



Arlington Public Schools Needs to Increase Focus on Academic Excellence

Over the last year, Arlington Parents for Education has consistently advocated around issues related to [recovery from learning loss](#) and the [impact](#) that learning loss has had on our students, particularly those from economically disadvantaged and minority communities. We have also highlighted steps that APS should be taking to improve outcomes, including [smaller class sizes](#), [more effective summer school programs](#), and [increased resources for student-facing positions](#). But, in addition to those issues, we have also posed the question: How well does APS prepare our students for college or other post-secondary options?

Arlington Public Schools has long prided itself on having a high-quality school system. For example, APS frequently touts Niche’s ranking of APS among the top school districts in Virginia. This year APS was ranked as the second-best school system in Virginia; in earlier years APS has been ranked first by Niche. Thus, some may assume that those graduating from APS high schools would be among the best prepared students, and would consistently perform better than their peers at other local high schools on various measures of school performance.

We set out to evaluate how our APS high school students perform in comparison to their local high school peers on all measures of academic performance for which we could gather data—including SAT, AP exam, and SOL scores, and on the number of National Merit Semifinalists. We compared APS high schools against schools from Fairfax and Falls Church with comparable percentages of economically disadvantaged students. In most of the measures considered, the data reflects that APS high schools perform below the average of their peers.

The analysis suggests, as one local official recently stated to us, “we may not be as good as we think we are.” No doubt APS schools perform above national and statewide averages, but that is to be expected given our highly educated population. When compared with our peers in neighboring districts on most metrics that we could find, our performance appears to be below average.



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Measuring APS High Schools Against Their Local Peers

Our analysis began with asking the question of how well APS prepares students academically for college or other post-secondary options compared to its local peers. For some parents, this is an important factor in evaluating school systems and even deciding where to live.

The evaluation of academic performance of schools and school systems is inherently challenging. There are many dimensions that can be measured (from graduation rates, to SAT scores, to SOL scores, etc.). And those dimensions are affected by many variables that are outside the direct control of schools (including the educational background and wealth of the community). Thus, rating systems like Niche, which fail to factor in the educational levels of parents and relative wealth of districts, tend to produce results that are not terribly informative. As noted in [America's Best and Worst Metro Areas for School Quality](#), for a long time “communities have boasted about ‘great public schools’—which are in reality defined as ‘schools populated by the children of highly educated parents.’” Indeed, in the [Niche Rankings](#) of the best school districts in Virginia, four of the top six (Falls Church, Arlington, Loudoun, and Fairfax) are all in the Northern Virginia region where parents tend to be highly educated.

To better measure the relative performance of APS schools, we compared APS schools to comparable schools in neighboring districts, Fairfax and Falls Church.¹ Across all schools, performance on standardized tests is highly correlated to the percentage of students at the school who are economically disadvantaged. In our sample, greater than 50% of the deviation in test scores across all tests could be explained by that one factor. Thus, to control for that factor, we compare the Arlington high schools with schools in Fairfax and Falls Church with comparable distributions of economically advantaged and disadvantaged students.

Arlington School Board member Kadera, when she was running for school Board, performed a [similar analysis](#) in comparing performance of Arlington High Schools. Like her, we have used data provided by the Virginia Department of Education (VDOE). For SOL data, we used the data from the 2021-22 school year. When looking at the percentage of economically

¹ Note that the primary data source, the VDOE School Quality Profiles data set, available [here](#), does not track data for HB Woodlawn. We have also excluded Thomas Jefferson High School of Science and Technology, as that school requires competitive tests for admission.



disadvantaged students, we used data from the 2022-23 school year, because it appeared to reflect the historic make-up of Arlington schools more accurately.²

Below is a table of all the area high schools, with their percentage of economically disadvantaged students (based on 2022 data). Schools identified as economic peers to APS High Schools are color coded in the below chart. We identified a school as an economic “peer” to an APS High School if the percentage of economically disadvantaged students was within 5% of the APS high school. Thus, for Yorktown, where 13.7% of students are categorized as economically disadvantaged, peer schools ranged from Meridian High School in Falls Church (9.1%) to West Springfield High School (16.4%). We did not perform any analysis on the high schools in Fairfax where the percentage of economically disadvantaged students exceeded the range of such students in Arlington high schools (including, from the chart below Edison high school through Justice high school).

² Virginia’s definition of economically disadvantaged students is based on students who receive free and reduced meals. During COVID, because students could receive free meals without submitting data on economic status, the percentage of students categorized as economically disadvantaged was lower across almost all schools. That difference was particularly significant in Arlington schools. The result of that data anomaly was to make APS schools appear even less competitive to their peers in Fairfax and Falls Church. Thus, we used 2022-23 data when it became available because it appears to more accurately reflect the historic makeup of students in Arlington schools.



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School	% Econ. Disadv.	School	% Econ. Disadv.
Langley High	4.4%	W-L (Arlington)	28.1%
Meridian (Falls Church)	9.1%	Hayfield Secondary	34.7%
Madison High	13.0%	South Lakes High	36.0%
Oakton	13.3%	Westfield High	36.3%
Yorktown (Arlington)	13.7%	Centreville High	37.0%
McLean High	13.8%	Wakefield (Arlington)	38.2%
Woodson High	14.7%	Edison High	43.4%
Robinson Secondary	14.9%	West Potomac High	52.5%
West Springfield High	16.4%	Herndon High	55.2%
Lake Braddock Secondary	22.0%	Mount Vernon High	65.3%
Chantilly High	22.7%	Falls Church	66.5%
Marshall High	25.1%	Lewis High	68.4%
South County High	26.0%	Annandale High	71.1%
Fairfax High	27.0%	Justice High	74.4%

Table Source: VDOE



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Results of Comparison

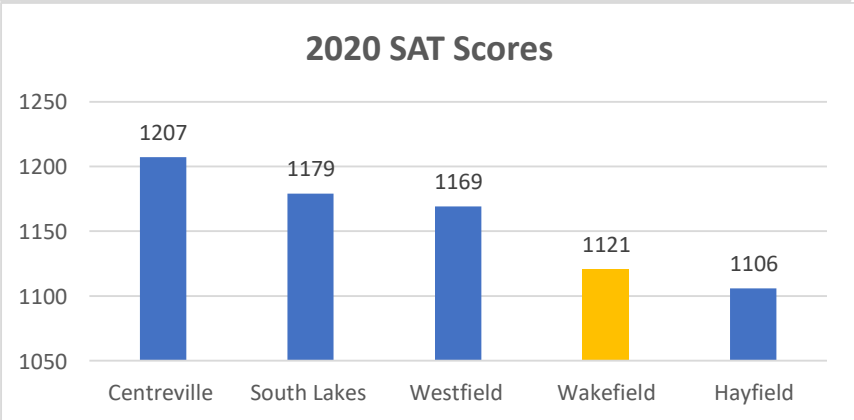
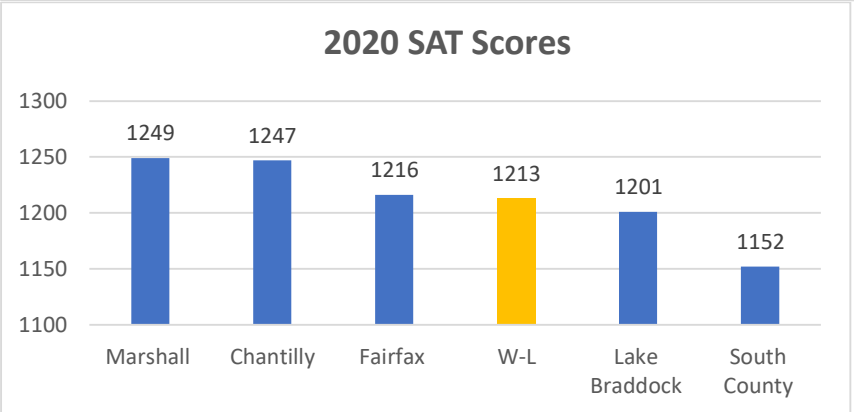
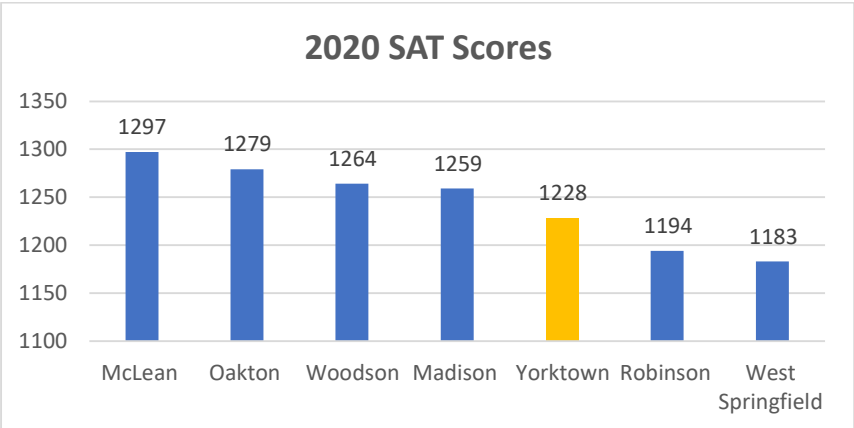
We compared the performance of each of Arlington's three high schools against their economic peer schools in Fairfax and Falls Church. Across nearly every dimension measured, APS schools performed below the average of their peers.

- SAT scores from 2018 through 2020 reflect that Arlington high schools have historically performed below the average of their peers.
- The percentage of students in APS receiving a 3 or higher on their AP tests has been steadily declining and is currently below the levels historically reported for Montgomery County (in 2019) and Fairfax (in 2010).
- Arlington high schools in 2022 on average produced fewer National Merit Semifinalists than the average of their peers in Fairfax (data was not available from Falls Church), although Washington-Liberty performs slightly above average.
- When looking at advanced SOL pass rates, although Washington-Liberty performs above the average of its peers on reading, on all other tests, APS schools are in the bottom half of their peers.
- Although SOL pass rates are more reflective of educational sufficiency (rather than educational excellence), even on that dimension APS schools fall below their peers, with the exception of Wakefield's math SOL pass rate.

Overall, these results reflect that APS has substantial room to improve in delivering educational excellence and in preparing students for post-secondary education.

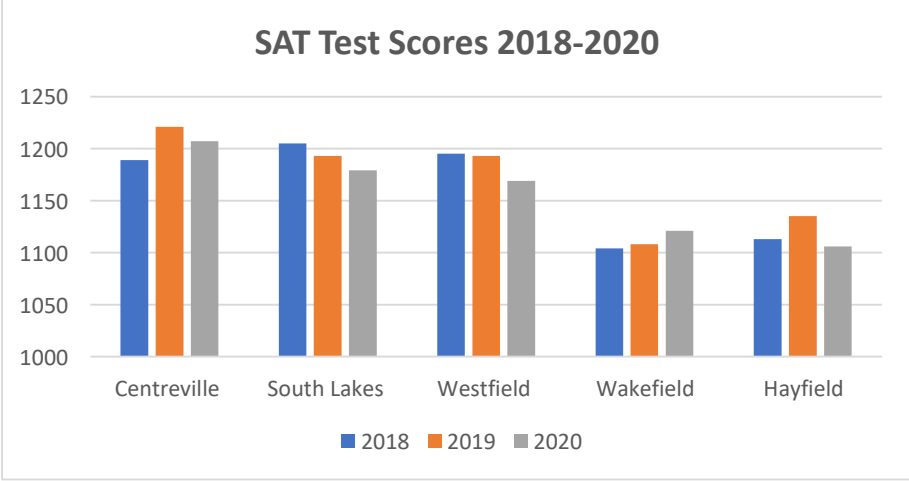
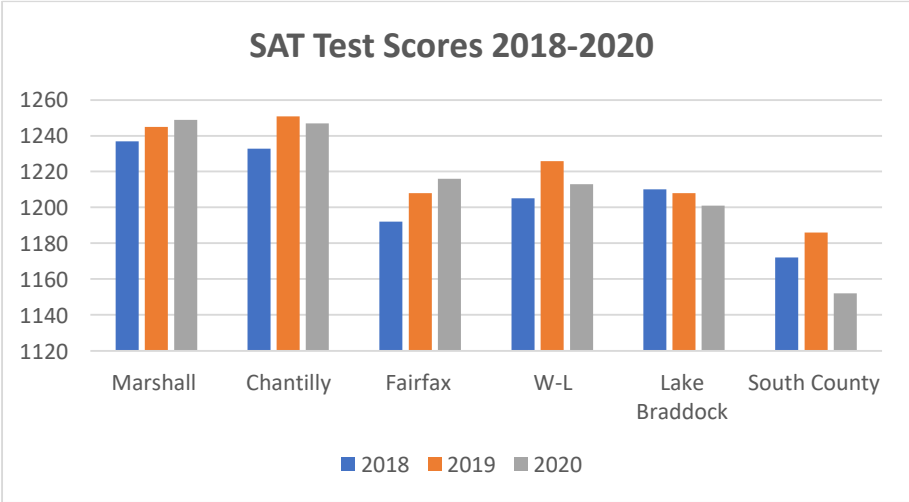
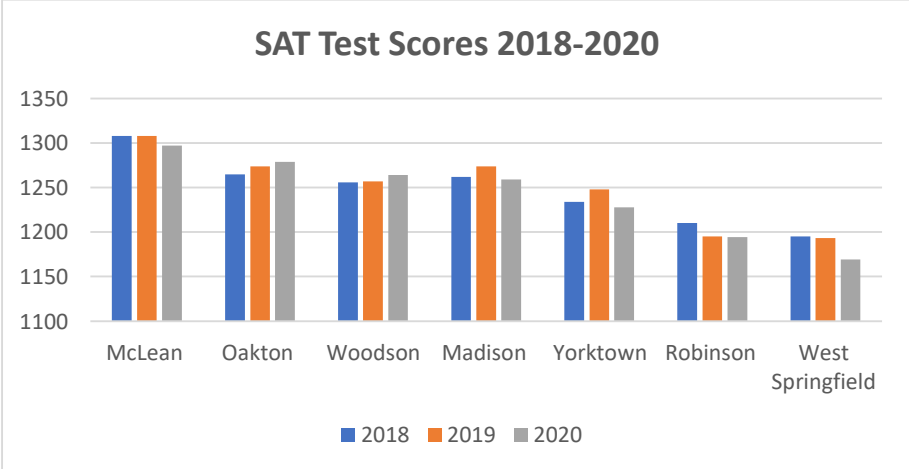
SAT Test Scores

SAT scores are intended to measure the readiness of students for college.



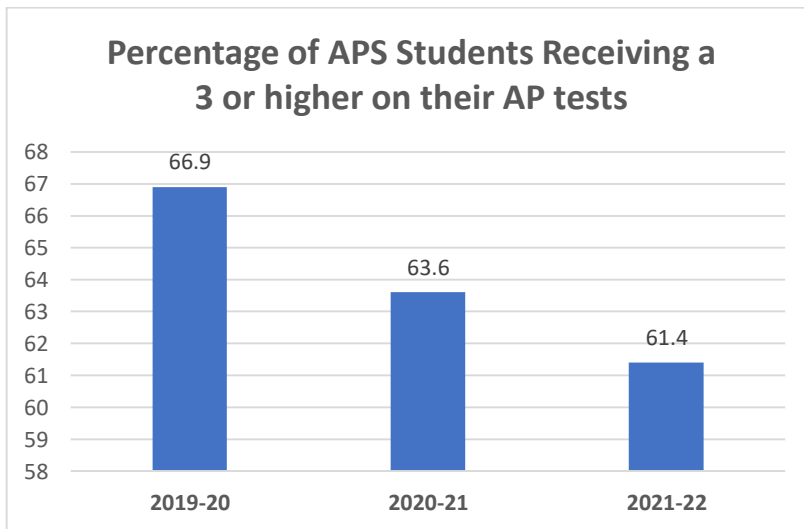
The last available SAT data for APS is from 2020. The SAT data reflects that in comparison to their peers, each APS high school performs in the bottom half of their peer group. Given that the reported 2020 SAT scores predated COVID closures, the data reflects that the relative underperformance of APS schools is not simply a reflection of APS’ [lackluster investment](#) in learning loss recovery.

Those relative differences in performance on the SAT scores are also not a one-year phenomenon. Data reflects that the underperformance persisted over the period 2018-2020.



AP Exam Scores

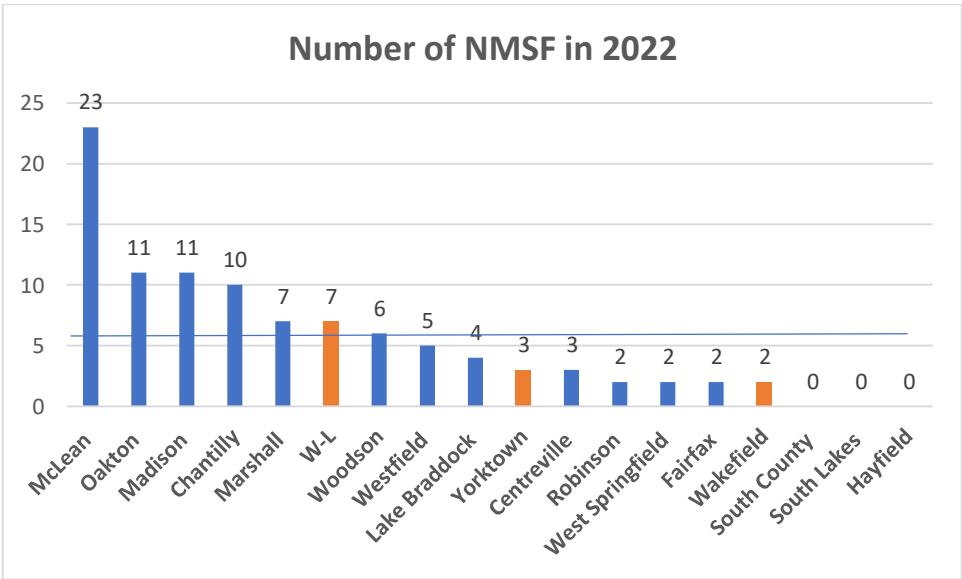
Another potential indicator of academic excellence (and college readiness) is the percentage of students taking an AP exam who score a 3 or higher on the exam (which is the lowest threshold typically permitted by colleges to be accepted for academic credit; some schools require a 4 or 5 for academic credit). APS reports those scores on its [equity dashboard](#), and those scores reflect a continued decline in performance over the past three years.



Although we could not find comparable data for Fairfax or Falls Church high schools for those school years, [Montgomery County](#) reported in 2019 that the number of students scoring a 3 or higher on the AP exams was 71%, and Fairfax [reported](#) in 2010 that more than 70 percent of students received a 3 or higher on the AP exams. Even in 2019-20, APS had fewer than 67% of students obtaining a 3 or higher on the AP exams. In this latest year, that number is down to 61 percent. Given that AP courses are intended to teach students the AP curriculum, the fact that less than two-thirds of students can perform at a passing level for college raises concerns about the rigor of APS' AP courses.

National Merit Semifinalists

Another potential measure of academic excellence is the number of national merit semifinalists at each high school.³ This data also confirms the relative underperformance of APS high schools.⁴ The average number of national merit semifinalists produced across Arlington’s three high schools (4), falls below the average number produced by their peer schools in Fairfax (5.7). Of the three high schools, only Washington-Liberty produced more national merit semifinalists (7) than did the average of the peer schools. Yorktown (3) performed far below the average of its economic peers (8.2), and Wakefield (2) performed on par with its economic peers (2).



The National Merit Semifinalists [represent](#) those who score within the top 1% within their state on the Preliminary SAT/National Merit Scholarship Qualifying test taken each fall. While it is not possible to determine whether APS schools are over- or under-represented in the state (because not all students take the qualifying test), for Washington-Liberty, its 7 National Merit Semifinalists represent 1.1% of its junior year student body (the students who typically take the exam). The same is not true for Yorktown and Wakefield.

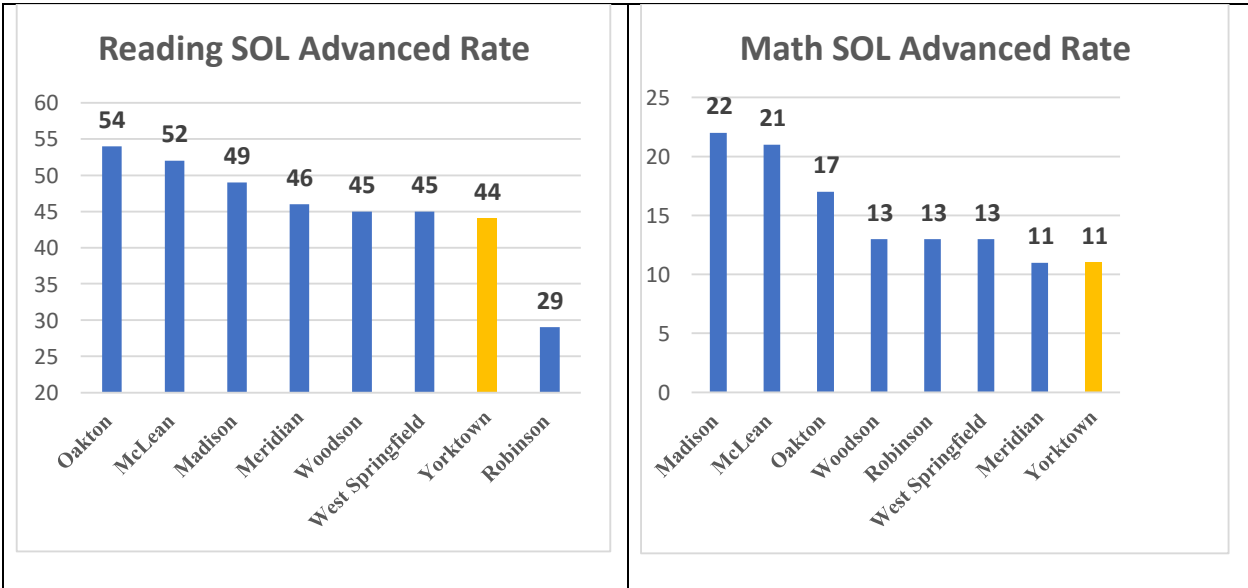
³ National Merit Semifinalists are published for both [Arlington](#) and [Fairfax](#).

⁴ Note, we could not find data on the number of national merit semifinalists at Falls Church’s Meridian High School.

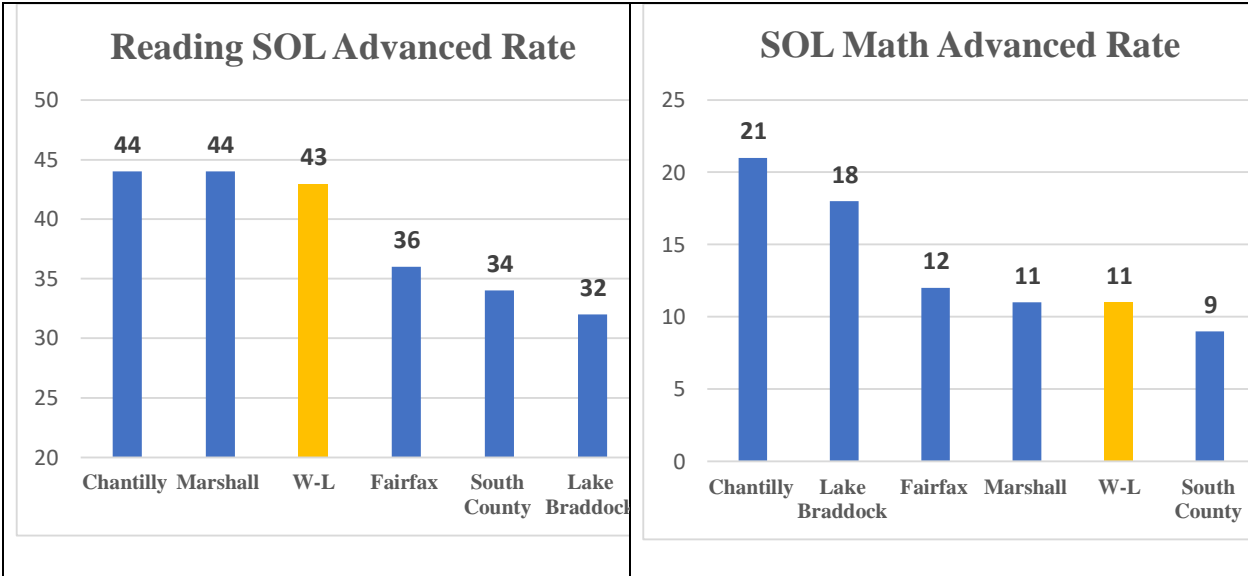
SOL Exam Results

In considering the extent to which APS high schools prepare students for post-secondary education, another potential metric is the percentage of students scoring at an advanced level on the SOL exams. With the exception of reading at Washington-Liberty, the APS high schools perform in the bottom half of their peer groups.

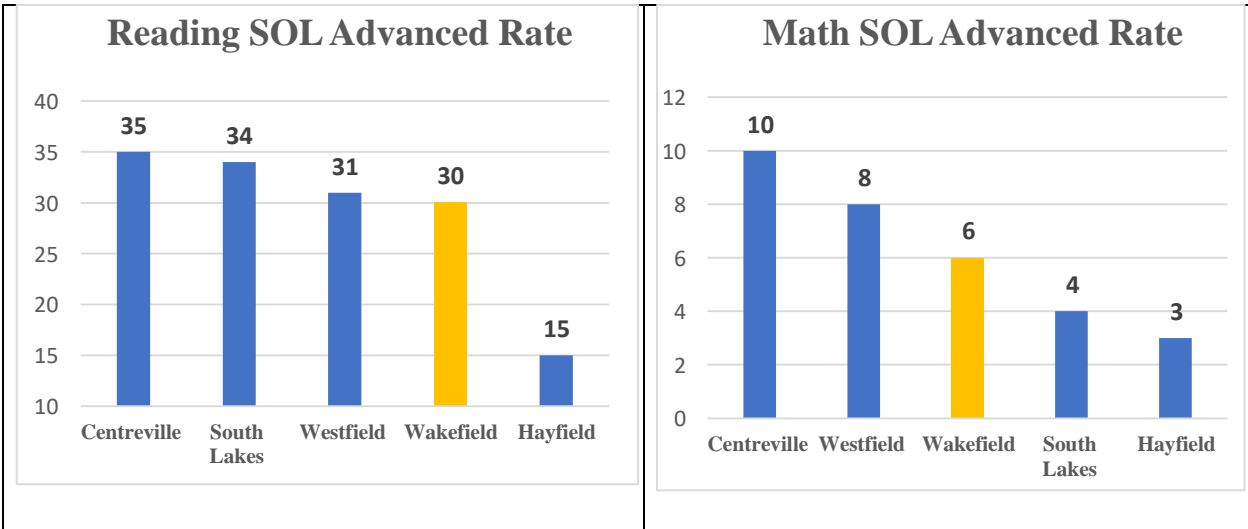
Yorktown Comparative Performance (Percent Students Scoring Advanced 2022)



Washington-Liberty Comparative Performance (Percent students Scoring Advanced 2022)



Wakefield Comparative Performance (Percent students Scoring Advanced 2022)





Although the passing rate for SOL scores (as opposed to the “pass advanced” rate reflected above) is less indicative of college readiness and more an indicator of whether schools provide minimum levels of proficiency, APS high schools also generally performed in the bottom half of their peer high schools on those passing rates as well for 2022. Yorktown’s passing rate on both reading and math place it in the bottom three schools among its peers. Washington-Liberty has the lowest reading pass rate among its peers, and the third lowest math pass rate. And Wakefield has the second lowest reading SOL pass rate among its four peers, though its math pass rates are the highest among its peer schools.

Implications and Conclusions

As with nearly all quantitative analyses performed across schools and school systems, while the above data reflects the performance trends, it does not show the causal factors driving those trends. Differences in the student population, parental participation rates, teacher qualification and professional development, curriculum, culture, and many other factors may be at play. By trying to control for relative economic circumstances, and looking only at neighboring schools, we account for some of those factors.

As we have noted [elsewhere](#), across its overall teacher population APS has the highest percentage of inexperienced teachers of any of our local districts. We considered whether this factor might explain some of the results. Yet, when looking at the overall mix of experience for teachers at the Arlington high schools compared to their peer high schools, the data reflects no meaningful difference in teacher experience.

	Inexperienced⁵	Out-of-Field	Bachelors	Masters
Arlington High Schools	5.3%	0.9%	22.0%	73.7%
Fairfax High Schools	3.1%	10.8%	23.9%	72.6%
Fairfax Peer Group Schools	3.0%	10.3%	23.9%	72.9%
Falls Church (Meridian)	5.6%	5.6%	19.0%	76.0%

⁵ Teacher Qualification data is derived from the data reported on the VDOE School Quality Profiles. Those reports are unclear with respect to the year from which the data was reported, in one place suggesting the data is from 2019-2020. For educational attainment, the data is from 2021-2022 school year. VDOE defines inexperienced teachers as those with less than one year of classroom experience.



We also considered whether the percentage of students who are English language learners might explain some of the results. As noted below, APS has a slightly higher school-wide and high school population of English language learners. While a multiple regression analysis suggested that factor might explain certain of the reading SOL results, there is no evidence that it explains the differences in the math SOL scores or the other college-readiness scores.

	Arlington	Fairfax	Falls Church
School-wide Population	27.2%	25.9%	7.7%
High School Population	19.4%	17.5%	5.1%

Another explanation may lie in the selection bias of parents. Parents who are most focused on the quality of their students’ education will likely move to those school districts that have historically performed the best. It may be the influence of that parental emphasis on education, as much as the quality of instruction, that drives the improved results. In that sense, high-performing schools create a virtuous cycle where success begets greater success because strong schools attract families that value education more highly. That parental selection bias may also help to create a culture of high academic expectations at the schools their children attend.

But this explanation only underscores the critical importance of using other means at our schools – including messaging from school and district leaders, and a no excuses mentality – to create a culture where educational achievement and excellence is valued. In our next paper, we will address the importance of developing a culture of high academic expectations, and the evidence that APS’ culture may suffer from a lack of such high expectations.

As with all our papers, we value the feedback and comments from our readers, and would welcome comments to be sent to Arlingtonparentsforeducation@gmail.com.

[Arlington Parents for Education](#) is a volunteer-led, non-partisan coalition of parents, teachers, students and citizens dedicated to accountability, transparency and educational excellence at Arlington Public Schools

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