

PUSHED OUT?

Low-Performing Students and New York City Charter Schools

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EXECUTIVE SUMMARY

The significant growth of charter schools in the United States has brought praise for the excellent results achieved by some schools as well as criticism that charter schools may not be serving the most disadvantaged students.

Critics of charter schools, in New York City and elsewhere, commonly assert that charters' (often) strong academic performance derives primarily from the type of student educated, rather than the quality of schooling provided. In particular, many charter school opponents argue that charters systematically "push out" low-performing, or otherwise difficult-to-educate, students in order to boost aggregate test scores.

This paper uses longitudinal NYC student-level enrollment data to assess such claims. Key findings include:

- Low-performing students are more mobile, regardless of where they are enrolled: in NYC charters as well as traditional public schools, low-performing students are more likely to change schools than their higher-performing peers.
- Low-performing students are not more likely to exit NYC charters than traditional public schools.
- To the extent that higher attrition rates for low-performing NYC students offer cause for concern, they are no less a problem for the city's traditional public schools than they are for its charters.

ABOUT THE AUTHOR

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PUSHED OUT? LOW-PERFORMING STUDENTS AND NEW YORK CITY CHARTER SCHOOLS

Marcus A. Winters INTRODUCTION

“ [Charters are] free to push out low-scoring students and send them back to the local public school,” writes Diane Ravitch, a prominent charter critic. “This improves their results, but it leaves regular public schools with disproportionate numbers of the most challenging students.”¹ Carmen Fariña, New York City schools chancellor, adds: “There shouldn’t be a whole movement out of charters the month before the test.”²

Given the frequency and assuredness of such criticism, one would be forgiven for assuming that it was backed by evidence more substantial than mere anecdotes. To date, however, no empirical evidence has been mustered to suggest that: (i) low-performing students are more likely to exit charters than traditional public schools; and (ii) charters systematically remove, or pressure out, low-performing students.

Indeed, analysis of NYC data by SchoolBook (an education website) and the Independent Budget Office (NYC’s version of the Congressional Budget Office) finds that, on average, charters display lower overall attrition rates than do traditional public schools.³ The IBO also finds that student attrition—when compared by gender, race/ethnicity, poverty, and English learner status—in charters is lower than in traditional public schools.⁴ Likewise, previous data analysis of NYC charters and traditional public schools (conducted by this author) found that students with disabilities⁵ and students learning English⁶ are less likely to exit charters than traditional public schools.

Nevertheless, current research offers little evidence comparing attrition patterns in charter and traditional public schools that is related to prior student performance on standardized tests. To the best of this author’s knowledge, a recent paper by Vanderbilt University’s Ron Zimmer and Indiana University’s Cassandra Guarino provides the only such analysis

directly examining whether low-performing students are more likely to exit charters than traditional public schools within a large school district.⁷

Analyzing student-level data from a large, anonymous midwestern school district, Zimmer and Guarino found that low-performing students exit charters and traditional public schools at equal rates. Though their results are convincing for the school district analyzed, Zimmer and Guarino urge similar research in other cities—a reasonable suggestion, given that the operation and effectiveness of charters vary dramatically across school systems.

This paper uses NYC student-level data, over six years, to study whether low-performing students are more likely to exit charters than traditional public schools. Low-performing students, the paper finds, *are* more likely to exit NYC charters than are higher-performing students. That pattern, the paper also finds, exists equally within the traditional public school sector. In short, the author finds no empirical evidence that low-performing students are more likely to exit charter schools than traditional public schools.

Though this paper does not attempt to explain why students exit certain schools, its findings are inconsistent with the argument that NYC charters systematically push out low-performing students.

I. DATA

This paper utilizes a student-level, longitudinal data set—made available by NYC’s Department of Education (DOE)—covering all students enrolled from 2006–07 through 2011–12 in NYC charter and traditional public schools. Unique (albeit anonymous) student identifiers allow individual students to be tracked over time. Similarly, unique school markers identify whether students are enrolled in charter or traditional public schools. Data include students’ demographic information and relevant test scores on state-mandated math and reading assessments, administered in grades three through eight.

The ability to follow individual students over time allows the author to observe whether students exit

their schools, as measured by: (i) their enrollment in a different school from the previous year; or (ii) their complete absence in the data set one year after being recorded as enrolled the previous year (i.e., students leave NYC’s public school system entirely).

This paper evaluates student exits according to previous test-score performance. State-mandated testing in New York extends from grades three through eight. The paper’s analysis thus begins with students moving into fourth grade (students entering third grade do not have a mandatory test score from the previous year, with the exception of students who are required to repeat third grade). Similarly, because mandatory testing ends in eighth grade, this paper is unable to analyze student exits in high school.

The author also excludes students progressing into sixth grade, a “gateway” grade in which the majority of NYC traditional public school students make a structural move into middle school: according to the author’s calculations using the DOE data set, 78 percent of such students entering sixth grade enter a new school, far higher than any other grade level considered. Because this move is structural, and thus unlikely to be systematically influenced by achievement, students transitioning from fifth to sixth grade are excluded from the analysis. Further, the author cannot evaluate student exits in 2006–07, the DOE data set’s first year, because the school in which students were enrolled in the previous year is not included.

This paper’s final sample, therefore, on which all subsequent results are based, includes students in NYC charter and traditional public schools entering grades four, five, seven, and eight for school years 2007–08 through 2011–12.

II. DEFINING LOW-PERFORMING STUDENTS

One difficulty with analyzing attrition patterns of low-performing students is that there are many ways to define “low performance.” This paper selects two methods.

The first classifies students as low-performing if their test scores fall below the NYC average for stu-

dents in the same grade and year. This method essentially holds all NYC public school students to the same academic standard.

The second method classifies students as low-performing if their test scores fall below the average for students in their particular school, grade, and year. Using this method, students who score poorly relative to other NYC students overall might nonetheless be classified as high-performing if classmates at their particular school score even worse.

To focus on NYC’s lowest-performing students, this paper alters the definition of “low-performing” to consider attrition patterns for students with test scores below the 25th percentile—within NYC and particular schools.

III. DESCRIPTIVE ANALYSES

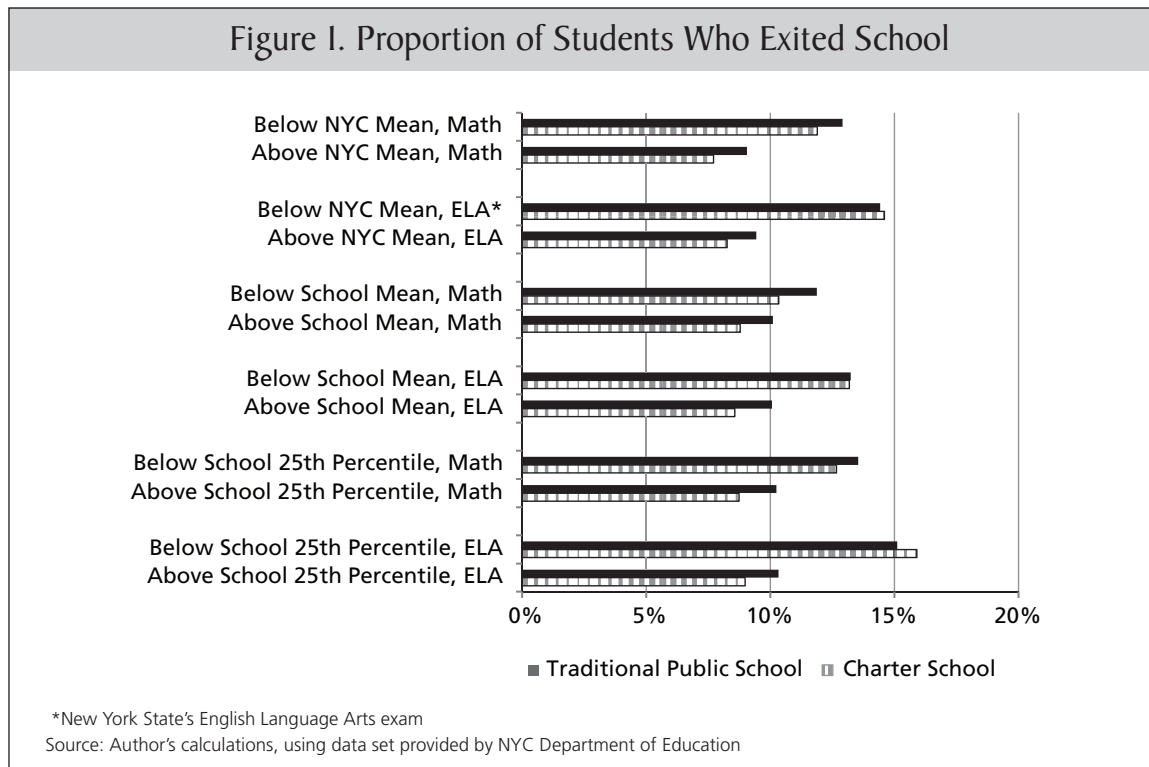
The author first considers basic descriptions of the probability that students exit their schools, by performance and sector. Because such analyses include no statistical controls, they should be in-

terpreted carefully. Nevertheless, they offer useful basic information and help set the stage for later statistical analyses.

Figure 1 compares the proportion of high- and low-performing students who exited their schools the following year. The solid black bars represent students in traditional public schools; the striped bars represent students in charters.

Figure 1 shows that low-performing students are significantly more likely to exit charters than are charter students scoring above the performance threshold—a result seemingly consistent with accusations that charters systematically remove low-performing students.

Yet Figure 1 also makes clear that attrition differences among low- and high-performing charter students only tell part of the story. Indeed, low-performing students in traditional public schools also demonstrate similar attrition differences relative to their high-performing peers. In other words, low-performing students are more likely to exit their



schools, *regardless* of whether they are enrolled in charters or traditional public schools.

Rather than being objects of discrimination, low-performing students, such descriptive analysis suggests, are simply more mobile, on average, than high-performing students. To confirm this finding, further analysis, using statistical controls and allowing for significance testing, is required.

IV. EMPIRICAL METHOD

The author next considers an empirical model that controls for student characteristics and allows for significance testing. The basic approach estimates an OLS regression (resulting in a linear probability model) predicting the relationship between the likelihood that students exit their schools, based on whether they are low-performers and whether they attend charters or traditional public schools, controlling for grade, year, and student characteristics. Formally, the estimation model, **Equation 1**, takes the form:

$$exit_{igst+1} = \beta_0 + \beta_1 charter_{igst} + \beta_2 X_{igst} + \beta_3 belowtest_{igst} + \beta_4 (charter * belowtest)_{igst} + \lambda_t + \delta_g + \varepsilon_{igst}$$

Where $exit_{igst+1}$ is an indicator equaling one if student i , in grade g , and school s , was observed to exit his school in year $t+1$; $charter$ indicates that the student's school in year t was a charter. X is a vector of observed student characteristics; $belowtest$ indicates that the student's test score is below the average score, relative to his school or NY state (depending upon the analysis). λ and δ are year and grade fixed effects; ε is a stochastic term clustered by school in year t . And β represent parameters to be estimated.

Figure 2 reveals results from estimating Equation 1, with each column reporting results of one of six individual regressions. The models use other controls; but for clarity, Figure 2 reports only coefficient estimates and standard errors for three variables of particular interest.

Row 1 estimates the independent relationship between attending a charter and attrition probability,

abstracted from students' observed test-score performance and other factors. In all cases, the estimate is negative and statistically significant. Row 1 shows that—on average and all else equal—students are less likely to exit charters than traditional public schools by about 2 percentage points. (This result is consistent with recent analyses, cited previously, finding that attrition is lower, overall, in NYC charters than in traditional public schools.)

Row 2 reports the estimated, independent relationship between being a low-performing student (as defined by the model) on the probability of exit in a given year, abstracted from students' test-score performance and other factors. Row 2, like Figure 1, reveals that low-performing students are, overall, more likely to exit their schools, whether charter or traditional public.

Of particular interest is the coefficient estimate, "Interaction: Low-Performing & Charter School." These cells represent the estimated differential impact—of being a low-performing student in a charter, relative to being a low-performing student in a traditional public school—on the probability of exit in a given year. In other words, the coefficient measures whether, and by how much, low-performing students are more, or less, likely to exit charters relative to traditional public schools.

In all cases, results for the interaction between attending a charter and being a low-performing student are statistically insignificant at conventional levels. Therefore, the estimates find that low-performing students are statistically just as likely to exit a traditional public school as they are to exit a charter.⁸ (The lone exception: at the 10 percent significance level, students who score below the school mean on the state English Language Arts exam are more likely to exit charters by about 1.93 percentage points.)

CONCLUSION

Charter critics correctly observe that low-performing students are more likely to exit charters than higher-performing students. However, as this pa-

Figure 2. Relationship Between Low Performance, Charter Schooling, and Probability of Exit

	Below District Mean, Math	Below District Mean, ELA	Below School Mean, Math	Below School Mean, ELA	Below School 25th Percentile, Math	Below School 25th Percentile, ELA
Charter School in Previous Year	-0.0242** [0.0116]	-0.0213* [0.0115]	-0.0203* [0.0122]	-0.0233** [0.0117]	-0.0223* [0.0119]	-0.0213* [0.0121]
Low-Performing in Previous Year	0.0189*** [0.00325]	0.0282*** [0.00402]	0.00878*** [0.00254]	0.0150*** [0.00310]	0.0189*** [0.00325]	0.0260*** [0.00445]
Interaction: Low-Performing & Charter School	0.0140 [0.0115]	0.0200 [0.0165]	0.000975 [0.0050]	0.0193* [0.0115]	0.0108 [0.00768]	0.0277 [0.0173]
Observations	1,408,693	1,408,693	1,408,693	1,408,693	1,408,693	1,408,693
R-Squared	0.025	0.026	0.025	0.025	0.025	0.025

* statistically significant at $p < 0.10$. ** statistically significant at $p < 0.05$. *** statistically significant at $p < 0.01$.
Source: Author's calculations, using data set provided by NYC Department of Education

per's analysis of enrollment statistics reveals, this isolated fact, when asserted tirelessly and without proper context, can be highly misleading.

Low-performing students, it is also true, are typically more mobile than their higher-performing peers, regardless of the type of school in which they are enrolled: low-performing students are more likely to exit traditional public schools than high-performing students, too. In short, this paper detects no statistically discernible difference—whether measured by basic descriptive statistics or a simple statistical model—in the probability that low-performing students are more likely to exit charters than traditional public schools.

Thus, if NYC charters' attrition rates for low-performing students, relative to high-performing students, are cause for concern, they are equally worrisome for NYC's traditional public schools. This paper's findings are consistent with two other recent reports by the author, which likewise find that actual student enrollment patterns are inconsistent with the argument that NYC charters systematically push out difficult-to-educate students.⁹ Using similar DOE data, those two papers reveal, respectively, that students with disabilities and English Language Learners are less likely to exit NYC charters than traditional public schools.

Alas, no statistical analysis can confirm alleged isolated instances of charters inappropriately removing low-performing students. Nonetheless, the author's analyses suggest that rampant claims that NYC charters systematically remove low-performing students—whether directly or indirectly, through “counseling out”—are, at the very least, overstated.

As a practical matter, understanding the impact of NYC charters on student academic performance does not require understanding the type of student who exits charters. Extensive empirical research, using random assignment¹⁰ and propensity score-matching¹¹ techniques, consistently finds that students of all types benefit from attending NYC charters over traditional public schools. In no way do claims that charters' aggregate test scores are artificially inflated by attrition patterns challenge such results. (Because charters are public schools, it would, of course, be of great concern if they were systematically removing low-performing students.)

For those who continue to assert that charters systematically remove low-performing students, the burden is now squarely on their shoulders to provide empirical evidence to support their claim. As the facts stand, their argument is plainly contradicted by a basic analysis of NYC longitudinal student enrollment and test-score data.

ENDNOTES

- ¹ See <https://groups.yahoo.com/neo/groups/nyceducationnews/conversations/topics/43167>.
- ² Geoff Decker, "Chancellor Fariña Implies Some Charter Schools Boosting Scores by Pushing Out Students," Chalkbeat, November 20, 2014, <http://ny.chalkbeat.org/2014/11/20/farina-implies-some-charter-schools-boosting-scores-by-pushing-out-students/#.VJmrel4DrE>.
- ³ Beth Fertig, "Harlem Schools See High Student Turnover," SchoolBook, October 2, 2012, <http://www.wnyc.org/story/302691-harlem-schools-see-high-student-turnover>; and NYC Independent Budget Office, "Staying or Going? Comparing Student Attrition Rates at Charter Schools with Nearby Traditional Public Schools," Schools Brief, January 2014, <http://www.ibo.nyc.ny.us/iboreports/2014attritioncharterpublic.html>.
- ⁴ Where IBO did find higher attrition rates for charters—among students with disabilities—the result was later revealed to be incorrect, the result of a data-coding error. See Sarah Darville, "IBO Admits Charter School Special Ed Attrition Numbers Missed the Full Picture," Chalkbeat, February 19, 2014, <http://ny.chalkbeat.org/2014/02/19/ibo-admits-charter-school-special-ed-attrition-numbers-missed-the-full-picture/#.VHHI7fnF9yw>.
- ⁵ Marcus A. Winters, "Why the Gap? Special Education and the New York City Charter Schools," September 2013, http://www.crpe.org/sites/default/files/CRPE_report_speced_gap-nyc-charters.sept13.pdf.
- ⁶ Marcus A. Winters, "Why the Gap? English Language Learners and New York City Charter Schools," Manhattan Institute, Civic Report 93, October 2014, http://www.manhattan-institute.org/html/cr_93.htm#.VHHmVPnF9yw.
- ⁷ R. W. Zimmer and C. M. Guarino, "Is There Empirical Evidence that Charter Schools 'Push Out' Low-Performing Students?," *Educational Evaluation and Policy Analysis* 35, no. 4 (2013): 461–80. Several academic papers examine this question for small charter networks, such as KIPP.
- ⁸ Though the results on the interaction coefficient are statistically insignificant, they are positive. One (generous) interpretation—in support of charter critics—might thus be that the model, however imprecise, finds that low-performing students are indeed more likely to exit charters. Still, in all but one case, the estimated differential positive impact on exit, from being a low-performing charter student, is smaller, overall, than the negative impact on attrition from attending a charter. Regardless of interpretation, the results consistently find that, overall, low-performing charter students display a lower probability of exit.
- ⁹ Winters, "Why the Gap? Special Education and New York City Charter Schools"; and idem, "Why the Gap? English Language Learners and New York City Charter Schools."
- ¹⁰ C. M. Hoxby, S. Murarka, and J. Kang, "How New York City's Charter Schools Affect Achievement" (Cambridge, Mass.: New York City Charter Schools Evaluation Project, 2009); and W. Dobbie and R. G. Fryer, "Getting Beneath the Veil of Effective Schools: Evidence from New York City," *American Economic Journal* 5, no. 4 (2013): 28–60.
- ¹¹ Center for Research for Education Outcomes (CREDO), "National Charter School Study 2013," <http://credo.stanford.edu/documents/NCSS%202013%20Final%20Draft.pdf>; and idem, "Charter School Performance in New York City" (2013), http://credo.stanford.edu/documents/NYC_report_2013_FINAL_20130219_000.pdf.

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