

# Would a Top 10-Percent Admissions Plan Increase Diversity in NYC Public Colleges?

## Working Paper

THE NEW YORK CITY  
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## **ABSTRACT**

Top percent plans that guarantee admission to a certain share of graduates from each high school in a state have emerged as alternatives to traditional affirmative action to promote racial diversity in public colleges. Top percent plans are currently in place in California, Florida, and Texas. Drawing on administrative data available through The New York City Partnership for College Readiness and Success, this analysis investigates whether a top 10 percent admissions plan for New York City high schools would increase the enrollment of underrepresented minority students in baccalaureate programs at the City University of New York (CUNY). We find that the impact of the plan would be minimal for several reasons: the number of top 10 percent public high school graduates is small relative to the total number of baccalaureate freshmen at CUNY; most of New York City's top 10 percent graduates are already admitted to CUNY; some students would not apply to CUNY even with a top percent plan in place; and some students would not enroll at CUNY even with guaranteed admission.

## **OVERVIEW OF TOP PERCENT PLANS**

For years, the graduation rates of New York City public high school students stagnated at 50%. Starting in 2002, the system started to see substantial increases in both the number and percentage of students earning a high school diploma within four years. Though still behind the national 2014 high school graduation rate of 82.3%, the 2015 high school graduation rate reached 70% for the first time in New York City. This falls in line with Los Angeles and Chicago, who represent the next largest school districts in the country (besides Puerto Rico), and whose 2015 high school graduation rates were 72.2% and 69.9% respectively (though Chicago reports a 5-year graduation rate) (LAUSD, 2016; Chicago Public Schools, 2016). Despite this great progress in New York City, the percentage of high school graduates enrolling in college immediately after graduation kept apace over the last decade, hovering between 70% and 73%. Most of these new graduates enrolled in the City University of New York (CUNY) system. In fact, the enrollment of first-time freshmen in CUNY jumped from over 16,000 in 2002 to over 26,000 in 2012.

## **RELEVANCE OF PLAN TO CUNY**

The CUNY system encompasses 18 distinct community and senior college campuses spread throughout New York City's five boroughs. During the time period studied here, six community colleges and three senior colleges offered open-access associate degree programs that admitted any high school graduate. Eleven senior colleges offered baccalaureate programs with varying degrees of selective admission standards. Each 4-year college sets its own criteria for freshman admission based on high school grades, credits, and SAT scores, but CUNY operates a largely centralized admissions system, in which candidates can complete a single form to apply to up to six CUNY colleges.

CUNY faces the challenge of enrolling a student body that is ethnically diverse and representative of the local population under selective admissions standards. Recent declines in the admission rates of Black and Hispanic applicants have attracted scrutiny to the admission process,<sup>1</sup> which currently evaluates applicants based on high school grades in combination with SAT scores and course credits.

This analysis investigates whether a top 10 percent admissions plan would increase the enrollment of underrepresented minority students above current levels in the most selective campuses at CUNY. The plan has potential to diversify incoming classes for several reasons. There is an affordable CUNY four-year college option accessible through public transportation in each borough; moreover, a centralized application system allows applicants to list up to six colleges on one form, with no additional cost per college. In addition, the CUNY system is the top destination of college-going Department of Education (DOE) graduates, with underrepresented minority students concentrated disproportionately in 2-year colleges. Nearly 60 percent of all college-going graduates of the city's public schools enroll at CUNY and 75 percent of all CUNY freshmen are graduates of the city's public schools.

The current analysis simulates one particular specification of a top percent plan, broadly following the one of Texas: guaranteed admission to any of CUNY's baccalaureate programs to students who graduate in the top 10 percent of a New York City public high school. We find that the impact of this particular plan on the representation of underrepresented minority students would be minimal for the following reasons:

- The number of top 10 percent DOE graduates is small relative to the number of students in CUNY's incoming baccalaureate class.
- Many of New York City's top 10 percent graduates are already admitted to CUNY.
- Some students would not apply to CUNY even with a top percent plan in place.
- Some students would not enroll at CUNY even with guaranteed admission.

## **DATA**

To simulate the top 10 percent admission policy, we use data available through The New York City Partnership for College Readiness and Success, a research-practitioner partnership designed to produce analyses that inform the actions of both the NYC DOE and CUNY toward increasing the success of DOE graduates in college. The unique partnership dataset links information from the high school records of all students in DOE high schools to college enrollment records from the National Student Clearinghouse, as well as detailed application and performance data for students at CUNY colleges using university administrative data.

## **MODEL AND RESULTS**

Given that the city’s public high schools do not systematically rank students, the first analysis step is to develop a ranking method. Using the denominator of 2009 9th-graders who graduated in four years (N=45,797), we identify the 90th percentile of GPA among students within each high school.<sup>2</sup> All students above the resulting score are flagged as being in the top 10 percent, resulting in 4,549 cases.

Comparing the racial composition of these top 10 percent graduates to that of current CUNY freshmen (Table 1), we see that top 10 percent graduates have a higher share of underrepresented minority students (47.6 percent vs. 38.1 percent Hispanics and blacks combined). However, comparing the total numbers of top 10 percent graduates and current CUNY freshmen highlights the first limitation of the potential impact of the plan: the number of top 10 percent DOE graduates is small relative to the number of students in CUNY’s incoming baccalaureate class. Even if all top 10 percent graduates applied to and enrolled at CUNY, these students would fill only about 38 percent of seats in the freshman cohort. Moreover, over half of these 38 percent are non-minority students.

**Table 1. Racial composition of actual 2013 CUNY freshmen vs. top 10 percent graduates**

	2013 CUNY freshmen		Top 10 percent graduates	
	N	%	N	%
<b>Asian</b>	3,836	32.0	1,452	31.9
<b>Hispanic</b>	2,769	23.1	1,225	26.9
<b>Black</b>	1,798	15.0	940	20.7
<b>White</b>	3,549	29.6	899	19.8
<b>Other</b>	36	0.3	33	0.7
<b>Total</b>	11,989	100.0	4,549	100.0

To predict which types of graduates are likely to be reached by the plan, we examine current application behavior of top 10 percent graduates. As shown in Table 2, 2,943 of these students are already admitted to four-year colleges. From the start this means that for these 65 percent of top 10 percent graduates, the plan would not be impactful, which is the second limitation of the plan at CUNY.

**Table 2. Current college application behavior of top 10 percent graduates**

	Asian	Hispanic	Black	White	Other	Total
Applied to CUNY						
Applied and admitted to 4-yr	1,117	760	504	543	19	2,943
Applied but not admitted to 4-yr	92	198	150	36	6	482
Applied to 2-yr	6	23	12	12	0	53
Did not apply to CUNY						
Did not apply, enrolled elsewhere	190	166	213	240	8	817
Did not apply, not enrolled elsewhere	47	78	61	68	0	254
<b>Total</b>	<b>1,452</b>	<b>1,225</b>	<b>940</b>	<b>899</b>	<b>33</b>	<b>4,549</b>

An additional 482 of top 10 percent graduates apply but are not admitted to four-year colleges, and 53 students currently apply to two-year colleges and could be expected to also apply to a four-year college under guaranteed admission. These two groups of students would be admitted under the plan; however, we cannot assume that all of them would enroll. To predict how many of them would enroll, we use enrollment information for currently admitted students to i) estimate a logistic regression model predicting the likelihood that a given student enrolls, controlling for gender, race/ethnicity, poverty status, high school GPA, SAT scores, and community poverty<sup>3</sup>); ii) use coefficients from this model to calculate predicted probabilities of enrollment for newly admitted applicants under top percent plan; and iii) multiply average predicted probability of enrollment by number of newly admitted applicants for each racial/ethnic group (Table 3). This exercise yields 73 Hispanic and 41 Black hypothetical new enrollees among current CUNY applicants, yet also sheds light on the third limitation of the plan: some students would not enroll at CUNY even with guaranteed admission.

**Table 3. Predicted number of new enrollees from current applicants who would be newly admitted**

	Asian	Hispanic	Black	White	Other
Applied but not admitted to 4-yr (N)	92	198	150	36	6
Predicted probability of enrollment (mean)	0.41	0.33	0.25	0.41	0.35
Predicted new enrollees (N)	38	65	38	15	2
Applied to 2-yr (N)	6	23	12	12	0
Predicted probability of enrollment (mean)	0.46	0.35	0.26	0.47	n/a
Predicted new enrollees (N)	3	8	3	6	n/a
<b>Total predicted new enrollees (N)</b>	<b>40</b>	<b>73</b>	<b>41</b>	<b>20</b>	<b>2</b>

As shown in Table 2, an additional 817 top 10 percent graduates currently do not apply to CUNY, but enroll in college elsewhere. To predict how many of these would apply to CUNY under the plan, we examine which types of colleges these students attend. Specifically, we want to know how many of them enroll at an equally or less selective top-20 CUNY competitor.<sup>4</sup> Table 4 shows that 95 students do so, including 14 Hispanic and 34 Black. We assume that these are the candidates who would be most likely to come to CUNY under the top 10 percent plan. However, there are very few of them, which points to the fourth limitation of the plan: many top students would not apply to CUNY even under a top percent plan.

**Table 4. Enrollment of top 10 percent graduates who did not apply to CUNY and enrolled elsewhere**

	Asian	Hispanic	Black	White	Other	Total
Enrolled at top 20 competitor						
More selective	53	21	14	26	1	115
Equally or less selective	30	14	34	15	2	95
Enrolled elsewhere	107	131	165	199	5	607
Total	190	166	213	240	8	817

Combining enrollment assumptions for students who currently apply (Table 3) and those who currently do not apply (Table 4), the top 10 percent plan could enroll an additional 271 total students (Table 5). The 87 new Hispanic students represent a 3 percent increase in the number of Hispanic baccalaureate freshmen (current: 2,769). The 75 new Black students represent a 4 percent increase in the number of Black baccalaureate freshmen (current: 1,798).

**Table 5. Estimated new enrollees under top 10 percent plan**

	Asian	Hispanic	Black	White	Other	Total
Newly enrolled	40	73	41	20	2	176
Newly applied	30	14	34	15	2	95
Total	70	87	75	35	4	271

An increase in the number of minority students, however, is different from an increase in the share. As shown in Table 6, the share of minority students among new students is larger than the share among currently enrolled students; therefore, the plan increases the share in the hypothetical incoming class. (We assume here that enrollment simply grows and no one is displaced.) However, the magnitude of this

increase is minimal because the number of new students attracted by the plan is small and because not all new students are underrepresented minority. Given all the assumptions we have made, the share of Hispanic students would go from 23.1 to 23.3 percent and the share of black students from 15.0 to 15.3 percent. We conclude that a top 10 percent plan as currently specified would make minimal difference on the share of minority students in the incoming baccalaureate class.

**Table 6. Racial composition of hypothetical freshman class under top 10 percent plan**

	Current CUNY freshmen		New students under plan		Freshman class under plan	
	N	%	N	%	N	%
Asian	3,837	32.0	70	25.8	3,907	31.9
Hispanic	2,769	23.1	87	32.1	2,856	23.3
Black	1,796	15.0	75	27.7	1,871	15.3
White	3,548	29.6	35	12.9	3,583	29.2
Other	36	0.3	4	1.5	40	0.3
Total	11,986	100.0	271	100.0	12,257	100.0

## **DISCUSSION**

Our simulations show that a top 10 percent plan under current specifications would increase the number of minority students in CUNY baccalaureate programs by three to four percent, with over a third of predicted new students under the plan being the result of changing application behavior. However, we conclude that the plan would have minimal impact on the share of minority students in a hypothetical freshman class entering under the plan.

The current analysis assumed one particular specification of a top percent plan, specifically one that would guarantee admission to any of CUNY’s baccalaureate programs to all students who graduated in the top 10 percent of a New York City public high school. Conclusions pertain to these conditions only and would likely be different under different implementation details. For instance, if the range of eligible students were increased, say, to 20 percent, the numbers of new applicants and enrollees would increase.<sup>5</sup>

Also, the analysis examined the impact of the plan on the racial composition of all incoming baccalaureate students, but findings might look quite different if we examine the impact at one flagship campus only. Baruch, for example, is the most



selective 4-year college and also has a relatively low share of underrepresented minority students. If top 10 percent graduates were automatically admitted to any CUNY baccalaureate program, we would expect a disproportionate share to choose Baruch, and the impact of the plan on the share of underrepresented minority students in Baruch's incoming class might be much larger.<sup>6</sup>

In broad terms, our simulation has shown that implementing a top percent program does not automatically increase minority representation, even in a highly segregated setting such as New York City. The impact of this type of admission program depends on various factors, including the size of graduating high school classes relative to freshmen classes at target colleges, numbers of top percent students already admitted to target colleges, application patterns, and enrollment patterns.

## APPENDIX

**Table A-1: Odds ratios from logistic regression model predicting enrollment in CUNY 4-year**

Female	0.805***
Asian	1.017
Hispanic	0.752***
Black	0.547***
Other	1.039
Poverty	1.103**
GPA	1.008**
SAT missing	1.771***
SAT 900-949	2.253***
SAT 950-999	2.573***
SAT 1000-1049	3.439***
SAT 1050-1099	3.331***
SAT 1100-1149	3.035***
SAT 1150-1199	2.661***
SAT 1200-1249	2.276***
SAT 1250-1299	2.083***
SAT 1300+	1.204**
Constant	0.211***
Pseudo R-squared	
	0.05
N	
	17,099

\*\*\* p<0.001 \*\* p<0.01 \* p<0.05

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## **NOTES**

<sup>1</sup> Hancock, L. and Kolodner, M. 2015. What It Takes to Get Into New York City's Best Public Colleges. *The Atlantic*.

<sup>2</sup> GPA is cumulative 11th-grade GPA across all DOE schools attended for total courses weighted by credit per course. High schools with fewer than 20 graduates are not included, leaving 382 high schools for analysis.

<sup>3</sup> See appendix for results. These show that women have lower odds of enrolling than men, Hispanics and blacks have lower odds of enrolling than whites, and poor students have a higher likelihood of enrolling than non-poor students. Additional points of GPA are associated with higher likelihood of enrolling. As for SAT scores, all students who score above 900 are more likely to enroll than those who score below 900, with the highest relative enrollment likelihoods between 1000 and 1149.

<sup>4</sup> Top 20 CUNY competitor colleges are those schools that receive the largest number of CUNY's admitted students who do not enroll at CUNY. Selectivity is based on Barron's selectivity ranking.

<sup>5</sup> In the cohort of DOE graduates, however, the share of students who are from an underrepresented minority group does not increase greatly when comparing the top 20 percent to the top 10 percent.

<sup>6</sup> At the University of Texas at Austin almost three out of four resident enrollees in fall 2012 were top 10 percent graduates (<http://www.thecb.state.tx.us/reports/PDF/3208.PDF>).