



REVIEW OF SCHOOL CLOSURES AND *STUDENT ACHIEVEMENT*

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June 2015

Summary of Review

A recent report found a general increase in test scores of students displaced from closed urban schools in Ohio, who were disproportionately African American and low-income. Students displaced from closed charter schools showed gains in math but not reading, relative to students from non-closed schools; students displaced from district schools showed gains in math and reading. Gains associated with closure were greater for students who transferred to “higher-performing schools”—those with higher test scores. Overall achievement growth in receiving schools, however, decreased in the year that they accommodated displaced students. Although the finding that displaced students showed improvement in test scores is encouraging, several factors limit the study’s policy implications. The report itself cautions that the potential for test-score gains depends on the availability of higher-performing schools for displaced students, a condition often unmet. Forty percent of students in closed schools transferred to schools that were not higher performing. Also, because demographic data were not reported about the receiving schools, an alternative explanation—that displaced students benefited from transferring to schools with less economic and racial segregation—was not explored. School closure also raises moral and political questions about democratic decision-making and community voice.



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This is one of a series of Think Twice think tank reviews made possible in part by funding from the Great Lakes Center for Education Research and Practice. It is also available at <http://greatlakescenter.org>.

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REVIEW OF SCHOOL CLOSURES AND STUDENT ACHIEVEMENT: AN ANALYSIS OF OHIO'S URBAN DISTRICT AND CHARTER SCHOOLS

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I. Introduction

School closures have proliferated since the economic recession that began in 2007. Once associated with decreasing populations in rural areas, they have become emblematic of contemporary urban school reform. Although sometimes motivated by declining numbers of students, they are also touted as an effective vehicle for reforming long-struggling schools – almost always schools that serve high percentages of African American and Latino students from low-income families.¹ Advocates justify closures as a way to rescue students from a dismal education. Parents and students have raised their voices against closures, arguing that they deserve access to a high-quality school in their neighborhood and that the disruptions caused by closure outweigh the potential benefits of transfer.

The attention from social scientists in this report is welcome and necessary. We located ten peer-reviewed studies published between 2001 and 2014 that examine urban school closures, but few of these studies looked explicitly at student performance data or related questions of effects on students post-closure.² The findings of the small number of

student-impact studies raise as many questions as answers.

Test scores are only one among several factors to consider when discussing the pros and cons of school closure

The Chicago Consortium on School Reform (CCSR) published a report in 2009 that analyzed the performance of students from 18 Chicago elementary schools closed between 2001 and 2006.³ The report found neither positive nor negative impacts on academic performance across many indicators,

including reading and math achievement. In research by Kirshner, Gaertner, and Pozzoboni about one high school closure, the consequences were mostly negative. Student performance on standardized tests decreased, the graduation rate decreased, and the dropout rate increased.⁴

Into this contentious policy space comes a report by the Thomas B. Fordham Institute, written by Deven Carlson and Stéphane Lavertu, titled, *School Closures and Student achievement: An analysis of Ohio's Urban District and Charter Schools*.⁵

II. Findings and Conclusions of the Report

Between 2006 and 2012, 198 elementary and middle schools were closed in Ohio's eight largest urban districts. One hundred and twenty of these were run by school districts; 78 were charter schools.

Characteristics of Closed Schools

Over 73 percent of students in the closing schools were African American, compared to 59 percent of non-closing district-run schools and 54 percent of charter schools. Although less pronounced, there was also a difference in economically disadvantaged students (92 versus 85 percent of district schools and 74 versus 72 percent of charter schools). Student performance on statewide math and reading tests also differed between closing and non-closing schools. In district schools the average student from a closed school scored at approximately the 20th percentile, while the average student from a non-closed school scored in the 30th percentile.

Characteristics of Receiving Schools

The report found that the majority of displaced students from both district-run and charter schools transferred to higher-performing schools the subsequent year. Among the district-run closed schools, 60 percent of students switched to a school that had higher achievement as measured by reading performance and 59 percentage as measured by year-to-year achievement gains. Among the closed charter schools, 72 percent switched to schools with higher reading scores and 68 percent to schools with higher achievement gains.

Academic Performance of Displaced Students

To assess changes in academic performance the report performs two analyses. The first takes as baseline scores from the year *prior to* the school's final year, because, as they write, "student achievement might dip during that final year as a result of the announcement" (p. 15). The second measure uses the final year as baseline from which to compare growth.

Under the first measure, students in district schools increased their performance by 0.060 standard deviations in reading and 0.041 in math. The authors translate these standard deviations into "days of learning" and report that this corresponds to 40 and 21 days of learning respectively by the third year after closure). When the second measure is used, the report states that displaced students increased their reading and math scores by 0.073 and 0.065 (corresponding to 49 and 34 extra days of learning). Displaced district students who went to schools that were higher-achieving than their closed schools showed even greater gains, regardless of baseline year.

Applying the same two analyses to displaced charter students, the report found that the more conservative estimate yielded math achievement gains of 0.094 standard deviations (49 days). The second measure saw math gains of 0.087 standard deviations, or 46 extra days of learning. Displaced charter school students' reading achievement did not show improvement by the third year for either measure. Displaced charter students saw greater gains in achievement if they went to higher-achieving schools.

Academic Performance of Receiving Schools

Although average achievement scores did not change in a significant way in the receiving schools, estimates of academic gains from the closure year to the year after closure showed statistically significant decreases for both district schools and charter schools (p. <.01 for two-tailed test). This means that students from the receiving school learned less on tested subjects during the year that those schools accepted displaced students into the school, suggesting a possible negative impact of closure for students in receiving schools.

III. The Report's Rationale for Its Findings and Conclusions

The report's rationale is based on empirical analyses of data collected from the state of Ohio. A variety of empirical analyses are carried out to examine features of closed and non-closed schools and the performance of students in both contexts. The report separates analyses of district and charter schools.

IV. The Report's Use of Research Literature

This report reviews most of the limited published work that examines closure outcomes based on quantitative analysis. It does an excellent job of pursuing salient questions raised by prior studies, particularly with regard to the quality of receiving schools attended by displaced students. The report does not cite the study published by Kirshner, Gaertner, and Pozzoboni (2010), which reported quantitative outcomes of one high school closure using regression discontinuity design.⁶ It is possible that this article was left out because it was a single case study or because it focused on high school performance, while this report looks exclusively at K-8 schools.

A second topic area the report discusses is the large research base on student mobility. Although some relevant research is discussed, the report does not include any of the important work by Russell Rumberger on student mobility.⁷

To be more comprehensive this report could have discussed some of the qualitative research which has investigated the political context of closures as well as discussions of the impact of closures beyond just test scores. The authors acknowledge that closures are often unpopular, but do not consider or discuss why people object to closures. This is

important to consider because test scores are only one among several factors to consider when discussing the pros and cons of school closure.

V. Review of the Report's Methods

The study is based on data collected from individual student records for students enrolled in public schools in the eight largest Ohio urban districts between the 2005-06 and 2012-13 school years. These data include student demographic characteristics (including sex, race/ethnicity, economic status, and disability status) and academic performance on state math and reading tests. The study included students from grade 3, the first year which was tested, to grade 8, enabling analysis of performance across multiple consecutive years. In order to facilitate comparison across grades and years, the report converted scale scores to z-scores, which display the distribution of scores in relation to a normal curve. Z-scores are then converted into days of learning, which the report suggests is consistent with practices used by other scholars. Because the study pursues three distinct lines of analysis, we discuss each separately here.

Characteristics of Closed Schools

The report provides descriptive statistics that compare the student population in schools' final year before closure with those in schools not in their final year. The only questionable strategy here is the comparison of the "average academic performance" of students at these two schools without controlling for race, ethnicity, or economic status.

Characteristics of Receiving Schools

This analysis, while similar to the prior one, makes a narrower comparison between the features of closed schools and the schools to which displaced students transferred. They compare the two sets of schools on two measures: average performance and academic growth. Academic growth refers to a longitudinal analysis of the average yearly achievement gains, which takes into account a student's prior achievement as well as characteristics such as gender, race, and economic class.

Academic Performance of Displaced Students

This analysis compares the achievement gains of all students from closed schools over the course of three years to the achievement gains of all students from non-closed schools; it describes this as a Difference-in-Differences (DiD) approach (p. 24). The authors then conduct a second analysis that looks only at those displaced students who transferred to higher-performing schools. This analysis found that estimated gains were even greater for those students who went to higher-quality schools. On the whole, this analysis has merit and appears sound. However, we raise five concerns about the claims made about academic performance.

First, we are confused by the decision to convert to z-scores if in fact the state of Ohio used a vertical scale. The purpose of vertical scaling is to create a single test score in a subject by which growth over time can be assessed. We suspect that these were vertically scaled, but the report does not address this explicitly. A vertical scale would work nicely in a DiD model, because you can subtract a score at time 1 on a vertical scale from a score at time 2 and interpret that difference as growth. But the report has standardized scores within grades and years (their z-score method). That means applying different linear transformations to different scores along the vertical scale. After a transformation like this, the scores are no longer on the same scale and can't be subtracted for the purposes of the DiD model. It is impossible to know how this would impact estimates of closure effects without knowing the standard deviations of test scores within grades.

Second, it would have been helpful to see a plot of test scores (rather than z-scores) over time for displaced and non-displaced students who fit the same demographic profile. Doing so would give the reader a simple descriptive look at test score trends for the treatment and comparison groups, and would avoid comparing students with different demographic profiles.

Third, the authors analyze test score trends for the 60 percent of displaced students who subsequently transferred to higher-performing schools with the justification that "closure policy could theoretically be designed to ensure that students end up in better schools." But this is by no means guaranteed for major urban districts. Why not also analyze the performance of the 40 percent of displaced students who went to similar or lower-performing schools? Omitting this analysis leaves out an important result and may bias the reader's impression of the findings.

Fourth, since the report makes claims about "academic performance," it should have made some effort to expand its sample to high schools and gather dropout and graduation data. At the least, this is an important caveat to acknowledge in the report. Otherwise all inferences about academic performance rest on the test scores changes, which are converted into a debatable "days of learning" metric. With regard to "days of learning," it is an imperfect estimate of the meaning of z-scores, as the authors themselves acknowledge: "We warn the reader not to read too much into this metric," as it is more intuitive than precise.

VI. Review of the Validity of the Findings and Conclusions

A brief sample of national and international media suggests this study was newsworthy to several sources. The *Economist* wrote, "Critics argue that shutting schools destabilises and, in some cases, derails the academic progress of pupils. Not so: the Fordham study found that closures ultimately benefit pupils from wretched schools." A *Wall Street Journal* op-ed by Aaron Churchill and Michael Petrilli, who also wrote the report's forward, concludes, "These results suggest that charter and district authorities should welcome school closures as a way to improve the education outcomes of needy children."

We would not draw such strong or straightforward conclusions from this study. First, as the authors themselves remind readers, results suggest a positive result “only if closed schools are of sufficiently low quality compared to other nearby schooling options” (p. 22). Another way to say this is that the availability of higher-quality receiving schools ought to be a precondition for a decision to close a school. The authors believe this was largely the case in Ohio – where 60 percent of district students were able to attend better schools – but 40 percent is a sizable number of students who transferred to equivalent or worse schools. And other cities may have even fewer “better” options. The authors’ decision not to report the specific academic performance outcomes of the 40 percent makes this even more concerning. (We also remind readers that the academic performance of the receiving schools suffered in the year following closure, which raises concerns about the instability caused by closure for receiving schools).

Second, and closely related to the quality of receiving schools, is to consider what counts as a “nearby schooling option.” Is the existence of a better school in the same district considered a reasonable option even if that school is several miles away or is not served by

public transportation? Does the district provide school buses to enable students to get to schools that are not in their neighborhoods? How long of a commute is reasonable to expect? These questions about transportation and accessibility are priorities for working families and students, as shown in qualitative research by a team from Cleveland State.⁸ They will vary depending on whether we are talking about elementary, middle, or

high schools, which adds even greater complexity to the lives of working families that expect older siblings to pick up younger ones from school (if they are geographically dispersed). Research from Denver suggests that even if a district encourages “choice,” it can be a false promise if safe transportation or clear information about options is not available.⁹ This issue of accessibility raises a host of complex questions about how to calculate “better”. Reports such as this use incremental differences in test scores as a proxy for better. What about a school’s discipline practices towards children or color, or its ability to accommodate English Language Learners, or its level of teacher experience? Who gets to decide what counts as better?

Our third concern has to do with the disproportionate impact on African Americans found in this study. The study’s first finding—about the characteristics of closed schools—confirms claims made by prior research and advocacy groups about the disproportionate impact of closure on students growing up in low-income communities of color.¹⁰ The forward’s authors interpret this to mean that the right schools are being closed. But, alternative interpretations should also be discussed, such as ones taking into account the pernicious consequences of racial segregation and concentrated poverty.¹¹ Even the “better” schools show year-to-year growth that is far below the mean for the state (-.70 z-score, p. 14). Unfortunately the report does not provide information about the economic or

racial and ethnic composition of the “better” schools. It is possible, for example, that the gains experienced by displaced students were linked to the opportunity to attend more economically and racially integrated schools.¹² If this were the case, one could imagine that the headline ought to be, “transferring to higher quality, more integrated schools is associated with increased performance.” If integration is the goal, then surely there are other strategies than the blunt instrument of school closure.

This points to a deeper problem with the conclusions reached by commentators on this study: its disregard for the rights and responsibilities of the parents, students, and community members who want to see high-quality schools in their neighborhoods. The argument against school closures (which, full disclosure, we have made)¹³ has always been about more than its effect on test scores. This argument is driven by a normative claim about what children deserve from their public schools and insists that decisions about schooling ought to be determined by public deliberation. Until people’s fundamental moral right to be part of decisions that affect their children’s lives are taken seriously, discussions about changes in test score performance are important but insufficient.

VII. Usefulness of the Report for Guidance of Policy and Practice

This report offers some guidance to school reform policy if one attends to its caveats and nuances. It is not useful if reduced to a sound bite about the benefits of school closure, because there are too many questions about what constitutes options for students and the impact on receiving schools. In addition to our normative critique about participatory democracy, we caution policymakers to ensure that there are better, accessible school options before accepting the conclusion that closure is a sound choice.

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DOCUMENT REVIEWED:	School Closures and Student Achievement: An Analysis of Ohio's Urban District and Charter Schools
AUTHOR(S):	Deven Carlson and Stéphane Lavertu
PUBLISHER/THINK TANK:	Thomas B. Fordham Institute
DOCUMENT RELEASE DATE:	April 27, 2015
REVIEW DATE:	June 16, 2015
REVIEWER(S):	Ben Kirshner, University of Colorado Boulder; Matthew Gaertner, Pearson
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SUGGESTED CITATION:	Kirshner, B., & Gaertner, M. (2015). <i>Review of "School Closures and Student Achievement"</i> Boulder, CO: National Education Policy Center. Retrieved [date] from http://nepc.colorado.edu/thinktank/review-school-closures