don't choose another option."
-DPS high school student**

Figure D: AP pass rates at DPS schools
(National Pass Rate=56%)



**"Some of my students are prepared, but others are very underprepared...this is supposed to be a college-level class and yet very few of my students do their homework. As a result, I have to spend a lot of class time letting them do the work they were supposed to do at home."
-AP English Language teacher**

Reasons for the low pass rates vary by school and student and are not directly in the purview of this report. However, a DPS analysis revealed that inconsistent grading practices contribute to the lack of correlation between AP course grades and exam scores.

DPS compared course grades and AP exam scores and found the following:

"When comparing AP Calculus course grades (school GPA) to AP Calculus exam scores (school average score), it was found that the degree to which the GPAs align with the scores varied across DPS high schools. Some schools with high AP Calculus GPAs have high average AP Calculus exam scores, while others schools have

low average scores, and vice versa. Inconsistencies in grading practices and lack of common definition of letter grades contribute to the lack of correlation between AP course grades and AP exam scores."

Regardless of the reason for low pass rates, participation rates should not be interpreted as proof that more students are college ready. Whether or not taking AP unprepared to pass is "good" or "bad," most agree that the impact is magnified when students are prepared for the class.

American College Test

The American College Test (ACT) is a national exam taken by every high school **Junior** in Colorado. The test includes sections on English, Math, and Science. However, when we talk about the ACT score, we refer to the composite score of the sections. The ACT is meaningful because it is a strong indicator of college readiness and because by "cross-walking" scores it is possible to estimate the equivalent ACT score a student needs to qualify for post-secondary opportunities like the military, community college, or career training.

What is a college- or career-ready score?

The college readiness benchmark, according to ACT, is a composite score of 21. Reaching a college ACT benchmark in a given subject means that a student has a 75% chance of scoring a C or better in college in that subject.²⁰ The Colorado Department of Education (CDE) has also estimated college readiness by identifying the average ACT score that 2- and 4-year (Colorado) college graduates had scored. By looking at the scores of those who persisted and those who dropped out, CDE found that the average score of a 2-year college graduate (Associate's Degree) is 22 and the score of a 4-year college graduate (Bachelor's degree) is 24. Therefore, for the purposes of using ACT scores to dictate college readiness, we generally think 24 is a better indication of college readiness than 21. The following table provides a set of sample translations of ACT average composite scores.

| ACT Score | Description (Figure F) |
|-----------|--|
| 36 | Perfect score |
| 28 | UT Austin average ACT for incoming class |
| 26 | CU Boulder average ACT for incoming class |
| 24 | Average ACT score, Colorado Bachelor's degree completer |
| 23 | CU Denver average ACT for incoming class |
| 22 | Average ACT score, Colorado Associate's degree completer |
| 21 | National ACT average (2012) |
| 18 | Average composite of student requiring math remediation in CO |
| 17 | Average DPS and APS score |
| 15 | Score required for entrance into military (equivalent to 31 on ASVAB) |
| 14 | Score represents basic literacy. Students at this level are unable to "locate basic facts (e.g., names, dates, events) clearly stated in a passage" ²⁰ |

A look at Distribution of Scores

Summary of DPS and APS performance

The average ACT score for Denver Public Schools is 17.6. The average score for Aurora Public Schools is 16.9, representing (roughly) the 32nd and 27th percentiles. This represents improvement in recent years by a rate of about a quarter point per year. While no one wants to complain about improvement, growth at a rate of one quarter point per year would mean that Denver urban districts would not be reaching an average ACT of 21 until 2026 or later.

In 2012, 16% of students in DPS and APS scored 23 or better, and about 13% scored a 24 or better. It isn't surprising then that those matriculating to college from APS and DPS require remediation. The overall distribution of scores in both APS and DPS falls below national averages.

Figure G: ACT score distribution: DPS, APS, National

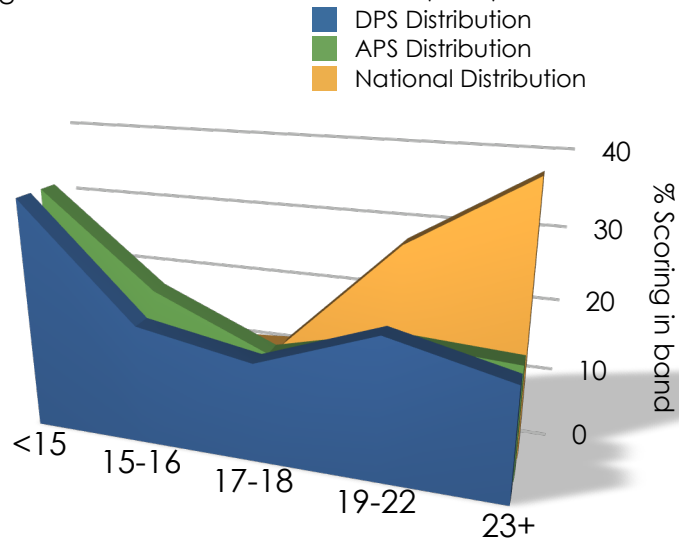


Figure H: DPS distribution

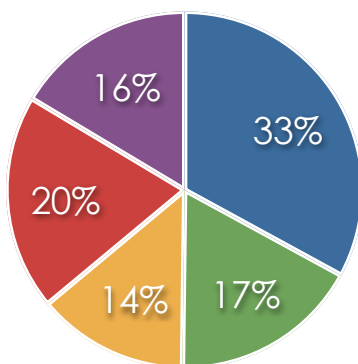


Figure I: APS distribution

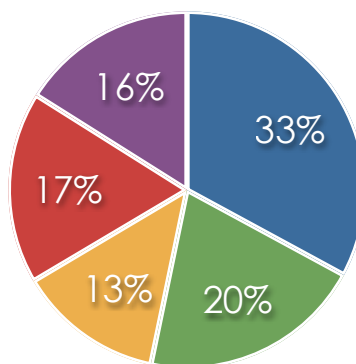
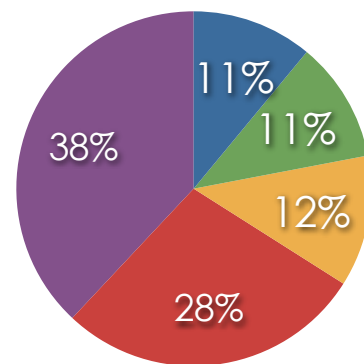


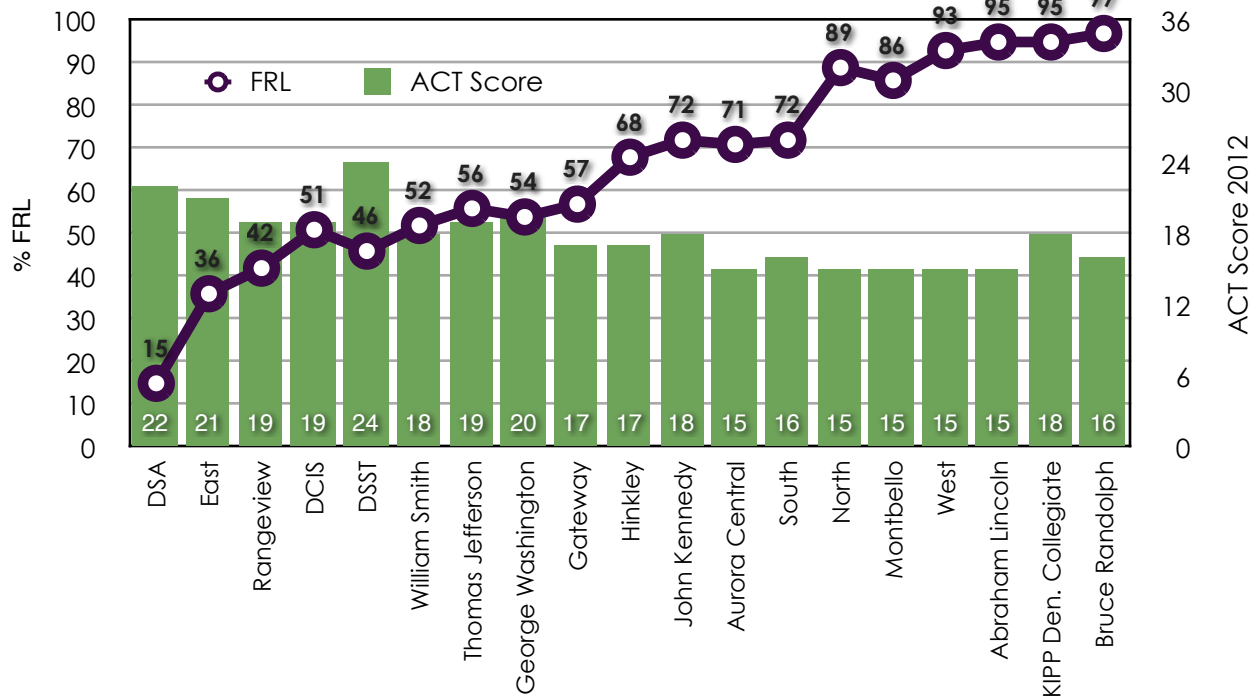
Figure J: National distribution



● Below 15 ● 15-16 ● 17-18 ● 19-22 ● 23 or Better

As seen in Figure K, the majority of Denver's and Aurora's high schools average less than a 17 on the ACT. Just three schools average 21 or higher. These are DSST, Denver School of the Arts, and East. Schools that perform better than expected based on their poverty are DSST, KIPP, and George Washington. Five schools score an average of 15.

Figure K: 2012 ACT scores compared to poverty rates at DPS & APS high schools



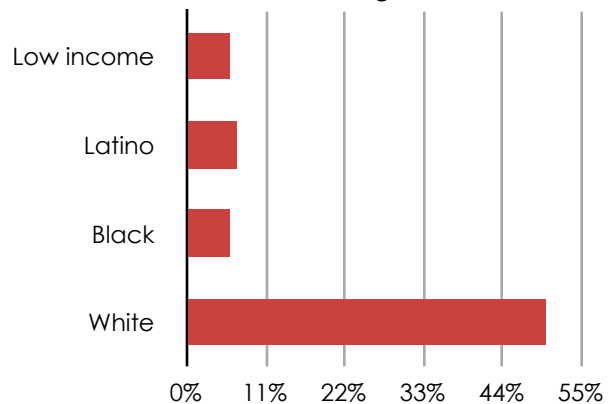
Source: APS research department, DPS website²¹

Denver Public Schools: How do subgroups do across all DPS high schools?

Across DPS, African-American/Black students, Latino students, and low-income students lag far behind white and non-low-income students on the ACT (note that more white students in DPS are non-low-income, not that they have higher aptitude). Low income here refers to students who qualify for free or reduced-price lunch.

- 26% of Latinos and 25% of African Americans scored **19** or above, compared to 74% of white students in the district
- 7% of Latinos and 6% of African Americans scored **23** or above, compared to 50% of white students
- 24% of low-income (as defined by FRL) students scored **19** or better, compared to 64% of non-low-income students
- 6% of low-income students scored **23** or better, compared to 38% of non-low-income students
- 41% of low-income students scored lower than **15**, compared to 14% of non-low-income students
- 40% of Black and Hispanic students scored less than **15**, compared to 8% of white students

Figure L: % of students scoring 23 or better on ACT across all DPS high schools



How do subgroups do at 15 major DPS high schools?

DPS generously shared data on 15 major high schools. We asked for the number of students, broken down by subgroup, at each school scoring at or below 14, and at or above 24.

Subgroups fare differently depending on where they go to school. DSST is the only DPS high school that consistently prepares students of all subgroups for college. Consider that half of the African-American students in the 15 major high schools who score a 24 or better attend DSST.

Just 10 low-income students at Abraham Lincoln (of 317 test takers) and 9 low-income students at Kennedy (of 114 test takers) scored a 24 or over.

The African-American students that score 24+ primarily attend George Washington and East. African-American students are slightly more likely to score a 24 or better at George Washington compared to East even though East is typically considered a "better" school. East stands out as one of the best places to be if you pay for lunch, but not if you qualify for free lunch.

Other schools also do better at serving certain subgroups. For example, KIPP is not a high performer overall (their average ACT is 18) but they have the fourth highest percentage of Latino students scoring 24 or better.

And finally, there are schools that don't stand out as college preparatory schools, but are also not failing a high percentage of students. Perhaps they are raising the floor—if not the ceiling. These include schools like DCIS, Jefferson, SW Early College, and KIPP.

Figure M: ACT scores among FRL students

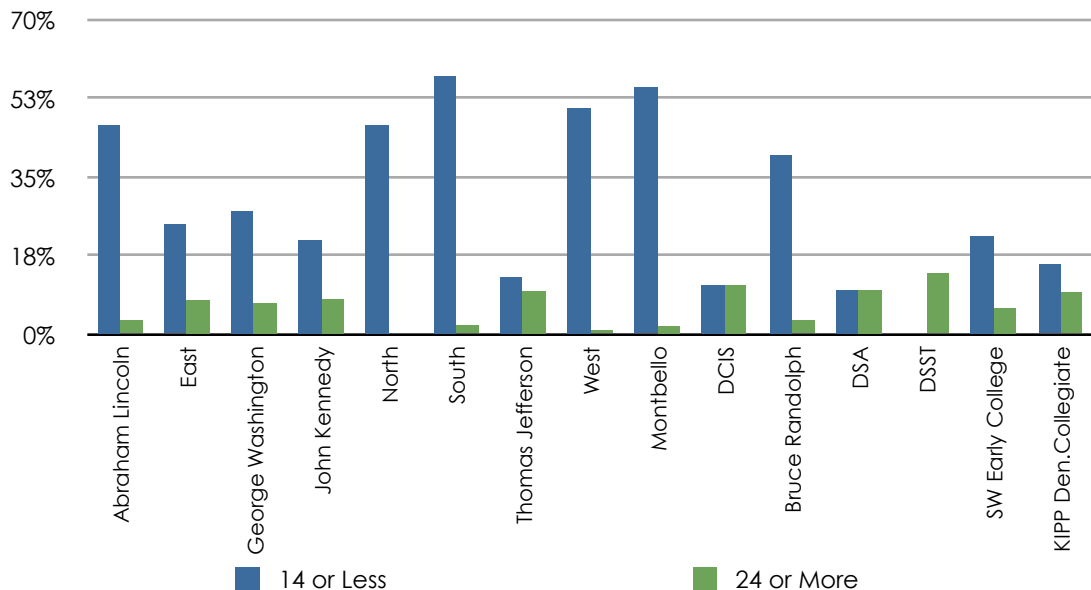


Figure N: ACT Scores among non-FRL students

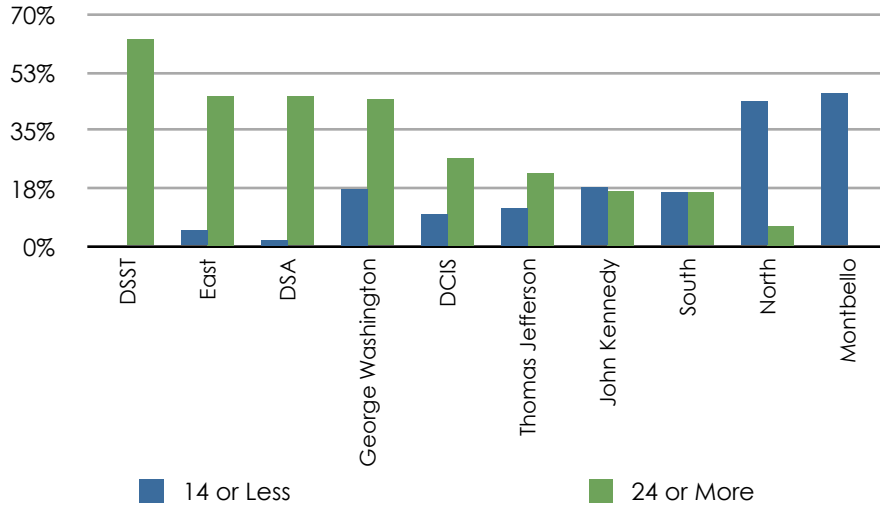


Figure O: ACT Scores by ethnicity Hispanic/Latino (% of students)

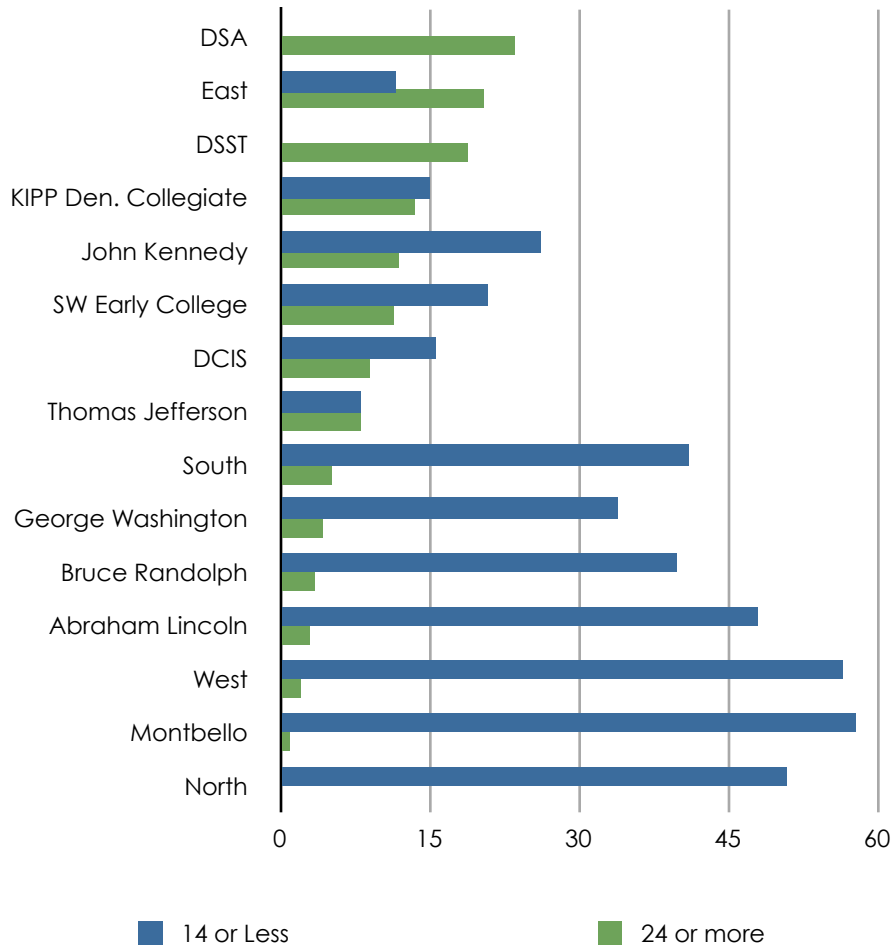


Figure P: ACT Scores by Ethnicity—White (% of students)

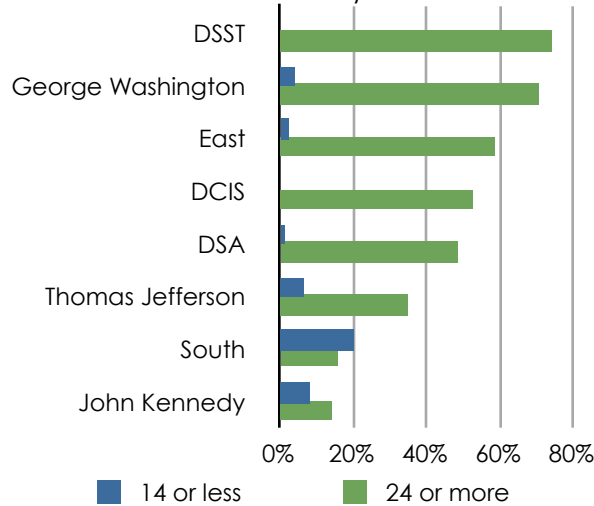
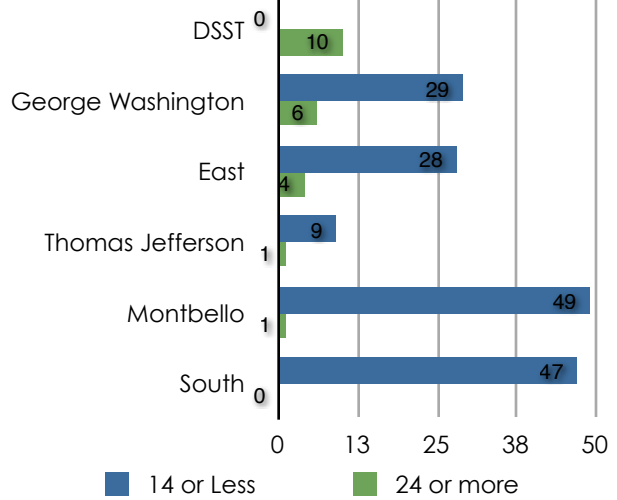


Figure Q: ACT scores by ethnicity Black or African American (number of students)



Aurora Public Schools: How do subgroups do across Aurora’s high schools?

- 27% of Black and Hispanic students scored **19** or above, compared to 56% of white students
- 26% of low-income students scored **19** or better, compared to 45% of non-low-income students
- 12% of Black and Hispanic students scored **23** or better, compared to 31% of white students
- 12% of low-income students scored **23** or better, compared to 23% of non-low-income students
- 39% of low-income students scored lower than **15**, compared to 23% of non-low-income students
- 36% of Black students and 38% of Hispanic students scored less than **15**, compared to 15% of white students

How do Aurora’s students score at five major high schools

Aurora also generously provided us with school- and subgroup-level data, broken down by various cut points. We use letters here to identify the schools as the district has asked that we mask the identity of the schools. Note that the APS data does not match up perfectly with the DPS data because we have slightly different versions of school-level data. However, the overall patterns are the same.

| Approximate poverty level of tested cohort | | | | |
|--|---------------|---------------|---------------|---------------|
| School A: 75% | School B: 57% | School C: 43% | School D: 68% | School E: 45% |

Overall, APS schools also have few low-income and minority students who are prepared for college, and schools with more low-income students fare worse than those with more students that don't qualify for free lunch. APS lacks outliers like DSST, but like DPS, has some "failure factories" where many students score at the lowest levels and few at the highest, and other schools that have a distribution that is inching toward the middle.

Figure R: % APS students scoring less than 15 or 23 or better (schools sorted by approx. poverty)

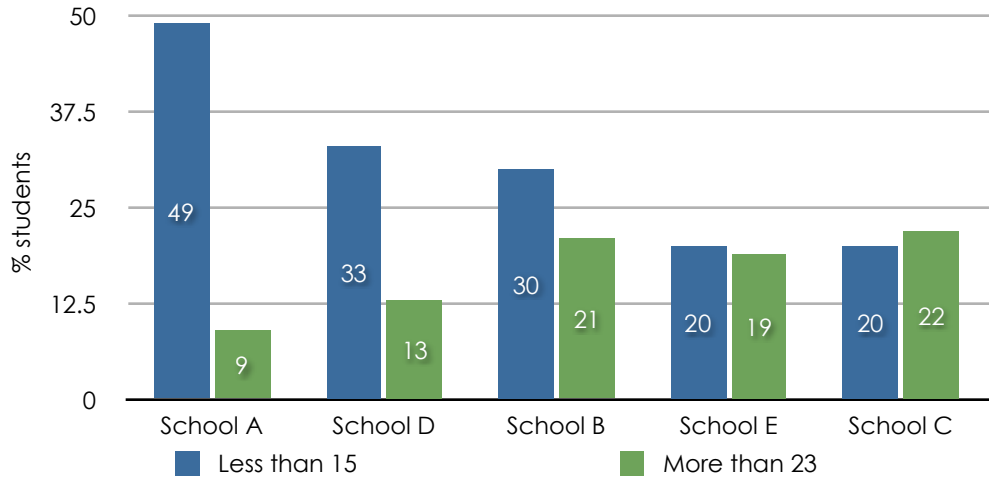


Figure S: Distribution of ACT scores at school B

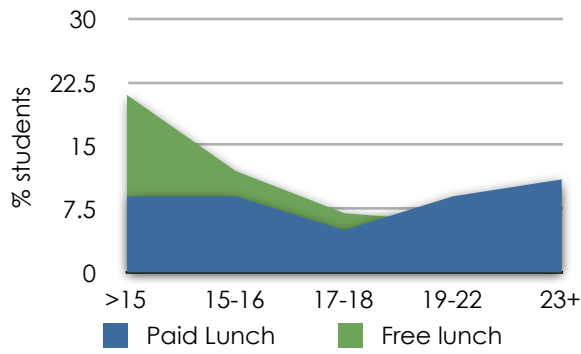


Figure T: Distribution of students at school A

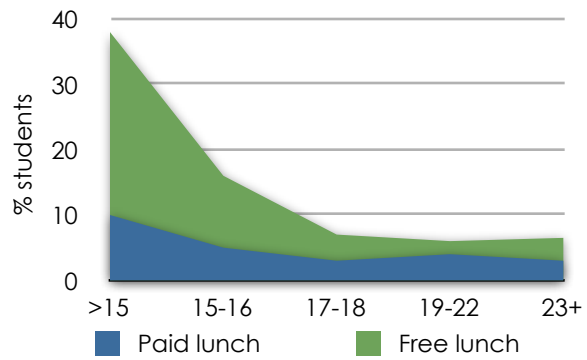
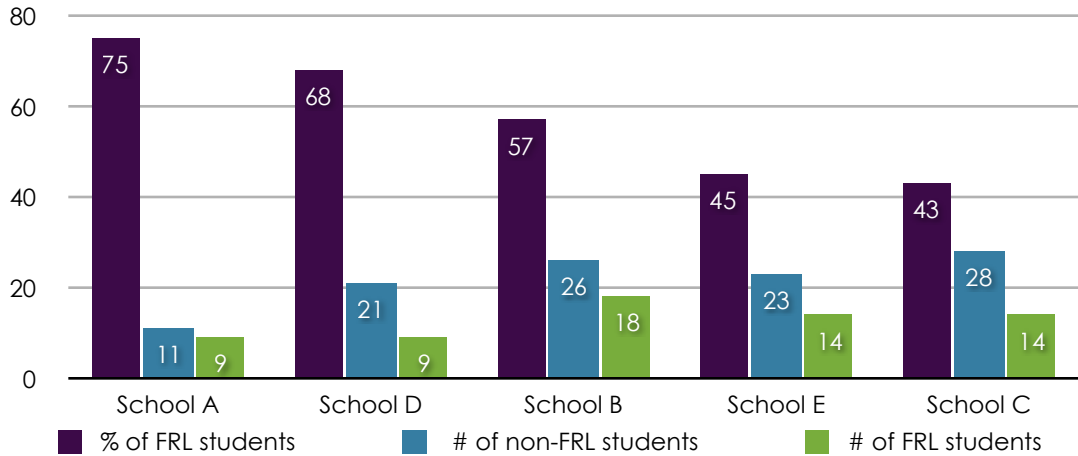


Figure U: Students scoring 23 or better (schools sorted by approx. poverty)



Conclusion

High schools are unquestionably the most difficult challenge in public education today. There have been a multitude of high school improvement efforts supported by billions of dollars from government and private foundations over several decades. In Denver alone, we have spent over \$10 million from mill levy funds over the past 10 years and millions more from other sources aimed at improving high school outcomes. Few (if any) existing schools targeted for improvement have made or sustained significant improvement. In Denver, most of the funds have gone toward credit recovery programs and not fixing the root problems. Graduation rates in Denver and in some other urban cities have improved, but college and work readiness have changed little. We can get more kids to graduate and enroll in college but we seem unable to get more kids to higher levels of achievement.

Fixing high schools will require a much more substantive and sustained effort than has previously been envisioned. There are many who would point to the dismal track record of those who've tried to reform high schools and say it is a waste of time and money. However, we believe we have no choice but to address the problem. There remains a critical need to prepare more of Denver's students for career, college and community participation, and the demands of the world aren't going anywhere.

The good news is that we can no longer say that creating schools like the Denver School of Science and Technology is a one-time miracle. Not only has DSST been successfully replicated but there are dozens of other new school designs across the country in which nearly all students, regardless of poverty or ethnicity, graduate ready for college. These schools prove that there are replicable practices that lead to strong high schools. What remains difficult (though surely not impossible) is how to transform existing low-performing schools to schools that achieve similar results to DSST.

These recommendations are meant to be the start of a dialogue about improving Denver's high schools, less a blueprint for fixing schools than a call to action. We include suggestions here because we believe future efforts to change high schools will require a level of focus and detail regarding implementation that we have not had in the past.

Rethinking high school design

The fundamental challenge for today's high school reformers is to prepare all students for college. Doing so will require a fundamental rethinking of the organization, programming, and culture of high school. We must escape the gravitational pull of current high school operations and culture.

Rigor, Relationships and Relevance came into vogue a decade ago with efforts to improve high schools by the Bill and Melinda Gates Foundation in the late '90s, but had been defined by a century of development, advocacy, and research by John Dewey, James Conant, Theodore Sizer, and Diane Ravitch. They represent a balance of high

expectations, a rigorous course of study, personalized support, and engaging programming. Ravitch, Conant and Sizer believed they were providing a recipe for improving the impersonal, boring, factory models of education that too many high schools had become. The 3Rs became shorthand for a vision for a well-functioning high school.

We use the 3Rs here because they are a convenient way to group our recommendations. However, we included two other categories (evaluation and human capital) because not all of these recommendations fit neatly under the 3Rs.

Examples of good practice

Rigor

- Require all students to take a college preparatory curriculum (e.g. YES Prep back-maps curriculum from objectives measured by Advanced Placement exams).
- Class choices or tracks should be limited, with a progression of learning that is logical and directed.
- High graduation rates should be based on demonstrated mastery of content and habits—not seat time. Consider offering an exit exam, such as the ACT, senior year (instead of, or in addition to, Junior year).
- Students may be required to have a commitment offer from a college, military, or another postsecondary pathway before graduation.
- Extend the school day and year.²²
- Grading reform: objective measures used across all schools or groups of schools is key to ensuring that an A paper at one school isn't a D paper at another.

Relationships

- Faculty advisors should be responsible for a relatively small number of students, providing academic and social support and guidance.
- Allow flexibility of school calendar and instruction where possible to allow more time for learning whether in school, college, or community while student is still in high school (Early College Model).
- Students work with mentors through sports, work, or outside school activities that tie back to school program and school advisor.
- Prepare students to thrive in a "college culture" by including travel opportunities to colleges and other trips, as well as assistance with college and financial aid applications, so students can envision themselves as successful college students.²³
- Provide critical academic and social-emotional support for students even after high school on their college campuses.²⁴
- Culture of high expectations where there are consequences for unprofessional behavior and choices.

- Prepare students for college and careers with university credits, industry certificates and associate degrees.
- Engage students through career exploration and relevant core academics.
- Position students to compete globally for high-demand, high-skill, high-paying careers.

Relevance

- Restructure or create smaller, autonomous mission-driven schools.
- Provide internships, projects, or experiences designed to give students rich learning experiences.
- Require capstone project that includes substantial writing, project management, and community connection for graduation.
- Tie graduation to college acceptance, military, or work.
- Provide opportunity for Middle or Early College programming that allows students to graduate from high school with an Associate's degree.

Human Resources

- Educators should be supported and evaluated based on student performance data; instruction should be adapted based on regular analysis of student data.
- Offer regular teacher professional development that teachers find meaningful and helpful; real-time coaching and individualized support.²⁵
- Teachers and administrators should be encouraged to spend time in other schools, learning new practices: private, charter and district schools.
- Create networks within schools to build leadership capacity among teachers.
- Ensure that teachers feel supported through specialized coaching, professional development, collaboration time, and career growth.

Assessment/Monitoring

- Build strong alignment of assessments starting very early that are aligned to the ACT (or exit exam). Schools should know where each student is upon entering and have interventions targeted specifically at catching students up when/where needed.
- Monitor and experiment with improvement strategies by building continuous improvement loops into a program—such as regular focus groups with students and teachers.

Lessons learned

School reform has not been easy, and many attempts by urban districts have failed. In Denver, start-up attempts (both as charter schools and district-managed schools) have seen their share of failure or rocky starts. Attempts at re-making large high schools have also been challenging (e.g. Manual and North). High principal turnover has marked many of these stops and starts. Since 2005, Montbello has churned through six

principals; West: five principals; Martin Luther King Jr. Early College: five principals; North: four principals; George Washington: four principals. From 2005 to 2012, the average tenure of a principal was 2.4 years. Without continuity of leadership or strong succession policies in place, reforms tend to fall apart and most gains are lost.

School choice has also presented challenges as well as opportunities for schools. High schools now receive students from multiple schools. For example, Manual receives students from 17 different middle schools. We recognize that it's hard for high schools to play catch-up when they receive low-performing students from so many schools (and different academic gaps). There may be an opportunity to maintain choice while building stronger feeder clusters along with a transition plan from middle to high school.

Finally, school and district leaders are right to point out that one reason students are not graduating college ready is that students are entering high schools (usually in 9th grade) so far behind that it is very difficult to make the kind of achievement leaps that are necessary to graduate at grade level. The lack of preparation is reflected on TCAP, AP pass rates, remediation and ACT. We recognize that this is not just a high school problem but a K-12 problem, begging the question: is 9-12 the right grade configuration? To this point, DSST and many new schools are moving toward a 6-12 model. We believe this may be one way to think about approaching school reform.

A hopeful future

Despite many setbacks, we can't give up on high school reform. Now is the time to take the examples we have from across the country and use them to help us redesign the high school experience—making it better for kids and adults. Denver is at a pivotal moment in education reform, and the U.S. economy depends on our will and ability to improve our nation's schools.

Acknowledgements

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Sari Levy authored this report.

Appendix A: ACT Data (DPS)

| 2012 Composite Colorado ACT Scores | | | | | | | | | | | | |
|------------------------------------|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total | No Score N | No Score % | ≤14 N | ≤14 % | ≤16 N | ≤16 % | ≤18 N | ≤18 % | ≤22 N | ≤22 % | >22 N | >22 % |
| 3837 | 6 | 0% | 1264 | 33% | 1926 | 50% | 2454 | 64% | 3207 | 84% | 630 | 16% |

| 2012 Composite Colorado ACT Scores by Demographics and Score Cutoffs | | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| Ethnicity | Total | ≤14 N | ≤14 % | ≤16 N | ≤16 % | ≤18 N | ≤18 % | ≤22 N | ≤22 % | |
| American Indian/ Alaska Native | 29 | 13 | 45% | 18 | 62% | 25 | 86% | 28 | 97% | |
| Asian | 150 | 50 | 33% | 68 | 45% | 84 | 56% | 112 | 75% | |
| Black or African American | 639 | 257 | 40% | 387 | 61% | 481 | 75% | 600 | 94% | |
| Hispanic or Latino | 2051 | 813 | 40% | 1230 | 60% | 1526 | 74% | 1905 | 93% | |
| White | 728 | 60 | 8% | 110 | 15% | 191 | 26% | 365 | 50% | |
| Native Hawaiian/ Other Pacific Islander | 8 | * | * | * | * | * | * | * | * | * |
| Two or more race | 124 | 22 | 18% | 40 | 32% | 58 | 47% | 93 | 75% | |
| FRL | Total | ≤14 N | ≤14 % | ≤16 N | ≤16 % | ≤18 N | ≤18 % | ≤22 N | ≤22 % | |
| Free Lunch Eligible | 2252 | 968 | 43% | 1421 | 63% | 1755 | 78% | 2122 | 94% | |
| Reduced Lunch Eligible | 282 | 82 | 29% | 139 | 49% | 182 | 65% | 251 | 89% | |
| Not Eligible | 1195 | 168 | 14% | 297 | 25% | 432 | 36% | 735 | 62% | |
| Gender | Total | ≤14 N | ≤14 % | ≤16 N | ≤16 % | ≤18 N | ≤18 % | ≤22 N | ≤22 % | |
| Female | 1883 | 608 | 32% | 927 | 49% | 1216 | 65% | 1585 | 84% | |
| Male | 1846 | 610 | 33% | 930 | 50% | 1153 | 62% | 1523 | 83% | |
| ELL | Total | ≤14 N | ≤14 % | ≤16 N | ≤16 % | ≤18 N | ≤18 % | ≤22 N | ≤22 % | |
| ELL | 637 | 462 | 73% | 560 | 88% | 601 | 94% | 628 | 99% | |
| Exited | 918 | 247 | 27% | 435 | 47% | 602 | 66% | 824 | 90% | |
| Non-ELL | 2174 | 509 | 23% | 862 | 40% | 1166 | 54% | 1656 | 76% | |
| <i>*Population is too small to interpret</i> | | | | | | | | | | |

| 2012 Colorado ACT Composite Score by High School and Income | | | | | | |
|---|------------|-------|-------|-------|-------|-------|
| DPS School | FRL Status | Total | ≤14 N | ≤14 % | ≥24 N | ≥24 % |
| Abraham Lincoln | Free | 291 | 130 | 44.7% | 9 | 3.1% |
| | Reduced | 26 | 18 | 69.2% | 1 | 3.8% |
| | Paid | 14 | | | | |
| East | Free | 119 | 30 | 25.2% | 7 | 5.9% |
| | Reduced | 24 | 5 | 20.8% | 4 | 16.7% |
| | Paid | 369 | 18 | 4.9% | 168 | 45.5% |
| George Washington | Free | 125 | 37 | 29.6% | 7 | 5.6% |
| | Reduced | 17 | 2 | 11.8% | 3 | 17.6% |
| | Paid | 133 | 23 | 17.3% | 59 | 44.4% |
| John Kennedy | Free | 94 | 20 | 21.3% | 8 | 8.5% |
| | Reduced | 20 | 4 | 20% | 1 | 5% |
| | Paid | 78 | 14 | 17.9% | 13 | 16.7% |
| North | Free | 125 | 63 | 50.4% | 0 | 0% |
| | Reduced | 10 | | | | |
| | Paid | 16 | 7 | 43.8% | 1 | 6.3% |
| South | Free | 172 | 108 | 62.8% | 4 | 2.3% |
| | Reduced | 21 | 3 | 14.3% | 0 | 0% |
| | Paid | 80 | 13 | 16.3% | 13 | 16.3% |
| Thomas Jefferson | Free | 77 | 11 | 14.3% | 9 | 11.7% |
| | Reduced | 16 | 1 | 6.3% | 2 | 12.5% |
| | Paid | 103 | 12 | 11.7% | 23 | 22.3% |
| West | Free | 104 | 56 | 53.8% | 1 | 1% |
| | Reduced | 7 | | | | |
| | Paid | 9 | | | | |
| Montbello | Free | 369 | 218 | 59.1% | 8 | 2.2% |
| | Reduced | 44 | 19 | 43.2% | 1 | 2.3% |
| | Paid | 39 | 18 | 46.2% | 0 | 0% |
| Denver Center for International Studies | Free | 32 | 4 | 12.5% | 4 | 12.5% |
| | Reduced | 4 | | | | |
| | Paid | 41 | 4 | 9.8% | 11 | 26.8% |
| Bruce Randolph | Free | 92 | 38 | 41.3% | 3 | 3.3% |
| | Reduced | 3 | | | | |
| | Paid | 3 | | | | |
| Denver School of the Arts | Free | 18 | 2 | 11.1% | 2 | 11.1% |
| | Reduced | 2 | | | | |
| | Paid | 95 | 2 | 2.1% | 43 | 45.3% |
| Denver School of Science & Technology | Free | 33 | 0 | 0% | 6 | 18.2% |

| 2012 Colorado ACT Composite Score by High School and Income | | | | | | |
|---|---------|----|----|-------|----|-------|
| Denver School of Science & Technology | Reduced | 11 | | | | |
| | Paid | 64 | 0 | 0% | 40 | 62.5% |
| Southwest Early College | Free | 46 | 11 | 23.9% | 3 | 6.5% |
| | Reduced | 4 | | | | |
| | Paid | 11 | | | | |
| Kipp Den. Collegiate | Free | 48 | 8 | 16.7% | 6 | 12.5% |
| | Reduced | 16 | 2 | 12.5% | 2 | 12.5% |
| | Paid | 8 | | | | |

| 2012 Colorado ACT Composite Score by High School and Race/ Ethnicity | | | | | | |
|--|---------------------------|-------|-------|-------|-------|-------|
| High School | Race/Ethnicity | Total | ≤14 N | ≤14 % | ≥24 N | ≥24 % |
| Abraham Lincoln | Black or African American | 2 | | | | |
| | Hispanic or Latino | 307 | 147 | 47.9% | 9 | 2.9% |
| | White | 8 | | | | |
| East | Black or African American | 128 | 28 | 21.9% | 4 | 3.1% |
| | Hispanic or Latino | 113 | 13 | 11.5% | 23 | 20.4% |
| | White | 238 | 6 | 2.5% | 140 | 58.8% |
| George Washington | Black or African American | 102 | 29 | 28.4% | 6 | 5.9% |
| | Hispanic or Latino | 71 | 24 | 33.8% | 3 | 4.2% |
| | White | 72 | 3 | 4.2% | 51 | 70.8% |
| Kennedy | Black or African American | 2 | | | | |
| | Hispanic or Latino | 119 | 31 | 26.1% | 14 | 11.8% |
| | White | 49 | 4 | 8.2% | 7 | 14.3% |
| North | Black or African American | 6 | | | | |
| | Hispanic or Latino | 130 | 66 | 50.8% | 0 | 0.0% |
| | White | 6 | | | | |
| South | Black or African American | 72 | 47 | 65.3% | 0 | 0.0% |
| | Hispanic or Latino | 78 | 32 | 41.0% | 4 | 5.1% |
| | White | 69 | 14 | 20.3% | 11 | 15.9% |
| Thomas Jefferson | Black or African American | 46 | 9 | 19.6% | 1 | 2.2% |
| | Hispanic or Latino | 50 | 4 | 8.0% | 4 | 8.0% |
| | White | 74 | 5 | 6.8% | 26 | 35.1% |
| West | Black or African American | 9 | | | | |
| | Hispanic or Latino | 101 | 57 | 56.4% | 2 | 2.0% |
| | White | 7 | | | | |
| Montbello | Black or African American | 83 | 49 | 59.0% | 1 | 1.2% |
| | Hispanic or Latino | 331 | 191 | 57.7% | 3 | 0.9% |
| | White | 11 | | | | |

| 2012 Colorado ACT Composite Score by High School and Race/ Ethnicity | | | | | | |
|--|---------------------------|----|----|-------|----|-------|
| Denver Center for International Studies | Black or African American | 5 | | | | |
| | Hispanic or Latino | 45 | 7 | 15.6% | 4 | 8.9% |
| | White | 17 | 0 | 0.0% | 9 | 52.9% |
| Bruce Randolph | Black or African American | 7 | | | | |
| | Hispanic or Latino | 88 | 35 | 39.8% | 3 | 3.4% |
| | White | 1 | | | | |
| Denver School of the Arts | Black or African American | 7 | | | | |
| | Hispanic or Latino | 17 | 0 | 0.0% | 4 | 23.5% |
| | White | 74 | 1 | 1.4% | 36 | 48.6% |
| Denver School of Science & Technology | Black or African American | 30 | 0 | 0.0% | 10 | 33.3% |
| | Hispanic or Latino | 32 | 0 | 0.0% | 6 | 18.8% |
| | White | 35 | 0 | 0.0% | 26 | 74.3% |
| Southwest Early College | Black or African American | 2 | | | | |
| | Hispanic or Latino | 53 | 11 | 20.8% | 6 | 11.3% |
| | White | 2 | | | | |
| KIPP Denver Collegiate High School | Black or African American | 1 | | | | |
| | Hispanic or Latino | 67 | 10 | 14.9% | 9 | 13.4% |
| | White | 3 | | | | |

| ACT Scores over time | | | | |
|-----------------------------|-------------------------|-------------------------|---------------------|---|
| DPS Schools | 2008 ACT Average | 2012 ACT Average | Change (+/-) | Average national percentile 2012 |
| Montbello | 15 | 15 | 0 | 16th |
| West | 15 | 15 | 0 | 16th |
| Abraham Lincoln | 15 | 15 | 0 | 16th |
| North | 16 | 15 | -1 | 16th |
| South | 17 | 16 | -1 | 22nd |
| Thomas Jefferson | 18 | 19 | 1 | 41st |
| SW Early College | 17 | 17 | 0 | 28th |
| Bruce Randolph | n/a | 16 | n/a | 22nd |
| KIPP Den. Collegiate | n/a | 18 | n/a | 34th |
| John Kennedy | 17 | 18 | 1 | 34th |
| East | 21 | 21 | 0 | 55th |
| DCIS | 20 | 19 | -1 | 41st |
| George Washington | 20 | 20 | 0 | 48th |
| DSA | 23 | 22 | -1 | 62nd |
| DSST | 24 | 24 | 0 | 74th |
| Manual | | 16 | | 22nd |
| MLK Early College | | 17 | | 28th |

| Highest and lowest % of students that scored 14 or less, by race/ethnicity and income | | |
|---|----------------------------------|---------------------------------|
| | Black or African American | % that scored 14 or less |
| Lowest | DSST | 0.0% |
| | Thomas Jefferson | 19.6% |
| | East | 21.9% |
| Highest | George Washington | 28.4% |
| | Montbello | 59.0% |
| | South | 65.3% |
| | Hispanic or Latino | % that scored 14 or less |
| Lowest | DSA | 0.0% |
| | DSST | 0.0% |
| | Thomas Jefferson | 8.0% |
| Highest | North | 50.8% |
| | West | 56.4% |
| | Montbello | 57.7% |
| | White | % that scored 14 or less |
| Lowest | DCIS | 0.0% |
| | DSST | 0.0% |
| | DSA | 1.4% |
| Highest | Thomas Jefferson | 6.8% |
| | John Kennedy | 8.2% |
| | South | 20.3% |
| | FRL | % that scored 14 or less |
| Lowest | DSST | 0.0% |
| | DSA | 10.0% |
| | DCIS | 11.1% |
| Highest | West | 50.5% |
| | Montbello | 55.0% |
| | South | 57.5% |

Appendix B: Remediation Rates (DPS & APS)

| College Remediation Rates (%) by High School | | | |
|---|-------------|-------------|-------------------|
| Denver Public Schools | 2011 | 2009 | Difference |
| Abraham Lincoln | 86 | 85 | 1 |
| DCIS | 65 | 54 | 11 |
| DSST | 13 | 21 | -8 |
| DSA | 27 | 26 | 1 |
| East | 37 | 40 | -3 |
| George Washington | 51 | 62 | -11 |
| John Kennedy | 60 | 67 | -7 |
| Montbello | 70 | 77 | -7 |
| North | 90 | 74 | 16 |
| South | 76 | 73 | 3 |
| Thomas Jefferson | 58 | 56 | 2 |
| West | 86 | 94 | -8 |
| District | 63 | 60 | 3 |
| Aurora Public Schools | 2011 | 2009 | Difference |
| Aurora Central | 58 | 75 | -17 |
| Gateway | 61 | 67 | -6 |
| RangeView | 44 | 48 | -4 |
| Hinkley | 55 | 59 | -4 |
| District | 53 | 60 | -7 |

*chart updated April 16, 2013

Appendix C: AP Pass Rates (DPS)

| 2011 Colorado Advance Placement Pass Rates by High School | | | |
|---|-------------------------|----------------------------------|---------------------|
| | # of tests taken | # of students that passed | AP Pass Rate |
| Bruce Randolph | 110 | 2 | 1.82% |
| Montbello | 434 | 44 | 10.14% |
| West | 84 | 9 | 10.71% |
| North | 165 | 25 | 15.15% |
| Abraham Lincoln | 397 | 59 | 14.86% |
| KIPP Denver Collegiate High School | 44 | 9 | 20.45% |
| Martin Luther King Jr. Early College | 141 | 29 | 20.57% |
| John Kennedy | 105 | 24 | 22.86% |
| Thomas Jefferson | 358 | 85 | 23.74% |
| George Washington | 415 | 100 | 24.10% |
| South | 303 | 104 | 34.32% |
| Denver Center for International Studies | 125 | 53 | 42.40% |
| Denver School of the Arts | 333 | 144 | 43.24% |
| East | 1307 | 731 | 55.93% |
| Denver School of Science & Technology | 182 | 121 | 66.48% |
| 2011 Colorado Advanced Placement Pass Rates by Race & Income | | | |
| | # of tests taken | # of students that passed | AP Pass Rate |
| White | 12073 | 8079 | 66.92% |
| Latino | 2506 | 1170 | 46.69% |
| Asian | 955 | 605 | 63.35% |
| Black | 617 | 183 | 29.66% |
| Low-income | 6331 | 1139 | 17.99% |

| 2012 Colorado Advance Placement Pass Rates by High school | | | |
|---|------------------|---------------------------|--------------|
| | # of tests taken | # of students that passed | AP Pass Rate |
| Bruce Randolph | 117 | 22 | 19% |
| Montbello | 312 | 25 | 8% |
| West | 73 | 12 | 16% |
| North | 62 | 18 | 29% |
| Abraham Lincoln | 421 | 100 | 24% |
| KIPP Denver Collegiate High School | 130 | 43 | 33% |
| Martin Luther King Jr. Early College | 130 | 18 | 14% |
| Manual | 63 | 6 | 10% |
| John Kennedy | 201 | 64 | 32% |
| Thomas Jefferson | 371 | 127 | 34% |
| George Washington | 471 | 100 | 21% |
| South | 378 | 93 | 25% |
| Denver Center for International Studies | 233 | 93 | 40% |
| Denver School of the Arts | 341 | 170 | 50% |
| East | 1399 | 785 | 56% |
| Denver School of Science & Technology | 202 | 153 | 76% |

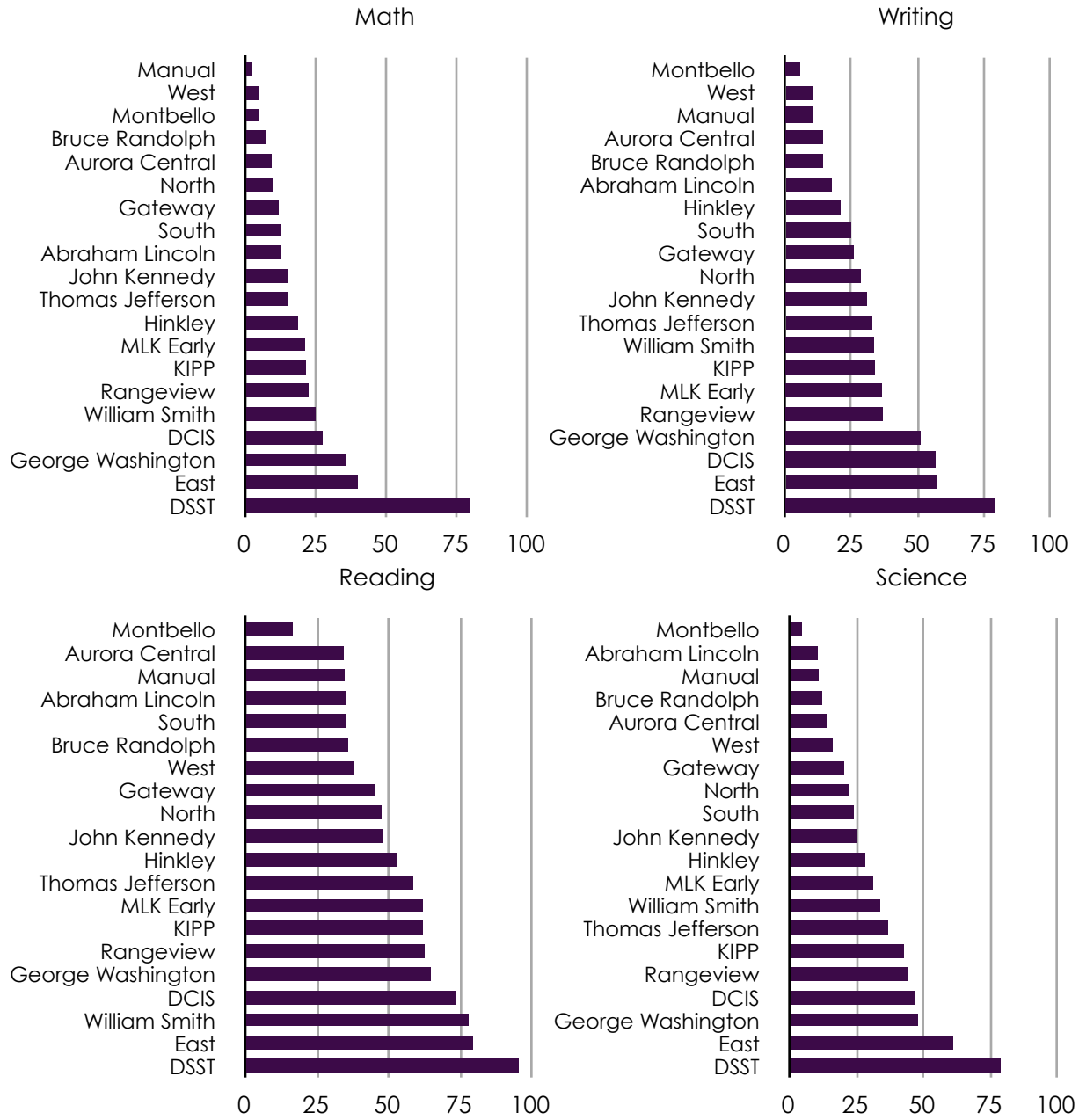
Appendix D: TCAP Scores (APS & DPS)

School Improvement: Are high schools improving based on test scores?

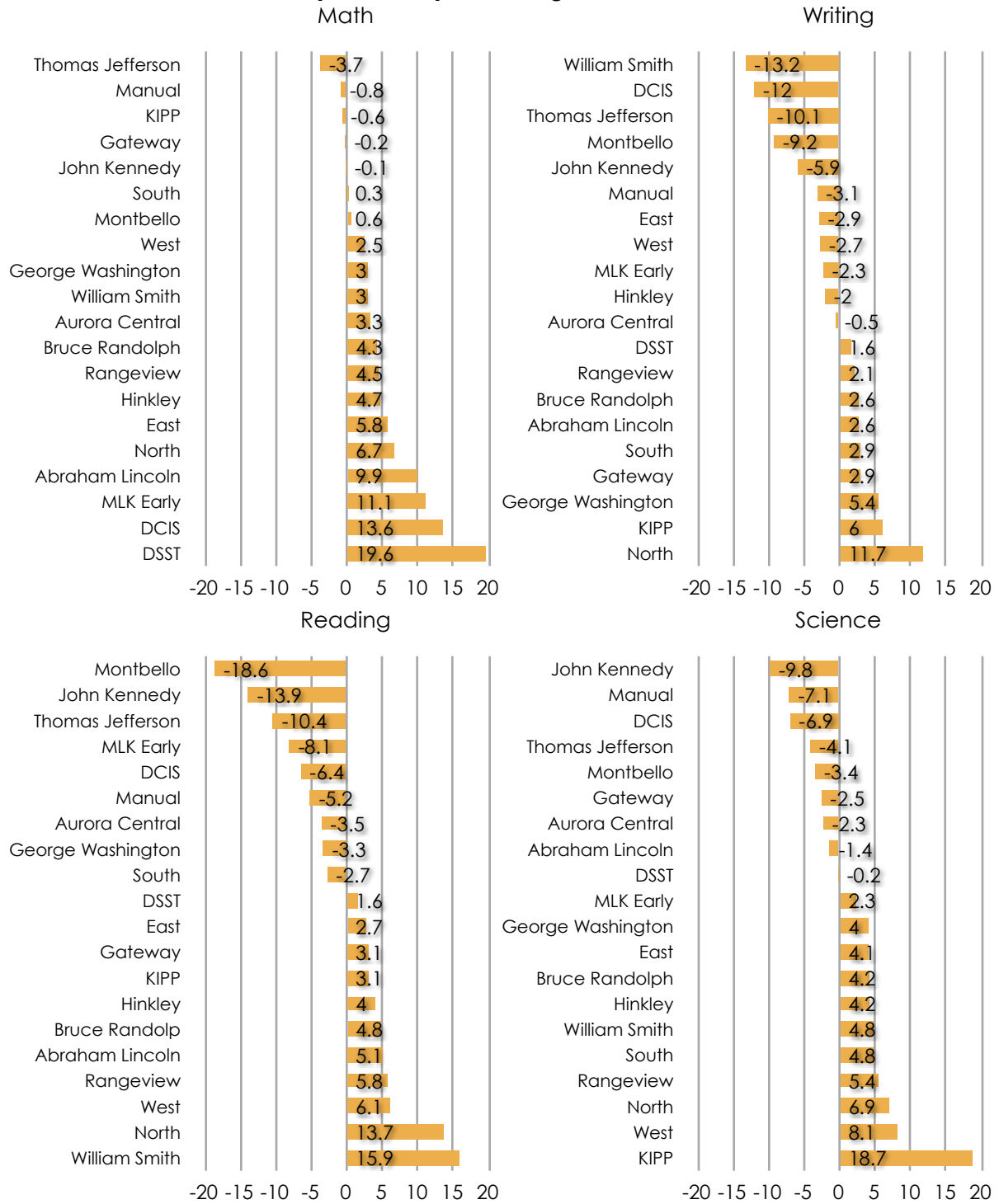
TCAP is the Colorado state assessment taken during high school by 9th- and 10th-graders. Scores can be used to determine whether students are on grade level and whether, over time, schools are getting more or fewer students to proficiency in math, reading, science, and writing. However, because their value is mainly in looking at high school readiness, and the growth from 9th grade to 10th grade, we chose to include them in the appendix instead of the body of this paper.

The data, included below, indicates that during the past four years, Denver and Aurora high schools moved more 10th graders—as a percentage of their total student body—to proficiency in math and science, but fewer students in writing and reading. The only significant net change districtwide has been in math, where 225 additional students scored proficient or above (keeping in mind that DPS grew by several thousand students over this period). These figures show which schools showed a higher or lower percentage of students at grade level in each tested subject.

2012 10th-grade TCAP scores (% of students proficient or advanced)



Cumulative increases (decreases) in % 10th graders at Proficient/Advanced 2009-12



| Colorado TCAP Advanced/Proficient Scores by High School | | | | | | | | | |
|---|---------|----------------------------|------|------|------|------------------------------------|------|------|------|
| | Subject | % of Adv/Prof 10th Graders | | | | # of 10th Graders Scoring Adv/Prof | | | |
| | | 2012 | 2011 | 2010 | 2009 | 2012 | 2011 | 2010 | 2009 |
| Abraham Lincoln | Reading | 35.1 | 33 | 28 | 30 | 142 | 152 | 132 | 130 |
| | Math | 12.9 | 8.5 | 8 | 3 | 52 | 39 | 38 | 13 |
| | Science | 10.6 | 11 | 11 | 12 | 43 | 51 | 52 | 52 |
| | Writing | 17.6 | 16 | 12 | 15 | 71 | 74 | 56 | 65 |
| Bruce Randolph | Reading | 35.8 | 50 | 52 | 31 | 44 | 57 | 50 | 31 |
| | Math | 7.3 | 8 | 12 | 3 | 9 | 9 | 12 | 3 |
| | Science | 12.2 | 14 | 13 | 8 | 15 | 16 | 13 | 8 |
| | Writing | 14.6 | 19 | 16 | 12 | 18 | 21 | 16 | 12 |
| Denver Center for International Studies | Reading | 73.6 | 81 | 75 | 80 | 64 | 68 | 41 | 57 |
| | Math | 27.6 | 28.6 | 27 | 14 | 24 | 24 | 15 | 10 |
| | Science | 47.1 | 48 | 51 | 54 | 41 | 40 | 28 | 38 |
| | Writing | 57 | 43 | 56 | 69 | 50 | 36 | 31 | 49 |
| Denver School of Science & Technology | Reading | 95.6 | 89 | 86 | 94 | 108 | 116 | 108 | 105 |
| | Math | 79.6 | 60 | 40 | 60 | 90 | 78 | 50 | 67 |
| | Science | 78.8 | 73 | 62 | 79 | 89 | 95 | 78 | 88 |
| | Writing | 79.6 | 73 | 63 | 78 | 90 | 95 | 79 | 87 |
| East | Reading | 79.7 | 76 | 75 | 77 | 433 | 423 | 387 | 384 |
| | Math | 39.8 | 37 | 37 | 34 | 216 | 206 | 191 | 170 |
| | Science | 61.1 | 60 | 54 | 57 | 332 | 334 | 279 | 284 |
| | Writing | 57.1 | 59 | 57 | 60 | 310 | 329 | 294 | 299 |
| George Washington | Reading | 64.7 | 56 | 65 | 68 | 278 | 312 | 335 | 339 |
| | Math | 36 | 29 | 33 | 33 | 155 | 106 | 108 | 119 |
| | Science | 48 | 33 | 40 | 44 | 206 | 120 | 131 | 159 |
| | Writing | 51.4 | 37 | 45 | 46 | 221 | 135 | 148 | 167 |
| John Kennedy | Reading | 48.1 | 55 | 57 | 62 | 130 | 131 | 172 | 162 |
| | Math | 14.9 | 20 | 18 | 15 | 40 | 48 | 54 | 39 |
| | Science | 25.2 | 28 | 24 | 35 | 68 | 67 | 72 | 92 |
| | Writing | 31.1 | 36 | 34 | 37 | 84 | 86 | 102 | 97 |
| Martin Luther King Jr. Early College | Reading | 61.9 | 70 | 72 | 70 | 91 | 78 | 70 | 57 |
| | Math | 21.1 | 23 | 14 | 10 | 31 | 26 | 14 | 8 |
| | Science | 31.3 | 27 | 31 | 29 | 46 | 30 | 30 | 24 |
| | Writing | 36.7 | 30 | 26 | 39 | 54 | 33 | 25 | 32 |
| KIPP Denver Collegiate High School | Reading | 62.1 | 59 | | - | 64 | 57 | 0 | |
| | Math | 21.4 | 22 | | - | 22 | 21 | 0 | |
| | Science | 42.7 | 24 | - | - | 44 | 23 | 0 | |
| | Writing | 34 | 28 | | - | 35 | 27 | 0 | |

| Colorado TCAP Advanced/Proficient Scores by High School | | | | | | | | | |
|---|---------|------|------|----|----|-----|-----|-----|-----|
| Montbello | Reading | 16.4 | 18 | 31 | 35 | 28 | 68 | 106 | 141 |
| | Math | 4.6 | 5 | 7 | 4 | 8 | 19 | 24 | 16 |
| | Science | 4.6 | 5 | 10 | 8 | 8 | 19 | 34 | 32 |
| | Writing | 5.8 | 6 | 11 | 15 | 10 | 23 | 38 | 60 |
| Manual | Reading | 34.8 | 39 | 39 | 40 | 32 | 25 | 36 | 48 |
| | Math | 2.2 | 22 | 10 | 3 | 2 | 14 | 9 | 4 |
| | Science | 10.9 | 22 | 18 | 18 | 10 | 14 | 17 | 22 |
| | Writing | 10.9 | 23 | 15 | 14 | 10 | 15 | 14 | 17 |
| North | Reading | 47.7 | 31 | 29 | 34 | 113 | 60 | 59 | 69 |
| | Math | 9.7 | 6 | 7 | 3 | 23 | 12 | 14 | 6 |
| | Science | 21.9 | 11 | 13 | 15 | 52 | 21 | 27 | 31 |
| | Writing | 28.7 | 9 | 11 | 17 | 68 | 17 | 22 | 35 |
| South | Reading | 35.3 | 34 | 39 | 38 | 106 | 117 | 137 | 109 |
| | Math | 12.3 | 13 | 11 | 12 | 37 | 45 | 39 | 35 |
| | Science | 23.8 | 19 | 19 | 19 | 72 | 65 | 67 | 55 |
| | Writing | 24.9 | 21 | 21 | 22 | 75 | 72 | 74 | 63 |
| West | Reading | 38.1 | 27 | 36 | 32 | 59 | 47 | 63 | 61 |
| | Math | 4.5 | 3 | 3 | 2 | 7 | 5 | 5 | 4 |
| | Science | 16.1 | 13 | 11 | 8 | 25 | 23 | 19 | 15 |
| | Writing | 10.3 | 10 | 9 | 13 | 16 | 18 | 16 | 25 |
| Thomas Jefferson | Reading | 58.6 | 66 | 67 | 69 | 139 | 157 | 170 | 182 |
| | Math | 15.3 | 24 | 22 | 19 | 36 | 57 | 56 | 50 |
| | Science | 36.9 | 44 | 35 | 41 | 87 | 105 | 89 | 108 |
| | Writing | 32.9 | 42 | 44 | 43 | 78 | 100 | 112 | 114 |
| Rangeview | Reading | 62.8 | 51 | 51 | 57 | 349 | 266 | 298 | 329 |
| | Math | 22.5 | 21 | 22 | 18 | 125 | 109 | 129 | 104 |
| | Science | 44.4 | 40 | 38 | 39 | 247 | 208 | 222 | 225 |
| | Writing | 37.1 | 37 | 26 | 35 | 206 | 193 | 152 | 202 |
| Aurora Central | Reading | 34.5 | 36 | 30 | 38 | 164 | 197 | 158 | 213 |
| | Math | 9.3 | 10 | 8 | 6 | 44 | 55 | 42 | 34 |
| | Science | 13.7 | 15 | 13 | 16 | 65 | 82 | 69 | 90 |
| | Writing | 14.5 | 16 | 9 | 15 | 69 | 88 | 47 | 84 |
| Hinkley | Reading | 53 | 47.7 | 49 | 49 | 245 | 251 | 251 | 232 |
| | Math | 18.7 | 15.4 | 13 | 14 | 86 | 81 | 67 | 66 |
| | Science | 28.2 | 26.4 | 24 | 24 | 130 | 139 | 123 | 114 |
| | Writing | 21 | 24.3 | 23 | 23 | 97 | 128 | 118 | 109 |
| Gateway | Reading | 45.1 | 37.3 | 39 | 42 | 156 | 154 | 167 | 168 |
| | Math | 11.8 | 13.3 | 11 | 12 | 41 | 55 | 47 | 48 |
| | Science | 20.5 | 23.3 | 25 | 23 | 71 | 96 | 107 | 92 |

| Colorado TCAP Advanced/Proficient Scores by High School | | | | | | | | | |
|---|---------|------|------|----|----|----|-----|----|----|
| Gateway | Writing | 25.9 | 24.5 | 19 | 23 | 90 | 101 | 82 | 92 |
| William Smith | Reading | 77.9 | 45.1 | 56 | 62 | 53 | 30 | 39 | 36 |
| | Math | 25 | 23.9 | 19 | 22 | 17 | 16 | 13 | 13 |
| | Science | 33.8 | 28.2 | 29 | 29 | 23 | 19 | 20 | 17 |
| | Writing | 33.8 | 25.4 | 23 | 47 | 23 | 17 | 16 | 27 |

Appendix E: ACT (APS)

| ACT Scores over time | | | | |
|----------------------|------------------|------------------|--------------|----------------------------------|
| APS Schools | 2008 ACT Average | 2012 ACT Average | Change (+/-) | Average national percentile 2012 |
| Hinkley | 16 | 17 | 1 | 28th |
| Aurora Central | 13 | 15 | 2 | 16th |
| Rangeview | 18 | 19 | 1 | 41st |
| William Smith | 14 | 18 | 4 | 34th |
| Gateway | 15 | 17 | 2 | 28th |

| 2012 Composite Colorado ACT Scores | | | | | | | | | |
|------------------------------------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------|
| APS School | 14 or Below | | 16 or Below | | 18 or below | | 22 or below | | Total |
| | # | % | N | % | N | % | N | % | |
| A | 251 | 49.2% | 359 | 70.4% | 414 | 81.2% | 463 | 90.8% | 510 |
| B | 117 | 30.0% | 200 | 51.3% | 251 | 64.4% | 308 | 79.0% | 390 |
| C | 105 | 20.3% | 202 | 39.0% | 287 | 55.4% | 405 | 78.2% | 518 |
| D | 151 | 33.3% | 244 | 53.7% | 297 | 65.4% | 397 | 87.4% | 454 |
| E | 13 | 20.3% | 26 | 40.6% | 38 | 59.4% | 52 | 81.3% | 64 |

| 2012 Colorado ACT Composite Score by High School and Income | | | | | | | | | | |
|---|----------------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------|
| APS School | FRL or Non FRL | 14 or Below | | 16 or Below | | 18 or below | | 22 or below | | Total |
| | | # | % | N | % | N | % | N | % | |
| A | Free | 196 | 51.4% | 280 | 73.5% | 318 | 83.5% | 348 | 91.3% | 381 |
| | Paid | 55 | 42.6% | 79 | 61.2% | 96 | 74.4% | 115 | 89.1% | 129 |
| B | Free | 81 | 36.5% | 129 | 58.1% | 159 | 71.6% | 183 | 82.4% | 222 |
| | Paid | 36 | 21.4% | 71 | 42.3% | 92 | 54.8% | 125 | 74.4% | 168 |
| C | Free | 58 | 26.1% | 111 | 50% | 148 | 66.7% | 191 | 86% | 222 |
| | Paid | 47 | 15.9% | 91 | 30.7% | 139 | 47% | 214 | 72.3% | 296 |
| D | Free | 116 | 37.4% | 184 | 59.4% | 217 | 70% | 283 | 91.3% | 310 |
| | Paid | 35 | 24.3% | 60 | 41.7% | 80 | 55.6% | 114 | 79.2% | 144 |
| E | Free | --- | --- | --- | --- | 19 | 65.5% | 25 | 86.2% | 29 |
| | Paid | --- | --- | --- | --- | 19 | 54.3% | 27 | 77.1% | 35 |

| 2012 Colorado ACT Composite Score by High School and Race/ Ethnicity | | | | | | | | | | |
|--|-------------------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------|
| APS School | Race or Ethnicity | 14 or Below | | 16 or Below | | 18 or below | | 22 or below | | Total |
| | | # | % | N | % | N | % | N | % | |
| A | Black | 34 | 46.6% | 50 | 68.5% | 57 | 78.1% | 63 | 86.3% | 73 |
| | Hispanic | 158 | 47.0% | 234 | 69.6% | 273 | 81.3% | 307 | 91.4% | 336 |
| | White | --- | --- | --- | --- | 20 | 60.6% | 26 | 78.8% | 33 |
| B | Black | 38 | 38.4% | 61 | 61.6% | 76 | 76.8% | 89 | 89.9% | 99 |
| | Hispanic | 57 | 36.3% | 93 | 59.2% | 112 | 71.3% | 125 | 79.6% | 157 |
| | White | --- | --- | 33 | 32.7% | 46 | 45.5% | 66 | 65.3% | 101 |
| C | Black | 33 | 28.7% | 62 | 53.9% | 80 | 69.6% | 103 | 89.6% | 115 |
| | Hispanic | 39 | 24.5% | 77 | 48.4% | 103 | 64.8% | 133 | 83.6% | 159 |
| | White | 22 | 12.4% | 42 | 23.6% | 68 | 38.2% | 118 | 66.3% | 178 |
| D | Black | 20 | 36.4% | 33 | 60.0% | 40 | 72.7% | 49 | 89.1% | 55 |
| | Hispanic | 100 | 35.1% | 168 | 58.9% | 198 | 69.5% | 259 | 90.9% | 285 |
| | White | 17 | 21.3% | 25 | 31.3% | 39 | 48.8% | 60 | 75.0% | 80 |
| E | Black | --- | --- | --- | --- | --- | --- | --- | --- | 10 |
| | Hispanic | --- | --- | --- | --- | --- | --- | 17 | 94.4% | 18 |
| | White | --- | --- | --- | --- | --- | --- | 21 | 77.8% | 27 |

Works Cited

- ¹ Gov. Owens' Achievement Gap Commission and Colorado Educational Alignment Council; the Colorado Commission on Higher Education; the P20 Educational Coordinating Council; the Colorado Commission for High School Improvement and, most recently, the Educational Success Task Force.
- ² A few high schools, like Manual, showed gains under new leadership but did not sustain those gains once leadership transitioned out.
- ³<http://planning.dpsk12.org/wp-content/uploads/2011/02/Graduation-Completion-Dropout-Report-2011-12.pdf>
- ⁴ Robles, Yesenia. (26 Sept 2011). "Denver Public Schools performances on rise." Denver Post. Retrieved from http://www.denverpost.com/news/ci_18976860
- ⁵ Mitchell, Nancy and Todd Engdahl. (2012). "State scores mostly flat, but growth in Denver." EdNews Colorado. Retrieved from <http://www.ednewscolorado.org/news/education-news/state-scores-mostly-flat-but-growth-in-denver>
- ⁶ Cotton, Anthony. (20 Feb 2013). "High Schoolers who are enrolled in College Classes up 15 Percent." Denver Post.
- ⁷ Denver Public Schools Communications Office. (2013). Facts and Figures. Retrieved from <http://communications.dpsk12.org/newsroom/facts-and-figures/about-denver-public-schools/>
- ⁸ Aurora Public Schools. (9 February 2011). APS Releases Dropout and Graduation Retrieved from Rates.<http://aurorak12.org/2011/02/09/aps-releases-dropout-and-graduation-rates/>
- ⁹ ASVAB. "Concordance Tables For Asvab Afqt/Act/Sat." Retrieved from http://redfield.k12.sd.us/high_school/scholarships/ASVAB%20to%20ACT%20score%20conversion.pdf
- ¹⁰ Carnevale, Anthony P., Nicole Smith, and Jeff Strohl. (June 2010). Help Wanted. Center on Education and the Workforce at Georgetown University. Retrieved from <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/HelpWanted.ExecutiveSummary.pdf>
- ¹¹ ACT. (2012). "The Condition of College & Career Readiness 2012." Retrieved from <http://www.act.org/research/policymakers/cccr12/aspirations2.html>
- ¹² Colorado Department of Education. (2013). "On-time Graduation Rates" Retrieved from <http://www.cde.state.co.us/cdereval/gradcurrent.htm>
- ¹³ Engdahl, Todd. (7 February 2012). "College remediation rates rise." EdNews Colorado. Retrieved from http://www.ednewscolorado.org/news/top_news/college-remediation-rates-rise
- ¹⁴ Colorado Dept. of Higher Education. (16 April 2013). "2012 Legislative Report on Remedial Education." Retrieved from http://higher.ed.colorado.gov/Publications/Reports/Remedial/FY2012/2012_Remedial_relapr13.pdf
- ¹⁵ Colorado Commission For Higher Education. (7 February 2012). 2011 Legislative Report on Remedial Education. Denver, CO: US. Retrieved from <http://www.ednewscolorado.org/wp-content/uploads/2012/02/2011-DHE-Remedial-Report.pdf>
- ¹⁶ For every 100 students that go to college from APS and DPS, 60 will require remediation. Of the 60, 9% will graduate and of the other 40, 30% will.

¹⁷ Poppen, Julie (2013). EdNews Colorado “Forty Percent of Colo. grads need remediation” Retrieved from: <http://www.ednewscolorado.org/news/forty-percent-of-colorado-grads-need-remediation>

¹⁸ DPS Press Release. (5 October 2010). “DPS Launches College Readiness Month with Release of AP, Concurrent Enrollment Numbers” Retrieved from <http://communications.dpsk12.org/announcements/dps-launches-college-readiness-month-with-release-of-ap-concurrent-enrollment-numbers>

¹⁹ In 2006-07 1061 students scored 3+ and in 2011-12 1829 students scored 3+ (DPS)

²⁰ ACT Research and Policy. (February 2012). “What Are ACT’s College Readiness Benchmarks?” Retrieved from <http://www.act.org/research/policymakers/pdf/benchmarks.pdf>

²¹ http://testing.dpsk12.org/research_eval/reports/test_results/COACT/coact_results.htm

²² YES Prep Public Schools: Supporting Every Student to College and Beyond, Winner of the 2012 Broad Prize for Public Charter Schools. Broad Foundation white paper, 2012 Retrieved from: <http://www.broadprize.org/publiccharterschools/2012.html>

²³ YES Prep Public Schools: Supporting Every Student to College and Beyond, Winner of the 2012 Broad Prize for Public Charter Schools. Broad Foundation white paper, 2012 Retrieved from: <http://www.broadprize.org/publiccharterschools/2012.html>

²⁴ YES Prep Public Schools: Supporting Every Student to College and Beyond, Winner of the 2012 Broad Prize for Public Charter Schools. Broad Foundation white paper, 2012 Retrieved from: <http://www.broadprize.org/publiccharterschools/2012.html>

²⁵ YES Prep Public Schools: Supporting Every Student to College and Beyond, Winner of the 2012 Broad Prize for Public Charter Schools. Broad Foundation white paper, 2012 Retrieved from: <http://www.broadprize.org/publiccharterschools/2012.html>