

Addressing Segregation in Richmond Public Schools

Applied Policy Project



Prepared by Andrew C. Prince for Richmond Public Schools
Frank Batten School of Leadership and Public Policy
University of Virginia
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Important Details

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Honor Statement

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

A handwritten signature in black ink that reads "Andrew Rounce". The signature is written in a cursive, flowing style.

Disclaimer

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

In addition, this analysis is prepared using data from RPS and the Virginia Department of Education (VDOE). The author also previously served as an intern with RPS during the summer of 2020. The content of this report does not necessarily reflect the definitions, policies, or views of RPS or the VDOE.

Key Terms and Acronyms

Charter schools: Publicly-funded schools that operate outside of the jurisdiction of local school districts. No students are automatically zoned to attend charter schools, and they typically have more autonomy to select students and to implement alternative curricula than do traditional public schools. CodeRVA, which opened in 2017 and educates students in the greater Richmond area using a computer science-centered pedagogy, is a local example of a charter school.

Disadvantaged: The status assigned to students who are eligible for free/reduced-price meals, Temporary Assistance for Needy Families, and/or Medicaid. Homeless and migrant students are also considered to be disadvantaged.

Governor's schools: Regional magnet schools that admit "gifted" students from Richmond and its surrounding suburbs. These schools include Appomattox Regional Governor's School and Maggie L. Walker Governor's School, which are considered to be among the top public high schools in the country. The Governor's schools use highly-selective admissions processes to choose students from feeder districts and are partially under the jurisdiction of RPS.

Integration: The process of bringing together individuals from different racial and/or socioeconomic backgrounds. In an education context, integration is typically measured by the extent to which the demographics of a district's schools (e.g., the proportions of Black students, disadvantaged students, etc.) represent those of the district as a whole.

Magnet schools: Publicly-funded schools that are similar to charter schools in that they do not have automatically zoned students and typically have more autonomy than do traditional public schools but are different in that they are still under the jurisdiction of local school districts. These schools usually also have specialized themes or curricula.

Open enrollment: The process through which students transfer to other RPS schools outside of their assigned neighborhood zones. Depending on interest and the number of seats available at a school, applicants may be entered into a lottery in order to determine who receives transfer spots.

Rezoning: The process through which RPS creates new attendance zones, which are used to assign students to schools based on their addresses. Zones are redrawn every several years to accommodate population changes, to improve transportation efficiency, and to promote diversity. Boundary lines must be approved by the School Board.

RPS: Richmond Public Schools.

School Board: RPS's local governing body that is composed of one representative from each of Richmond's nine districts. Members meet twice monthly and are elected to four-year terms by the city's residents. The School Board oversees RPS's leadership and approves most of the district's major policy decisions.

Segregation: The process of separating individuals from different racial and/or socioeconomic backgrounds. In an education context, segregation is typically measured by the extent to which the demographics of a district's schools differ from those of the district as a whole.

Specialty schools: Magnet schools in Richmond that offer specialized curricula and use merit-based applications to select students.

- **FMA:** Franklin Military Academy. A specialty school in eastern Richmond that primarily serves students of color and of low-income in grades 6-12 and enrolls all students in a strict military-style program.
- **Open High School:** A specialty high school that prioritizes small classrooms and independent learning. Open's classes and programs are located in a variety of buildings throughout downtown Richmond.
- **Richmond Community High School:** A specialty high school in northern Richmond that targets academically gifted, disadvantaged students.

Students of color: Students who identify as American Indian/Alaska Native, Asian, Black, Hispanic, Native Hawaiian/Pacific Islander, or multi-racial.

TJHSST: Thomas Jefferson High School for Science and Technology. A magnet school operated by Fairfax County Public Schools in Northern Virginia that is considered by many to be the top public high school in the country. Like RPS's specialty schools, TJHSST uses merit-based applications, but it has recently attracted media attention due to efforts to increase equity in its admissions process after years of disproportionately low enrollment among Black and Hispanic students.

VDOE: Virginia Department of Education. The state agency governing public education.

White flight: The phenomenon of white people moving out of cities, especially those with growing minority populations, and into suburban areas. This has historically occurred in response to policies that promote residential and school integration.

Executive Summary

RPS currently experiences some of the highest rates of racial and socioeconomic segregation among major school districts in Virginia. While much of this issue results from residential segregation beyond RPS's direct control, the district's use of school choice mechanisms—which have the potential to break the link between housing and school segregation—has actually exacerbated this problem. Rather than promoting integrative movement throughout the district and bringing together students from different backgrounds, RPS's specialty schools and open enrollment system do not explicitly consider diversity in their outreach and selection processes. As a result, they function as a means for advantaged families to leave their neighborhoods and to self-segregate in higher-performing schools elsewhere in Richmond. This restricts the ability of students from historically marginalized populations to access advanced educational opportunities at these schools. And it prevents all students, regardless of race and class, from enjoying the academic and social-emotional benefits of school integration.

To address this problem, it is recommended that RPS follow in the footsteps of other urban school systems that have taken initiative to mitigate school segregation. This report proposes five alternatives to address the disproportionately low rates at which students of color and of low-income apply to, are accepted at, and enroll at RPS's specialty schools and evaluates them based on their effectiveness in improving racial and socioeconomic diversity, their likely popularity within the Richmond political climate, and the extent to which their operations burden school leaders and RPS families. These alternatives are (1) status quo, (2) weighted lottery, (3) mixed lottery, (4) merit lottery, and (5) middle school lists.

It should be noted that the goal of this analysis is to provide an overarching sense of how these alternatives could operate within the RPS context. Projected outcomes only use the simplest version of each policy and are based on a simulated world. Thus, estimates are not intended to be exact and are just meant to broadly model the advantages and disadvantages of the different admissions systems.

With this in mind, it is advised that RPS replace its current admissions process with a merit lottery, which involves screening applicants using a minimum achievement requirement, such as a minimum grade-point-average or standardized test score, and then running a lottery for all eligible students that gives additional weight to or reserves seats for disadvantaged students and English-language learners. In reality, the different options can actually be designed and combined in a myriad of ways in order to increase their success, and almost any policy change would be an upgrade over the status quo system. The merit lottery is highlighted, though, because it is estimated to significantly improve diversity at the specialty schools and removes the time burden that traditional applications place on administrators and families. It also maintains elements of merit in

the selection of specialty school students, so it is hoped that pushback from advantaged families is limited and that admitted students will still be academically prepared for the challenges of specialty school attendance.

Additionally, the lottery-based structure reduces the mental and emotional strain that a competitive educational culture can have on students' well-beings, since admissions decisions are no longer referendums on applicants' abilities. The pressure on school leaders is reduced, as well, given that principals no longer have to make difficult decisions about which applicants are truly most deserving of admission. Rather, they are only responsible for establishing achievement levels above which they believe students are able to succeed at their schools. They then can allow the lottery to address hidden factors such as luck, bias, and unequal circumstances that complicate evaluations of students' true merit.

It is also recommended that RPS apply a weighting method similar to that proposed for the merit lottery to its open enrollment system. This ensures that the students who would benefit most from transferring to high-performing schools in Richmond are given priority in seat allocation. Both open enrollment and the specialty schools should implement extensive outreach efforts, as well, to increase participation among disadvantaged families.

Altogether, RPS has the ability to take straightforward policy steps to greatly improve integration across the district. This can set a precedent for longer-term initiatives that promote equity and access throughout the entire Richmond region.

Introduction

In his introductory strategic plan, RPS Superintendent Jason Kamras identified integration as a key priority for increasing achievement among historically marginalized groups (RPS, 2018). As RPS—whose student body is 79% non-white and 52% disadvantaged (VDOE 4, 2021)—enters its second term under Kamras’ lead, this issue remains as salient as it did upon his 2017 arrival to Richmond. **Approximately 64% of schools within RPS are still considered to be “intensely segregated”** (VDOE 2, 2021).¹ **As a result, students from all backgrounds lose out on the robust academic and social-emotional benefits of school integration, and children of color and of low-income in Richmond have limited access to high-level educational opportunities** (Siegel-Hawley, Bridges, Shields, & Koziol, 2019).

In 2019, RPS underwent major rezoning in order address this problem. However, this effort was not sufficient in mitigating segregation and did not include an in-depth review of related structures, such as RPS’s specialty schools and open enrollment process. This report attempts to fill these gaps by examining the causes and consequences of school segregation in Richmond and exploring policies used by other districts to improve equity within their magnet programs and transfer systems. It is intended for the School Planning Team within RPS’s Schools Office, which oversees specialty school admissions and open enrollment, and proposes both straightforward and bold solutions that RPS can implement going forward.

With the COVID-19 pandemic nearing its end and the restart of in-person classes imminent, RPS has a crucial opportunity to create diverse, inclusive spaces for its students to return to. It must follow the lead of other districts that have taken initiative to tackle school segregation and then push the forefront of integration even further in order to ensure that every child in Richmond receives a quality education.

¹ “Intense segregation” is defined as having a student body that is less than 10% white (Mattingly 2, 2019).

Background

Problem Description

While integration efforts shortly after *Brown v. Board of Education* (1954) may have given the impression that school segregation was sufficiently addressed in the United States, the share of intensely segregated schools throughout the country actually tripled from 5.7% to 18.2% between 1988 and 2016 (Frankenberg, Ee, Ayscue, & Orfield, 2019). Richmond, therefore, is certainly not alone in dealing with school segregation, but the problem within RPS is particularly bad. Nearly 67% of Black students within RPS attend schools that are intensely segregated, compared to 17% of Black students across Virginia (Mendes & Duncombe, 2020). And around 70% of white elementary students in the district are concentrated at just four elementary schools (out of 25, in total) (VDOE 2, 2021).

Richmond struggles even when examined only against other highly-populated urban centers in the state. The city's Black-white dissimilarity index is 0.57; in contrast, the Virginia Beach-Norfolk-Newport News area has a Black-white dissimilarity index of 0.50, while the Northern Virginia area's is just 0.42 (Mendes & Duncombe, 2020).² Segregation between white and Hispanic students is not as deep but has increased significantly since 2010 (Siegel-Hawley, Koziol, Moeser, Holden, & Shields, 2017). Richmond's Hispanic-white dissimilarity index of 0.49 is now the highest of any metro region in Virginia (Mendes & Duncombe, 2020). **This means that about half of the Black and Hispanic students in RPS would need to transfer schools in order for complete integration—that is, a situation in which the racial demographics of all schools are reflective of those of the district as a whole—to be achieved.**

This issue also appears to be worsening. Richmond's white population has grown by 35% over the past two decades (Mitchell, 2019), and residential segregation across the city fell by 22% between 1990 and 2015, but Richmond experienced a 41% increase in school segregation over the same timeframe (Coughlan, 2018).³ This contrast is in part because many of the new white residents in diverse neighborhoods are young professionals, so they have yet to start families that will populate Richmond's schools.

² The dissimilarity index is a measure of segregation that estimates the proportion of students of a particular race who would need to transfer in order for all schools in a region to attain a racial distribution reflective of citywide enrollment (Whitehurst, Reeves, & Rodrigue, 2016). For example, RPS's Black-white dissimilarity index is 0.57, which means that 57% of Black students would need to transfer for complete integration to be achieved.

³ The report referenced measures residential and school segregation using a variant of a dissimilarity index that estimates the degree to which the racial breakdowns of census tracts and schools, respectively, mirror the demographics of entire cities (Coughlan, 2018).

But, as described in the next section, policy mechanisms also have failed to convert this influx of white residents into school integration.

Lastly, racial segregation is strongly connected to socioeconomic segregation within RPS. The average Black student attends a school in which two-thirds of their peers are low-income, while the average white student attends a school in which just one-fourth of their peers are low-income (Siegel-Hawley et al., 2017).

Contributing Factors

Residential segregation is decreasing in Richmond, but it is nonetheless the main contributor to the city's school segregation problem (Siegel Hawley et al., 2019). Richmond has a fraught past of discriminatory housing policy that has left many of its neighborhoods isolated by race and class (Siegel-Hawley et al., 2019).⁴ Unfortunately, the drawing of school zones has done little to reverse this history's effect on school diversity. For example, a 2013 rezoning attempt actually exacerbated school segregation due to a policy design process that excluded voices of color and of low-income (Siegel-Hawley, Bridges, & Shields, 2016). A subsequent effort was more effective and transferred hundreds of students from one of the city's four predominantly white elementary schools to a nearby majority-Black school. But it only affected about 6% of RPS students overall and did not include the "pairing" plan favored by many integrationists after it received pushback from mainly white families (Kutner, 2019; Mattingly 3, 2019).⁵ As a result, RPS boundary lines continue to reproduce residential segregation (Chang, 2018), and schools with higher rates of minority enrollment are still frequently located in areas with lower levels of economic opportunity (Siegel-Hawley et al., 2017).

Richmond's specialty schools—Franklin Military Academy (FMA), Open High School, and Richmond Community High School—and open enrollment system also contribute to segregation.⁶ As is discussed more in the literature review, magnet schools have the

⁴ This report does not include much information about the history of segregation in Richmond, since it is focused more on present-day factors within RPS's control. For those interested, James Ryan's *Five Miles Away, A World Apart: One City, Two Schools, and the Story of Educational Opportunity in Modern America* (2010) includes a detailed account of the legal and political history surrounding residential and school segregation in Richmond and across the United States more generally.

⁵ The "pairing" plan would have involved matching predominantly white elementary schools with predominantly Black elementary schools and then having the paired students attend one school for grades K-2 and the other for grades 3-5. That way, no school buildings would be overcrowded, yet integration would be achieved.

⁶ Prior to SY20-21, RPS technically operated five specialty programs: the three listed above along with Lucille M. Brown Middle School – International Baccalaureate (IB) and Thomas Jefferson High School – IB. These IB programs were housed within traditional public schools that had zoned students and used merit-based admissions to select rising 6th and 9th graders, respectively. This school year, however, RPS changed their admissions processes to open enrollment, since the decision was made to expand the IB

potential to reverse the negative impacts of housing segregation by using their offerings to attract diverse populations from across districts. Open enrollment, meanwhile, can enable disadvantaged students to transfer into higher opportunity schools outside of their assigned zones (Potter, Quick, & Davies, 2016). In order for this to happen, both programs must intentionally consider diversity. Otherwise, they may just function to appease wealthy families who do not want to attend their zone schools and who are threats to leave for private schools (Potter et al., 2016). Despite this, RPS does not prioritize marginalized students in its outreach and selection processes.

The consequences of this are that disproportionately low numbers of students of color and of low-income apply to and receive admission at the specialty schools, which are RPS's only three fully accredited secondary schools (RPS 2, 2020).⁷ Additionally, open enrollment has been used to reverse the integrative effects of rezoning. A key focus of the most recent rezoning plan was moving students from William Fox Elementary School, one of RPS's four aforementioned predominantly white elementary schools, to nearby John B. Cary Elementary School, a predominantly Black school (Mattingly 3, 2019). A significant number of white, non-disadvantaged students who had been rezoned from William Fox to John Cary, however, were able to successfully transfer back to William Fox through open enrollment (RPS 3, 2020). RPS's current school choice mechanisms, therefore, perpetuate segregation.

In addition, a recently released study estimated that 44% of segregation in the broader Richmond area occurs between, rather than within, school districts (Siegel-Hawley, Taylor, Bridges, Frankenberg, Castro, Williams, & Haden, 2020). Just 26% and 36% of students in bordering Chesterfield and Henrico counties, respectively, are Black, compared to 55% of RPS students (VDOE 1, 2021; VDOE 3, 2021; VDOE 4, 2021). The aforementioned influx of white residents into the city is gradually alleviating this gap (Siegel Hawley et al., 2019). But the effect of white flight to the suburbs in the decades after *Brown* (1954) persists. This is due to historic funding disparities between RPS and its neighbors and to implicitly-biased school and real estate rating systems that do not

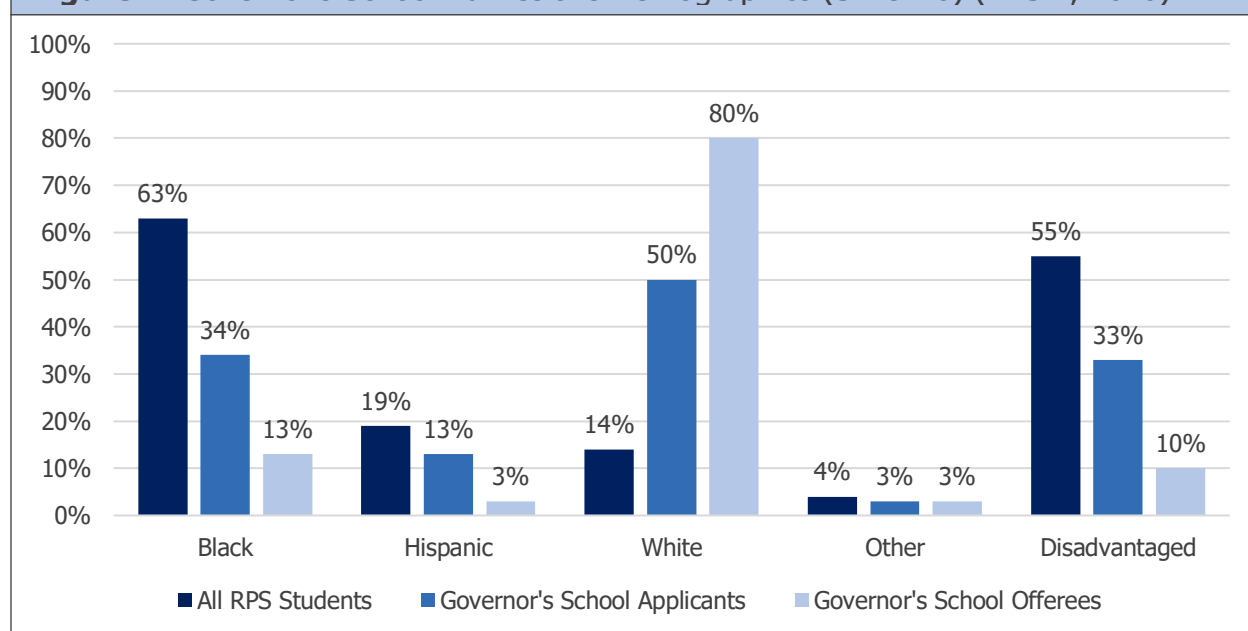
programs to whole-school models that all enrolled students—not just those chosen via applications—could access. So, Lucille Brown and Thomas Jefferson are not counted as specialty schools in this report. With that being said, a component of the Thomas Jefferson IB program is still technically considered by RPS to be a fourth specialty program. There is a high diploma aspect that requires application and admission, but it is not discussed in this analysis because students cannot apply until 11th grade and are still housed within Thomas Jefferson. In contrast, FMA, Open, and Richmond Community admit students in 9th grade (FMA also admits students in 6th grade) and do not have any zoned students.

⁷ FMA also offers students a unique reserve officers' training corps experience, while Open and Richmond Community allow students to take up to 15 and 13 Advanced Placement (AP) classes, respectively (RPS 1, 2020). By comparison, RPS's unaccredited high schools offer just 8.5 AP courses, on average. This excludes Thomas Jefferson, which is unaccredited but, as mentioned previously, offers an IB curriculum instead of AP classes.

reward diversity and have discouraged white families from buying homes within RPS's boundaries (Mendes & Duncombe, 2020).

Richmond's regional Governor's schools—which are among the most highly-ranked schools in the country and enroll students from Richmond and its suburbs—have failed to correct for interdistrict segregation. Rather than bringing together wealthier, white students from surrounding districts and students of color and of low-income from RPS, the overwhelming majority of RPS students who apply to and are admitted to the Governor's schools are white and non-disadvantaged (Figure 1) (RPS 2, 2020).⁸ Like the specialty schools, the Governor's schools do not prioritize diversity in their outreach and selection processes. This causes them to similarly serve well-to-do students from the city who do not want to attend their RPS zone schools.

Figure 1. Governor's School Admissions Demographics (SY19-20) (RPS 2, 2020)



Problem Significance

Before exploring potential policy interventions, it is worthwhile to acknowledge the discussion among education researchers about whether racial integration is truly a meaningful goal to pursue. Along with the moral and legal imperative to integrate established by *Brown* (1954), numerous studies of the desegregation that occurred in the decades after the case have found strong correlations between these initiatives and both short- and long-term benefits for students of color. These include increased

⁸ This figure is reproduced with more context in Appendix A.

graduation rates and lifetime earnings and reduced incarceration rates and healthcare expenditures (Guryan, 2003; Johnson, 2011).

But skeptics have pointed out that determining a causal relationship between racial composition and these outcomes is difficult given that the choices of districts to integrate were not random and that integration often coincided with other policy changes that had similar potential to boost Black achievement (e.g., increased per-pupil funding) (Hanushek, Kain, & Rivkin, 2009; Whitehurst et al., 2016). In addition, the Black-white achievement gap has largely remained constant since 1990 even as integration has continued (Barton & Coley, 2010).⁹ And an analysis by the National Center for Education Statistics (2015) found that much of the current racial disparity in standardized test scores can actually be explained by socioeconomic factors. Two studies of a Charlotte-Mecklenburg integration plan in the early 2000s also showed that the academic gains that resulted from moving minority students to more advantaged schools were mainly due to changes in school quality, not to exposure to greater racial and socioeconomic diversity (Whitehurst et al., 2016).

That being said, there is a robust body of research that supports the effectiveness of racial integration. Even if much of the racial achievement gap stems from socioeconomic factors, achieving racial integration is likely to produce socioeconomic integration, as well, since segregation along both lines is highly correlated in Richmond (Siegel-Hawley et al., 2017). Furthermore, even if neither form of diversity is directly relevant to student success, the Charlotte-Mecklenburg case still aligns with other studies that have found that integration may indirectly expand access to highly qualified teachers, challenging courses, extracurricular opportunities, and improved facilities for students of color and of low-income (Stuart Wells, Fox, & Cordova-Cobo, 2016). This occurs by “linking the fates” of students from different racial and socioeconomic backgrounds, which encourages advantaged families to invest in resources at historically underfunded schools (Siegel-Hawley, 2020). This goal is particularly salient for Richmond, as RPS schools that serve larger percentages of white and wealthy students (e.g., Open and Richmond Community), on average, are more likely to be accredited, have fewer inexperienced teachers, offer a wider variety of world language classes, and have greater shares of students enrolled in gifted programs, Algebra I, and AP courses (Siegel-Hawley et al., 2017; The Education Trust, 2018).

⁹ Though Barton & Coley’s argument is understandable, it is also worth considering if recent integration efforts have truly been in good faith given the rising share of intensely segregated schools in the United States (Frankenberg et al., 2019). Furthermore, a study of over 20 years of North Carolina data estimated that 40% of all racial segregation actually occurs within schools, due to practices such as tracking (Sparks, 2020). Classroom integration is not discussed extensively because it is beyond the scope of this project. But it is, therefore, possible that the measured efficacy of school-level integration has been undercut by segregationist practices within schools.

Evidence of a more direct relationship between integration and student achievement does exist, though. Contrary to the Charlotte-Mecklenburg studies, an analysis of mid-1990s Texas school data found that racial diversity, independent of family background and school quality, was positively correlated with standardized test scores (Hanushek et al., 2009). Meanwhile, a study of nationally-representative data from the Education Longitudinal Study of 2002 showed that socioeconomic peer effects are more strongly related to college enrollment rates than are school practices (Palardy, 2013).

Integration also has numerous social-emotional benefits for students of all races. A study of 26 California middle schools found that greater diversity is correlated with reduced feelings of isolation and increased perceptions of fair and equal treatment by teachers among students of color (Juvonen, Kogachi, & Graham, 2018). This result is consistent with many other studies that have shown that integration is related to reduced racial bias and anxiety and greater creativity, critical thinking, civic engagement, student and teacher expectations, cross-racial friendships, and pursuit of integrated settings later in life (Kahlenberg, Potter, & Quick, 2019; Siegel-Hawley et al., 2019; Stuart Wells et al., 2016). These benefits extend to both students of color and white students.

Altogether, while desegregation is not the only route to raising academic achievement, it is still a path to both directly and indirectly improving the education of students of color and of low-income, and it yields positive prosocial benefits for all students. **Thus, racial and socioeconomic integration are policy outcomes worth pursuing.**¹⁰

¹⁰ While a color-blind approach to policy is not recommended for the reasons stated above, the use of race in this report is also not meant to imply that all students of color have the same experiences. Helms, Jernigan, & Mascher (2005) warn against relying on race as an explanation for outcomes in research and advise that analysts should focus on the lived experiences of individuals, rather than potentially legitimizing the social construction of racial groups and stereotypes. This project attempts to keep their guidance in mind, but race is incorporated because it is connected to generations of historic inequity in Richmond that undermine the education of students of color today. Thus, this report does not intend to generalize the experiences of students of color, but it centers race because doing so facilitates policy design and the targeting of efforts towards groups of students who have been historically marginalized.

Literature Review

This section provides an overview of the literature surrounding potential options to address school segregation within RPS. Many other districts throughout the country have already taken initiative to mitigate this problem. This section reviews the effectiveness of these different initiatives, as well as lessons that can be drawn from implementation in other contexts that may improve intervention design in Richmond. Not all districts mentioned are exactly similar to RPS, but observed results are still likely to be relevant for RPS as they seem to be consistent across a range of contexts.

School Choice

One of the primary mechanisms through which districts can integrate is school choice policy. These options enable students to transfer to schools outside of their neighborhood zones, which can break the link between residential and school segregation and provide better educational opportunities to those zoned to under-resourced schools.¹¹ If misused, however, choice policy can backfire and facilitate the self-segregation of families by race and income. This section explores the efficacy of three commonly used choice options—charter schools, magnet programs, and open enrollment—in mitigating segregation and improving academic outcomes.

Charter schools, which receive public funding but operate independently of local school districts, exist sparingly in Richmond. However, a Brookings Institution review of urban charter schools found that they can be effective in raising the standardized test scores of students of color and of low-income (Whitehurst et al., 2016). These results can be interpreted as causal evidence of charter school success because students were chosen through randomized lotteries. These academic gains come at a cost, though. A subsequent 2017 analysis by Whitehurst found a significant positive correlation between the share of charter schools in a district and the degree to which that district experiences racial segregation. This outcome, which is mostly the result of Black students moving to predominantly Black charter schools, is supported by a report on national charter school data from 1998 to 2015 that isolates causal effects using grade- and district-controls. According to this study, increases in the charter school share of total district enrollment are correlated with increases in Black and Hispanic segregation (Monarrez, Kisida, & Chingos, 2019). A study of charter schools in Kansas City, whose public school system is similar in size and racial distribution to Richmond's, also found

¹¹ In an ideal world, school choice would not be necessary since all students would already be attending zone schools that are well-resourced and racially and socioeconomically diverse. This is not the current situation in RPS, unfortunately, so school choice is potentially an important means through which integration and academic achievement can be improved in the short-term. RPS should ensure, though, that it does not become overly reliant on school choice as a policy mechanism. It should still pursue efforts in the long-run to sufficiently fund its schools and to disrupt housing segregation in order to reach a reality in which school choice is no longer needed.

that newly established charter schools exacerbated segregation. But it was the switching of white students from traditional public schools to charter schools that was the main driver of segregation in this case (Denice, DeArmond, & Carr, 2019).

Altogether, while charters may improve academic outcomes for students of color and of low-income, they appear to increase the rate at which students of all races self-segregate.

Magnet schools, like the specialty and Governor's schools, are similar to charter schools in that they have more autonomy than do traditional public schools and do not have students automatically zoned to them, but they are operated directly by local school districts. The first magnet schools were created with specific desegregation goals in mind, however federal education reform efforts over the past several decades have shifted their purposes towards meeting performance standards, piloting educational innovations, and serving specialized populations (e.g., students with special needs, struggling students, gifted students, etc.) (Frankenberg & Le, 2008). Unfortunately, magnets without explicit diversity considerations have been shown to increase segregation, as they can instead function as a way for wealthy, white families to leave their zone schools (Betts, Kitmitto, Levin, Bos, & Eaton, 2015; Potter et al., 2016).

Successfully integrative magnet programs, meanwhile, are often sited in predominantly low-income and minority neighborhoods and use robust outreach programs, free transportation, specialized curricula, and lottery-based admissions (instead of merit-based applications) that favor disadvantaged students to attract a diverse range of families from across districts (Siegel-Hawley, 2014; Siegel-Hawley et al., 2019). In doing so, they can bind the fates of students from different racial and socioeconomic backgrounds, which can improve investment in resources for historically marginalized students and provide social-emotional benefits for all students.

A qualitative study by Ayscue & Siegel-Hawley (2019) of three magnet schools in different parts of the United States confirmed these findings. And a 2011 literature review by Siegel-Hawley & Frankenberg highlighted randomized experiments that showed that magnet programs in Connecticut and San Diego with civil rights considerations significantly improved integration and standardized test scores. Furthermore, descriptive data from Chicago Public Schools reveal that low-income students who gained entrance to selective magnet schools through lottery programs graduated at higher rates and had greater average test scores than their non-magnet, more affluent peers did (Quick, 2016). A more statistically rigorous analysis of affirmative action policies that placed low-income students in selective Chicago schools estimated that these students experienced no gains in reading and negative effects in math. But these students' poor outcomes may have resulted from their divergence from

high-performing charter schools, which, as previously stated, do not exist widely in Richmond (Angrist, Pathak, & Zarate, 2019).

The final choice policy to be examined is open enrollment, which is the process by which students transfer to out-of-zone schools within a district. Similar to magnet schools, open enrollment programs that do not have explicit diversity considerations have been shown to increase segregation. This is because more-advantaged students, who tend to have greater information about the potential academic benefits of transferring, are more likely to use the system to leave low-performing but diverse schools (Phillips, Hausman, & Larsen, 2012). For example, a study on a Minnesota open enrollment system that allowed transfers throughout Minneapolis, St. Paul, and St. Cloud but did not use a weighted lottery and did not provide transportation found that segregation increased (Institute on Metropolitan Opportunity, 2013). A similar result was found through an analysis of a San Diego open enrollment system that also did not provide busing (Koedel, Betts, Rice, & Zau, 2010).

There are other open enrollment systems, though, that, like successful magnet schools, use extensive outreach, weighted lotteries, and transportation to encourage integrative movement throughout districts.

When implemented properly, open enrollment enables disadvantaged students to transfer to better-resourced schools and uses themed programs, such as performing arts or STEM initiatives, to draw wealthier families into lower-income neighborhoods. Rigorous analysis of these systems is limited, but 30 districts in the United States have transfer policies that consider diversity (Potter & Burris, 2020). In addition, 22 districts use “controlled choice” (Potter & Burris, 2020). This policy expands open enrollment by eliminating traditional attendance zones, having families rank all the schools within a district, and using lotteries to fill seats at schools that attempt to accommodate students’ preferences. Again, there is incomplete evidence of these programs’ effectiveness. But a controlled choice system in Berkeley, California that weights its lottery using a composite of students’ races, household incomes, and parental educations produced significant racial diversity while enabling 76% of families to receive their first-choice schools (Chavez & Frankenberg, 2009). Schools in Cambridge, Massachusetts have also seen steadily rising test scores and graduation rates since the implementation of controlled choice (Learned-Miller 1, 2016). This system in Cambridge guarantees socioeconomic integration since it uses a weighted process to make sure that each school within the district has a proportion of students eligible for free/reduced-price lunch that is on par with the rate of the entire district.

Overall, all three school choice mechanisms—charter schools, magnet programs, and open enrollment—are generally effective in increasing student achievement by enabling low-income students to move to better-resourced, higher-performing schools. However, charter schools, perhaps due to a lack of district oversight, tend to exacerbate

segregation, while carefully structured magnet programs and open enrollment systems have the potential to promote integration.

Rezoning

The drawing of school attendance zones can also be an effective way to break the link between housing and school segregation. Unfortunately, an analysis of more than 15,000 attendance zones throughout the country found that current boundaries tend to exacerbate racial segregation, on average, relative to a world in which all students attend the schools closest to their houses (Richards, 2014). A follow-up study of around 13,000 zones, though, which more effectively controlled for the shapes of zones, showed that boundaries that are particularly irregularly shaped almost always promote racial diversity (Saporito & Van Riper, 2015). **Therefore, while boundaries, on the whole, may perpetuate segregation, there is still the potential for districts to use creative rezoning to integrate.**

The most relevant case study for how to achieve integrative school zones actually comes from RPS itself. A 2016 report by Siegel-Hawley, Bridges, & Shields reviews the errors made during the aforementioned 2013 RPS rezoning process that led the district to implement zones that worsened segregation. Rather than incorporate broad-based public participation, rezoning discussions excluded low-income Black families and were largely held in private. As a result, white families, who made up just 10% of RPS at the time, were able to use meetings and online petitions to dominate the process.

A 2019 rezoning attempt was slightly more effective in part due to greater transparency and fairness. This time, the district held 60 public meetings on the issue and outsourced the drawing of potential maps to a third-party company. Still, RPS did not implement a more strongly integrative “pairing” plan. Logistical challenges and high costs caused the plan to fail, despite its successful use to diversify schools in areas such as Charlotte-Mecklenburg (Kutner, 2019; Siegel-Hawley et al., 2019; Way, 2019).¹² An additional concern with pairing was that it may lead to white flight from RPS, as mostly white parents argued that rezoning would undermine families’ decisions to intentionally buy houses near schools that they hoped to enroll their children at (Kutner, 2019). White flight occurred somewhat in Charlotte-Mecklenburg (Helms, 2020), but Charlotte-Mecklenburg has a robust charter school system that Richmond does not (Ayscue, Nelson, Mickelson, Giersch, & Bottia, 2018). Siegel-Hawley (2014) also suggests that integrating and, thus, improving the performance of more schools across RPS might actually increase white enrollment over time. With all of this in mind, **rezoning should**

¹² RPS officials estimated that it would cost between roughly \$600,000 and \$850,000 for each pairing of a predominantly Black school and a predominantly white school. This money would go towards more teachers, buses, and bathrooms at the schools (Carrington, 2019).

engage diverse communities, be transparent, and be bold in its pursuit of integration.

Other Solutions

There is a final set of interventions that should be acknowledged but is not the primary focus of this report. While these solutions can be highly effective, they do not technically fall under the jurisdiction of RPS or require partnerships with other institutions. First, because housing and school segregation are so strongly linked (Whitehurst, Reeves, Joo, & Rodrigue, 2017), RPS could advocate for policies such as more inclusive zoning laws, affordable housing vouchers, and mortgage assistance programs that support the settlement of low-income families in high-quality school zones (Tegeler & Hilton, 2017). For example, poor students who used public housing in Maryland to move to low-poverty neighborhoods cut their initial achievement gap (relative to their non-poor district peers) in half by the time they finished elementary school (Schwartz, 2010). RPS could also work with local real estate groups to develop school rating systems that incorporate diversity. Traditional ratings rely heavily on standardized test scores, which can result in the coded labeling of schools based on their racial demographics (Knoester & Au, 2015). A potential model can be found in Pasadena, California, where an outreach program has, according to anecdotal reports, increased the movement of white families to neighborhoods of color by bringing local realtors into schools in order to dispel racial stereotypes (Tegeler & Hilton, 2017).

Lastly, given that 44% of racial segregation in the Richmond area occurs between, rather than within, school districts (Siegel-Hawley et al., 2020), RPS could pursue a busing system with neighboring Chesterfield and Henrico counties. A study based on a 1970s natural experiment in Kentucky that randomly assigned students of color to be bused to majority-white out-of-district schools found that participating students lived in higher-income neighborhoods later in life, with no significantly detrimental effects to the enrollment and achievement of white students (Tuttle, 2019). A more recent analysis of an early 2000s California busing system also found that the policy was correlated with Black student achievement, as test scores and college enrollment increased among students randomly selected for busing. However, rates of special education classification and arrests for students of color also rose (Bergman, 2018). This indicates that interdistrict busing has the potential to improve integration and student achievement, but consideration must be given to the fair treatment of students of color who transfer.

Policy Analysis Overview

The following policy analysis provides an overview and evaluation of potential alternatives to address the issue of racial and socioeconomic segregation within RPS. It is broken into two parts with different scopes. The policies within each section target school segregation in distinct ways and are discussed separately because decisions in one sector do not majorly affect those in another.

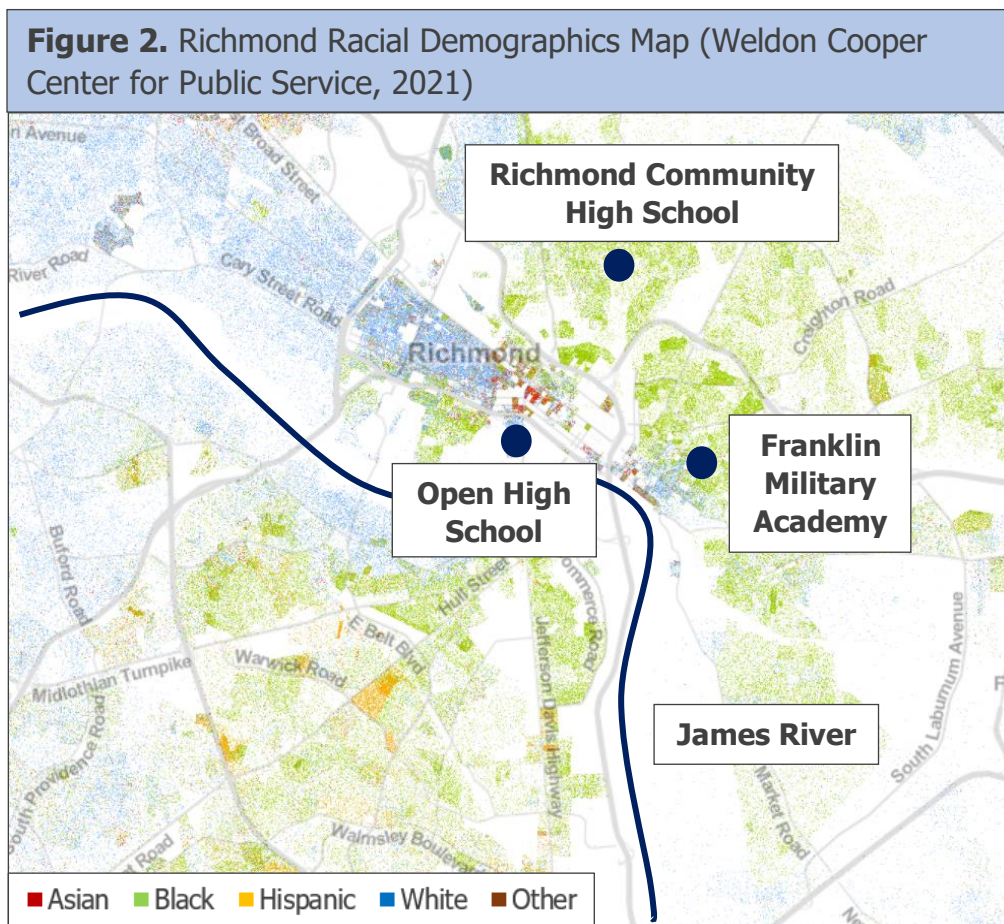
The specialty schools section constitutes the bulk of this report and outlines solutions to address the disproportionately low rates at which students of color and of low-income apply to, are accepted at, and enroll at RPS's three magnet high schools—FMA, Open, and Richmond Community. It details evaluative criteria against which options are judged and includes a quantitative analysis that projects outcomes and informs a final recommendation. The specialty schools make up just three of RPS's 40 traditional public schools, but the most attention is given to this section because reform is relatively straightforward in this space given that control over the schools is entirely within RPS's jurisdiction. Many other districts also provide robust case studies of magnet school success that RPS can and should follow.

Next is a section focusing on open enrollment, which is relevant for students of all grade levels. The range of alternatives for this process is quite limited, so this section is more informal. It does not include a comprehensive review of options but just gives guidance—based on the academic literature and operations of other districts—on how RPS could structure its enrollment lottery, outreach program, and transportation plan.

It should also be acknowledged that there are other alternatives that are bigger in scope and have greater potential to move the needle on school segregation. Some of these options are covered in the literature review and are discussed briefly in the conclusion, but they are not the focus of this report even though they should be considered for RPS's long-run plans. Projecting outcomes, estimating costs, and giving specific implementation advice for these policies is difficult, since they have significant administrative, fiscal, and political concerns that complicate enactment. Many of them are also outside of the complete jurisdiction of RPS. As a result, this analysis centers on critical changes that can be made quickly by the School Planning Team to improve equity and access within the specialty schools and open enrollment process.

Specialty Schools Analysis

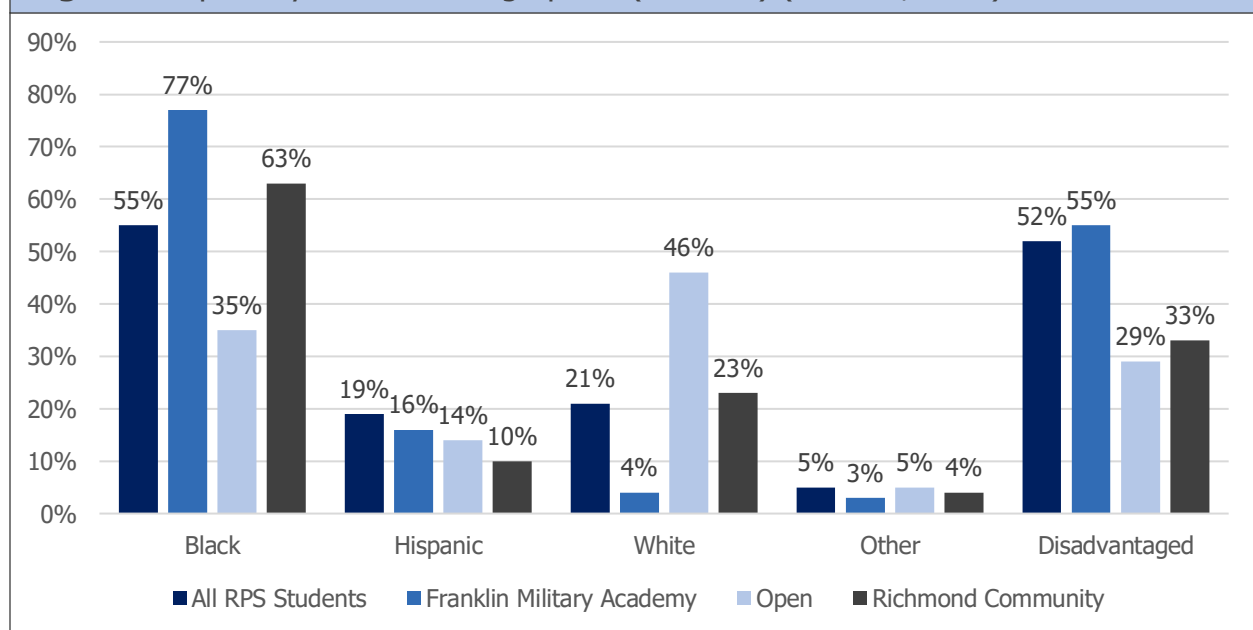
Magnet schools have the potential to promote integration by bringing together diverse ranges of families from throughout a school district. To do this, though, they should be sited in predominately low-income and minority neighborhoods and employ extensive outreach, free transportation, specialized curricula, and lottery-based admissions (Siegel-Hawley, 2014; Siegel-Hawley et al., 2019). Unfortunately, RPS's specialty programs only meet a subset of these requirements. While FMA, Open, and Richmond Community all have themes, they each use merit-based admissions to select students and do not explicitly consider children's extenuating circumstances (e.g., poverty, trauma, etc.) during application review. In addition, as seen in Figure 2, Open is located downtown in one of the wealthiest, whitest parts of Richmond and does not provide busing. FMA and Richmond Community are located in higher-need, more diverse areas and offer transportation, but they too are situated north of the James River. This means that no specialty schools are located in the southern half of Richmond, where most of the city's growing Hispanic population lives (Weldon Cooper Center for Public Service, 2021).



The above conditions should also be met in service of explicit diversity considerations (Betts et al., 2015; Potter et al., 2016). Currently, however, the purpose of the specialty schools and the reason as to why they use merit-based admissions is unclear. James Ryan (2010) in *Five Miles Away, A World Apart* comments that some in Richmond believe that Open and Richmond Community were created in the 1970s with the hope of retaining white families who threatened to leave RPS in the wake of desegregation efforts. Ryan is skeptical of this claim and notes Richmond Community’s focus on poor students and the fact that both schools were over 75% Black at the time of publication. But while Richmond Community’s website includes a mission to uplift “academically gifted children from disadvantaged backgrounds” (RPS 2, 2021), Ryan’s past optimism and the school’s stated aspiration are not reflected in more recent demographics.

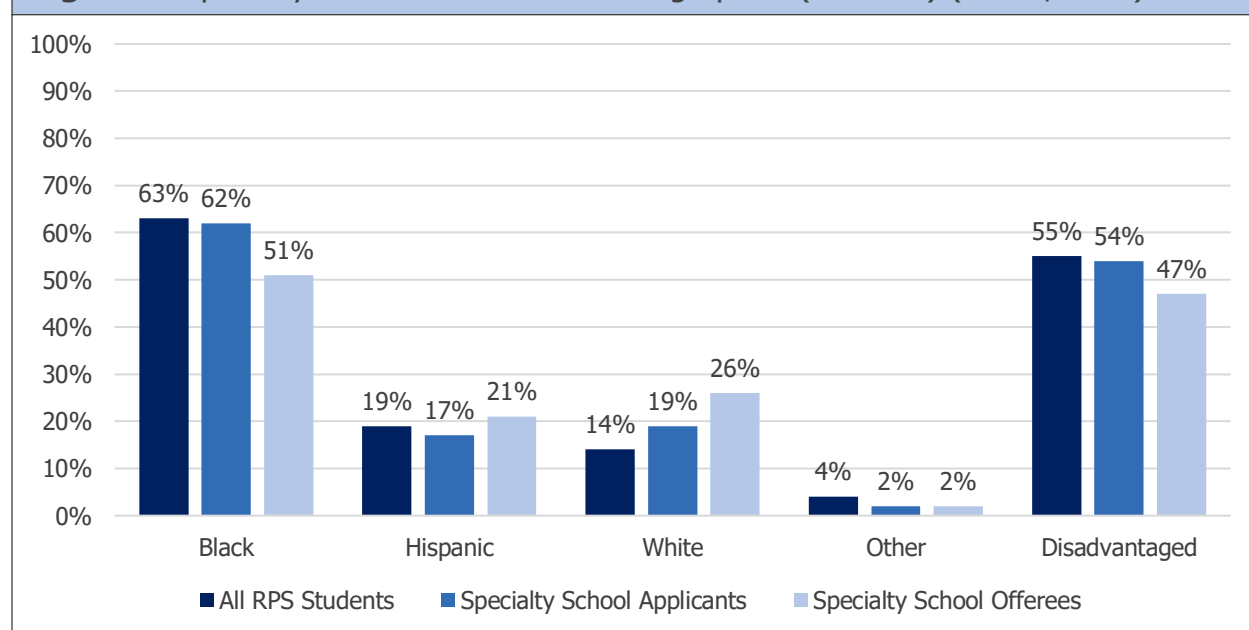
For context, in SY20-21, 52% of RPS students were considered to be disadvantaged, and between SY09-10—when Ryan’s book was released—and SY20-21, the proportion of Black students in RPS fell from 85% to 55% (VDOE 2, 2021). As seen in Figure 3, however, Open is now just 35% Black (down 53% from SY09-10) and 29% disadvantaged; Richmond Community is in line with the district at 63% Black but is only 33% disadvantaged (VDOE 2, 2021).

Figure 3. Specialty School Demographics (SY20-21) (VDOE 2, 2020)



These gaps are not improving soon either, as Black and disadvantaged students made up just 51% and 47% of specialty school offerees in SY19-20, respectively (Figure 4).¹³ This is despite the fact that applicant demographics were relatively in line with all of RPS. **Thus, this issue is mainly an admissions problem, not one caused by poor outreach (though outreach efforts can be improved).**

Figure 4. Specialty School Admissions Demographics (SY19-20) (RPS 2, 2020)

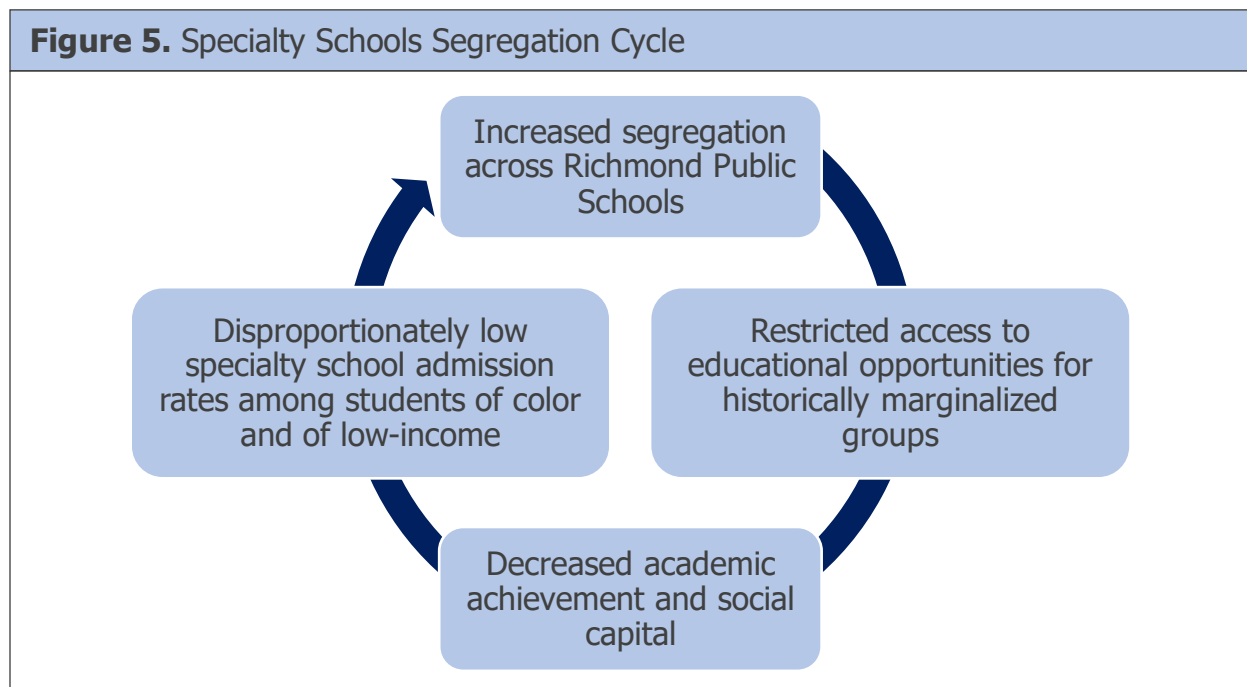


These admissions gaps are concerning because they are part of a cycle in which they both result from and contribute to segregation throughout RPS. Disproportionately low specialty school offer rates among students of color and of low-income exacerbate segregation, which, in turn, restricts these groups' access to the educational opportunities exclusively available at these schools. As a result, historically marginalized communities experience diminished academic achievement, and they are unable to accrue information about how to apply to and thrive at the specialty schools that is commonly shared across more advantaged social networks. This, then, limits the ability of future generations of students of color and of low-income to earn admission to the specialty schools, which further worsens segregation.

¹³ This graph is reproduced with more context in Appendix A.

This cycle (Figure 5) is not unique to the specialty schools: Richmond’s private schools and predominantly white elementary schools also house concerning relationships among segregation, resource and opportunity access, academic achievement, social capital, and the navigation of admissions and enrollment systems. But specialty school principals must reconcile with their particular role in this problem. They must follow the paths of leaders in other districts and define their schools’ purposes and processes around the integrative potential that magnets can have.¹⁴ **It is important that these schools focus on what children *can do* if given the resources to succeed, not on determining who is most deserving of admission solely based on what they *have done*.**

Figure 5. Specialty Schools Segregation Cycle



¹⁴ It should be acknowledged that it is entirely possible that the true purpose of the specialty schools is actually just to retain white, wealthy families within the public school system. If this is the case, then the schools are working as intended by utilizing merit-based admissions processes. This analysis assumes that equity and desegregation are the real goals of RPS, though.

Evaluative Criteria

The following criteria are used to evaluate policy options that attempt to improve diversity and equity at RPS's specialty schools. Descriptions explain the criteria and provide overviews of their rating systems.

Effectiveness

Rather than utilize an effectiveness measure that connects directly to the overall segregation level of RPS (e.g., the proportion of intensely segregated schools or the dissimilarity index), this report focuses on the extent to which students of color are represented among those admitted to the specialty schools. Trying to estimate the exact effect of a policy on overall segregation is challenging, as there is uncertainty in regards to how families may move in, out, and around RPS in response. Because of this, an intermediate output that is assumed to be negatively correlated with segregation is used (i.e., the level of segregation across the district is assumed to decrease as diversity at the specialty schools increases).

To compare effectiveness in promoting racial integration across alternatives, the percentage of non-white specialty school offerees that is estimated to result from each policy is calculated.¹⁵ This value indicates how represented students of color are at the specialty schools, with higher values being more desirable. It is not expected that any policy will generate a significant overrepresentation of students of color at these schools, relative to RPS's demographics overall. But even if this result is to happen, it would not be considered worrisome, given the historical disadvantages faced by these children. This is not to say that all white students are less deserving of spots at the specialty schools, but this approach is grounded in Deborah Stone's (2012) writing on equity, which highlights the importance of policies that benefit groups that have the greatest needs and that would value those benefits the most, on average. In addition, focus is placed on offerees, rather than on applicants or enrollees, because RPS has the greatest control over which students are admitted to the specialty schools, which makes projecting outcomes for this part of the admissions process the most straightforward.

A similar socioeconomic effectiveness measure is also calculated by estimating the percentage of disadvantaged students that is expected to result from each policy. Like the racial effectiveness score, higher values are more desirable, with the overrepresentation of low-income students not considered a cause for concern. Once all calculations are complete, the two effectiveness scores are weighed equally to determine the overall efficacy of policy options in increasing integration across racial and class lines. This overall score is a percentage out of a possible total of 100%.

¹⁵ Explanations of how overall demographics are estimated for the alternatives, as well as projected demographics for each individual school, can be found in Appendix B.

Political Feasibility

This criterion considers how viable each alternative is in the current Richmond political climate. Any policy change will have to be communicated to and likely approved by the RPS School Board, whose members are accountable to Richmond voters. So, it is important to consider how popular each option would be among political stakeholders. Many families of color and of low-income are likely to be in favor of policies that promote equity and diversity at the specialty schools. But it has typically been white, wealthy parents who have been the most outspoken during debates surrounding student allocation (e.g., recent rezoning efforts) and who have left RPS to move to the suburbs or to attend private school in response to previous integration efforts. Therefore, policies are evaluated according to the amount of political backlash and lost funding that is expected from families whose children may become less likely to obtain spots at the specialty schools due to the proposed changes.¹⁶

This measure also factors in equity based around perceived merit (Stone, 2012), because pushback against integrative policies often centers upon complaints that lotteries invalidate the hard work of students who lose out on seats.¹⁷ Whether these complaints are justified or not, the perceived achievement level of offerees under each option is incorporated to account for this pushback.¹⁸ Other factors that are considered include historic opposition in Richmond to similar policies and the political viability of alternatives in comparable school districts. Each option then receives a score of high, medium, or low—with high being most desirable.

¹⁶ Funding decreases that may result from “white flight” are not incorporated into a separate cost criterion despite their importance because obtaining a precise calculation for each alternative is quite difficult. Studies on the effects of integration on white enrollment exist, but they are largely focused on integration efforts in the 1970s and 1980s. The results of these reports may be outdated, and the exact details of these efforts do not exactly align with the proposed policies below, so estimates are likely to be unreliable. Instead, this cost is factored into political feasibility in a more abstract sense.

¹⁷ Perceived, rather than actual, merit is used because determining actual merit is not entirely feasible. Achievement metrics, such as grade-point-average (GPA) or standardized test scores, provide insight into students’ academic progress, but comparing across students is challenging given differences in luck and in the obstacles that students have had to overcome. For example, a student who is more naturally intelligent and hard-working than their peers may have a lower GPA due to the detrimental impact that discrimination and poverty can have on academic success. Thus, this analysis does not attempt to determine which students are truly most deserving of specialty school seats. Rather, it tries to factor in the alignment between those who RPS parents might feel are most deserving and those who are projected to get in.

¹⁸ Explanations of how overall achievement is estimated for the alternatives, as well as projected achievement for each individual school, can be found in Appendix C.

Administrative Feasibility

This criterion refers to the ease with which each policy can be implemented as intended. It factors in the burden placed on district administrators and school leaders to integrate each admissions system, with the monetary cost of collecting and reviewing applications for the alternatives calculated in Appendix D. It also incorporates assessments of how enthused school leaders will be to perform outreach for each alternative, since it is assumed that principals will be willing to exert more effort to promote policies that provide them with greater autonomy over the selection of students for their schools. In addition, it considers the burden that each policy option places on families, as it is important that students have clear information and can easily navigate application requirements so that they are able to apply to and enroll at the specialty schools with little complication. Finally, this criterion factors in the potential for unintended consequences, on either the administrative or familial side, that may undermine a policy's effectiveness.

This rating is based on two sub-scores: one focusing on the burden placed on administrators and one focusing on the burden placed on families. The administrative component includes a precise cost estimate, but both scores still use a qualitative high/medium/low scale, with high being most desirable.

Policy Alternatives¹⁹

It is important to note that all proposed policies include (1) the establishment of explicit diversity goals by district administrators and school leaders for each specialty program and (2) expanded outreach efforts to recruit students of color and of low-income. As previously mentioned, the specialty schools lack the explicit diversity considerations that are key to mitigating segregation. Because of this, RPS officials should work with principals to outline demographic goals and practices that can be integrated during the admissions process (and more broadly) in order to better recruit, admit, and support students of color and of low-income. These changes should be communicated to the RPS community, and schools should increase transparency about selections and about how application components are assessed and weighted in order to ensure that leaders are held accountable for meeting diversity considerations. All of the specialty schools, not just Richmond Community, should also publicly market themselves to note their specific intentions to promote equity and access across RPS.

¹⁹ The goal of this section is to provide an overarching sense of how each alternative could operate within the RPS context. The projected outcomes in this report only use the simplest version of each policy and are based on a simulated world. Thus, estimates are not intended to be exact and are just meant to broadly model the advantages and disadvantages of different admissions systems. This section is followed by a recommendation of one specific alternative, but the options can actually be designed and combined in a myriad of ways in order to increase their success.

Furthermore, regardless of their admissions systems, the specialty schools should seek to improve outreach in order to grow interest among children from historically marginalized backgrounds. This could include creating comprehensive guides that walk students through the application process, beginning recruitment efforts at earlier grade levels, inviting all eligible students to recruitment visits and presentations (instead of just those identified as academically high-achieving), integrating counselors and teachers into the outreach process, improving online branding to better communicate the unique theme of each specialty school, and partnering with community groups (e.g., religious organizations, sports leagues, tutoring services, etc.) to expand recruitment. The district could also track the demographics of applicants as their submissions come in and then increase targeted outreach in specific neighborhoods if applications among certain sub-groups are noticeably low (Siegel-Hawley, 2020).

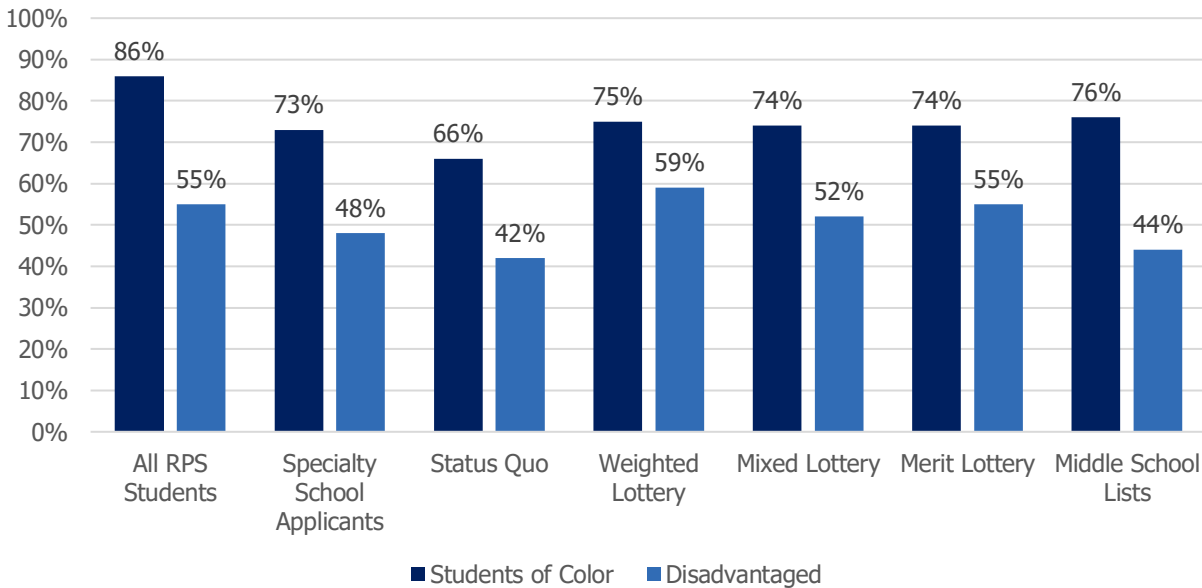
With all of this in mind, the following alternatives have been identified based on the relevant literature as potential options for RPS to implement in order to reform specialty school admissions. A description of each alternative is followed by an assessment of its efficacy based on the aforementioned evaluative criteria.

Status Quo

This option would continue the merit-based admissions system that is currently in place. At the moment, each specialty school principal has almost full autonomy over their application process and requires students to complete some combination of a transcript submission, essays, teacher recommendations, an interview, and an aptitude test in order to apply. For the SY20-21 admissions cycle, slight changes were made to establish common essay prompts and teacher recommendation forms across schools to reduce the burden on interested students. But, otherwise, the process remains quite differentiated across schools. As part of this alternative, schools could further improve accessibility by finding additional ways to standardize applications and by providing resources to students to help them prepare for essays, interviews, and tests.²⁰

²⁰ Another possible change to the status quo structure could be to first reserve a portion of seats at the specialty schools for disadvantaged students and use merit-based applications to fill those spots. Then, all other applicants, including any leftover disadvantaged students who are not admitted initially, could apply using merit-based applications for the remaining seats. This option is not explored in depth in this report but is a way to potentially increase equity while still retaining an entirely merit-based system.

Figure 6. Percentages of Specialty School Offerees of Color and of Disadvantaged Status by Alternative (VDOE 4, 2021)



- **Effectiveness:** As seen in Figure 6, the status quo perpetuates the issue of segregation in RPS. Students of color and of disadvantaged status compose only 66% and 42% of the offeree pool, respectively, which are rates significantly below their proportions among specialty school applicants and all RPS students. As a result, **the overall effectiveness score for this policy is just 54%.**
- **Political Feasibility: This policy is highly political feasible.** It does not disrupt the current situation in Richmond, which has shown remarkable durability given that merit-based systems have remained in place for the specialty schools even as they have moved locations and changed leadership frequently during their extensive histories in Richmond. There is not expected to be any new white flight under this alternative, as it preserves the specialty schools as a mechanism through which wealthy families can leave their neighborhood schools. It is also expected to be quite resilient to any proposed change in the future, as evidenced by the recent resistance from white families to rezoning attempts that forced a scaling back of efforts to integrate RPS's elementary schools (Kutner, 2019). Finally, perceived achievement for the status quo is the highest of any alternative, with an average offeree GPA of 3.75.

- **Administrative Feasibility:** While school leaders are likely to appreciate the autonomy that comes with managing the current system, the status quo process places a significant burden on teachers, principals, and administrators. As calculated in Appendix D, the time cost of interviewing and testing students, completing recommendations, reading essays, and cleaning and reviewing applications amounts to over \$32,000 per year. Given this balance of flexibility and workload, the administrative burden is given a medium sub-score.

For RPS families, the status quo earns also earns a medium sub-score, **which results in an overall rating of medium.** Differentiated application requirements across schools can be confusing and time-consuming for parents and students, especially those who may lack information often learned through social networks about how to best prepare for each component. As mentioned above, recent changes have been made to simplify this process, but this option remains taxing. The familial burden does not rate as low, though, because this process has been in place for quite some time, so its general structure is relatively well-known.

Weighted Lottery

This alternative would eliminate student achievement entirely as a factor in deciding seat allocations at the specialty schools. Instead, applicants would enter their names into computerized lotteries that would be processed by the RPS School Planning Team, similar to the way in which open enrollment applicants are randomly awarded seats at out-of-zone schools. The structure of the lottery would be based off of systems currently implemented in other major urban school districts. Due to the 2007 Supreme Court case *Parents Involved in Community Schools v. Seattle District No. 1*, school districts are restricted in their ability to use students' individual races to determine student allocation policy (Greenhouse, 2007). But magnet schools in Dallas and San Antonio have weighted their lotteries in order to give students from low-income backgrounds and those learning English additional entries (Hawkins, 2018; Learned-Miller 2, 2016). This practice is also used by CodeRVA, a regional charter school in Richmond that intentionally structures its admissions practices to promote socioeconomic integration (Siegel-Hawley, 2020). For the purposes of this analysis, RPS could give disadvantaged students and English-language learners 1.25 entries for every one that non-eligible students receive. In actuality, many districts use more nuanced formulas that involve measures such as parental education and neighborhood poverty. Some also reserve seats and run separate lotteries for low-income students—which are followed by lotteries that include all applicants—rather than just using one lottery that gives additional weight to disadvantaged students.

- Effectiveness:** The weighted lottery seems to work as intended, as it is projected that students of color make up 75% of admitted students. Disadvantaged students make up 59% of offerees, which is more socioeconomically diverse than RPS overall. **This results in an overall effectiveness score of 67%, the highest rate of any policy.** This success is largely driven by the diversification of Open and Richmond Community. Offerees to Open would be 66% non-white and 62% disadvantaged (compared to just 56% and 36% for the status quo, respectively), while those to Richmond Community would be 70% non-white and 63% disadvantaged (compared to just 52% and 32% for the status quo, respectively).
- Political Feasibility: Political feasibility for this alternative is rated as low.** Lottery admissions have been implemented with success in other states and in Richmond itself (e.g., Lowell High School in San Francisco, CodeRVA, and the recent transition of Lucille Brown IB and Thomas Jefferson IB to open enrollment). But it is doubtful that local stakeholders would be receptive to such a major overhaul of the specialty schools. RPS has yet to even implement a weighted lottery for its open enrollment system. And, while anecdotes from CodeRVA indicate that its diverse students—despite coming in with varied academic backgrounds—have found success at the magnet school (Siegel-Hawley, 2020), the perceived achievement level of admitted students under this system is the lowest among the alternatives with an average GPA of just 3.52. As a result, there are likely to be vocal concerns among parents who traditionally view educational access through a merit-based lens. For example, as is described more in later sections, Fairfax County Public Schools (FCPS) experienced significant backlash from families when it attempted to convert admissions for Thomas Jefferson High School for Science and Technology (TJHSST), a prestigious magnet school, to a system even less integrative than a weighted lottery (Satterfield, 2020). Similar protest might be enough to discourage RPS School Board members from supporting this policy change.

This alternative also has high potential for white flight, which may lead to funding decreases that further disincentive enactment. Under the status quo system, about 19% of offerees to Open and Richmond Community previously attended non-RPS schools, most of which are local private schools. Under the simulated weighted lottery system, just 13% of offerees previously attended non-RPS schools. Thus, if this change is made, it is possible that a significant number of students who otherwise would attend private middle schools but return to RPS for high school may just stay in private schools if they are not

granted seats at the specialty schools—seats that they may be awarded through a fully merit-based system.

- **Administrative Feasibility:** The administrative sub-score for this policy is a medium. The time cost is effectively \$0, since this system would not require any substantial effort to process applications on top of that already exerted for the other alternatives. However, principals may be frustrated that they lose the ability to select students for their schools, so they may be less enthusiastic about performing outreach and recruitment.

The familial sub-score is a high rating. Under this policy, students would no longer have to complete extensive applications, as they could just enter their names into the lotteries for the schools in which they are interested. From there, the School Planning Team would execute the lotteries and announce offers to families. Given how straightforward this process is for families, **the overall rating for this alternative is high**, as the diminished burden placed upon students and parents outweighs the frustrations of school leaders.

Mixed Lottery

This option merges the first two alternatives by creating two paths for students to receive admission to the specialty schools. One half of the seats would be distributed using merit-based applications, while the other half would be reserved for weighted lottery applicants who do not earn a seat based on merit. The idea of reserving seats for equity reasons is suggested by Ryan in *Five Miles Away, A World Apart* (2010), and it has recently been implemented in some of New York City's elementary and middle schools (NYC Department of Education, 2020). No full-scale analysis of the New York schools has been performed yet, but initial diversity results are encouraging, nonetheless, and the option to reserve seats was expanded from just seven pilot schools to all interested schools across the city (Saxena, 2016).

It should be noted that there are potential concerns with the internal mixing of students who are accepted through different mechanisms.²¹ While school-wide demographics may be diverse, it is possible that students accepted via merit-based applications are tracked into separate classes and social groups from those accepted via a weighted lottery. This issue is part of the reason for why Lucille Brown IB and Thomas Jefferson IB switched to open enrollment this year—instead of having portions of students

²¹ Internal segregation is an issue for all of the alternatives and is discussed in the implementation section because of its potential to undermine school-level integration. But it is only mentioned in this portion of the analysis for the mixed lottery because it is of particular concern for this option given that the other alternatives just use one pathway to admit students.

selected through applications—as there were struggles with creating cohesive student bodies (RPS 2, 2020). Therefore, if this policy is implemented, the path through which each student is selected should not be disclosed, and all students, regardless of how they are chosen, should have access to the same high-level courses and extracurriculars.

- **Effectiveness:** Using multiple admissions streams is moderately effective. Students of color make up 74% of offerees, while disadvantaged students compose 52% of admitted students. **This combines to an overall effectiveness score of 63%.** Though this alternative is nearly as successful as the weighted lottery is in racially diversifying Open and Richmond Community, it is less successful in promoting socioeconomic diversity given that only 44% of offerees to Open are disadvantaged under this policy.
- **Political Feasibility:** Given that this policy integrates components from the first two alternatives, **its political feasibility is scored as a medium.** Perceived achievement sits in-between that of the status quo and weighted lottery with an average offeree GPA of 3.63. This may lead to arguments about the devaluation of the specialty schools, but merit equity concerns are limited because the district's highest-achieving students would still be admitted under this system. Evidence from New York City also demonstrates that this option can be adopted at scale in a major urban school district, albeit with some pushback (Hu, 2018).
- **Administrative Feasibility:** The administrative score for this option is quite low. Not only do school leaders still have the roughly \$33,000 annual time cost required to collect, process, and review applications, but they also lose some autonomy over student selection. Furthermore, this policy has a potential for internal segregation that other alternatives do not, given the separate streams through which students are admitted. Because of this, an additional responsibility is placed on administrators to ensure that tracking does not undermine diversity and equity efforts and disrupt school unification.

The familial score is also low. Students still have to complete a wide range of application components and now also have the additional burden of navigating a new system. Some students may be confused about whether they need to submit a full application in order to be eligible for the lottery component of this process, which could lead to incomplete entries. **Thus, overall administrative feasibility for this option is low.**

Merit Lottery

This idea combines aspects of the first two options in a different way by using an achievement metric such as GPA to establish a cutoff point above which students can enter into a weighted lottery. It is based off of a proposed change to the admissions process for TJHSST, which recommended transitioning from a merit-based application system to a lottery for all interested students with GPAs above 3.50 (FCPS, 2020). Additionally, some New York City magnet high schools shifted to using merit lotteries during the pandemic (Adams, 2021). The TJHSST proposal was ultimately unsuccessful and results from New York have yet to be examined, but this policy is a potential pathway to increasing equity while avoiding some of the political pushback that is more likely to result from a standard weighted lottery.

For this report, the top two-thirds of applicants to each specialty school, based on artificial GPA, are entered into lotteries.²² In reality, RPS would likely use a GPA cutoff point, like TJHSST considered, based on actual student achievement data and could also implement a system through which students who are right at the cutoff could appeal to teachers and counselors to get approval to apply.

- **Effectiveness: The merit lottery is the second-most effective alternative, as it scores a 65% on this criterion.** Students of color and disadvantaged students make up 74% and 55% of admitted students, respectively, using this admissions system. This policy is slightly less effective than is the mixed lottery in improving socioeconomic diversity at Richmond Community, as just 55% of admitted students are disadvantaged (compared to 57% for the mixed lottery). But it is much more successful in increasing the proportion of disadvantaged students at Open, as 56% of Open offerees are disadvantaged, which is the second-highest rate after the weighted lottery.
- **Political Feasibility:** As alluded to earlier, a version of this policy was initially proposed by FCPS officials for TJHSST before it was canceled amidst intense pushback from families. **Political feasibility for this alternative is still rated as a medium, though.** Concerns about white flight under a lottery system persist, but the incorporation of merit makes these worries less significant than those for the weighted lottery. The average GPA of admitted students in the

²² This approach is used because a reasonable GPA cutoff point is unable to be identified for this alternative. Since actual student GPA data were inaccessible, the artificial GPA distribution that is created for this analysis is not necessarily reflective of the actual distribution of students' GPAs. Therefore, rather than pick a cutoff point that may not be a reasonable cutoff point that RPS might consider in practice, the top two-thirds of applicants to each specialty school are entered into lotteries. This is done to create a pool of applicants that is condensed enough to screen out students with poor academic metrics yet inclusive enough to potentially diversify the group of offerees.

simulation is 3.65, which is third-highest among the options, so it is possible to establish an achievement cutoff point where diversity is improved without sacrificing the perceived aptitude of offerees too greatly.

In addition, during the TJHSST debate, the merit lottery proposal was publicly supported by a broad coalition, including the Fairfax County NAACP. Supporters especially appreciated how the policy would increase equity while also decreasing the emotional stress placed on students, as using a cutoff and the element of chance would prevent offers from being a subjective “referendum on a child’s self-worth” (Satterfield, 2020). Therefore, this alternative has the potential to attract a similar range of advocates who could learn from the events surrounding TJHSST in order to achieve enactment.

- **Administrative Feasibility:** Similar to the weighted lottery, this policy would save teachers, principals, and district administrators significant time. The process requires only a simple lottery, and the screening of entrants is not intensive as RPS already has the necessary student achievement data in place. Though principals lose some autonomy over who is selected, they still have the ability to work together to establish achievement cutoff points that they feel reasonably increase diversity without compromising the perceived academic strength of admitted students too much. In addition, this system alleviates the pressure placed on administrators by the status quo to determine exactly which students are most-deserving of admission. Instead, administrators just have to identify a cutoff point above which students are likely to be “good enough” to succeed at their schools. The lottery, then, accounts for hidden factors such as luck, bias, and unequal life circumstances that complicate the assessment of a student’s true merit, while still ensuring that offerees are prepared for the academic challenge of specialty school attendance (Lei, 2020).

It is possible that each school will require a different cutoff point to meet this goal, depending on the overall demographics and achievement of each’s applicants. If these differentiated cutoff points are publicized, this could lead to a formalized “tiering” of the schools, which may be a concern for the district. Still, the administrative sub-score for this alternative is high, as practices can be put in place to avoid this outcome.

The burden on families under this option would also greatly be reduced, given that students would no longer have to complete time-intensive applications. There is some worry that the academic records of students right at the cutoff

line might be subject to manipulation. But processes can be established to enable students close to but below the minimum achievement level to still be entered into the lottery if they have the support of teachers and counselors in order to reduce the pressure that families might feel to improperly game the system. **As a result, both the familial and overall score are high.**

Middle School Lists

This policy is similar to that which was eventually implemented for TJHSST. It would involve dividing up the number of available seats at each specialty school according to the populations of the RPS middle schools and then creating lists of students to fill each group of seats based on zone middle school (i.e., the middle school that a student is assigned to attend based on their residential address). To determine the lists, school officials could require applicants to complete the essays, interviews, tests, etc. that are in place now and then could review applications using a traditional merit-based lens. To project outcomes for the purpose of the analysis, GPA is used to approximate which students from each middle school would make the list, with the highest-achieving students given first priority.

For SY19-20, 59% of admitted students to Open and Richmond Community previously attended either Albert Hill Middle School, Binford Middle School, or a non-RPS private school (RPS 3, 2020). Thus, the goal of this policy is to increase the representation of students from RPS's other six middle school programs, which tend to have greater proportions of students of color and of low-income than do Albert Hill and Binford. This alternative also results in students competing for spots with others from their own middle schools, instead of with peers from all across RPS, in order to standardize comparisons across applicants and to mitigate the effect of neighborhood poverty and school quality on the relative strengths of students' applications.

- **Effectiveness: This policy is relatively ineffective, as its effectiveness score is just 60%.** Though it has the highest racial effectiveness score of any policy at 76%, its socioeconomic effectiveness score is only 44%. Disadvantaged students make up 50% of offerees to FMA, which is a rate lower than that of the status quo (57%). This is likely because FMA already draws many of its students from low-income areas, so requiring the school to admit more students from higher-income schools results in less socioeconomic equity.
- **Political Feasibility:** This policy mostly keeps the status quo merit-based system intact. There may be some pushback and departure from families who lose out on seats to others from their zone middle schools, but these are expected to be limited as the students perceived to be the highest-achieving

from each school would still receive admission (as evidenced by the average GPA of 3.68 for offerees under this policy). If anything, there may be complaints from parents of color and of low-income whose children do not get offers to FMA that they might receive if the middle school quotas are not in place.

Anecdotes to support a high rating again come from TJHSST and New York City. While FCPS continued to receive complaints (including a series of lawsuits) even after it altered its proposal to use middle school lists instead of a merit lottery, the district still approved changes to its admissions system (Natanson, 2020). Similarly, after a proposal involving middle school lists was announced to reform admissions at some of New York City's most prestigious magnet programs, hundreds of students and parents marched on the Brooklyn Bridge in protest (Manskar, 2018). This did not deter school officials from moving forward with the policy, however. As a result, while there is expected to be more pushback with this option than there would be for the status quo, **its political feasibility remains quite high.**

- **Administrative Feasibility:** This policy maintains the burdensome application process that is required as part of the status quo, but it also restricts principal autonomy slightly. Rather than being able to freely select students from all across the district, school leaders would potentially face difficult decisions while attempting to adhere to middle school quotas. Because of this and the \$33,000 time cost, the administrative sub-score is low.

The familial sub-score is also rated as low. Families would still be required to navigate application components, and there is an additional concern that the quota structure based on students' zone schools may be confusing for individuals who either did not previously attend an RPS school or who used open enrollment to transfer to a middle school other than that located in their neighborhood zone. This policy could also result in some manipulation on the part of families who might try to gain an advantage by falsely claiming residency in areas of Richmond in which they do not actually live. This might be done if parents feel that their children will be more competitive for seats allocated to middle schools with less-esteemed academic reputations. Finally, this alternative might place an added pressure on students. Rather than encouraging applicants to compete with their peers from throughout the district, who are largely unknown to an applicant, this option might result in more direct competition among students at the same schools, which can be emotionally burdensome. With all of this in mind, **the overall administrative feasibility rating for this policy is low.**

Outcomes Matrix

Alternative	Effectiveness		Political Feasibility		Administrative Feasibility		
Status Quo	Students of color: 66%	54%	Average GPA: 3.75	High	Cost: \$32,701	Administrative score: medium	Medium
	Disadvantaged: 42%				Familial score: medium		
Weighted Lottery	Students of color: 75%	67%	Average GPA: 3.52	Low	Cost: \$0	Administrative score: medium	High
	Disadvantaged: 59%				Familial score: high		
Mixed Lottery	Students of color: 74%	63%	Average GPA: 3.63	Medium	Cost: \$32,701	Administrative score: low	Low
	Disadvantaged: 52%				Familial score: low		
Merit Lottery	Students of color: 74%	65%	Average GPA: 3.65	Medium	Cost: \$0	Administrative score: high	High
	Disadvantaged: 55%				Familial score: high		
Middle School Lists	Students of color: 76%	60%	Average GPA: 3.68	High	Cost: \$32,701	Administrative score: low	Low
	Disadvantaged: 44%				Familial score: low		

Recommendation

Based on the analysis summarized in the outcomes matrix, it is recommended that RPS convert its specialty school admissions system to a merit lottery. There generally appears to be a tradeoff between a policy's effectiveness and its political feasibility, as alternatives that are the most integrative are also the most likely to spur backlash. The merit lottery, though, strikes a critical balance between these two criteria. It has potential to greatly increase the rate at which students of color and of disadvantaged status are admitted to the specialty schools without undermining the perceived achievement level of offerees too strongly. While a weighted lottery with no merit considerations best improves equity and would be proposed in an ideal world, such a strong overhaul of the admissions system is unlikely to be approved in the current Richmond political climate. It is hoped that in the long-run, effectiveness and political feasibility will go hand-in-hand as more families realize the benefits of integration and as more voices of color and of low-income are incorporated into policy discussions. For the time being, however, the merit lottery best aligns magnet schools with their original purpose of integration while still being mindful of the current view among RPS families of how the specialty schools should function.

Furthermore, though the failed merit lottery proposal in FCPS is a concern, the demographics of TJHSST are noticeably different from those of RPS's specialty schools. A significant portion of the pushback against the proposal was centered on the argument that it is discriminatory against Asian-Americans, since TJHSST's population has historically been around 70% Asian (Fox, 2021). But a similar argument is not particularly relevant to Richmond, given that an overrepresentation of white students, not students from a minority group, is the key issue.

What can be drawn from the TJHSST narrative, though, is the broad political support that the merit lottery attracted. For example, the policy was commended by advocacy groups for the way it would encourage applications from high-achieving students without grounding their identities in whether or not they got in (Satterfield, 2020). It also reduces the pressure placed on principals to assess students' true merit by acknowledging the difficulty of such an evaluation, while still creating offeree pools that are prepared for the academic challenge of specialty school attendance. Rather than trying to determine the impact of unseen factors such as luck or bias on how deserving each student is of admission, principals would only have to set achievement levels above which applicants are likely to succeed at their schools (Lei, 2020). Thus, this policy would not only improve equity and diversity, but it would also mitigate the strain that a competitive educational culture can place on students and school leaders.

Finally, while the other alternatives had important implementation concerns, the merit lottery scored most highly on the administrative feasibility criterion. It significantly reduces the time cost placed on both administrators and families by the status quo system, mixed lottery, and middle school lists, while also preserving some principal autonomy during the establishment of cutoff points. There are also policy design elements that can be integrated in order to limit minor implementation issues that may arise. For example, in order to avoid formally creating a “tiered” ranking of the specialty schools, RPS should utilize the same cutoff point for all schools. Or, to better adjust to the relative academic strengths of each school’s applicant pool, rather than setting a GPA or test score minimum, it could enter students above a certain percentile in one of those achievement metrics into lotteries, as is done for the simulation of this policy in this report. Additionally, if minimum cutoff points are used, processes can be put in place to allow students below the cutoffs to appeal and get support from teachers and counselors that enables them to still enter into the lotteries. That way, exceptionally-talented and highly-interested students whose abilities may not be reflected by traditional achievement measures can still earn offers to the specialty schools without feeling pressure to “game the system” in order to be eligible.

Implementation Considerations

This section details key considerations for the implementation of the merit lottery. It covers policy structure, approval, and promotion, as well as tangential steps related to internal segregation and funding that RPS should take to improve this option’s success.

In addition to the policy design elements mentioned above, other aspects of the merit lottery can be adjusted to improve its efficacy. This is another opportunity for RPS to adopt practices implemented successfully in other urban school districts. For example, RPS could employ a more sophisticated weighting system as part of its lottery in order to better target students who would benefit the most from the opportunities available at the specialty schools. Magnet schools in San Antonio go beyond using just disadvantaged and English-language-learning statuses, as they incorporate parental education, single-parent household status, neighborhood poverty, and the performance of students’ previous schools to create a more holistic method of identifying student need (Hawkins, 2018). Using this composite index, these schools reserve seats and run separate lotteries for high-need students, before running lotteries that include all students to fill any remaining spots. RPS could either use this multiple-lottery system or just run one lottery with additional entries given to high-need students, as is done in this report.

Additionally, the merit lottery’s general structure could be combined with features from other alternatives, such as the geographical focus of the middle school lists. In Chicago

Public Schools, students who live close to a magnet school are weighted favorably in seat allocation, provided that the neighborhoods surrounding a school are racially and socioeconomically diverse (Quick, 2016). By integrating this detail, RPS could improve equity at Richmond Community, which is located in a low-to-middle-income area but struggles with enrolling disadvantaged students, without prioritizing wealthier Richmond residents who live near Open.

Regardless of exact policy design, a merit lottery proposal would be presented to and likely require the approval of the RPS School Board. It is hoped that the strong effectiveness and administrative feasibility of this alternative are enough to facilitate approval. But it is possible that there is backlash from families who oppose transitioning away from an entirely merit-based admissions system. To mitigate this protest, RPS should uplift voices of color and of low-income during policy deliberations in order to rally support for this change. Administrators should also emphasize the benefits of integration for all students, no matter their races. **If these actions are not enough to push this policy forward, RPS must eventually grapple with the purpose of the specialty schools and determine whether it prioritizes diversity and equity over the concerns of select families in Richmond.**

From there, implementation would be spearheaded by the School Planning Team within the Schools Office. Staff members would partner with SchoolMint, which manages the SmartChoice platform used to process specialty school applications, to run the merit lottery. They would also need to work with the specialty school principals to ensure that they understand exactly how this new system works and to design a robust outreach plan in coordination with the Engagement Office that includes a comprehensive application guide, widespread recruitment efforts, and online marketing about the benefits of specialty school attendance. This is critical because the success of this policy depends on high numbers of applications from students from diverse backgrounds.

Another major consideration for implementation is internal segregation. While integration within schools is primarily a concern for the mixed lottery due to its use of multiple admissions streams, it remains a potential worry for the merit lottery as well. Focus must be placed not just on the overall diversity numbers of the specialty schools but on students' actual lived experiences. For example, Genevieve Siegel-Hawley's *A Single Garment: Creating Intentionally Diverse Schools That Benefit All Children* explores strategies to help schools promote racial and socioeconomic integration within classrooms (2020). These include hiring diverse leaders and teachers committed to equity and inclusion, providing students with opportunities to collaborate with peers from different backgrounds, eliminating ability grouping that tracks marginalized students into lower-level courses, and confronting racially-biased disciplinary practices.

Finally, RPS should invest additional resources into opportunities and themes at all schools across the district so that the specialty schools are not the only schools considered to be “special.” Doing so might alleviate white flight among families who do not get seats at FMA, Open, or Richmond Community, since the option to attend their zone high schools would not seem as undesirable. This would also mitigate admissions gaps that currently exist by tackling achievement disparities between low- and high-income families at earlier ages. RPS leaders could support greater investment through the pursuit of federal grants that reward school systems that intentionally promote integration. For instance, RPS should seek to follow in the footsteps of CodeRVA by applying for the Magnet School Assistance Program. Through this initiative, CodeRVA is expected to receive nearly \$6 million over four years from the federal government to support diversity efforts (U.S. Department of Education, 2019). To qualify, however, **RPS must align itself with other urban districts that have committed to structuring their magnet schools in order to break the cycle of segregation.**

Open Enrollment Analysis

Open enrollment systems can be used to promote integration, but, like magnet programs, they must have explicit diversity considerations in order to avoid functioning as a means for students to self-segregate. Unfortunately, these considerations are not in place within RPS's open enrollment process. As a result, a significant portion of open enrollment participants in SY19-20 were white, advantaged elementary students who transferred back to their previous schools in order to reverse the effects of the 2019 rezoning efforts (RPS 3, 2020). More specifically, as discussed in the background section, many students from William Fox who had been rezoned to John Cary used open enrollment to reenroll at William Fox. This limited the ability of low-income students from other parts of RPS to obtain seats at William Fox, which is one of the district's higher-performing elementary schools (The Education Trust, 2018).

RPS must make several reforms to open enrollment so that this policy can work as intended. As is the case with the specialty schools, leaders must grapple with, define, and publicize the purpose of this program, which is currently ambiguous on the district's website (RPS 1, 2021). Determining the optimal utilization of open enrollment, like any school choice mechanism, is admittedly difficult, since ideally all RPS schools would already be diverse and high-performing, so no students would feel the need to transfer. But given that this is not the district's reality, RPS should be stronger in its use of open enrollment as an integrative tool.

The first step in this is weighting the lottery used to allocate seats. A weighting system similar to that recommended for the specialty school merit lottery could be used, with prioritization based on some combination of disadvantaged status, English-language-learning status, parental education, single-parent household status, neighborhood poverty, and the performance of students' zone schools. For example, using a composite of these factors, students could be grouped into tiers, with students from the least-advantaged tier getting first pick of schools to transfer to. Or, as is done for the specialty school simulations in this report, students from marginalized backgrounds could be given additional entries in one lottery that includes students from all tiers.

Additionally, RPS could adopt a policy used in one Massachusetts school district that restricts "segregative" transfers, which are those that "would exacerbate racial imbalance in the sending or receiving school" (Hilbert, 2018). These changes would prevent white students from transferring to already predominantly white schools and would ensure that available spots at well-funded, high-performing schools are given to students who would benefit from them the most. While a segregative transfer

restriction is not widely used and might elicit some pushback, the academic literature and case studies from other districts make it clear that weighting the lottery is a key aspect in integrating open enrollment. This step has actually been proposed by Superintendent Jason Kamras in previous years (Mattingly 1, 2019), so RPS should follow through on this proposal and implement a weighted lottery for the next open enrollment cycle.

Outreach is a second area that must be improved for open enrollment. Both James Ryan (2010) and Genevieve Siegel-Hawley (2021) in their books *Five Miles Away, A World Apart* and *A Single Garment*, respectively, comment on the information disparities that exist in this policy space. Both authors note that wealthier families in Richmond—via social networks—tend to have greater knowledge of the potential benefits of transferring schools and of how to navigate the open enrollment application process. Ryan also describes an informal transfer approach used by mostly white families to circumvent the official lottery system and receive spots that involves directly appealing to RPS principals. To address these issues, RPS must crackdown on illegitimate transfer approvals and adopt a comprehensive outreach plan. Many outreach elements can overlap with those used for specialty school outreach, as the district should include open enrollment in a detailed application guide, partner with community groups to share information, and encourage principals to market the unique strengths of their respective schools. RPS could also expand the number of open enrollment applications that families can submit beyond the current limit of three and publish historic seat availability at its schools. These changes would help parents make more informed decisions for their children and increase the odds that disadvantaged students apply to and receive spots at schools that better meet their needs.

Furthermore, RPS should continue investing financially in themes in order to support the open enrollment process. Expanding resources at all schools is important because specialized curricula facilitate integrative movement throughout a district. That way, not only can open enrollment support disadvantaged students seeking greater educational opportunities, but it can also encourage wealthier families to transfer to schools with unique themes in low-income neighborhoods. In his 2018-2023 strategic plan, Superintendent Kamras set a goal of establishing a theme (e.g., arts, technology, law and social justice, etc.) at every RPS middle and high school. While STEM academies have been founded at two middle schools, the development of other programs has been slow-moving. Thus, as RPS plans for a return to in-person class, it should look for opportunities to redesign and fund specialized curricula throughout the district.

Finally, financial investment can promote integration through the provision of transportation for open enrollment participants. In 2007, RPS made the decision to cancel bus service for students attending out-of-zone schools. Families now have to provide their own transportation, which can limit the ability of low-income families to take advantage of open enrollment, since it may be more difficult for these parents to find the means and time to drop off and pick up their children at faraway schools (Ryan, 2010). While this decision was made for cost reasons, it goes against the guidance of the academic literature. Numerous case studies in other districts have demonstrated that transportation is key to ensuring that open enrollment does not exacerbate segregation. Cost concerns remain relevant today amidst perpetual budget constraints, but it is worth discussing the possible implementation of a hub-based transportation system for open enrollment, similar to that used by FMA and Richmond Community. Under this program, buses travel to hubs, such as elementary schools, community centers, and libraries to pick up students. Because parents are responsible for getting their children to the hubs, this policy serves as a middle-ground solution between picking up students in their neighborhoods and not providing transportation at all. Hub transportation still requires significant financial resources that RPS might feel are better invested elsewhere in the immediate future. But the district's long-term plans should attempt to incorporate transportation in some form so that more disadvantaged students can use open enrollment as a tool for equity and integration.

Conclusion

As RPS moves forward into a post-pandemic world, it has an opportunity to reshape the classroom spaces that its students return to. Overcoming school segregation can seem like a daunting task, but many other districts have paved the path for the Kamras administration to follow as it pursues integration in its second term. With this guidance, RPS leaders must grapple with the purpose of the specialty schools and open enrollment, implement admissions practices that increase equity and access, and engage and uplift communities of color and of low-income throughout Richmond. These steps are crucial to unlocking the robust academic and social-emotional benefits that school integration generates for all students.

That being said, specialty school admissions and open enrollment are just two pieces of a larger ecosystem in Richmond that has perpetuated segregation. RPS should explore longer-term solutions to promote integration that go beyond even what most model school systems have done. Within the district, leaders should consider relocating the specialty schools to—or perhaps creating new ones in—areas of the city with growing minority and low-income populations. In addition, the next rezoning attempt should go even further in diversifying schools, with serious consideration being given to the controlled choice plan proposed by School Board member Jonathan Young during the 2019 process (Domingo, 2019). While transportation costs under this system would grow significantly, this policy option most effectively breaks the link between housing and school segregation. Under this plan, RPS would have tremendous control of the demographics of its schools, as it could experiment with different lottery designs in order to achieve optimal levels of integration.²³

Beyond Richmond's city limits, RPS could seek to partner with surrounding districts in order to promote regional integration. Open enrollment could be extended to Chesterfield and Henrico counties so that Richmond children could attend underfilled schools in the suburbs. And new schools modeled after CodeRVA could be created to bring diverse populations from across the entire Richmond region together. If leaders are wary about the potential proliferation of charter schools that such a move could produce, attention could focus instead on the Governor's schools, which are also

²³ For example, a controlled choice plan could be structured that still preserves some of the connection between housing and school assignments. RPS could eliminate standard attendance zones but divide Richmond into mega-zones and then have families rank schools within their mega-zones. Or, no zones could be used but lotteries for each school could give additional weight to students who live in surrounding neighborhoods. That way, choice is expanded but some consideration of families' housing decisions is incorporated.

regional magnet schools but are under the jurisdiction of district leaders. In a recent state budget, Virginia Governor Ralph Northam included language that requires Governor's schools to begin setting diversity goals and to at least consider admissions processes that promote access for students from marginalized backgrounds (Mendes & Duncombe, 2020). Thus, RPS should follow the lead of TJHSST in Northern Virginia and begin overhauling the way that students are admitted to Appomattox Regional Governor's School and Maggie L. Walker Governor's School.

Finally, the disruption of housing segregation and continued investment into innovative curricula at all schools are critical. The choice mechanisms discussed in this report are important options that should be implemented and sufficiently funded in order to encourage integrative movement throughout RPS for the time being. But they are limited in scope and should be accompanied by a political and financial commitment to an ideal long-run world in which choice is unnecessary because every student is already able to receive a diverse, well-resourced education no matter where they live and are zoned to go to school.

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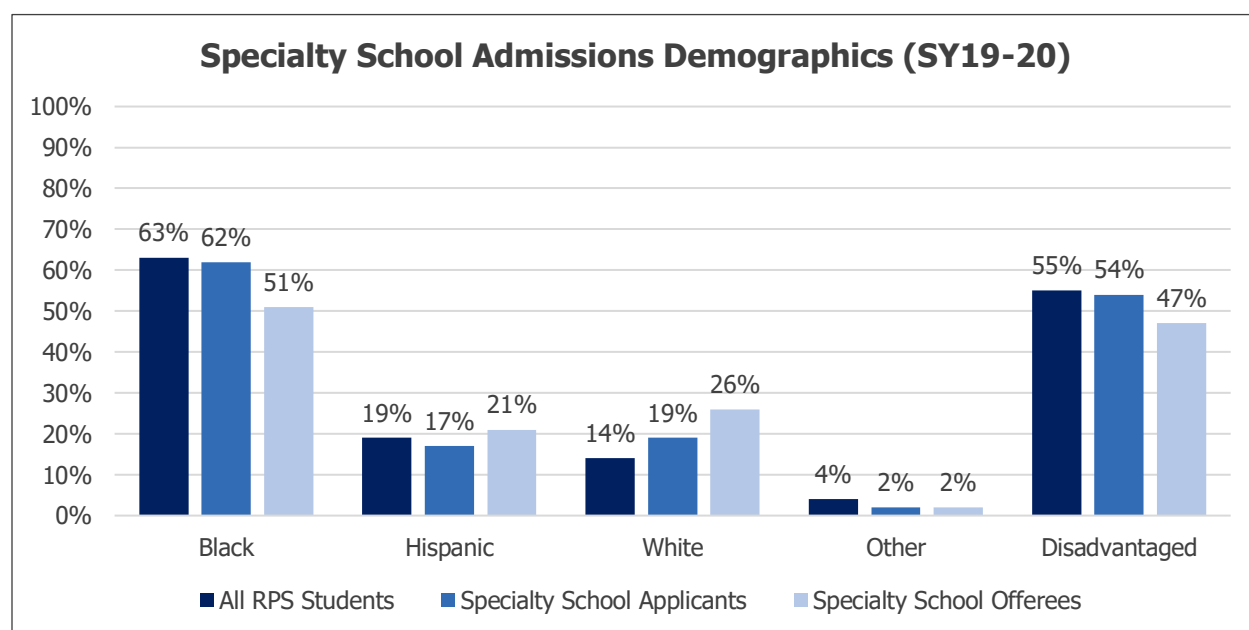
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Appendices

Appendix A: Specialty and Governor's School Admissions Demographics

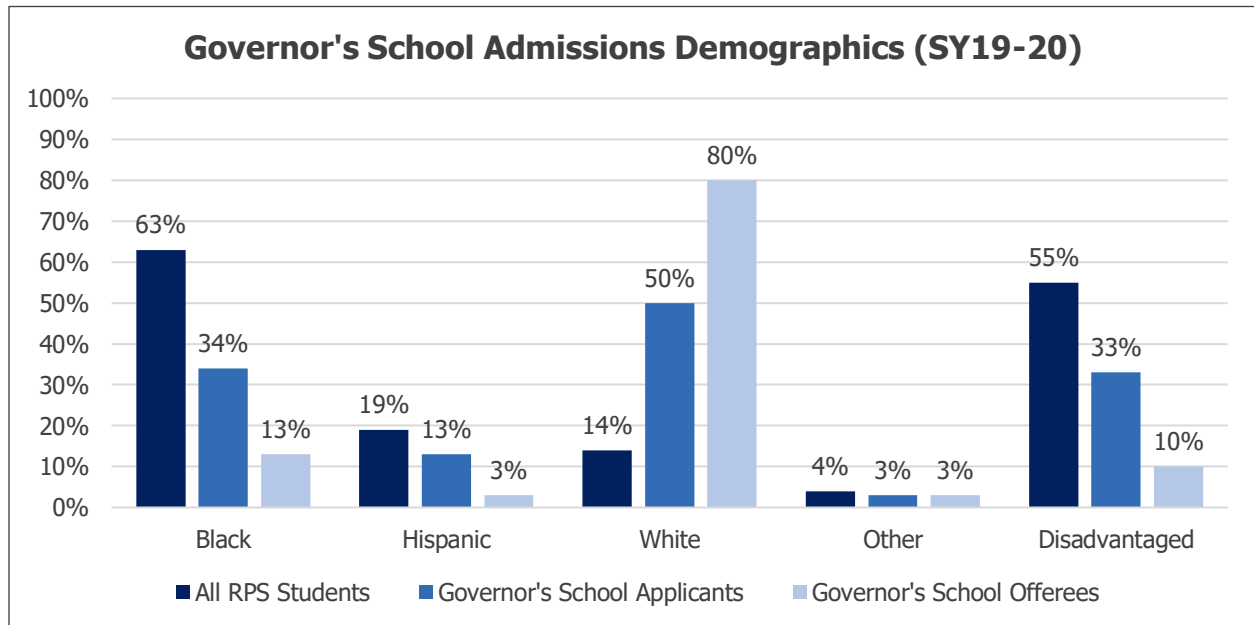
The following graphs are taken from an October 2020 School Board presentation (RPS 2). They display demographic information for students who applied to and were accepted at specialty and Governor's schools in Richmond during the 2019-2020 application cycle. For SY19-20, there were 25,212 students in RPS. In total, 844 of them applied to at least one specialty school, with 485 students receiving offers.^{24,25}



²⁴ This graph incorporates data from students who applied to Lucille Brown IB and Thomas Jefferson IB. Their data are included in the figure since they used merit-based applications—like the other specialty programs did—in SY19-20. But they are not the focus of this report because they altered their selection processes in SY20-21 to implement open enrollment lotteries.

²⁵ Applicants could only be associated with one race or ethnicity. Students who identified as Hispanic in the specialty school applicant portal are considered to be Hispanic for analytical purposes, even if they also noted that they were a member of a particular racial group (e.g., Black, white, etc.). Any students who identified as American Indian/Alaska Native, Asian, or Native Hawaiian/Pacific Islander are included in the "Other" category.

Meanwhile, 251 students applied to the Governor's schools (Appomattox Regional Governor's School and Maggie L. Walker Governor's School), with 71 students receiving offers.



Appendix B: Effectiveness Methodology

In order to estimate the specialty school offeree demographics generated by each alternative, data from the SY19-20 admissions process are cleaned and analyzed using Microsoft Excel and Stata. These data, which are the basis for the graphs in Appendix A, contain background information about each specialty school applicant from RPS's student database, as well as records of their applications, offers, and enrollment decisions obtained through the specialty school application portal. For the purposes of this report, only rising ninth graders who applied to FMA, Open, and/or Richmond Community are included, which results in 434 applicants. Additionally, for reference, in SY19-20, FMA admitted 64 ninth-graders, Open admitted 96 ninth-graders, and Richmond Community admitted 116 ninth-graders. These numbers are used to determine the number of "seats" available at each school.

To project outcomes, these applications are processed using the different policy options, and then the proportions of students of color and of disadvantaged status are calculated. Access to student achievement data (e.g., GPAs or standardized test scores) was unfortunately not granted, so for the solutions that incorporate this information into their selection mechanisms (i.e., mixed lottery, merit lottery, and middle school lists), an alternate approach is adopted. This approach was recommended by Andrew Bishop (2021), a School Planning Specialist with RPS's School Planning Team.

A simulated world is created by randomly assigning all students in the dataset a base GPA between 2.50 and 4.00. In order to reflect the actual achievement of students and to preserve the correlations among race, socioeconomic status, and achievement observed in the actual results, students who received admission to a particular school are given 0.50-point bumps to their base GPAs, while those who were waitlisted are given 0.30-point bumps to their base GPAs. For example, if a student had a base GPA of 3.10 and received admission to Open, their Open GPA is increased to 3.60. Using this process, students are assigned GPAs for each of the specialty schools to which they applied, along with an overall specialty school GPA that is given the aforementioned 0.50-point bump if a student received an offer from any specialty school or a 0.30-point bump if a student was waitlisted at one or more schools but did not receive any offers.

With these GPAs, simulations are then run to model the effect of each alternative on offeree demographics. More specific descriptions of how each alternative is simulated are detailed below.

Status Quo

While the original dataset yields the demographics of the students who actually were admitted to the specialty schools in SY19-20, these numbers are not used. Instead, in order to standardized comparisons across alternatives, a new status quo process is run using the simulated GPAs. Essentially, the top applicants to each school, based on the

artificial GPAs, are given offers. For instance, for FMA, students are sorted by GPA and the top 64 students are then admitted. As can be seen in the tables below, using the GPA-bump process to reflect actual admissions results leads to a reasonable approximation of the status quo demographics that occurred in reality, thus validating the practicality of this approach.

Weighted Lottery

As mentioned in the description of this alternative, the weighted lottery modeled for this analysis gives students who are disadvantaged and/or English-language learners 1.25 entries for every one granted to non-eligible students. To reflect this weighting, non-eligible applicants are randomly assigned a number between 0 and 100, while eligible applicants are randomly assigned a number between 0 and 125. Then, students are sorted by their randomly-assigned numbers, and the applicants with the highest numbers are given offers. So, for Open, the 96 students with the highest randomly-assigned numbers are admitted. This practice of using randomly-assigned numbers to distribute offers is based off of the system used to admit students to San Antonio Independent School District's choice schools (2021).

Mixed Lottery

This alternative combines the approaches of the first two options. First, applicants to each school are sorted by artificial GPA, and 50% of the seats at each school are assigned to the students with the highest GPAs. Second, the remaining students who are not selected initially are randomly assigned numbers using the same weighting employed for the weighted lottery. The other 50% of seats are then given to the applicants with the highest randomly-assigned numbers.

Merit Lottery

For this system, students are sorted by artificial GPA. Next, the top two-thirds of applicants to each school, based on GPA, are entered into a lottery and randomly assigned numbers based on the weighting described above. The students with the highest numbers are then given offers.

Middle School Lists

The number of seats available at each specialty school is first divided according to the relative populations of each RPS middle school. For this distribution, enrollment numbers from SY19-20, rather than those from the current school year, are used because RPS opened up a new middle school in SY20-21. Furthermore, while FMA and Richmond Alternative School serve middle school students in RPS, they do not have any zone students (i.e., students assigned to a school based on their residential addresses), so they are not included. The number of seats for each specialty program available to students at each school can be seen below.

	Total	Albert Hill	Binford	Elkhardt-Thompson	Lucille Brown	M.L. King Jr.	T.C. Boushall	T.H. Henderson
SY19-20 Enrollment	4522	519	454	883	848	631	805	382
Proportion of Seats	--	11%	10%	20%	19%	14%	18%	8%
FMA	64	7	6	13	12	10	11	5
Open	96	11	10	19	18	13	17	8
Richmond Community	116	13	12	23	22	16	21	10

Students are then grouped according to their zone middle schools and are ranked by artificial GPA. Afterwards, the top students from each zone middle school are given offers. If a school has fewer applicants than allotted seats (e.g., if a middle school is allotted 13 seats to Richmond Community but only has 11 applicants), then any unused seats are offered to the remaining applicants from any middle school with the highest GPAs.

One consideration to keep in mind with this alternative is that 64 students in the dataset either do not have an address in the RPS student database or are not listed in the database at all. Because of this, zone schools for these applicants cannot be identified. So, they are automatically ruled out from consideration for initial offers and only receive seats if they are competitive for any unused spots based on their GPAs. These students, who mostly attended private middle schools in Richmond, tend to be white and non-disadvantaged. Therefore, because some of these applicants would likely receive spots based on their GPAs if they had zone schools in the system, the projected demographics for this alternative are likely to be more diverse than those that would occur in practice.

Results

All Specialty Schools							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Black	58%	49%	51%	60%	57%	57%	59%
Hispanic	13%	12%	12%	14%	15%	15%	15%
Other	2%	3%	3%	1%	2%	2%	2%
<i>Students of Color</i>	73%	64%	66%	75%	74%	74%	76%
White	28%	36%	34%	25%	26%	26%	24%
<i>Disadvantaged</i>	48%	41%	42%	59%	52%	55%	44%
Non-disadvantaged	52%	59%	58%	41%	48%	45%	56%

Franklin Military Academy							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Black	82%	77%	77%	88%	78%	76%	76%
Hispanic	9%	14%	14%	8%	14%	14%	14%
Other	1%	2%	2%	0%	2%	2%	2%
<i>Students of Color</i>	92%	93%	93%	96%	94%	92%	92%
White	8%	8%	8%	5%	6%	8%	8%
<i>Disadvantaged</i>	58%	53%	57%	60%	61%	60%	50%
Non-disadvantaged	42%	47%	43%	40%	39%	40%	50%

Open High School							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Black	48%	34%	35%	44%	46%	47%	43%
Hispanic	15%	18%	18%	20%	19%	14%	19%
Other	2%	3%	3%	2%	0%	2%	3%
<i>Students of Color</i>	65%	55%	56%	66%	65%	63%	65%
White	35%	45%	44%	34%	35%	37%	32%
<i>Disadvantaged</i>	45%	36%	36%	62%	44%	56%	40%
Non-disadvantaged	54%	64%	64%	38%	56%	44%	60%

Richmond Community High School							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Black	58%	38%	42%	53%	53%	54%	54%
Hispanic	12%	7%	6%	16%	13%	15%	14%
Other	2%	5%	4%	1%	3%	4%	3%
<i>Students of Color</i>	72%	50%	52%	70%	69%	73%	71%
White	28%	50%	47%	29%	31%	27%	29%
<i>Disadvantaged</i>	47%	30%	32%	63%	57%	55%	41%
Non-disadvantaged	53%	70%	68%	37%	43%	45%	59%

Appendix C: Political Feasibility Methodology

To estimate the perceived achievement level of admitted students under each alternative, the simulated GPAs created through the process explained in Appendix B are used. For each policy option, the GPAs of offerees for each school are averaged in order to get the values shown in the tables below. Similar to the effectiveness scores calculated in Appendix B, the status quo appears to reasonably approximate the average artificial GPA of students who were admitted in reality, while the average artificial GPA of applicants is significantly lower. Thus, this approach is again validated given that the status quo is highly reflective of reality and that the selection mechanisms work as intended in regards to admitting highly-qualified applicants.

All Specialty Schools							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Average GPA	3.52	3.74	3.75	3.52	3.63	3.65	3.68

Franklin Military Academy							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Average GPA	3.51	3.73	3.73	3.49	3.62	3.67	3.66

Open High School							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Average GPA	3.42	3.74	3.77	3.44	3.60	3.57	3.69

Richmond Community High School							
	Applicants	Reality	Status Quo	Weighted Lottery	Mixed Lottery	Merit Lottery	Middle School Lists
Average GPA	3.45	3.73	3.74	3.44	3.60	3.60	3.63

Appendix D: Administrative Feasibility Methodology

The cost of collecting, processing, and reviewing specialty school applications is estimated for the status quo, mixed lottery, and middle school lists alternatives as part of the administrative feasibility criterion.²⁶ Cost projections are \$0 for the weighted lottery and merit lottery alternatives because these options only require basic application cleaning, which is standard across all admissions systems. The status quo, mixed lottery, and middle school lists alternatives, however, place an additional burden on teachers, principals, and administrators, which is estimated below. The time cost is assumed to be the same across these three options, since they each require applicants to fully complete all components of the applications.

As mentioned in Appendix B, this analysis only factors in rising ninth grade applicants to FMA, Open, and Richmond Community. The listed assumptions are based on a conversation with Andrew Bishop (2021), a School Planning Specialist with RPS's School Planning Team. Hourly wages are calculated by dividing step 18 on the RPS principal and administrator salary scales and step 22 on the RPS salary scale for teachers with a B.A by the number of contracted days and hours per day for each position (RPS 4, 2020).²⁷

Assumptions	
Number of Applicants	
Total	434
Franklin Military Academy	115
Open High School	327
Richmond Community High School	308

Applications	
Principal Interview (per school)	
Interviews per applicant	1
Minutes per interview	15
Principals per interview	1
Admissions Test (Richmond Community only)	
Number of sessions	3
Hours per session	2
Principals per session	1
Teachers per session	1

²⁶ All costs are in 2020 dollars.

²⁷ Each step on the salary scales aligns with the number of years of experience an individual has in that position.

Recommendations (common across schools)	
Recommendations per applicant	2
Minutes of completion per recommendation	10
Teachers per recommendation completion	1
Essay Review (per school)	
Essays per applicant	2
Minutes of review per essay	10
Teachers per essay review	1
Application Cleaning (common across schools)	
Hours of additional application cleaning per administrator	10
Administrators per additional application cleaning	1
Application Review (per school)	
Hours of application review per principal/teacher	10
Principals per application review	1
Teachers per application review	4

Hourly Wages	
Principal Hourly Wage	\$55.56
Annual salary	\$115,569
Contracted days	260
Hours per day	8
Administrator Hourly Wage	\$39.13
Annual salary	\$81,391
Contracted days	260
Hours per day	8
Teacher Hourly Wage	\$38.20
Annual salary	\$61,126
Contracted days	200
Hours per day	8

Cost of Status Quo/Mixed Lottery/Middle School Lists	
All Specialty Schools	
Recommendations	
Total hours (total number of applicants x recommendations per applicant x minutes of completion per recommendation x teachers per recommendation/60)	144.67
Total cost (total hours x teacher hourly wage)	\$5,526.81
Application Cleaning	
Total hours (hours of additional application cleaning per administrator x administrators per additional application cleaning)	10
Total cost (total hours x administrator hourly wage)	\$391.30
Franklin Military Academy	
Principal Interviews	
Total hours (number of FMA applicants x interviews per applicant x minutes per interview x principals per interview/60)	28.75
Total cost (total hours x principal hourly wage)	\$1,597.41
Essay Review	
Total hours (number of FMA applicants x essays per applicant x minutes of review per essay x reviewing teachers per essay)	38.33
Total cost (total hours x teacher hourly wage)	\$1,464.48
Application Review	
Total principal hours (hours of review per principal x principals per review)	10
Total teacher hours (hours of review per teacher x teachers per review)	40
Total cost (total principal hours x principal hourly wage + total teacher hours x teacher hourly wage)	\$2,083.77
Open High School	
Principal Interviews	
Total hours (number of Open applicants x interviews per applicant x minutes per interview x principals per interview/60)	81.75
Total cost (total hours x principal hourly wage)	\$4,542.20
Essay Review	
Total hours (number of Open applicants x essays per applicant x minutes of review per essay x reviewing teachers per essay)	109
Total cost (total hours x teacher hourly wage)	\$4,164.21

Application Review	
Total principal hours (hours of review per principal x principals per review)	10
Total teacher hours (hours of review per teacher x teachers per review)	40
Total cost (total principal hours x principal hourly wage + total teacher hours x teacher hourly wage)	\$2,083.77

Richmond Community High School	
Principal Interviews	
Total hours (number of Richmond Community applicants x interviews per applicant x minutes per interview x principals per interview/60)	77
Total cost (total hours x principal hourly wage)	\$4,278.28
Admissions Test	
Total principal hours (number of sessions x hours per session x principals per session)	6
Total teacher hours (number of sessions x hours per session x teachers per session)	6
Total cost (total principal hours x principal hourly wage + total teacher hours x teacher hourly wage)	\$562.29
Essay Review	
Total hours (number of Richmond Community applicants x essays per applicant x minutes of review per essay x reviewing teachers per essay)	102.67
Total cost (total hours x teacher hourly wage)	\$3,922.25
Application Review	
Total principal hours (hours of review per principal x principals per review)	10
Total teacher hours (hours of review per teacher x teachers per review)	40
Total cost (total principal hours x principal hourly wage + total teacher hours x teacher hourly wage)	\$2,083.77
Total Cost	\$32,700.83