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National Center for Research on Education Access and Choice

EDUCATION RESEARCH ALLIANCE FOR NEW ORLEANS

Setting Priorities in School Choice Enrollment Systems: Who Benefits from Placement Algorithm Preferences?

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Overview

Many U.S. cities with school choice programs have adopted unified enrollment systems to manage their application and placement processes centrally. Typically, these systems use placement algorithms to assign students to schools. These algorithms make placements based on families' rank-ordered requests, seat availability in schools, and various priorities and lottery numbers that determine students' standing at each school. These priorities include geographic preferences for students who live in nearby schools and preferences for students with siblings already enrolled.

This study examines the placement algorithm—and broader school request, placement, and enrollment patterns—in New Orleans, which has a citywide system of charter schools. We explore whether the priority categories in the New Orleans placement algorithm tend to favor students of certain races or socioeconomic classes. Specifically, we examine cases where families of Black and white children, or lower-income and higher-income families, submit the same first-choice requests for kindergarten (a key entry grade for elementary school). Even though the placement algorithm does not directly consider students' race, one racial group might be more likely than another to receive a first-choice placement if they are more likely to benefit from priorities such as geographic proximity and sibling enrollment.

In addition to examining whether certain groups of students are more likely than others to get school placements when they vie for the same seats, we run simulations to assess how placement patterns might differ with different policies. These simulations consider the impacts of changing the priorities used by the placement algorithm, changing the rank-order of priorities, and increasing the seat capacity in oversubscribed schools.

Key Findings

- Black students attended schools with much lower state performance ratings than white students. These gaps emerged at the application stage and persisted through students' placements and enrollment. Gaps are also evident between students from lower-income and higher-income families.
- When Black and white applicants submitted the same first-choice school requests for kindergarten in 2018-19, Black applicants were 9 percentage points less likely to get a seat in that school. Meanwhile, lower-income students with the same first-choice requests were 6 percentage points less likely to get seats in that school than higher-income students. This is because of the priorities that students of different backgrounds received.
- When Black and white applicants submitted the same first-choice kindergarten requests for oversubscribed schools in 2018-19, Black applicants were much less likely to have geographic priority and less likely to have sibling priority—two key priorities for kindergarten placements.
- Changing the priorities in placement algorithms or adding seats to oversubscribed schools can alter placement patterns, but their overall impact on racial and income integration is limited because of factors and forces beyond the enrollment system.

Background

School choice reforms enable families to choose from an assortment of relatively autonomous schools. These reforms tend to result in school governance settings that are less centralized than the ones that precede them. For example, in most U.S. school districts, students are assigned to schools based on where they live, and what schools teach is largely defined by state and district policy. However, school choice policies give families more control over which schools their children attend while giving schools more control over what and how they teach.

To advocates of school choice reforms, decentralization is a key feature of a successful school system. It allows schools to differentiate themselves from one another more than they could in a centralized setting. This creates a more diverse set of school options from which families can choose and could result in a better match between what families want and what schools offer. However, decentralization brings challenges, too. For one, each school might have to perform duties—such as developing curriculum and managing enrollment—that would otherwise be done for them by their district office. Also, individual students could be overlooked or underserved in a setting where their school enrollment depends on how their families manage a complex, barrier-laden school choice setting.

Over time, cities with school choice policies have implemented reforms in hopes of striking the right balance between school autonomy and district-centralized services. Many of these efforts have focused on the application and enrollment processes. In a highly decentralized, choice-oriented system, families must apply to each school individually, navigating a maze of application requirements and deadlines (as they might if they were applying to many colleges). Schools, for their part, must manage the application and selection processes themselves, which creates more potential for inefficiencies and abuses. Unified enrollment (UE) systems have emerged as a more centralized solution to some of these challenges. Families can apply to many schools by submitting a single, rank-ordered application to a central agency (e.g., a school district). The agency then determines the schools to which students are assigned.

Many of today's UE systems use algorithms to decide students' school placements. These algorithms make placements based on families' requests, the availability of seats, and policies that determine which students get seats when the number of requests for a school exceeds the number of seats available. New Orleans created one of the first UE systems in the United States when it introduced OneApp in 2012. With OneApp—now called the NOLA-PS Common Application Process (NCAP)—families submit rank-ordered requests for schools. Then an algorithm uses student priorities and lottery numbers to determine which students receive seats in oversubscribed schools. Schools have say over which priorities they apply, in what order, and for how many seats, as long as they comply with state and district policies. For example, schools might offer priority to siblings of current students, children who reside in a school's geographic zone, or children of staff members who work in a school. Lottery numbers are used as tiebreakers for students with the same priority status.

NCAP does not consider students' race/ethnicity in placement decisions. In fact, this information is not even a part of the application. Meanwhile, family income is an important factor in the early childhood application, but very few schools include family income as a priority for K-12 seats. Still, students of a certain race or family income might fare better than students of another race or family income—even if they apply for the same schools. This could happen if the existing priorities tend to benefit certain groups over others. For example, if white students are more likely than Black students to have geographic or sibling priority in an oversubscribed school, then white applicants could be more likely than Black applicants to the same school to obtain a seat. Checking for these types of differences is important since they can arise quietly (e.g., without explicit racial priorities) and present a barrier to equitable access to schools. It is also important to examine ***how*** these disparities arise, if they do, and whether alternate policies—such as different placement priorities—could change student placement patterns.

Research Questions

Using data from the NCAP, we sought to answer questions about equitable access to schools. These questions consider broad questions about enrollment patterns in New Orleans—a city that, in theory, has created options for students to attend the school of their choice citywide. We also ask questions about which students benefited from the priorities used to make school placements in 2018-19. These analyses focus on schools that participated in NCAP in 2018-19 (a few charter schools did not) and that received more first-choice requests than they could accommodate.

SPECIFICALLY, WE EXAMINE THE FOLLOWING RESEARCH QUESTIONS:

- Do students of different racial and socioeconomic groups request, get assigned to, enroll in, and remain enrolled in schools with similar performance ratings?
- Do placement priorities benefit students from certain racial or socioeconomic groups over others?
- Which priorities benefit which groups of students?
- How might changes to school priorities or seat capacities affect placements?

How Did We Carry Out This Analysis

To conduct this analysis, we used data on students and schools in New Orleans. This includes data on families' NCAP school requests and placements during the 2018-19 choice process, as well as the priorities used by schools to make placements. We supplemented these data with information about students' background characteristics (e.g., race/ethnicity and free/reduced-price lunch status). For most students, we located their background characteristics in NOLA-PS data after they enrolled in a New Orleans publicly funded school. For students who submitted a NCAP application but did not end up enrolling in a New Orleans publicly funded school, we inferred about their backgrounds based on the demographic characteristics of their neighbors or siblings.

We focus especially on the cohort of students applying for seats in elementary schools for the 2018-19 school year. Focusing on 2018-19 applicants allows us to track students' enrollment in that fall and the subsequent fall before any schooling disruptions from the COVID-19 pandemic. While we would like to conduct the analysis for many subgroups of students, the number of students is too small to include those groups in our analysis. Therefore, we focus our comparisons on what happens when students of difference races (Black or white) or family income apply for the same seats. More information about the demographics of schools in New Orleans, the distribution of school priorities, and the methods and analyses presented here are available in the technical report.

Our first analysis describes patterns in the types of schools where students applied in the 2018-19 Main Round (as their first choice for kindergarten), were placed in the 2018-19 Main Round and Round 2, and enrolled in that school year as well as the following school year. Here, we focus on the school letter grade ratings from the Louisiana Department of Education (LDOE). These **grades are flawed**, and we do not believe that any single rating can adequately summarize a school's performance. However, these grades are prominent indicators of school performance in New Orleans and useful in exploring potential inequities to access. We convert the letter grades to a traditional, four-point GPA scale for our analysis (A=4, B=3, C=2, D=1, F/T=0). One thing to note is that not all students who apply end up enrolling in New Orleans schools. Some students—including a disproportionate share of students from higher-income families and white students—opt out of the system and enroll in private school if they do not get placed in the school of their choice. This "exit" option is important to keep in mind when assessing the possible effects of policy changes.

Our second analysis explores what happens when students of different backgrounds request the same school as their first choice. We use a data analysis approach focusing on schools with more requests than they could accommodate, with at least one student from each subgroup. For example, if a school had 50 seats available, with 40 Black applicants and 40 white applicants ranking that school as their first choice, we would look to see how many students from each group received a placement. We aggregate the results across all schools to see if certain groups are systematically more likely to receive seats than other groups when they vie for the same seats. More technically, we do this with regression models that predict whether students receive a seat in their first choice (dependent variable) by their race or family income subgroup (independent variable), using school fixed effects to restrict our comparisons to applicants to the same school.

Our third analysis takes the same approach as in the second analysis above, with one exception. Instead of looking to see whether students from one group are more likely than students from another group to receive a school placement, we look to see whether students from one group are more likely to have a certain priority at that school. That is, we use the same fixed-effects regression approach to see if, for example, Black and white applicants are equally likely to receive geographic priority when they apply to the same oversubscribed school as their first choice.

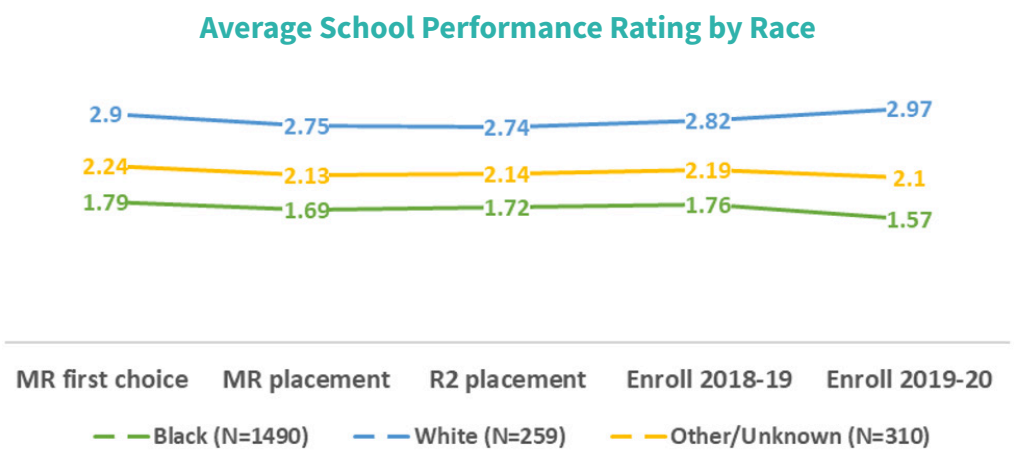
Our final analysis considers how school placement results might differ in simulated scenarios with different policies. To do this, we created a simplified version of the placement algorithm and checked how placements would differ if schools used different priorities and/or had more seats available. For example, we check how placements would have differed if no schools had geographic priorities (and families submitted the same requests). We test several changes to priority categories, including eliminating or reordering geographic and sibling priority and adding a priority that gives preference to students from low-income families. We also test what would happen if priorities remained the same but schools could accommodate 10 percent more students (e.g. if a school that could take 50 students had been able to take 55 students). This allows us to explore the effects of changing the supply of seats available.

Findings

1. Black students attended schools with much lower state performance ratings than white students. These gaps emerged at the application stage and persisted through students' placements and enrollment. Gaps are also evident between students from lower-income and higher-income families.

Comparing the types of schools to which students of different backgrounds apply, are placed, and enroll, we find large differences with respect to average school letter grade ratings from the Louisiana Department of Education (LDOE). Notably, these differences appear in New Orleans, a choice-rich environment where students are not assigned to schools based only on where they live. This raises important questions about where and why the gaps arise.

We find that large gaps appear in the types of schools that kindergarten applicants requested as their first choice in the Main Round (MR) for 2018-19. For example, the top-choice school requests of white applicants were over a full letter grade higher than the top-choice requests of Black applicants. These gaps remained large through the types of schools where families were placed in the Main Round, placed after Round 2, and enrolled in that school year (2018-19) and the subsequent school year.



Note: The average school performance measure converts the state-assigned school letter grade to a grade scale (A=4, B=3, C=2, D=1, F/T=0). MR= Main Round and indicates students' first choice on the application, as well as their Main Round placement. R2=Round 2 placements. Enroll indicates the letter grade of the schools where students ended up enrolling.

We urge care with interpreting gaps between the school ratings that different groups of families request. These gaps could reflect an assortment of contributing factors. One important factor is the barriers to access that disproportionately harm students of color and students in poverty. For example, it may be that many Black families would have liked to enroll their children in a higher-rated school but could not because of transportation barriers, enrollment barriers, information barriers, or a sense that certain schools would not serve their children well. Another factor is that different groups might have different preferences. For example, some groups might find state performance ratings more meaningful than others, or schools with higher school letter grades might lack other important qualities that these parents care about. A report by **Black Education for New Orleans (BE NOLA)** found that parents of Black students often search for schools that promote Black Excellence and foster a sense of belonging, provide support for reaching high expectations, provide meaningful and culturally relevant experiences, and support critical thinking and problem solving skills.

The gaps that first appear in families' initial requests persist—and, in some cases, grow—as students move through the placement and enrollment processes. In general, it is difficult to determine exactly why gaps arise. However, there is one step that is straightforward to analyze. That is whether students of different subgroups have similar placement outcomes when they apply to the same oversubscribed schools. This is the focus of our next analysis.

2. When Black and white applicants submitted the same first-choice school requests for kindergarten in 2018-19, Black applicants were 9 percentage points less likely to get a seat in that school. Meanwhile, lower-income students with the same first-choice requests were 6 percentage points less likely to get seats in that school than higher-income students. This is because of the priorities that students of different backgrounds received.

The NCAP's priorities, as they were in place for kindergarten for the 2018-19 school year, favored white applicants over Black applicants and students ineligible for free lunch over students eligible for free lunch. These gaps arose when these groups applied to the same schools.

Notably, white students were more likely than Black students to have their first-choice requests fulfilled at these schools even though no school used a priority that explicitly benefited students of a certain race. These differences arose because race is correlated with other (non-race) priorities that were consequential in the algorithm's placements. For example, many popular schools are in neighborhoods where white students tend to get geographic priority.

The differences in placements between higher-income and lower-income applicants arose despite the fact that a small number of schools gives priority to students from low-income families. Part of these differences likely emerged because of residential segregation in New Orleans. Black and white families (and low-income and high-income families) are not likely to receive geographic priority to the same schools, and more oversubscribed schools are located in neighborhoods with a higher proportion of white and higher-income families.

3. When Black and white applicants submitted the same first-choice kindergarten requests for oversubscribed schools in 2018-19, Black applicants were much less likely to have geographic priority and less likely to have sibling priority—two key priorities for kindergarten placements.

Looking more closely at cases where applicants of different backgrounds submitted the same first-choice requests for kindergarten in oversubscribed programs, we find large differences by group in the priorities they received. The differences are especially stark for geographic priority. When Black and white applicants vied for the same kindergarten seat in an oversubscribed school, Black applicants were 32 percentage points less likely than white applicants to have geographic priority. Black applicants were 9 percentage points less likely than white applicants to have sibling priority in these cases.

We also observe differences between higher-income and lower-income applicants in the priorities they received, but the differences by family income are smaller than the differences by race. The most significant difference is that applicants eligible for free lunch were 10 percentage points less likely to receive geographic priority than applicants ineligible for free lunch.

4. Changing the priorities in placement algorithms or adding seats to oversubscribed schools can alter placement patterns, but their overall impact on racial and income integration is limited because of factors and forces beyond the enrollment system.

Our simulations using alternate priorities and seat capacities reveal some important patterns. First, eliminating geographic priority leads to more Black and free lunch-eligible students getting first-choice placements and placements in "A" or "B"-rated schools. Second, giving priority to marginalized groups (in particular, students from low-income families) can result in markedly different placement patterns if that priority ranks among the most influential priorities—ahead, especially, of geographic priority. Third, and related, it is not simply ***which priorities*** are used that matters; the rank-ordering of the priorities is just as important. If a UE system's algorithm had priorities for marginalized groups that are lower ranking and less influential than other priorities, those priorities may have little impact in practice. Fourth, increasing seat capacity creates additional opportunities, but these opportunities go to whomever is next in the priority line. Concurrent increases in seat capacities and changes to priority categories could have a multiplicative effect in improving access to popular schools for marginalized groups.

Finally, it is important to note that none of our simulations achieved placements that would create an integrated system of similar enrollment patterns across groups. At least in present-day New Orleans, policymakers could not realistically engineer their way to an integrated system through changes to student priorities or seat capacities alone. They can remove a certain type of disparity from these systems through algorithm reform, but the work of providing equitable access to schools also demands attention to barriers that exist outside of the enrollment system.

Additional Findings

Our primary analysis of placement disparities focuses on kindergarten. Kindergarten is a key grade level for school choice in New Orleans since it is a primary entry grade for elementary and middle schools. However, it is important to note that some students begin their elementary school careers in pre-K and are guaranteed a seat in that same school for kindergarten.

In addition, some students switch schools at non-transition grades (e.g., before grades 1-8 in most schools). These non-transition grades are important to examine to assess whether students of certain groups fare better in the placement process for non-transition grades. We conducted a set of analyses for non-transition grades similar to our analysis of kindergarten. Interestingly, we find very different patterns. When Black and white applicants submitted the same first-choice request for grades 1-8 in the 2018-19 Main Round, Black students were 5 percentage points **more likely** to get a seat. Students from lower-income families were 3 percentage points more likely to get a seat than students from higher-income families. The primary reason for this appears to be the presence of a closing school priority in NCAP intended to support families whose schools were shut down. A disproportionate share of Black students and students in poverty received this priority. Its high ranking among NCAP priorities led many applicants who received closing school priority to win seats over applicants who did not. Of course, it is important to note that this "advantage" for marginalized groups of students arises only in the context of these students being more likely to have the undesirable experience of being in a school that closed.

Conclusion/Discussion

Even in New Orleans, a city that has adopted reforms to weaken the links between where students live and which schools they attend, there are large differences in the types of schools where students of different backgrounds enroll. In particular, Black students and students from low-income families attend schools with considerably lower state performance ratings than their peers. These gaps are especially concerning if they reflect unequal access to highly desirable schools—and if these enrollment patterns contribute to educational inequities.

This study focuses on one (of many) reasons why students of different backgrounds might have unequal access to schools: the student priorities used to place students in schools in unified enrollment systems. We show that, at least in kindergarten, these priorities tend to benefit white and higher-income students relative to Black and lower-income students, respectively, when they request seats in the same schools. These differences do not arise because placement algorithms provide direct preferences based on race or ethnicity. No such priorities exist. Rather, race and ethnicity are correlated with which students receive consequential priorities such as geographic and sibling priority.

The priorities within UE systems' placement algorithms reflect policy decisions about how to allocate scarce resources. Often, when policies determine who has access to valued resources—and who does not—the most marginalized and politically powerless members of society lose out. This appears to have been the case for the pursuit of kindergarten seats in popular elementary schools in New Orleans. These gaps are not inevitable. In fact, in New Orleans, while Black and low-income applicants tend to be disadvantaged when they apply for kindergarten, these groups are more likely to win a seat when they seek the same placements as their more advantaged peers for a non-transition grade. However, the context is important to note. These non-transition grade patterns arise because of a "closing school" priority that was designed to mitigate the harms of school closures that disproportionately affect historically marginalized groups.

Another point of context is relevant to this study. Barriers and biases that keep marginalized groups out of certain schools are not unique to New Orleans, nor cities with school choice policies. What distinguishes a setting like New Orleans from cities with more traditional systems of residential school assignment is not the presence of disparities or biases in the school enrollment process. Rather, it is the relative ease with which we can identify and measure certain types of disparities. It is notable, too, that the key source of priority-related disparities in kindergarten placements appears to be the system's neighborhood preferences. More traditional systems that assign students to schools based solely on where they live risk reproducing (and contributing to) deep inequities rooted in housing opportunities.

The findings from this study have implications for decisions about how priorities are defined in unified enrollment systems—and who must have voice in those decision-making processes. Unified enrollment systems like NCAP can make access to schools much more equitable than access to schools in highly decentralized systems. However, the details of enrollment policies matter. In addition, these findings point to the importance of decisions about where to locate schools and how to support and improve existing schools. It suggests the need for further efforts to ensure that all families can find excellent schools in their own neighborhoods.

How Does This Relate To Other REACH Research?

This study is one component of an extensive research series on unified enrollment, including a guide on **how the centralized enrollment system works in New Orleans** and an analysis of **how entering centralized enrollment changed school demographics and outcomes**.

Reach and ERA-New Orleans have released other studies on centralized enrollment. Douglas Harris and Jon Valant have provided a **brief introduction to centralized enrollment systems and their pros and cons**.

Other research by Valant and Lindsay Bell Weixler addresses the **role that information plays in how families rank schools**.

The current study discusses **how parent preferences, reflected in their rank orderings of schools, also affect the schools that students enroll in**. Harris and Matthew Larsen have used these data to understand what schools families want.

Valant has also studied **efforts to shape the schools that families request--specifically, the effects of giving families access to resources from a program called Ed Navigator**.

About the National Center for Research on Education Access and Choice (REACH)

Founded in 2018, REACH provides objective, rigorous, and applicable research that informs and improves school choice policy design and implementation to increase opportunities and outcomes for disadvantaged students.

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