The Impact of Performance-Based School Closures in Four Cities

The No Child Left Behind Act (NCLB) reflected a national movement to shine a bright light on chronically low-performing schools, to invest in intensive efforts to turn them around, and then to hold them accountable if they failed to improve. Under the law, schools not making “adequate yearly progress” were subject to sanctions ranging from state-imposed school improvement plans to restructuring, including the possibility of outright closure.

Many districts responded with large-scale efforts to transform or eliminate persistently struggling schools. Policymakers used a range of terms to describe these efforts, including “redesigns,” “restarts,” “reconstitution,” “phase out,” or simply “closure.” This constellation of approaches gained additional momentum in 2009, when the federal government provided a $3.5 billion infusion to the School Improvement Grant (SIG) program as part the stimulus package. SIG grants could be used to implement four possible turnaround models, including “closure.”

The strategy of closing schools has been accompanied by intense politically and emotionally charged controversy. In cities around the country, school closures have sparked lawsuits and protests, with advocates arguing that their district hadn’t invested enough in school improvement efforts, and that students would be harmed by the elimination of an important neighborhood institution. Students enrolled in schools designated for closure were often described in the press as “casualties”—bearing the brunt of persistent school failure and then having their lives further disrupted when officials decided to close their school.

Despite the general sense that closure policies are controversial and painful, however, there is little rigorous evidence about what actually happens to students during and after a performance-based school closure. Does the closure process harm students who are enrolled in a school when a closure decision is made or while it is being phased out? Are future cohorts of school students better off because a low-performing option has been eliminated? Do students attend better schools and have better outcomes as a result of the closure? More broadly, should closure remain part of the “toolkit” available to policy makers seeking to turnaround persistently low-performing schools?

To begin filling this gap, several district-based “research-practice partnerships” have conducted studies of the school closures that were undertaken during the NCLB era. This symposium will present results from studies conducted in New York, New Orleans, Chicago, and Philadelphia. These studies focus largely on performance-based closures, rather than those motivated by primarily by enrollment declines or efforts to make more efficient use of school buildings. Their goal is to provide evidence about the efficacy of school closures as a tool for school or system improvement. All four studies examine the impact of school closures on students who were “displaced,” either by having their current school closed and forcing them to transfer, or by having a likely school option taken away by a closure. In addition, two of the studies examine school closures as a phaseout process and offer evidence on whether such a strategy might have particular negative consequences or, conversely, benefits for the students who are in the schools as the phase out.
High School Closures in New York City: Impacts on Students’ Academic Outcomes, Attendance, and Mobility

Background and Setting

After nearly 40 years of stagnant performance, New York City has witnessed a steady improvement in its high schools over the past 15 years. With graduation rates hovering at or below 50 percent for nearly four decades, graduation rates topped 70 percent in 2015 for the first time in history. Among the forces behind these trends were a set of sweeping and interconnected high school reforms that the New York City Department of Education (NYC DOE) implemented at an unprecedented pace and scale beginning in 2002. These reforms were anchored in closing large, persistently low-performing high schools, opening new small schools, and extending high school choice to all students throughout the district.

The high school closure process was the most politically charged feature of the reform effort. The closure decisions sparked lawsuits and protests, with advocates arguing that the district had not invested enough in school improvement efforts, and that students would be harmed by the elimination of an important neighborhood institution. Yet, apart from the general sense that closure policies were controversial and painful, there has never been a rigorous assessment of the impact of school closures in New York City.

Intervention

High school closures in New York City were implemented as a phaseout process, in which schools stopped admitting new 9th graders. The existing student body was allowed to transfer to another high school or continue to attend the school that was being phased out until the year of their scheduled graduation. As a result, over the three years following the decision to close a school, enrollment declined steadily, as new students were no longer admitted, and current students graduated, transferred, or dropped out.

In the wake of a school closure decision, middle school students from the surrounding community were compelled to attend a different high school. The NYC DOE’s open choice system provided all students with access to schools throughout the City. For students in the “post-closure cohorts,” this often led them to a school nearby, including the new small schools that had been opened in the same building as the school that had been closed.

Research Questions

The paper focuses on two sets of research questions.

- What was the impact of the school closure decision on the students who were enrolled in one of the high schools during the phase out process? To what extent did the phaseout process influence students’ likelihood of dropping out or moving to another school (mobility), their attendance, and their academic performance?

- What was the impact of school closures on students who were compelled to choose and attend other high schools, because their local school and most likely option had been closed? Where did these students enroll instead? How did having to opt for a different school affect students’ mobility, attendance, and academic performance?
Sample
The study focuses on the 29 NYC high schools that were designated for closure between 2002 and 2008. Our analyses showed that, based on a wide range of indicators, these 29 schools were consistently among the lowest-performing high schools in the City. We found that none of these schools were ranked above the 20th percentile citywide, based on a composite of 10 performance indicators averaged over the four years prior to the closure decision.

Our analyses focus first on the more than 9,600 students who were just beginning their high school careers in one of these schools when the closure decision was announced. The analysis also focuses on more than 11,000 students who were in 8th grade when the closure decisions were made and were forced to choose other high school options. These students were identified using propensity score matching analyses based on recent patterns of residential and middle school feeder patterns and the background characteristics and prior school performance of the most recent cohort of students who enrolled in those schools.

Finally, our sample includes between three and eight other high schools each year that exhibited nearly the same historical pattern of poor performance as the closing high schools, but were passed over for closure.

Research Design
The impact findings in the report are derived from Comparative Interrupted Time Series (CITS) analyses. To assess impacts on students during the phaseout process, the CITS methodology compares their outcomes with outcome trends for students who were enrolled in the schools during the years prior to the closure decision. It then makes the same comparison, during the same time period, for other low-performing schools that avoided closure. Differences in deviations from their historical trends represent the net impact of the phaseout process.

The paper extends the CITS analysis to assess impacts on students in the post-closure cohort. Specifically, the analysis projected the historical outcome trends for an additional year for both the closed schools and the comparison schools. Differences in deviations from these trends between the post-closure cohort and an additional cohort in the comparison schools represent the net impact of the closure on the post-closure cohort.

Findings
Our findings indicate that the phaseout process itself did not have a systematic impact, positive or negative, on the academic performance or attendance of students enrolled in these high schools. Students who were enrolled in the phaseout schools achieved similar or, in some cases, higher outcomes compared to those of their peers who were enrolled in those schools prior to the closure decision. These improvements were comparable to improvements for students in other low-performing schools during the same period.

Our study found that students in the post-closure cohort attended higher-performing high schools, compared to the closed schools they likely would have attended. This shift in their enrollment options led to improvements in students’ attendance, progress toward graduation, and
ultimately, their graduation rates—with large increases in the share of students earning a New York State Regents diploma.

Conclusions

Should districts keep the option of closing very low-performing schools on the table? While there is no simple way of answering this question, our findings suggest two different, but equally important insights:

- **School closures in New York City were a central part of a multi-dimensional, comprehensive effort to improve secondary education.**

- **The landscape and expectations of New York City’s high schools look very different today than they did at the turn of the 21st century.**

The paper includes a discussion of both the likely interaction among the multiple lines of reform and the elements of the current landscape and expectations for high schools that are likely to influence the future use of closures as a tool for improvement.
Extreme Measures: When and How School Closure and Charter Takeovers Benefit Students

Background and Setting

Over the past several decades, the pressure to improve U.S. public schools has grown stronger than ever. The most extreme step is to close low-performing schools entirely or convert them into charter schools. While these more aggressive steps are rarely taken, advocates argue that they lead to better performance as students move to better schools and failing schools are turned over to a more effective group of educators. Critics, on the other hand, point out that closures and takeovers are often forced on local communities by state and federal laws that measure school performance and require changes in school practice that are inconsistent with local needs and preferences. Closures, in particular, may also harm neighborhoods where schools sometimes serve as community anchors in ways that go beyond their direct responsibility to educate children. These intensive interventions also create job insecurity for teachers and disrupt the lives of students and families, especially for the most disadvantaged students. A key objective of our research is to understand whether these disruptions over-shadow other potential longer-term benefits or whether the improvements in school quality are large enough to overcome the disruptions and upheaval.

Interventions

We study three different types of interventions: school closure, where students are required to leave and the school building is usually not occupied the following year; district-to-charter takeover where a district school is taken over by a charter school; and charter-to-charter takeovers where control over a school is transferred from one charter board to another.

Sample and Setting

An important theme of education research is that policies work in some places and not others. The design of policies, their implementation, and the context can all make a difference. New Orleans and Baton Rouge are both in Louisiana, and are therefore subject to many of the same state policies, but the two cities differ in important ways. In New Orleans, control of almost all schools was shifted from the local Orleans Parish School Board (OPSB) to the state after Hurricane Katrina. The state is also in charge of some schools in Baton Rouge, but, especially in the years of this analysis, it was only a tiny fraction. Overall, the Baton Rouge schools in the post-Katrina period look more like the New Orleans system pre-Katrina.

All of the school closure and takeover decisions we study in New Orleans, and most of those in Baton Rouge, were made by the state of Louisiana, specifically the state Board of Elementary and Secondary Education and the Louisiana Recovery School District. Local school districts made the intervention decisions in only a few cases in Baton Rouge. The interventions—31 schools in all—occurred during the years 2007-12 for elementary schools and 2007-14 for high schools.

The Louisiana Department of Education (LDOE) provided data for these and other years. Specifically, we use test scores from the Louisiana Education Assessment Program (LEAP) for grades 3-8 and the Graduate Exit Exam for 10th grade. The high school analysis differs from the elementary in two respects. First, while we study student test scores at both levels, we also to
study graduation and college entry rates of high school students. Also, the elementary school analysis includes only New Orleans, while the high school analysis includes both New Orleans and Baton Rouge.

**Research Design**

We identify the effects of closure and takeover with difference-in-differences combined with a two-stage matching process. The first step is to compare the performance of students in the affected schools before and after the intervention occurred. Then, we do the same for a matched comparison group that came from similarly low-performing schools within the same district but did not experience either closure or takeover. In some cases, we also compare schools affected now to those affected by intervention in the future. The results are similar no matter how we carry out the analysis, providing confidence that our conclusions are valid and that we are identifying the effects of school intervention.

One of our main questions is whether the effects depend on how much school improvement students experienced as a result of the changes. We measure school quality in two ways. First, we use the state’s School Performance Score (SPS), which is mostly a weighted average of test scores. However, these types of metrics are not very accurate measures of school performance. Some schools have low SPS scores mainly because they serve especially disadvantaged students who enter school with lower test scores. Therefore, we rely mainly on school value-added measures.

**Research Questions**

(1) What was the effect of closure and charter takeover on student test scores, high school graduation, and college entry in the affected schools? How do the results compare in New Orleans and Baton Rouge, which differ somewhat in their policy approaches?

(2) How strong is the relationship between the size of the effect on students and the amount of school quality improvement they experienced?

(3) Are the effects more positive when there is less disruption? In particular, are the effects of takeovers and closures different? Are the effects different for students in takeover schools who stay at the same facility afterwards than they are for those who leave?

(4) How do the intervention effects on current students compare with those of future cohorts of students?

**Findings**

- The effects of school closure and charter takeover on student outcomes depend substantially on how much disruption students experience and whether they end up in higher quality schools.

- Intervening in elementary schools was more effective in these cities than intervening in high schools. The interventions increased student test scores by 10 percentile points in New
Orleans elementary schools but decreased them by 14 percentile points in high schools (combined across cities). The high school interventions also reduced college entry by 10 percentage points.

- Charter takeover of low-performing schools was more effective than closure. In elementary schools, charter takeovers increased student test scores by 13 percentile points, but closures had no effect. In high schools, charter takeover and closure both decreased scores, but the negative effects was smaller for takeovers (13 versus 17 percentile points). Closure also had more negative effects than takeover on college entry.

- The results were very different in New Orleans and Baton Rouge. New Orleans high school students experienced no effect while in Baton Rouge high school interventions reduced high school graduation and college entry by 14 and 18 percentage points.

Conclusions

The first two findings, about school quality changes and disruption, are reinforced by the others. Almost all results suggest that the effects are more positive with less disruption. Similarly, in almost all of the cases where these interventions worked well—especially with takeovers and interventions in New Orleans—students experienced more positive improvements in school quality. Like any other intervention, closure and takeover only work when students end up in better schools.
School Closures in Chicago: Understanding the Impact on Students

Background and Setting

Across the country, school districts such as Detroit, Philadelphia, and New York are electing to close schools with the underlying belief that displaced students will attend better performing ones and will benefit from this move. Motivated by fiscal deficit, in May 2013 Chicago Public Schools (CPS) voted to close 49 elementary schools – the largest mass school closure to date. Although the fiscal deficit was the primary reason, Mayor Rahm Emanuel stated, “I know this is incredibly difficult, but I firmly believe the most important thing we can do as a city is provide the next generation with a brighter future.” In this way the mayor’s office framed the school closings policy as an equality of opportunity issue for displaced students.

Closing these schools was controversial, and there was fierce resistance from many families, neighborhood groups, and the Chicago Teachers Union. Most of the schools that were closed were in the city’s South and West sides, in neighborhoods struggling with high levels of crime and poverty. Critics worried that closing these schools would create more instability in the lives of children and families who were already among the most vulnerable. Yet, supporters argued that transferring students to higher performing schools would generate better learning opportunities and offset any of the negative consequences.

Intervention

In 2013, the Chicago Board of Education voted to close 47 elementary schools at once. Two other elementary schools closed a year later and one high school program closed. CPS made an effort to place displaced students into higher performing designated “welcoming” schools. These schools were selected to be within a mile of the closed school, higher performing based on the district accountability metrics and with enough seats to accommodate the influx of displaced students. There were 48 designated welcoming schools. Since Chicago is an open enrollment system, families could enroll their children in any other school with open seats.

Research Question

Because prior research shows that the effects of school closings depend on the performance level of the welcoming schools, we look into where the students enrolled the fall after closings took place. We then focus on the impacts of the policy on the displaced students. Our research questions include:

- Where did displaced students enroll the following fall? To what extent are these higher-performing schools compared to the closed schools?
- What was the impact of the school closures on the displaced students, including their test scores, grades, and attendance?

Research Design

The first research question is answered though descriptive analysis of enrollment records. We examined where students enrolled in the 2013-14 academic year, including the percentage that enrolled in their designated welcoming schools and the characteristics of the welcoming schools in terms of their academic performance.
The second research question is addressed through an interrupted time series analysis with a comparison group. We use a panel of available data three years prior to the announcement, the announcement year and all available data after the closures. We compare changes in displaced students’ individual trajectories before and after school closings to changes in other students’ trajectories who were attending similar schools before the announcement. The goal is to isolate the effect of the policy from other changes that could have taken place around the time of the implementation of the policy.

Students in the comparison group are selected by using some of the policy decisions that year. Earlier in the 2012-13 school year, CPS announced that a total of 330 schools were under-enrolled and at-risk for closure. Throughout the year, the district pared down the number to 129 under consideration for closure until the final vote took place. It is from this group of 129 that we draw the comparison group, basically schools under threat of closure but were not closed.

Our models include student-fixed effects taking into account any time-invariant factors (such as an individual’s race, gender, or aspects of their home or neighborhood that are constant over time). We also account for a collection of student-specific characteristics that do vary over time, such as free or reduced-price lunch status and special education status.

Sample
Using administrative data, this study follows all of the students who were enrolled in the 47 closed schools in grades K-7 at the end of the 2012-13 academic year. There were 10,708 students who needed to reenroll in an elementary school the fall of 2013. In addition, we identified 49 elementary schools serving 14,734 students in grades K-7 at the end of the 2012-13 academic year to serve as the comparison group. Attendance data are available for all students, grades for students starting in first grade and test scores starting in third grade.

Findings
Among those students who reenrolled in a CPS school, 66 percent attended their designated welcoming school. Besides the 48 designated welcoming schools, students enrolled in 311 other CPS schools across the city.

More students (36 percent) attended a school on probation (the lowest-performing schools) than the district originally assigned to them. But that was a significant reduction from the prior year (when enrolled at the closing school) when 78 percent of students attended a school on probation. Fewer students (21 percent) attended a top-rated school than the district intended. This is important because prior research has found that students who relocated from closed schools to substantially higher-performing schools showed improvements in their academic performance.

In terms of the impact of the policy on displaced students, we find small negative effects on students’ test scores, grades and attendance. Similar to prior research, the effects of the policy on test scores and attendance started the year of the announcement, before students actually moved to the welcoming schools. After two years test scores have not rebounded, GPA continues to be below their counterparts but those differences are small. Attendance bounced back during the second year post-policy, no different than the students in the comparison group.
The Direct and Indirect Effects of Closing Schools on Students’ Educational Opportunities: Evidence from Philadelphia

Background and Setting

Urban school districts across the United States have increasingly relied on closing public schools as an education reform strategy to address declining student enrollment, fiscal constraints, poorly maintained school infrastructure, and low academic performance. Federal policies such as the No Child Left Behind Act and the Obama Administration’s more recent school turnaround initiatives have also prompted many of the nation’s largest urban school districts to endorse school closings as a means of offering students better educational options. Between 2000 and 2010, no fewer than 70 urban school districts closed an average of 11 traditional public schools.

The School District of Philadelphia (SDP) is one of the largest school districts in the United States. In fall 2015, approximately 135,000 students were enrolled in traditional public schools and an additional 64,000 students were enrolled in public charter schools. To address problems of declining school enrollments, long-term fiscal deficits, and lagging school achievement relative to state averages, the SDP has undertaken a number of dramatic organizational changes. The closing of schools with a history of declining enrollment and underperformance was among the biggest of these organizational changes.

Intervention

Following on a 2010 Facilities Master Plan to “standardize grade configurations, increase school utilization and reduce excess building capacity,” the SDP identified and recommended schools for closure that were under-enrolled relative to building capacity, lower performing academically and in aging buildings. District recommendations were subject to approval by the School Reform Commission (SRC), the administrative body responsible for voting on (and approving) the proposed closings. Based on the SRC’s approval, the SDP closed six (of the 10) schools originally identified for closure at the end of the 2011–12 school year (Cohort 1). At the end of the 2012–13 school year, the SDP closed an additional 24 (of the 39) schools identified for closure (Cohort 2). While the SDP recognized that the decision to close schools would alter the landscape of schools districtwide, it viewed its decision as an opportunity to provide students with better-performing school options. Indeed, the closing of persistently under-enrolled and underperforming schools is a primary feature of the district’s efforts to develop a system of excellent schools.

Research Questions

This paper contributes to the existing literature by examining the impact of two rounds of school closures in the School District of Philadelphia (SDP). Specifically, we examine whether the SDP’s closure policy relocated students from low-performing schools to higher-performing options, and whether the policy reform “increased opportunities for students to learn in high-performing, safe schools.” We address the following three research questions:

(1) Were higher-performing school options offered to displaced students, and did students avail themselves of these opportunities?
(2) Did closing schools affect the educational and behavioral settings experienced by displaced students and their receiving-school peers?
(3) Did closing schools impact the academic achievement of displaced students and their receiving-school peers in the year after closure?

**Sample**

This study uses student-level administrative data for students in grades 3-12 attending a traditional (i.e., non-charter) SDP public school. Our analysis includes all grade 3-12 students attending a traditional SDP public school in the 2011-12 through 2013-14 school years. Among students in grades 3-12, 1,126 students (of the 101,844 district students) were displaced by the closing of six schools at the end of the 2011–12 school year. In 2012-13, there were 6,928 students in grades 3 through 12 (of 98,824 district students) displaced due to the closing of 24 schools at the end of the school year.

**Research Design**

We employ a difference-in-differences (DD) strategy to estimate the impact of school closures on the educational settings and academic achievement of displaced students and their receiving-school peers. While neither students nor schools were randomly selected for closure, the student-specific decision to change schools at the end of the 2011–12 and 2012–13 school years was imposed on students in closed schools as a result of district-level policy. The DD approach allows us to compare changes (in school quality, travel patterns and academic achievement) for students induced to move via school closures to students not in closed schools.

We provide empirical evidence in support of the primary assumption underlying our two-period DD approach; namely, that school-level outcome trends, by closure status, do not diverge in the pre-closure years. Further, our DD approach also relies on the assumption that, in the absence of school closure, the outcome trend for students in closed schools would have followed the same trajectory as that which is observed for students in non-closed schools. We examine the robustness of this assumption by estimating the DD models using alternative comparison groups of schools. Specifically, for the 2011-12 cohort of closed schools, we estimate separate models with the following comparison groups: (i) the 39 schools identified for closure in 2012-13; and (ii) the 24 schools closed in 2012-13. For the 2012-13 cohort of closed schools, we estimate models using the 15 schools identified for closure in 2012-13 (but which remained open in 2013-14) as the comparison group. The use of alternative comparison groups of schools serves as a robustness check on our main results.

Finally, receiving-school students may experience changes in their schooling contexts that result from their schools’ receipt of students from closed schools. To address this potential crossover problem, we further refine our DD approach by separating out the compositional effects for displaced students from closed schools and students in receiving schools.

**Findings**

Our findings indicate that school closings shifted displaced students to schools with higher achieving peers, but not to schools that were more effective at improving student achievement growth. Further, we find that receipt of displaced students imposed no additional costs onto the educational settings of receiving-school students. Regarding the travel patterns of
displaced students, we find that school closures had only a modest effect on the distance displaced students traveled to their new schools. Finally, we find that the achievement of displaced students did not suffer in the post-closure year, and closing schools did not impose any adverse spillover effects onto the achievement of their receiving-school peers.

Our results suggest that improvements in peer quality play a critically important role in supporting the academic achievement of displaced students as they transition from their recently closed schools. This is in light of our findings that while displaced students did not enroll in schools that were more effective at improving student achievement growth, their receiving school peers were much higher performing than their peers in their closed schools.

Ultimately, our results indicate that a large scale closure of public schools in Philadelphia did not adversely affect the educational opportunities for students attending among the most disadvantaged schools.

Conclusions

Our findings reveal that targeted school closure policies like those conducted in Philadelphia, which identify and select among the lowest-performing schools districtwide for closure, can offer better school opportunities for displaced students with no educational costs to students in schools receiving displaced students. Policymakers looking to school closures as a method for improving the educational opportunities offered to students in persistently low-performing schools should recognize that the magnitude of any spillover effects will depend on the size of the displaced student cohort relocated to receiving schools. In the case of Philadelphia, displaced students enrolled in many receiving schools post-closure, such that there were no adverse effects on receiving students’ educational settings or academic performance.

Ultimately, this work should inform policymakers on the direct and indirect effects that major rounds of school closures may have on the educational opportunities experienced by both displaced students and their receiving-school peers. Though closing schools in urban school districts is a difficult policy decision, fraught with many political considerations, our findings reveal that targeted closure policies can improve the educational opportunities for displaced students with limited educational costs imposed on receiving schools. We also suggest that in cases where policymakers face the decision to close schools, greater consideration be given to selecting not just the lowest-performing schools for closure, but also providing displaced students with more effective school options as alternatives to their recently closed schools.