

Which Jeffco Schools are Leaders in Student Achievement Growth?

With school choice open enrollment season once again upon us, many parents are asking themselves where to send their children next year, and are searching for information to help them make that decision. Unfortunately, the information that is currently available is scarce, and two of the most popular sources of school comparisons are badly flawed.

Broadly, there are two types of criteria you can use to evaluate and compare schools.

The first is absolute achievement, as measured by the percent of students who score in the proficient or advanced category on the TCAP tests, which assess students' mastery of state grade level standards (this year TCAP will be replaced by CMAS, which is more rigorous). Students take the TCAP in grades 3 through 10 in reading, writing, and math, but in science only once in elementary, middle, and high school.

For example, Colorado's John Irwin school awards are based on the percent of students at a school that are proficient or advanced on the TCAP in reading, writing, math, and science. One issue with an absolute metric like TCAP or CMAS proficiency is that it reflects not only the value added to student achievement by a school and its teachers, but also its students' socio-economic circumstances. It should therefore come as no surprise that Jeffco's John Irwin Award winning schools are all in affluent areas.

For that reason, SB-191, Colorado's law covering the evaluation of teachers' and principals' performance, does not use absolute achievement as a criteria, because that would unfairly benefit those educators who are based at schools with favorable student socio-economic demographics. This would run the risk of committing the error that was so colorfully described by Barry Switzer, Oklahoma's legendary football coach: "Some people are born on third base and go through life thinking they hit a triple."

Instead, SB-191 uses a different metric, which aims to capture just the impact of teacher and school value added. This metric is called "Median Growth Percentile" or "MGP". A student's growth percentile is a relative, rather than an absolute measure of performance. Essentially, it is calculated by subtracting a student's previous year's TCAP scale score from this year's score, and dividing the result by the starting score to standardize the change in scale score from one year to the next. These standardized scores are then further categorized into statewide percentiles that range from 0 to 99. The Median Growth Percentile is simply the midpoint growth percentile in any grouping of students.

Because it is a relative measure, MGP makes it easier to compare value added across schools. For example, the Median Growth Percentile for math at Evergreen and

Jefferson High Schools could in theory be exactly the same, even though the students had very different starting and ending TCAP scale scores. In this example, both schools could be said to have added the same amount of value to their students' math achievement over the previous year.

So how are all these metrics related to each other?

If a student is proficient or advanced on Colorado state standards each year (e.g., as measured by his or her TCAP or CMAS test results), then he or she should also meet the college and career ready standard on the ACT test. In theory, the year-to-year increase in the TCAP score that is associated with the 50th growth percentile should correspond to the year-to-year increase in the minimum cut score for proficiency. This is why you often hear people say that a Median Growth Percentile of 50 equals "a year's worth of learning." Unfortunately, when you look at the data, this often isn't the case, and the increase in TCAP score associated with the 50th growth percentile is actually less than the increase in the proficiency cut score. This is the answer to the often-posed question (or riddle), "why isn't our percentage of proficient students increasing if our Median Growth Percentile is above 50?"

I also like to use a running race analogy to explain the difference between absolute and relative achievement metrics. Suppose your child comes home and tells you that she or he finished in the 90th percentile in a running race at school. This tells you that, compared to the other students who were on the same starting line as your child, he or she was relatively fast. But should you start thinking about college track scholarships? Not yet. To make that decision, you also need to know your child's absolute time in the race. Both metrics are important, but answer different questions.

We face the same challenge when it comes to evaluating the performance of our public schools. At the District level, Jeffco has two absolute goals: to ensure that every student meets Colorado state grade level standards every year, and then graduate college and career ready. It is the District's challenge to make decisions -- e.g., about curriculum, programming, staffing, technology, budget, etc. -- that will maximize the probability we will achieve these goals.

Unfortunately, we are still a long way from reaching them, despite spending nearly a billion dollars per year on Jeffco's schools. Colorado is one of eighteen states that use the national ACT test to measure the college and career readiness of every 11th grade student. This serves two purposes: It expands access to college for students who might otherwise not take the test, and it provides policymakers, parents, and taxpayers with a measure of the cumulative results produced by the billions of dollars we spend each year on our public schools. The results on the ACT are not only very important for college admissions, but are also highly correlated with scores on the ASVAB test that students who want to serve in the military must take, as well as pre-employment screening tests (e.g., Work Keys) that are taken by many students going straight to work after high school.

In 2014, only 46% of Jeffco students met the “college and career ready” (C&C) standard in reading, only 47% in math, and only 45% in science. Since 2008, over 24,000 Jeffco 11th graders have failed to meet the C&C standard in reading, over 25,000 have failed to meet the math standard, and over 30,000 have failed to meet the science standard. In today’s intensely competitive global economy, these students and their families will likely pay a heavy lifetime price for these failures.

Among Jeffco students eligible for free and reduced lunch (FRL), just 26% met the C&C reading standard, and 23% met the math standard, and 23% met the science standard. For Jeffco’s Hispanic students, the results were also dismal, with just 27% meeting the C&C standard in reading, 25% meeting it in math, and 25% meeting it in science.

However, Jeffco’s achievement problems cannot all be blamed on poverty. In 2014, only 52% of non-FRL students met the C&C reading standard, 55% met the math standard, 52% met the science standard. And even in our most affluent articulation areas (Chatfield, Columbine, Conifer, Dakota Ridge, Evergreen, and Ralston Valley), only 58% of 11th graders met the C&C reading standard in 2014, 64% met the math standard, and 59% met the science standard.

Equally frustrating proficiency results appear in Jeffco’s TCAP scores for the past ten years ([download them](#)). So at the District level, there is still a lot of work to do to improve student achievement on absolute metrics like the TCAP/CMAS and ACT.

However, at the school level teachers cannot control either the socio-economic background or the previous educational experience of the students who walk in the door every August. So while it makes sense to use absolute metrics like the percent of students who are proficient or advanced on TCAP, and college and career ready on the ACT to evaluate the District's performance, at the school level it makes more sense to use a relative metric like Median Growth Percentile. When it comes to achievement metrics, the right answer isn’t either/or. It’s both/and.

Let’s move on to a closer look at the methodology that is used to create Colorado School Grades, another source of information that is used by many parents when they make their school choice decision.

Their methodology is straightforward: they simply convert schools’ numerical score on the Colorado Department of Education (CDE) School Performance Framework (SPF) rating system to an “A” through “F” letter grade. So to understand those letter grades, we have to understand the SPF methodology.

For High Schools, the SPF assigns a 15% weight to Academic Achievement, 35% to Academic Growth, 15% to Academic Growth Gaps, and 35% to College and Career Readiness. For Elementary and Middle Schools, the SPF assigns a 25% weight to Academic Achievement, a 50% weight to Academic Growth, and a 25% weight to Academic Growth Gaps.

I've already noted how Academic Achievement (which the SPF defines as the percent of students scoring proficient or advanced on the TCAP) reflects not only school value added, but also students' socio-economic circumstances. And I've discussed the strengths and weaknesses of Academic Growth, as measured by Median Growth Percentile.

What about Academic Growth Gaps? CDE defines an Academic Growth Gap as follows: "Academic growth gaps are a performance indicator that reflects the academic progress of students in the following disaggregated groups: students eligible for free/reduced lunch, minority students, students with disabilities, English language learners and low-proficiency students. A growth gap for any of the above disaggregated groups is defined as the difference between the median growth percentile and the median adequate growth percentile for that group."

So what is the Median Adequate Growth Percentile? Again, here is CDE's definition: "The growth (student growth percentile) sufficient for the typical (median) student in a district, school, or other group of interest to reach an achievement level of Proficient or Advanced, in a subject area (reading, writing or math), within three years or by 10th grade; whichever comes first. Each student, in a school, will be assigned an adequate growth percentile. How that adequate growth percentile is calculated depends on if the student is below Proficient in the prior year (needing to catch-up) or if the student is Proficient or better in the prior year (needing to keep up). If you take the median of all these numbers, you get the growth level that would enable the typical student to either catch up or keep up; whichever they need to do."

Personally, I strongly dislike this metric. Why? Because the research shows that catching up is very hard, and it becomes non-linearly more difficult the further you fall behind (see, for example, *Getting Students on Track to College and Career Readiness: How Many Catch Up from Far Behind?* by Dougherty and Fleming from ACT Research). Let me give you an example that is near and dear to me as the chair of Wheat Ridge High School's Accountability Committee. Too many of the students who walk in the door at WRHS every August have Grade 8 TCAP scores that are a long way from the minimum cut score for proficiency.

Once they arrive, the team at Wheat Ridge does an outstanding job of increasing their level of achievement, as measured by our Median Growth Percentiles compared to other high schools, for similar types of students. However, under CDE's School Performance Framework, if these superb MGPs aren't high enough to close an achievement gap that has built up over the previous nine years (K – 8), WRHS gets penalized. And then it gets further penalized when, despite the efforts of Wheat Ridge High School's teachers, not all students are able to meet the career and college ready standard on the national ACT test. I can't say this often enough: the percent of students meeting the career and college ready standard on the ACT is indeed a critical metric; however, it is a measure of a district's cumulative performance, and not a relevant metric for measuring a high school's annual performance.

My analogy is that using the Achievement Gap and Career and College Readiness results to criticize a high school is like complaining that the last runner in a 4 x 400 relay race did not run a humanly impossible twenty second anchor lap to make up for all the time lost by the previous three runners. This simply makes no sense – yet the SPF puts a combined 50% weight on a high school's Academic Growth Gaps and College and Career Readiness results.

From my perspective, the single best measure we have of a school's (as opposed to a district's) value added is the Median Growth Percentiles it produces for different types of student. In the following analysis, I have used a three-year average MGP, in order to reduce the impact of year-to-year changes in teaching staff and student mix, in order to better capture the core performance of the school as a system.

In the following sections, I list the highest performing schools, as measured by their three-year average MGPs in math, reading, and writing, for students in the following categories:

(1) Students who are not eligible for free and reduced meals, and do not have either an Advanced Learning or Individualized Education Plan (ALP/Gifted Education or IEP/Special Education);

(2) Students who are eligible for free and reduced meals, and do not have an ALP or IEP;

(3) Students who are English Language Learners; and

(4) Students who are not eligible for free and reduced meals, and have an ALP but not an IEP.

Other groups of students besides the ones I used had numbers that were too small (at the school level) to allow for a meaningful analysis. Individual school results were only included if they had 20 or more students in a given category for 2012, 2013, and 2014. Charter, Option, and District run schools are all included in the results.

In the interest of brevity, I'll only present here the top ten schools in each category, along with their three-year average MGP. [The entire data set, as well as results and rankings for all Jeffco schools can be downloaded as an Excel \(xlsx\) file from K12accountability.org](http://K12accountability.org)

Students Not Eligible for Free and Reduced Meals, Who Have Neither an ALP nor IEP

Math/Elementary

Vanderhoof (MGP = 74), Green Gables (71), Ute Meadows (71), Montessori Peaks Charter (68), Shelton (68), Thomson (68), Dutch Creek (67), Lincoln Charter (67), Maple Grove (67), and Marshdale (67).

Math/Middle

Montessori Peaks Charter (72), Collegiate Academy Charter (69), Manning Option (69), Deer Creek (67), Coal Creek (66), Oberon (63), Evergreen (62), Excel Academy Charter (62), Drake (61), and Wayne Carle (61).

Math/High

Ralston Valley (72), Evergreen (68), Compass Montessori Charter (67), D'Evelyn Option (67), Collegiate Academy Charter (65), Wheat Ridge (62), Chatfield (61), Conifer (60), Jefferson Open (60), Dakota Ridge (59).

Reading/Elementary

Ute Meadows (67), Green Gables (66), Thomson (65), Warder (65), Fairmount (64), Meiklejohn (64), Parmalee (64), Vanderhoof (64), Bradford (63), Devinny (63), Kendalvue (63), Maple Grove (63), Prospect Valley (63), Sheridan Green (63), South Lakewood (63).

Reading/Middle

Montessori Peaks Charter (70), Coal Creek (63), Bear Creek (59), Manning Option (57), Carmody (55), Rocky Mountain Academy (55), Woodrow Wilson (55), Free Horizon Montessori (54), Drake (53), Oberon (53)

Reading/High School

Compass Montessori Charter (68), Collegiate Academy Charter (61), D'Evelyn Option (61), Jefferson Charter (60), Ralston Valley (57), Wheat Ridge (56), Conifer (52), Evergreen (51), Jeffco Open (50), Arvada West (48)

Writing/Elementary

Elk Creek (66), Peck (66), Ute Meadows (66), Fairmount (65), Lincoln Charter (65), Deviny (64), Thompson (64), Marshdale (63), Lukas (60), Vanderhoof (60), Warder (60)

Writing/Middle

Coal Creek (71), Mountain Phoenix Charter (64), Manning Option (59), Bear Creek (56), Evergreen (56), Carmody (55), Rocky Mountain Academy (55), Falcon Bluffs (53), Drake (51)

Writing/High

Compass Montessori Charter (65), Collegiate Academy Charter (61), Wheat Ridge (58), Conifer (57), Jefferson Charter (57), Jeffco Open (57), Ralston Valley (57), Standley Lake (56), Dakota Ridge (53), D'Evelyn Option (51)

Students Eligible for Free and Reduced Meals, Who Have Neither an ALP nor IEP

Math/Elementary

Warder (68), Motensen (65), Sierra (64), Vanderhoof (64), Green Gables (63), Edgewater (62), Shelton (62), Columbine Hills (61), Dutch Creek (61), Thomson (60)

Math/Middle

Manning Option (76), Deer Creek (59), Oberon (59), Excel Academy (58), Bear Creek (57), Drake (57), Evergreen (56), Mandalay (56), North Arvada (56), Summit Ridge (55)

Math/High

Ralston Valley (66), Evergreen (65), Jeffco Open (63), Wheat Ridge (58), Chatfield (55), Conifer (55), Arvada West (54), Dakota Ridge (54), Golden (51), Arvada (50)

Reading/Elementary

Peck (65), Shelton (63), Thomson (62), Prospect Valley (61), Edgewater (60), Dutch Creek (59), Mortensen (59), Vanderhoof (59), Warder (58), Green Gables (57), Stein (57), Stony Creek (57), Wilmore Davis (57)

Reading/Middle

Bear Creek (58), Manning Option (58), Falcon Bluffs (56), Excel Academy Charter (54), Oberon (54), Deer Creek (53), Arvada (51), Carmody (50), Dunstan (4), Mandalay (49)

Reading/High

Jefferson Charter (60), Ralston Valley (53), Evergreen (50), Wheat Ridge (50), Jefferson High (49), Conifer (48), Jeffco Open (47), Standley Lake (46), Dakota Ridge (44), Arvada West (43)

Writing/Elementary

Warder (71), Stein (66), Edgewater (62), Dutch Creek (60), Thomson (58), Ryan (57), Eiber (56), Peck (56), Shelton (56), Kendalvue (55), Lukas (55), Mortensen (55), Sheridan Green (55), Vanderhoof (55)

Writing/Middle

Manning Option (59), Bear Creek (55), Evergreen (51), North Arvada (51), Arvada (50), Carmody (50), Falcon Bluffs (49), Oberon (47), Drake (46), Bell (45), Deer Creek (45), Summit Ridge (45)

Writing/High

Ralston Valley (66), Evergreen (65), Jeffco Open (63), Wheat Ridge (58), Chatfield (55), Conifer (55), Arvada West (54), Dakota Ridge (54), Golden (51), Arvada (50)

Student Who Are English Language Learners

Math/Elementary

Devinny (74), Ryan (69), Edgewater (61), Blue Heron (60), Stein (60), Thomson (60), Lasley (59), Eiber (58), Foster (58), Belmar (56), Westgate (56)

Math/Middle

Drake (68), Summit Ridge (65), D'Evelyn Option (64), Mandalay (63), Dunstan (62), Falcon Bluffs (62), Bear Creek (61), Bell (61), Ken Caryl (57), North Arvada (57)

Math/High

Green Mountain (63), Chatfield (61), Columbine (61), Wheat Ridge (59), Pomona (58), Standley Lake (55), Arvada (54), Bear Creek (52), Golden (51), Arvada West (50)

Reading/Elementary

Thomson (67), Adams (66), Devinny (64), Edgewater (64), Ryan (64), Westgate (64), Stein (61), Blue Heron (60), Eiber (60), Bear Creek (57).

Reading/Middle

Bear Creek (69), Falcon Bluffs (60), Madalay (57), Arvada (56), Drake (55), Summit Ridge (55), Dunstan (52), Everitt (52), North Arvada (52), Bell (51), Carmody (51)

Reading/High

Standley Lake (60), Wheat Ridge (59), Dakota Ridge (57), Arvada West (55), Golden (55), Bear Creek (54), Green Mountain (53), Columbine (52), Lakewood (49), Jefferson High (45)

Writing/Elementary

Devinny (75), Stein (68), Edgewater (66), Eiber (66), Ryan (64), Blue Heron (62), Adams (61), Thomson (61), Westgate (60), Swanson (57)

Writing/Middle

Bear Creek (67), Arvada (59), North Arvada (56), Camody (54), Summit Ridge (54), Drake (53), Dunstan (49), Bell (48), Everitt (48), Mandalay (48)

Writing/High

Golden (56), Chatfield (55), Standley Lake (55), Wheat Ridge (55), Columbine (54), Dakota Ridge (53), Arvada West (52), Bear Creek (50), Lakewood (49), Jefferson High (48)

Students Not Eligible for Free and Reduced Meals, Who Have an ALP But Not an IEP

Math/Elementary

Stony Creek (80), Ute Meadows (79), Parmalee (76), Fairmount (75), Sierra (75), Blue Heron (73), Shelton (72), Westridge (71), Prospect Valley (70), Westwoods (70)

Math/Middle

Dunstan (67), Oberon (67), Drake (66), Manning Option (65), Excel Academy Charter (64), Summit Ridge (60), Carmody (59), Deer Creek (59), Evergreen (58), Creighton (57)

Math/High

Wheat Ridge (70), Evergreen (68), Ralston Valley (66), Conifer (64), D'Evelyn Option (63), Green Mountain (62), Golden (61), Bear Creek (60), Chatfield (59), Dakota Ridge (59)

Reading/Elementary

Parmalee (78), Meiklejohn (76), Ute Meadows (76), Shelton (72), Bradford (71), Dennison (71), Shaffer (69), Red Rocks (69), West Woods (69), Leawood (67), Hackberry (67)

Reading/Middle

Mandalay (62), Drake (61), Manning Option (61), Evergreen (59), Carmody (58), Wayne Carle (57), Bell (55), West Jefferson (55), Excel Academy Charter (54), Oberon (54)

Reading/High

D'Evelyn Option (56), Wheat Ridge (56), Evergreen (55), Ralston Valley (54), Arvada West (53), Conifer (51), Green Mountain (50), Bear Creek (49), Dakota Ridge (49), Golden (47)

Writing/Elementary

Parmalee (74), Bradford (71), Prospect Valley (71), Leawood (70), Ute Meadows (70), Governor's Ranch (69), Bergen Valley (68), Westridge (68), Hackberry (67), Meiklejohn (67), Sierra (67)

Writing/Middle

Carmody (60), North Arvada (59), Drake (58), Evergreen (57), Creighton (56), Bell (55), Mandalay (55), Manning Option (55), Summit Ridge (55), Oberon (54)

Writing/High

Wheat Ridge (67), Standley Lake (59), Conifer (56), Dakota Ridge (54), Arvada West (52), Ralston Valley (52), Bear Creek (50), Evergreen (50), D'Evelyn Option (49), Pomona (49)

Some Final Thoughts

While Jeffco's choice enrollment program offers parents a wide range of options for finding a good fit between what their child needs and what various schools have to offer, the district has always been stingy when it comes to providing parents with the information they need to easily compare schools and make good decisions. To be sure, there are state-level resources like Colorado School Grades, and the Colorado Department of Education's School View website. However, as I have noted above, their methodologies have some important limitations, particularly if a parent is trying to identify those schools that add the most value to student achievement, and not just schools that are located in the most affluent zip codes. Hopefully, this analysis will help Jeffco parents make better school choice decisions for their children.

Another point that is sure to strike a lot of people, particularly after they have reviewed the data for all schools on the downloadable excel spreadsheet, is that Jeffco has both very strong and very weak schools (including some whose reputations substantially exceed their results).

One of my great frustrations with the way Jeffco was run for over a decade under former Superintendent Cindy Stevenson was that there seemed to be a great reluctance to publicly compare schools' performance, and ensure that the district had strong management processes for learning lessons from the best performers and systematically transferring them to other schools. Just ask any of the teachers and principals at the schools listed here with MGPs of 60 or higher how often they received visits from head office or from principals at other schools seeking to learn how they achieved their impressive results. And if your school has MGPs below 60, ask your principal and teachers how often they reached out to these high performing schools to solicit improvement ideas and coaching. Sadly, you won't hear many positive responses.

And that's the point. If we want to improve student achievement in Jeffco, this needs to change, even if increased use of school performance comparisons ruffles some feathers and produces more conflict. The inescapable truth is that substantial performance improvement requires substantial change, which inevitably produces conflict. If Jeffco's primary goal is to avoid that conflict, then our student achievement performance will never improve, and we'll continue to pay a billion dollars a year for mediocre results.

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