

# DID THE NEW ORLEANS SCHOOL REFORMS INCREASE SEGREGATION?



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## Overview

In this study, we examine the effects of the post-Katrina school reforms on the segregation of students on a wide variety of dimensions: race, income, special education, English Language Learner status, and achievement. Research shows that all students benefit, socially or academically, from more integrated schools, making this an important issue to examine. We draw four main conclusions:

- New Orleans schools were highly segregated prior to the city's school reforms, especially in terms of race and income, and remain segregated now.
- We found little evidence that the New Orleans school reforms affected segregation for elementary school students. Most groups of high school students that we examined were affected, with some groups seeing an increase in segregation and others a decrease.
- There were no consistent trends in racial segregation. Some groups became more segregated, others less so.
- Among high school students, segregation has increased for low-income students and English Language Learners, but decreased for special education students as well as by achievement.

### Data Sources

**State Data:** Anonymous student-level data from 2002-2014

**Source:** Louisiana Department of Education

**National Data:** School-level data from 2000-2014

**Source:** U.S. Department of Education Common Core of Data

To our knowledge, ours is the first study to examine the effect of school choice on the segregation of English Language Learners, special education students, and low- and high-achieving students. Other national studies of choice and charters have examined effects on segregation by race and income. The most rigorous of these studies find a mix of usually small effects of choice and charters on racial and income segregation. Our results are generally in line with these prior findings in other cities. New Orleans remains highly segregated after the reforms, suggesting that this will be an issue for years to come.

## BACKGROUND

The United States has long struggled with school segregation. After the Supreme Court's *Brown v. Board of Education* decision in 1954, it took more than two decades of additional court action and federal intervention before legalized (*de jure*) segregation ended. While the end of legalized segregation was a clear victory for civil rights, in practice, schools are still largely (*de facto*) segregated today, in part due to housing segregation and the typical practice of assigning students to schools by neighborhood.

Conversations about school segregation have re-emerged in recent years, as the charter sector and school choice have grown. Choice and charter advocates counter that families should be able to choose their students' learning environment. However, critics of these reforms often point to evidence that some charters, though they are supposed to be equally accessible to all students, try to select students they prefer, which could increase segregation in a district.

School choice could also have the opposite effect and reduce segregation because it breaks the link between school and neighborhood. Therefore, in principle, choice allows low-income students to choose schools in other neighborhoods with students from different backgrounds. There is little evidence to support this more positive theory, however, so the current debate is mainly about whether choice and charters increase segregation or have no effect.

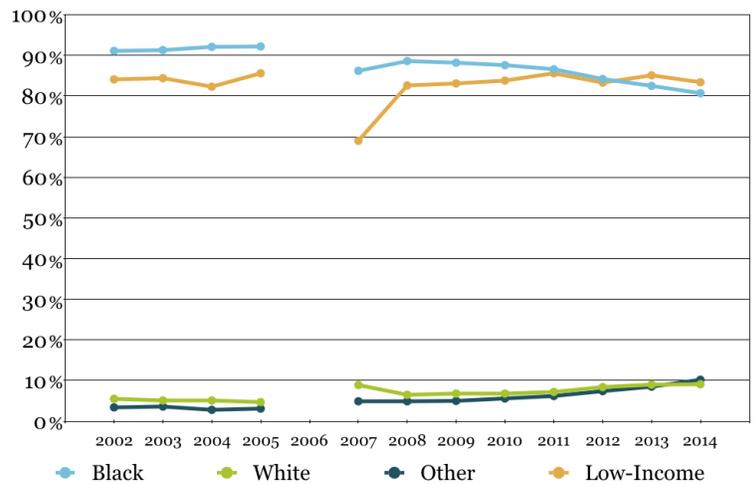
New Orleans is an important case because it has had the largest change in choice that any district has ever experienced. This study answers two key questions:

1. How did the New Orleans school reforms affect segregation by race, income, achievement, special education, and English Language Learner status?
2. How do these changes differ for elementary and high school students?

## NEW ORLEANS DEMOGRAPHICS AND POLICIES

Like most cities, New Orleans has a long history of racial segregation and one that persists today. While the city as a whole remains racially diverse, 22% of all New Orleans students—including a majority of the city's white students—attend private schools. As Figure 1 shows, even before Katrina, the city's publicly funded schools served almost solely low-income black students.

Figure 1. New Orleans Publicly Funded Elementary School Demographics



Following Hurricane Katrina, the state of Louisiana took over nearly all New Orleans schools and created a city-wide choice system. Neighborhood school attendance zones were nearly all eliminated and replaced by citywide school choice. Now, if more students want to attend a given school than there are available slots, then students are assigned by lottery. This, and other policies related to discipline and transfer, are intended in part to ensure that families are choosing schools and that schools are not choosing families. With a few exceptions, the state also requires schools to provide transportation to make schools more accessible to all families. In short, while families had some degree of choice prior to Katrina, they now arguably have more choice than any other public school system in the country.

“*The intensity of the choice system in New Orleans... provides an important test of the effects of choice on segregation.*”

The intensity of the choice system in New Orleans therefore provides an important test of the effects of choice on segregation. This policy brief also discusses additional policy changes and factors—mostly unrelated to the reforms, but occurring at the same time—that may have influenced our results.

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## HOW DID WE CARRY OUT THE ANALYSIS?

We use anonymous data on individual students from the Louisiana Department of Education from 2002-2014, comparing the average of the four years prior to Katrina (2002-2005) to the average of the three most recent years in our data (2012-2014). The intent of this approach is to test the effects on segregation after the reforms had a chance to fully take hold, while also averaging across years to reduce the effects of random fluctuations. Also, we did not have access to post-2014 data when this analysis was conducted. Here and throughout the paper, we refer to each school year by the spring year. For example, 2003 represents the 2002-2003 school year.

One key advantage of these data is that they provide not only the usual demographic measures (race and income) that are the basis for segregation debates, but also special education, English Language Learner status, and student achievement. This is, to our knowledge, the first study to examine school segregation on this range of dimensions. We separate the results for elementary and high school students because segregation patterns are sensitive to the number of schools and school sizes, and there are more elementary schools than high schools in almost all cities, including New Orleans. In both elementary and secondary schools, we use the earliest grade available (kindergarten and 3rd grade data for elementary schools and 9th grade for high schools) so that the results reflect newly enrolling students and do not reflect, for example, student mobility or dropout that might affect segregation and be caused by other factors.

“ *There is no single ‘correct’ measure of segregation. Rather, different measures capture different forms of segregation.* ”

There is no single “correct” measure of segregation. Rather, different measures capture different forms of segregation. We rely on two common segregation measures: unevenness and isolation. Unevenness measures how perfectly each school’s population mirrors the district population and can be interpreted

as the percentage of students in one group who would have to switch schools in order to have all schools at the district average. For example, Figure 1 shows that 80% of elementary students in New Orleans publicly funded schools in 2014 were black. In that case, the unevenness measure gives the percentage of black students who would have to switch schools to make every school 80% black.

One limitation of the unevenness measure is that it accepts the district average as a reasonable starting point; but in a highly segregated district like New Orleans, that is not necessarily the case. Moreover, moving students to schools to create an 80-20 split could involve moving some students out of schools that are more diverse, for example, with a 50-50 split.

Given this limitation of the unevenness measure, we also consider a second measure called the isolation index, which measures the typical concentration of a student’s own group in the schools they attend. For example, if the isolation index for low-income students is 80%, that means that the typical low-income student is in a school that is 80% low-income. Unlike the unevenness measure, moving students from schools split 50-50 to achieve an 80-20 split would *increase* the isolation index.

Relying solely on the isolation index has a drawback, too, because the index can change when the total district percentage for that group changes, even when students are spread across schools in exactly the same way. Given the advantages and disadvantages of each measure, and the fact that each captures a different element of segregation, we use both measures in our analysis.

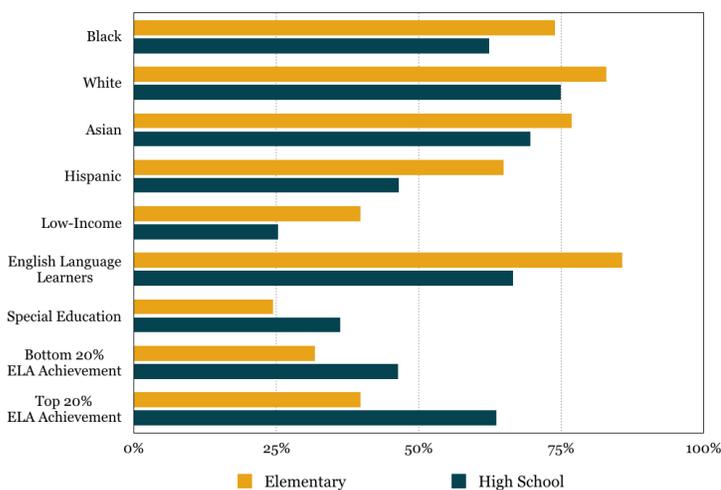
We first calculate the citywide segregation values for unevenness and isolation in each year, and then compare the pre- and post-Katrina averages. We then compare the changes in New Orleans to changes over the same time period in two comparison groups: (1) five large high-poverty Louisiana districts and (2) demographically similar urban districts (Atlanta, Baltimore, Baton Rouge, Birmingham, and St. Louis). Using these comparison groups allows us to determine if any changes we observe in New Orleans might be due to state policies and trends or general trends in urban districts that might affect segregation. The analyses of achievement, special education, and English Language Learner status include only the in-state comparison group because we do not have those data for other states.

Our conclusions are based on the difference between the New Orleans trend and the comparison group trend, called a difference-in-differences analysis. If segregation for a given group dropped in New Orleans, and at the same time, segregation dropped less, stayed the same, or increased in the comparison group, we conclude that the New Orleans reforms led to a drop in segregation. However, if segregation dropped in New Orleans, but dropped more in the comparison group, we conclude that the reforms led to an increase in segregation because New Orleans students likely would have been more segregated than they would have been in the absence of the reforms.

## HOW SEGREGATED ARE NEW ORLEANS SCHOOLS?

Figure 2 plots the unevenness indices and shows just how segregated New Orleans publicly funded schools were before the reforms. The closer the bars are to 100%, the more uneven is the distribution of students across schools.

**Figure 2. Unevenness of New Orleans Publicly Funded Schools in 2005 (Pre-Reform)**



As predicted, elementary schools were generally more segregated than high schools, likely because there are more elementary schools, which segments students into smaller groups. The one exception is that high schools were more segregated on achievement. For most racial groups—the usual focus of attention in segregation conversations—schools were closer to complete segregation than complete integration. Clearly, New Orleans was far from being an integrated school system prior to the reforms. Below, we explore how this changed after the reforms.

## HOW DID THE LEVEL OF SEGREGATION CHANGE OVERALL?

To determine if there is strong evidence of a reform effect on segregation for a given group, we look across the results for both measures and both comparison groups. We only conclude that there is strong evidence if: (a) at least one of the estimated changes in unevenness and one change in isolation was statistically significant; (b) all statistically significant results were in the same direction and no more than one non-significant result was in the opposite direction; and (c) we are confident that there were no pre-existing trends in our comparison groups that may have affected our findings. We also identified a few groups as having some, but not strong, evidence of a reform effect on segregation if two estimates were significant and in the same direction or if one coefficient was significant and the majority of the remaining estimates were in the same direction.

Most elementary groups experienced no clear and consistent change as a result of the reforms; however, most high school groups did. Figure 3 below provides a list of the groups we examined, with a bold arrow indicating those groups for which we found strong evidence of reform effects on segregation. Note that “strong” does not mean that the effect was large; rather, it indicates our level of confidence in the effects that we found. The faded arrows indicate some, but weaker, evidence. In all cases, upward arrows indicate increased segregation.

**Figure 3. Student Subgroups with Discernable Reform Effects on Segregation**

Student Subgroup	Elementary	High School
Black	↓	↑
White	↔	↔
Asian	↓	↔
Hispanic	↑	↑
Low-Income	↔	↑
English Language Learners	↔	↑
Special Education	↔	↓
Bottom 20% ELA Achievement	↔	↓
Top 20% ELA Achievement	↑	↓

In what follows, we show year-by-year unevenness values for only those groups where we see strong evidence of increases or decreases in segregation attributable to the reforms and where the unevenness trend shown reflects our conclusion.

## TO WHAT EXTENT DID THE REFORMS AFFECT SEGREGATION BY RACE AND INCOME?

The reforms did not have a straightforward effect on racial segregation. Figure 4 shows a decrease in segregation for Asian elementary students, which was larger than changes in both the state and national comparison groups.

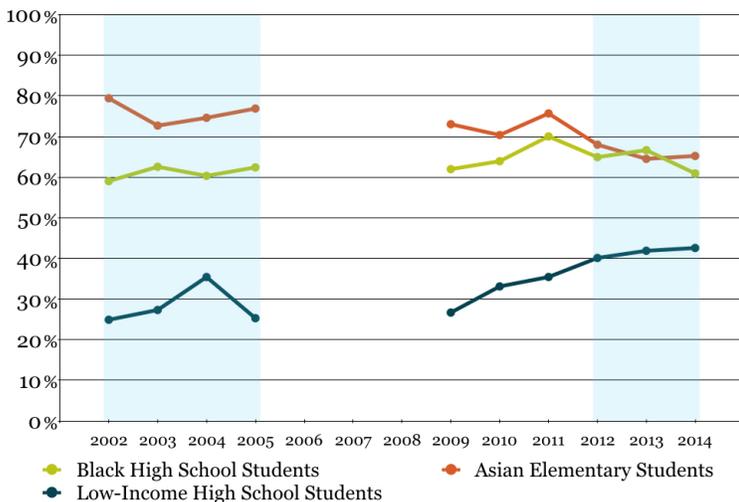
We also find that black high school students are more unevenly distributed across schools. As we discussed above, the unevenness measure, shown below, measures how perfectly each school reflects the district population. New Orleans high schools are majority black both before (92%) and after the storm (85%). While there was only one high school with a student population that was less than 80% black before the storm, there are now six schools that share this characteristic. This contributed to an overall increase in unevenness.

Figure 4 also shows that the patterns are clearer for low-income students. At the high school level, segregation by income increased.

While the trend line is not shown for Hispanic high school students, this group saw an increase in isolation. Additionally, though this group saw a small decrease in dissimilarity, the national comparison group saw a much larger decrease, leading us to conclude that Hispanic high school segregation increased.

Here and in all figures that follow, the shaded areas are the pre- and post-years used to calculate averages for these analyses.

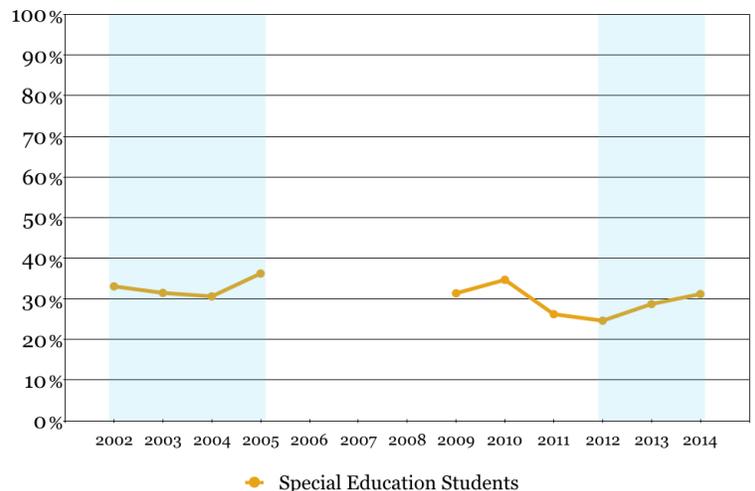
**Figure 4. Unevenness of New Orleans Students by Race**



## TO WHAT EXTENT DID THE REFORMS AFFECT SEGREGATION OF ENGLISH LANGUAGE LEARNERS (ELL) AND SPECIAL EDUCATION STUDENTS?

We identify special education students based on whether they have an Individualized Education Plan (IEP). Among special education students and ELL students, the only change in segregation was among high school students, and the effects were in opposite directions. Special education students became somewhat less segregated (Figure 5). While the trend line for ELL students is not shown in the figure, segregation for this group was similar before and after the New Orleans reforms; however, ELL segregation in our comparison districts dropped substantially, leading us to conclude that these students are more segregated now than they would have been in the absence of the reforms.

**Figure 5. Unevenness of New Orleans High School Special Education Students**

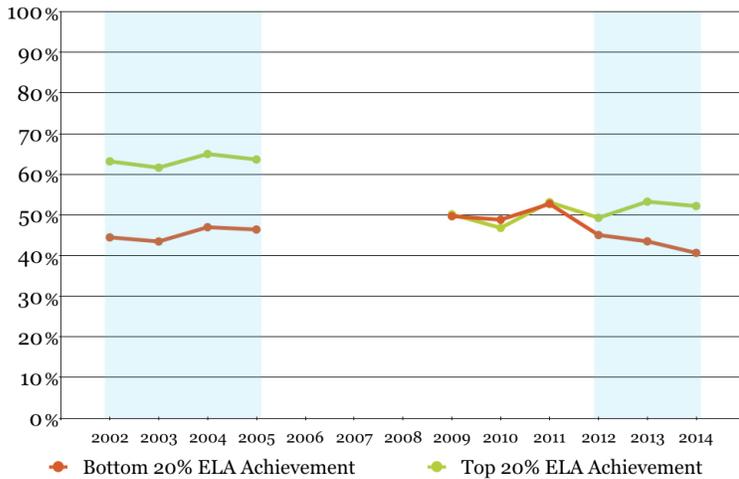


## TO WHAT EXTENT DID THE REFORMS AFFECT SEGREGATION BY ACHIEVEMENT LEVEL?

To test for changes in segregation by academic ability, we identify students from the city's publicly funded schools who score in the bottom 20% and top 20% of standardized test results for math and English Language Arts (ELA) and then calculate the same segregation measures as above. (Note that since student test scores increased across the board after the reforms, the students scoring in the bottom 20% on math and ELA standardized tests in 2014 are, on average, higher performing than the same group in 2005.)

Figure 6 shows a decline in segregation among high- and low-performing high school students in ELA. There was also a decline in segregation for both high- and low-performing high school students in math (not shown).

**Figure 6. Unevenness of New Orleans Students by Achievement**



## OTHER FACTORS AFFECTING SCHOOL SEGREGATION

While our goal is to study the effects of the reforms on school segregation, we also considered the possibility that the changes we see in segregation are not driven by choice and charters, but rather by the upheaval in the housing market after Hurricane Katrina. The city shuttered its old public housing projects after Katrina and eventually replaced them with new, lower-density housing. Many neighborhoods, such as the Lower 9th Ward and New Orleans East, have seen significant drops in population. To address this issue, we obtained census data on race and income and calculated the same indices for race and income as what we report above for schools. That analysis shows few noticeable changes in citywide neighborhood segregation by race and income, with the exception of the isolation of black residents, which has dropped from 82% in the 2000 Census to 76.5% in 2014. As a result, we conclude that our findings are not likely attributable to changes in housing segregation.

*“... we conclude that our findings are not likely attributable to changes in housing segregation.”*

It is also important to note that about 40% of New Orleans students still attend high schools governed by the Orleans Parish School Board (OPSB). As a result, decisions made by OPSB, which might arguably not be part of “the reforms,” may also have influenced these results. In particular, there has been a reduction in the share of high schools with selective admission requirements, which we would expect to reduce segregation. If the number of selective admission schools had not decreased, some of these segregation indices, especially those related to student achievement, might have increased more than they did.

## CONCLUSION

Segregation has been an important part of schooling debates for more than a half-century. Research suggests that, in the long run, more diverse schools are better for everyone, especially disadvantaged students. For this and other reasons, critics of school choice have had a good reason to be concerned that choice and charter schools might increase segregation. In New Orleans, however, the reforms have not had any clear or consistent effect on segregation for the majority of groups. For some groups, particularly low-income students, the reforms apparently made matters worse, but at the same time, segregation by achievement has declined.

*“ In New Orleans, however, the reforms have not had any clear or consistent effect on segregation for the majority of groups. ”*

These effects may be partly driven by the New Orleans context before the reforms. As Figure 1 shows, New Orleans schools were already heavily segregated by race and income before the reforms. The district serves primarily black students, in part because 22% of all students in the city, including a majority of white students, are enrolled in the city’s private school sector.

Many approaches to addressing segregation are unpopular. However, choice-based systems offer distinctive possibilities. For example, some New Orleans charter elementary schools have sought to deliberately increase the diversity of their student populations, designing their schools to attract a broad population voluntarily.

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There are also additional efforts ongoing to better leverage existing diversity and to create even more of these schools going forward. The substantial academic improvement in the New Orleans publicly funded schools may also attract more middle class families to public schools, which would increase diversity indirectly, though the long tradition of private education, along with the test-focused and highly structured nature of many of the charter schools, will likely prevent any large shifts.

With growing evidence of increased inequality in income and wealth, it is important to consider segregation of schools as a potential cause and effect of those trends. Our results for New Orleans confirm the broader national pattern that very few school systems—whether traditional or reformed—have had much success in integrating schools. As a result, segregation will likely remain an issue for New Orleans and other cities around the country for years to come.

## How is this Research Related to Other ERA–New Orleans Studies?

The ultimate aim of ERA–New Orleans’ research is to understand the effects of the post-Katrina school reforms on New Orleans students. Segregation is important to our larger agenda because evidence suggests that more integrated schools can raise achievement for disadvantaged students, in addition to having general societal benefits.

In *The Effects of the New Orleans School Reforms on Students’ Academic Outcomes*, Harris and Larsen find that the post-Katrina school reforms had large positive effects on students’ average test scores. In addition, they find that all student groups benefited from the reforms, although more advantaged groups—higher-income and white students—benefited more than others. In other ongoing analyses, the ERA–New Orleans team is examining the effects on special education and ELL students in more depth.

The unusual choice process in New Orleans could play a role in changes in segregation. In *The New Orleans OneApp*, Harris, Valant, and Gross provide analysis of the city’s centralized enrollment system, which is the centerpiece of choice in the city.

In another study, *What Schools Do Families Want (and Why)?*, Harris and Larsen find that higher-quality schools are more equally distributed geographically than they were before the reforms, but low-income families face greater constraints in choosing schools because of child care needs and limited transportation.

Finally, in *What Happened to Student Mobility After the New Orleans’ Market-Based School Reforms?*, Maroulis, Santillano, Harris, and Jabbar show that low-income students, when they switch schools, are less likely to move to higher-performing schools.

We are also continuing to examine a variety of other potential unintended consequences of market-based school reforms, especially the possibility that some schools may not welcome some groups of students (sometimes called cream-skimming or cherry-picking) and that, in a system focused on measureable performance, problems with the quality of performance measures may also affect school choice and access.

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## About the Education Research Alliance for New Orleans

The mission of the Education Research Alliance for New Orleans (ERA-New Orleans) is to produce rigorous, objective, and useful research to understand the post-Katrina school reforms and their long-term effects on all students. Based at Tulane University, ERA-New Orleans is a partnership between university-based researchers and a broad spectrum of local education groups. Our Advisory Board includes (in alphabetical order): the Louisiana Association of Educators, the Louisiana Association of Public Charter Schools, the Louisiana Federation of Teachers, the Louisiana Recovery School District, New Orleans Parents' Guide, New Schools for New Orleans, the Orleans Parish School Board, the Orleans Public Education Network, and the Urban League of Greater New Orleans. For more information, please visit the organization's website.

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**EducationResearchAllianceNOLA.org**

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