

APS Needs to Increase its Focus on Academic Excellence (Part III)

As described in the [second part](#) of our three-part series, research reflects that academic rigor is one of the most important factors in determining whether students will succeed in post-secondary education. Yet the data reflects that the rigor at APS is slipping. More than half of APS students are not taking Algebra by 8th grade, which means they are not on a path to take calculus by their senior year. This is down from almost 80 percent in past years. APS graduates are reporting being unprepared for college-level writing. APS offers fewer advanced course options in middle school than our surrounding peer districts. And, as a result, APS high schools also trail their peers in neighboring districts in enrollment in AP, IB and Dual Enrollment courses.

As noted in the first part of the series, this lack of focus on academic rigor is reflected in the performance of APS' high schools on most quantitative metrics. APS high schools score below their peers (defined as high schools in Fairfax and Falls Church with similar percentages of economically disadvantaged students) on SAT tests. A smaller percentage of APS students are scoring at an advanced rate on the Virginia SOLs, and our high schools are producing fewer National Merit semifinalists than their peers. APS is also seeing a significant decline in students obtaining a 3 or better on their AP exams.

In considering changes that APS could make as a school system to improve student performance, as we have explored elsewhere, smaller class sizes are important and APS still has work to do there. Teacher experience and teacher quality are also critical success factors; APS must ensure it offers competitive pay and treats teachers as professionals in order to attract and retain the best teachers. There are also many operational functions (safety, security, mental health support, food, and physical facilities) that are necessary bare minimums for a school to be effective. But, consistent with a wealth of academic research, one of the most important changes that APS could make to improve its performance as a school system is to develop and enhance its culture of high academic expectations and academic rigor.

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This same theme has been highlighted by Secretary of Education Miguel Cardona, who stated in a [recent speech](#):

“The same is not good enough anymore. If we do what we’ve done, we’re going to get what we’ve gotten. We’re better than that. Our children deserve better than that. The first area where we must raise the bar is academic excellence. As much as it is about recovery, it’s also about setting higher standards for academic success in reading and mathematics.”

The literature is reasonably consistent in identifying the attributes of great and successful schools (for example, [here](#) and [here](#)). The Association for Effective Schools reviewed decades of research comparing successful schools across a range of socio-economic backgrounds against schools that were less successful. They found that “[t]here are unique characteristics and processes common to schools where all children are learning, regardless of family background.” They called those unique characteristics “correlates of student success.” As with the other research noted above (and which was identified in the second part of our series), those correlates were defined as follows:

- **Clear School Mission:** “In the effective school, there is a clearly articulated school mission through which staff shares an understanding of and commitment to instructional goals, priorities, assessment procedures and accountability.”
- **High Expectations for Success:** “In the effective school, there is a climate of expectation in which the staff believe and demonstrate that all students can attain mastery of the essential content and school skills.”
- **Instructional Leadership:** “In the effective school, the principal acts as an instructional leader and effectively and persistently communicates that mission to the staff, parents and students.”
- **Frequent Monitoring of Student Progress:** “In the effective school, student academic progress is measured frequently. . . . The results of the assessments are used to improve individual student performance and also to improve the instructional program.”
- **Opportunity to Learn and Student Time on Task:** “In the effective school, teachers allocate a significant amount of classroom time to instruction in the essential content and skills.”
- **Safe and Orderly Environment:** “In the effective school, there is an orderly, purposeful, businesslike atmosphere which is free from the threat of physical harm.”



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- **Home-School Relations:** “In the effective school, parents understand and support the school’s basic mission and are given the opportunity to play an important role in helping the school to achieve that mission.”

Those elements, based on extensive research and echoed in substantial volumes of literature, should set the framework for APS’ efforts to improve its academic performance—from the performance of its highest performing students to the improvement of its most struggling students. They apply not only at each school, but to APS as a whole. As APS begins the process of developing its strategic plan for the next five years, it should incorporate these elements into that plan. We discuss the first five of those elements below.

I. Clear School Mission

The first element for student success is setting a clear school mission that is “*clearly articulated, reflects a commitment to instructional goals and priorities, and includes assessment procedures and accountability.*” APS district-level goals do not meet this standard and should be revamped as part of the strategic planning process, and APS should also adopt articulated goals at each school level.

APS should articulate a strategic plan that sets high expectations for success for APS as a whole, and revamp its accountability structure to ensure achievement of the objectives. As noted in the second installment, when it comes to student success, the APS [strategy](#) includes only two generic and undefined objectives:

- “By 2024, APS will reduce opportunity gaps for all reporting groups on state assessments.”
- “By 2024, all elementary and middle school students will annually demonstrate growth by a minimum of one level using district assessments and students performing at the advanced level will continue to perform at the advanced level.”

These objectives have several shortcomings.

APS’ First Goal Does Not Require Improvement of Underperforming Students. With respect to the first goal (addressing opportunity gaps), there is no quantified target at all, other than to “reduce” the opportunity gap, which itself is undefined. APS [measures](#) that gap based on the performance of each demographic group against the “average” pass rate for all students. But as

designed by APS, the goal could as easily be met by lowering the average as it could be by improving the performance of minority students. There is no doubt that APS still has great strides to make in closing opportunity gaps – but at a minimum the goal should be articulated in terms of raising the performance of our underperforming students over time.

APS’ Second Goal is Incomplete and Sets a Low Bar. As discussed in more detail in the second installment of this series, APS’ academic achievement goal sets a low academic bar. It leaves our high school students completely unaddressed. For “advanced” students, APS has no stated goal for growth. For elementary and middle school students who are not advanced, the goal is only to cover the ground—one year’s worth of growth—that is expected of all students by Virginia standards. If students are already performing below grade level (as many are), one-year’s-worth of growth is insufficient, and there is no goal to bring those students to grade level. Finally, APS has yet to even [develop](#) a metric to define what the “minimum of one level of growth” on district assessments even means, or how that is measured, given that each student may advance at different rates in different subjects.

APS Lacks Accountability in Achieving Even its Stated Objectives. At the February 2, 2023 Board meeting, APS [updated the Board](#) on its progress against the strategic plan. That report reflected a decline in performance on four objectives, minimal change on two objectives, two objectives that lacked any measures, and only two measures that the district defined as “significant progress.” Yet the district did not offer, and the school board did not insist on, any plan to turn around any of those performance metrics. As discussed further below, setting clear goals and objectives matters only if someone holds the organization accountable to delivering on those goals and objectives. Absent accountability, the strategic planning process has little meaning.

APS Should Revamp its Strategic Goals and Objectives. As noted in the second part of our series, other districts include much more detailed goals that set much higher levels of expectation, such as 85% or 100% of students passing the reading and math SOLs (in Prince William and Fairfax respectively), increasing the pass advanced rate by 10% across all grades, 100% of students showing proficiency in at least one AP or IB course, and meaningful increases in the number of students participating in enriched and accelerated programs, or participating in VJAS and regional science fairs. APS should set similarly aggressive goals, which might include the following:

- 95% of students passing the reading and math SOLs.
- 25% of students scoring at the Advanced level for math.
- 50% of students scoring at the Advanced level in reading.

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- Increasing participation in AP and IB courses by 30% over five years.
- Increasing the percentage of students achieving a 3 or higher on AP tests by 30%.
- Reducing the percentage of students requiring intensive support on DiBels tests to 10%.
- Reducing the percentage of students scoring below basic on the MI to 10%.
- Raising the SOL passing percentage of minority students, students with disabilities, and economically disadvantaged students sufficiently to reduce the gap from the average for all students to 5% or less.
- Increasing the participation rate of students in academically-oriented competitive events (e.g., science fairs, debate and forensics, math competitions, writing competitions) by 30%.

Along with those clearly articulated instructional goals, APS should implement an accountability system. This does not need to be punitive, and indeed should not be, but it needs to provide for diagnosis and remediation. If progress is not being made in reaching the desired SOL, DiBels, or MI scores, the Board must ask that APS work to identify the specific barriers preventing achievement, and whether those barriers are district-wide (curricula or instructional time) or school-specific. The Board should also ask for a plan detailing how to remediate those root causes so that progress can be made.

Each APS school should also set goals for its own performance, including specific action plans to reach those goals. As an [example](#), every Fairfax school prepared detailed plans to achieve their goals under ESSER, which are unique and targeted to the specific challenges at each school. For example, [Colvin Run Elementary](#) school targeted having 100% of students reading on grade level by the end of the school year, and 100% of students in grades 3-6 passing the math SOL. [Graham Road Elementary](#) school targeted having 70% of students in third through sixth grades meet proficiency on the Core Phonics Assessment, and 75% of students in third through sixth grades pass the Reading SOL.

Each plan included specific actions the school would adopt to meet those goals. At Colvin Run, the school would provide math and language arts intervention support before school, consisting of small group instruction provided to a targeted small group of students to help close gaps. Cooper Middle School provided that an open block period would be used to reteach and reinforce concepts to students who teachers had identified as requiring targeted intervention.

Those are examples of clearly articulated instructional goals that reflect a commitment to high academic performance. They are communicated to all stakeholders, so the school can better engage parents and teachers. They set high standards, so if they are met it will represent a significant improvement in school-level performance. And they are specific and measurable, so



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that if they are not met, school leaders and teachers can assess (and hopefully correct) the hurdles that precluded success. Such transparency can give all stakeholders, and particularly parents, confidence that their neighborhood school will continue to provide an excellent education for their students.

The same level of goal-setting and strategic planning could occur at every school in APS. Carlin Springs, for example, might target reducing the number of students identified as needing intensive support on DiBels from 49.2% to 25%. It might develop a strategy of providing before- or after-school small group interventions, or offer those same interventions during an open block. If the hurdle for achieving its goals is a lack of interventionists or instructors, Carlin Springs could report that need back through the district to the Board so that the Board could authorize funds for additional interventionists.

In short, at both the district and the school level, APS should set more clearly articulated missions that reflect a commitment to instructional goals that reflect high expectations, and that provide for accountability and remediation.

II. High Expectations for Success

As discussed in the second part of our series, schools that set high academic expectations generate better performance among their students across a range of measures. As noted above, Education Secretary Cardona agrees that “setting higher standards for academic success in reading and mathematics” is critical for our public schools.

Virginia Secretary of Education Aimee Guidera recently [echoed](#) that sentiment, and specifically intends to develop a strategy to improve performance in advanced courses and expand opportunities for students to pursue rigorous academic courses so that Virginia can raise both the floor and the ceiling.

As highlighted in [Part Two](#) of this series, setting higher standards for academic excellence requires schools and districts to “articulate shared high expectations for student engagement, work, and mastery across the school [or] district,” implementing “a schoolwide approach to grading student work with high standards, including rubrics, grading scales and common policies for accepting late assignments,” providing “support for low-performing students through intervention programs and extended learning opportunities,” and “a requirement that each student complete a college- or work-ready curriculum.”

For APS, examples of steps it could take to raise the bar and provide more students with opportunities for increased academic challenge include the following.

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Intensified Middle School Courses: Adopting intensified middle school classes was a notable success of Dr. Duran’s first two years. But there is more to do. Intensified courses should be implemented for 6th grade classes. APS must work aggressively to identify and encourage traditionally under-represented populations to enroll in those courses. APS should consider a policy, as adopted by [Dallas ISD](#), in which students who score well on state exams are automatically enrolled into those intensified courses. There, students may opt out but they are no longer required to opt into those programs. In Dallas, this program has led to a significant increase in enrollment in such courses, particularly among traditionally underrepresented students. The content in intensified courses should be truly differentiated, so that the courses do not simply separate groups of students from each other, but actually challenge those students who take them.

Increased Enrollment in AP and IB Courses: As noted in a recent “Great Schools” [article](#), “[s]tudents who take advanced classes are more likely to graduate high school, enroll in a four-year college, earn higher GPAs while there, and graduate in four years. Award-winning schools not only have robust advanced academics, they make these classes widely available. They are less likely to require a minimum GPA, a teacher recommendation, or any other obstacle to accessing these courses.” Districts like Fairfax set targets for enrollment in such courses. Relative to our peers, APS enrolls a lesser percentage of students in such programs, particularly at Yorktown and Wakefield, and APS has seen a 3 percent reduction in enrollment in AP, IB and Dual enrollment courses from 2019 to 2021. That reduction has been the most pronounced among black (13%) and Hispanic (14%) students. APS should adopt enrollment targets for its AP and IB courses, develop a plan to prepare students for such courses during elementary and middle school, and take proactive steps to ensure that all students (including those traditionally underrepresented) are encouraged and supported in taking such classes.

Increase Preparation in Elementary Schools: Preparation for academic excellence must start in elementary school. APS should improve instruction at the elementary schools in three ways:

- APS should strengthen the curriculum so that all students are prepared for intensified courses in middle school and for Algebra by 8th grade.
- APS should address the relative underperformance at certain elementary schools. This is critical both for the students attending those underperforming schools and also for the system’s ability to increase educational excellence at the middle schools.
- APS should increase opportunities in elementary schools for differentiated instruction for students who could benefit from it (including at least offering pull-out gifted services). Like Fairfax, which sets [detailed goals](#) to increase the population of diverse students in its gifted

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program, APS should also set publicly available goals for increasing participation of diverse students in the gifted program and should track performance on its diversity dashboard.

Increase Number of Students Taking Algebra I by 8th Grade. APS has seen a dramatic drop in the percentage of students taking Algebra by 8th grade, which is a critical metric for student academic success (see Part II). The APS math department has suggested slowing progression in the math sequence by making 7th grade math classes more heterogenous, as discussed [here](#). APS is also in the process of eliminating an intensified pre-calculus course to substitute in an AP pre-calculus course that provides 25% less content, leaving students less prepared for calculus, as discussed [here](#). This is the wrong direction. Rather than slowing progression and reducing content, APS must do more to support *all* students in developing the capability to succeed in advanced math programs.

AP and IB Courses for Underclassmen. APS could also improve the college readiness of its students in other ways. Great Schools [research](#) from 2018 reflected that top schools were differentiated from their peers by offering AP and IB courses to underclassmen in high school. 63 percent of top schools offered AP and IB courses to ninth-graders compared to 49 percent for schools that did not fare as well. APS high schools offer few AP courses for underclassmen, and no IB courses.

Increase Number of College Counselors. Great Schools found that more than 80 percent of top schools had at least two college counselors. Each APS major high school includes only one planning factor for college and career counselors. APS should increase its planning factors for college counselors at each high school. Further, most students applying to competitive colleges require teacher recommendations. We understand that preparing such recommendations is expected to be done during teacher work days, and that teachers are provided no additional compensation for the time required to prepare such recommendations. For some teachers, this burden can become substantial. APS should set aside stipends to compensate teachers for such time.

Improve Writing Instruction. APS must bolster its writing instruction. As detailed in Part II of this series, APS students report being unprepared for college-level writing. The VDOE [curriculum framework](#) provides that students should be producing research products (e.g., writing research papers) beginning in 7th grade. Yet, the APS [program of studies](#) only requires production of research projects beginning in 11th grade. To ensure our students' readiness for college, APS should adopt the [recommendation](#) of the ELAAC committee that APS "create a long-term plan for research-based writing instruction across elementary and secondary grades."

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This may also require that APS invest in more secondary teachers to increase the amount of feedback students receive on written work products.

Strengthen Grading Policies. APS needs to adopt more rigorous grading policies. Research reflects that students learn more from tough graders. A 2020 [study](#) found that students perform better on end-of-year standardized tests when their teachers are tough graders, and that this increased performance was persistent even two years later. These results were consistent across demographics. As the study author noted “[a]ssigning good grades for mediocre work signals to students that excellent work is beyond their reach,” and “they can become complacent and fail to reach their full potential.” Brown University’s Annenberg Institute recently [released a paper](#) building on that prior research and coming to the same conclusions. As summarized in one [article](#), increasing student performance is achieved by holding all students accountable to make an effort on all assignments (e.g., no opting out), not inflating grades by “rounding up” partially correct answers, and stretching students beyond “Ok/Good” answers (either written or oral) to more robust (“A”-quality) answers. (See Doug Lemov [Teach Like a Champion](#)).

APS’ [grading policy](#) states that it is intended for a “high level of rigor,” and aspires to provide grading scales that are “precise and clear,” and “reflect student mastery of content.” Yet the implementation plan does not fully reflect those goals. The [K-5 Grading PIP](#) provides for standards-based grading that lacks clarity, with reporting levels including “Approaching Mastery” and “Meets Standard” that have left parents confused. Further, while the traditional reporting standard includes a level for “Exceeds Grade Level Expectations” (grade A), no such level exists for the standards-based grading as currently implemented at APS (In fact, most school systems that have adopted SBG have an “exceeds” level; although APS first included this level, it appears to have removed this level in 2019 or 2020 without explanation). Although grading policy is intended to reflect a “high level of rigor” and “mastery of content,” the highest grade for APS’ standards-based grading (“Meets standard”) is purportedly set only at the level of SOL proficiency, not for advanced performance on the SOLs. As one [article](#) has noted, students that receive As for mere proficiency risk decreasing their effort and losing meaningful feedback on areas in which they need improvement. Additionally, although not specified in the PIPs, at least some in APS have also encouraged teachers not to grade interim assignments and to permit multiple exam retakes. Aside from the additional burn-out this would inflict on teachers, such an approach encourages student procrastination and studying to the contents of the exam rather than learning the contents of the course.



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Equity is Advanced by Higher Standards, Not Lower Standards. The push for academic excellence within the public school system is the antidote to, not the cause of, inequities in the system. As noted in this [discussion](#) by a teacher, research “suggests that countries with low levels of educational achievement suffer from higher levels of inequality.” To combat this, the teacher concludes, what is needed “is a culture of excellence that permeates every classroom, department and school.” According to the Equality Trust, as cited in the article, “[t]he link between educational achievement and high aspiration is a key explanation for the association between low educational achievement and inequality.”

As stated in the aforementioned [letter from Wakefield teachers](#), “[f]amilies that have means could still provide challenging and engaging academic experiences for their children and will continue to do so, especially if their children are not experiencing expected rigor in the classroom. . . . Students who come from families who are not as ‘savvy’ or ‘aware’ will be subject to further disadvantage . . .” Indeed, as with the reduction in students taking AP and IB courses, the reduction in students taking Algebra by eighth grade has been greater in the black population (34% reduction) and Hispanic population (37%) than in the white population (20%).

Rather than eliminating intensified courses, other schools (including [Fairfax](#)) invest resources into better identifying underrepresented groups who could qualify for those courses, while ensuring that “rigor” remains the hallmark of the programs. As commentators have noted ([here](#) and [here](#)), the solution to having insufficient diversity in intensified or honors courses is not to eliminate the courses. Nor is the solution to some students not doing their homework to eliminate homework altogether. Rather, school systems need to do the painstaking work of identifying and encouraging students from underrepresented populations to take intensified courses, and to provide underrepresented students with support when they do.

III. Strong Instructional Leaders

A third correlate for student success (both at the school and district level) is strong instructional leaders who effectively and persistently communicate the school’s mission to staff, parents and students.

Strong School Leadership Requires Clear and Consistent Communication: Effective school leaders communicate the importance of academic excellence in order to create a culture that values academic pursuits. As one teacher has [noted](#), a key difference between certain “no excuses” schools (charter schools that emphasize a culture of academic performance) and other schools is that in the former, there is a consistency of messaging, from school-room posters to classroom routines, curricula, and teacher messages, which are all focused on academic

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excellence. The teacher contrasted this with other schools where messaging is not consistent but rather a hodge-podge mix of student- and teacher-led approaches. APS principals should consistently communicate the importance of academic pursuits using all available media and in all school community communications.

Other Traits of Strong School Leaders: Research consistently shows (for example, [here](#), [here](#), [here](#), and [here](#)) that successful principals are those who commit to achieving performance outcomes, maintain order and structure, promote accountability, treat teachers like professionals, and develop strong relationships. APS has many very successful principals, as reflected in the performance of certain schools that consistently outperform peers with a similar demographic makeup. But where schools consistently underperform their peers, APS should consider opportunities to strengthen the skills identified in strong school leaders or improve school leadership. APS should adopt a rigorous process of evaluating principals and tying those evaluations to performance on the academic, equity, and accountability goals that have been set for students (and improvement in performance with respect to those goals over time). One potential model for APS to follow is the Principal Excellence Initiative (PEI) in Dallas ISD, in which principals were evaluated based on school-level performance (with an emphasis on closing gaps), principal performance in improving teacher effectiveness, and feedback from student families. A recent [study](#) reflects that the adoption of PEI, together with a teacher excellence initiative, improved math performance by 0.2 standard deviations and reading performance by 0.1 standard deviation over a peer school system; this represents a dramatic improvement in student results.

District Leadership Should Communicate Consistently about Academic Excellence. Like great principals, APS leaders must persistently communicate the mission of achieving academic excellence. Too frequently, Board meetings have lost this theme, becoming mired in operational issues that have little bearing on academic performance, and spending little time actually addressing academic issues. As recently noted, the [Board](#) spent less than 10% of its time in the last school year addressing issues of academics, with far more time spent on operational issues, facilities and announcements. As one recent [article](#) noted, successful school boards should spend at least half their time on student learning. The APS Board sets its own agenda for each Board meeting and student academic performance should predominate that agenda. There is much to discuss, including student academic performance by subject matter, by school, and by demographic group, identifying specific barriers to improving that performance, identifying the best evidence-based practices (from APS schools or other districts) for addressing those barriers, and specific action plans that APS will implement to address those barriers. The Superintendent



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and Board should also use their regular communications to parents and family to underscore the key issues affecting academic performance across APS.

IV. Frequent Monitoring of Student Progress

The fourth correlate of student success is frequent monitoring of student progress. APS has taken good steps in that direction by implementing its student performance dashboard and diversity dashboards. But APS and the Board rarely review such data publicly or use the data to inform district action. That should be remedied.

APS' dashboards track student performance on reading (using DiBels and the HMH-Growth Measure Assessment), and on math (using Math Inventory). Those tests provide data three times per year. APS also tracks student participation and passage rate on AP/IB courses and exams, and the state SOLs, which are annual data. But beyond publicly reporting that data, APS and the Board need to use that data to identify areas where academic excellence is not being achieved, and to identify and remedy the barriers. This should include comparing the data to prior years' performance and performance at other school districts, and also discussion of detailed plans about how performance will be improved going forward. Given that the data is available for each school and each demographic multiple times a year, APS should do far more to use the data to identify opportunities for improvement and examples of best practices across all schools in the district.

V. Opportunity to Learn and Time On Task

The fifth correlate of student success is the opportunity to learn and "time on task". Research reflects that additional instructional time is one of the interventions with the greatest efficacy. For APS, there are several ways to increase students' opportunities to learn and time on task, including increased instructional time, ensuring high-quality, meaningful homework, and encouragement of additional participation in academic extracurricular activities.

Additional Instructional Time. APS has the opportunity to increase instructional time for many of its students through after-school extended day programming. In coordination with APS' extended day program, and not-for-profit entities like ASPIRE, APS could develop instructional programs focused on reading and math that provide an additional hour or more of instructional time each day. If planned and budgeted in advance, APS could hire sufficient teachers to staff such a program, and could work with the community to encourage participation among students most in need.

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Homework Provides More Opportunity for Time on Task. As recently [reported](#), one of the most powerful drivers of student achievement is “effort,” which requires students to perform homework carefully, including by re-reading questions and double-checking answers. As the author of this research noted, “educators routinely overlook the importance of student effort.” Although there has been [debate for decades](#) regarding the relative value of homework, many [studies](#) have quantified an academic benefit from increased homework. While the quality of the homework certainly matters—no one advocates for busywork—effective homework that helps students grasp and fully internalize content makes a difference. That APS has excluded AP and IB courses from that policy only risks creating an even larger achievement gap, where students in advanced classes are encouraged to study even more, and students in less advanced classes spend even less time on homework. Rather than impose arbitrary time limits on the amount of homework that teachers can assign, APS’ policy should ensure that assigned homework is high quality and creates opportunities for meaningful student practice (see [here](#)). APS should also keep at least some schools open into the evening to provide a constructive study environment for students who need it.

Academic Extracurricular Programs Also Increase Learning Opportunities. Exceptional schools encourage excellence by offering access and encouraging participation in academically-oriented extracurricular programs (see for example [here](#)). [Research](#) demonstrates that “students who participate in extracurricular activities experience higher levels of academic achievement.” Extracurricular programs span the academic fields, from participation in science fairs and VJAS, competitive math leagues, debate and forensics, writing and art competitions, and robotics and programming, among others. APS certainly offers many such programs throughout elementary, middle and high school. But unlike other districts, APS does not have targets for student participation in those programs. Programs such as robotics are often left to the ingenuity and resources of individual teachers and/or parents within each school. APS had only two schools [registered](#) in the 2023 Virginia mathematics league contest. Despite valiant efforts by some of our teachers and students, APS has been largely unrepresented in the VHSL state forensic [meet results](#) in recent years. Although APS has seen some success at the state science fair contests in recent years, anecdotally, students often scramble for basic scientific equipment or to find teachers who can provide adequate guidance on projects.

Other school systems, such as Prince William County, create express goals for participation in such extracurricular programs. (See [PWCS Strategy](#) targeting a 5% increase in participation in VJAS, science and engineering fairs, and Biology and Chemistry Olympiads). A recent [article](#) highlighted the impact that such programs can have on entire school systems. That article reported on a public school in Florida that built over the course of years one of the greatest math



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teams in the country. In that instance, the initiative was started by a teacher that went above and beyond any school expectations and created an intensive program that targeted students as early as elementary school to develop their talent.

APS has many teachers who have shown a willingness to go above and beyond their official responsibilities, but creating such programs should not depend on the periodic heroic teacher. APS should affirmatively encourage students to participate in academic extracurricular programs. Teachers leading the programs should be incentivized and compensated for the added responsibility. The APS curricular design teams should identify extracurricular opportunities in each subject at each grade level, should encourage schools to offer programs for those opportunities, and encourage students (particularly among underrepresented populations) to participate. APS should set targets for participation in such events, and track and report out on student participation.

APS should also ensure its schools provide the resources needed to support students' additional academic pursuits. [Fairfax](#), for example, has placed DNA labs in elementary schools, established labs for STEM academics, created 300 partnerships with businesses (which also facilitate business internships), and created partnerships with colleges (including George Mason and Marymount) for summer programs. APS should ensure that its students have similar opportunities.

Conclusion

To regain its position as a great school district, APS should adopt policies that have been shown to correlate with student success. Such policies include (i) developing clear district- and school-wide missions with academic achievement at the center, (ii) setting high expectations for student success and providing courses with the level of challenge needed to realize those expectations; (iii) selecting and training strong school- and district-level leaders who clearly communicate the school system's mission of academic excellence; (iv) frequently monitoring student academic performance, performing root cause analysis of underperformance, and consistently following-up to ensure poor performance is remediated; and (v) providing increased opportunities for students to learn and increasing students' time on task.

As APS embarks on its new five-year strategic planning process, it should strive to adopt such policies to enable itself to regain its position as a great school district.