Community District Education Council 26

New York City Department of Education

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Resolution Urging the NYC Department of Education to Reform Waitlist Mechanisms to Improve Equity

WHEREAS, prior to 2003, New York City's high school admissions process was decentralized and left approximately 31,000 students[i] — nearly one in three rising ninth-graders — without any school placement before the start of the academic year, prompting the Bloomberg administration to partner with Nobel Prize-winning economist Alvin E. Roth[ii] and a team of economists including Atila Abdulkadiroğlu and Parag Pathak to redesign the entire admissions system by using the Nobel Prize-winning Gale-Shapley deferred acceptance algorithm, which in its first year reduced unmatched students by over 90%[iii]; and

WHEREAS, for open/unscreened programs and as a tie-breaker within screened program tiers, the random number (lottery ID) becomes the sole determinative factor in whether a student receives an offer when applicants exceed available seats, meaning a single randomly assigned number governs a student's competitive standing across EVERY oversubscribed program on their application simultaneously[iv]; and

WHEREAS, random numbers (lottery IDs) are generated using Python's uuid4() function — a 128-bit cryptographically random value — and the DOE has confirmed that no student demographic characteristics, including race, income, zip code, or disability status, are used as inputs to the random number generation process[v]; and

WHEREAS, each student can view their assigned random number in their school application; the number appears as a 32-character string of hexadecimal characters (0, 1, 2 ... 9, A, B, C, D, E, F), in which numbers beginning with 0 are the most favorable while numbers beginning with the letter F are the least favorable[vi]; and

WHEREAS, the widespread use of random lottery numbers as a primary admissions mechanism — significantly expanded during the COVID-19 pandemic — was originally justified as an equity measure to counteract historical underrepresentation of Black, Hispanic, low-income, and English Language Learner students in selective schools, recognizing that grades and test scores were themselves inequitably distributed due to systemic resource disparities[vii]; and

WHEREAS, a 2022 Freedom of Information Law (FOIL) request for high school program offers in the 2020-21 and 2019-20 admissions cycles found that approximately 73 percent of students received one of their top three program choices (See Exhibit 1); and

WHEREAS, assuming similar matching rates under the expanded use of random numbers, a substantial proportion of students—those with more favorable lottery numbers—are likely placed into one of their top-ranked programs (See Exhibit 2), and

WHEREAS, students who receive favorable lottery numbers benefit not only from across-the-board increased access to higher-ranked initial offers but also from greatly reduced reliance on waitlists, and strongly weakens any justification for such students to participate in waiting lists on equal ground with those who are locked out from desirable programs[viii]; and

WHEREAS, despite the neutral intent of random number generation, a student assigned an unfavorable random number is systematically disadvantaged not at one program, but across ALL oversubscribed programs on their application simultaneously, creating a compounding structural inequity that the original merit-based screened system did not impose in the same totalizing way[ix]; and

WHEREAS, under current policy, students who are not matched to their top choice are automatically placed on waitlists for programs ranked higher on their application, including those already matched to one of their top three choices, and

receive a NEW independently-generated random number for each waitlist — meaning waitlist placement is determined by a separate lottery unrelated to the original application lottery outcome (favorable or unfavorable)[x]; and

WHEREAS, new random numbers provide a statistically equal probability of a favorable outcome for each student on any individual waitlist, but does NOT guarantee compensatory improvement for students who were assigned a highly unfavorable random number in the main round, because each random draw is independent — meaning a student who drew an unfavorable number in the main round has an equal probability of again drawing an unfavorable number on each waitlist, and no structural mechanism corrects for their original disadvantage experienced in the application round[xi]; and

WHEREAS, students without guaranteed placements — those who lack a zoned school assignment or continuing student priority — face disproportionate risk when attempting to use their application choices strategically in anticipation of a favorable waitlist number, as being unmatched in the main round and receiving unfavorable waitlist numbers could result in administrative assignment to a school entirely outside their preference list[xii], with research demonstrating that such students were less likely to graduate[xiii]; and

WHEREAS, research in matching theory suggests the most equitable and algorithmically simple corrective mechanism — requiring no new data collection, no demographic profiling, and no changes to the deferred acceptance algorithm itself — is to reuse each student's original application random number for waitlist placement but apply it in REVERSE priority order: students with the most unfavorable application random numbers (who were most disadvantaged in the main round) would receive the highest waitlist priority, while students with the most favorable application random numbers (who benefited most in the main round) would receive lower waitlist priority[xiv]; and

WHEREAS, reversed-application-random-number waitlist priority is superior to a new random draw[xv] because it (a) guarantees structural compensatory benefit to an unfavorable main-round lottery by directly offsetting the bad luck, rather than merely offering probabilistic relief by issuing new random numbers; (b) eliminates the compounding advantage that favorable-number students currently enjoy in both the main round and the waitlist; (c) is transparent and predictable to families; (d) preserves the existing priority group framework; and (e) is technically trivial to implement through multiple options such as a simple sort-order reversal on an already-stored data field or taking the “one’s complement” of the application random number, requiring no additional funding and minimal system modification (See Exhibit 3); and

WHEREAS, aside from serving as a systemic safety net for those who were unmatched or poorly matched due to initial bad luck, peer-reviewed research by Feigenbaum et al, “Dynamic Matching in School Choice,” on NYC DOE admissions data also demonstrates that a Reverse Lottery Deferred Acceptance (RLDA) mechanism reduces the number of student reassignments (unmatched students) by more than 50% compared to the current forward lottery practice[xvi]; and

WHEREAS, the NYS Comptroller's 2025 audit of the NYC DOE student-school matching algorithm found multiple deficiencies in how the algorithm accounts for vulnerable student populations, including students in temporary housing and low-income students, underscoring that improvements to the equity of the admissions and waitlist mechanisms are urgently needed and within the DOE's administrative capacity to implement[xvii]; and

WHEREAS, Community Education Councils exist specifically to advocate for the educational interests of all students in their districts, including ELL students, students with disabilities, and students in temporary housing, with particular attention to equity, transparency, and accountability in the systems that determine students' access to educational opportunity[xviii]; and

THEREFORE, BE IT RESOLVED, Community Education Council (CEC) 26 urges the New York City Department of Education to evaluate the equity impacts of its current lottery-based admissions and waitlist systems, including the effects of using independently generated random numbers across multiple stages of the admissions process; and

BE IT FURTHER RESOLVED, that the New York City Department of Education discontinue the use of newly generated random numbers for waitlists and instead adopt a system that reuses each student’s original application lottery number in reverse order of priority within existing priority groups, such that students who received less favorable lottery numbers in the main round are given higher priority in waitlist placement; and

BE IT FURTHER RESOLVED, that the New York City Department of Education publish comprehensive annual reports on admissions and waitlist outcomes, disaggregated by race, income level, disability status, English Language Learner status, and borough, in order to ensure ongoing public accountability and enable evaluation of equity impacts; and

BE IT FURTHER RESOLVED, that the New York City Department of Education shall implement the changes for the 2026-2027 admissions cycle to ensure that the waitlist serves as a true restorative mechanism for students harmed by the lottery system.

During the CEC 26 meeting held on March 26, 2026, the resolution was reviewed and unanimously approved by all members in attendance.

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[i] https://ibo.nyc.ny.us/iboreports/preferences-and-outcomes-a-look-at-new-york-citys-public-high-school-choice-process.html
[ii] https://www.nobelprize.org/prizes/economic-sciences/2012/popular-information/
[iii] https://blueprintlabs.mit.edu/research/how-do-new-york-city-schools-assign-seats/
[iv] https://www.schools.nyc.gov/enrollment/enroll-grade-by-grade/how-students-get-offers-to-doe-public-schools/random-numbers-in-admissions
[v] https://www.schools.nyc.gov/enrollment/enroll-grade-by-grade/how-students-get-offers-to-doe-public-schools/random-numbers-in-admissions
[vi] https://amelie-marian.cs.rutgers.edu/2021/06/13/june-2021-decoding-the-nyc-school-admission-lottery-numbers/
[vii] https://www.cityandstateny.com/policy/2022/09/nyc-overhauls-controversial-schools-admissions-process-middle-schools-selective-high-schools/377841/
[viii] https://www.aeaweb.org/articles?id=10.1257/000282805774670167
[ix] https://www.nber.org/system/files/working_papers/w14864/w14864.pdf
[x] https://www.schools.nyc.gov/enrollment/enroll-grade-by-grade/waitlists
[xi] https://www.nber.org/system/files/working_papers/w21046/revisions/w21046.rev1.pdf
[xii] https://www.osc.ny.gov/state-agencies/audits/2025/07/24/management-student-school-matching-algorithm
[xiii] https://www.aeaweb.org/research/charts/nyc-high-school-admissions-matching
[xiv] https://dl.acm.org/doi/fullHtml/10.1145/3593013.3594009
[xv] https://ykanoria.github.io/mnsc.2019.3469.pdf
[xvi] https://business.columbia.edu/sites/default/files-efs/citation_file_upload/mnsc.2019.3469.pdf
[xvii] https://www.osc.ny.gov/state-agencies/audits/2025/07/24/management-student-school-matching-algorithm
[xviii] https://www.schools.nyc.gov/get-involved/families/education-councils/community-education-councils

Exhibit 1 – High school placement statistics per Citywide Council on High Schools FOIL Response

Admissions Cycle	%Received Top 3 offer	%Received Top 5 offer	%Received Top 10 offer	%Received offer 1-12	%Unmatched (no offers)
2020-21	73%	84%	92%	93%	7%
2019-20	73%	84%	93%	94%	6%

Exhibit 2 – Projected high school placement outcomes by random number

Random Number - first two characters	Percentile	Placement outcome
00	99.61%	likely to receive Top 3 offer
10	93.36%	likely to receive Top 3 offer
20	87.11%	likely to receive Top 3 offer
30	80.86%	likely to receive Top 3 offer
40	74.61%	likely to receive Top 3 offer
50	68.36%	likely to receive Top 3 offer
60	62.11%	likely to receive Top 3 offer
70	55.86%	likely to receive Top 3 offer
80	49.61%	likely to receive Top 3 offer
90	43.36%	likely to receive Top 3 offer
A0	37.11%	likely to receive Top 3 offer
B0	30.86%	likely to receive Top 3 offer
C0	24.61%	likely to receive Top 3 offer
D0	18.36%	likely to receive Top 5 offer
E0	12.11%	likely to receive Top 10 offer
F0	5.86%	likely to receive no offers

Exhibit 3 – Inverting of hexadecimal numbers

Hexadecimal	One's Complement
0	F
1	E
2	D
3	C
4	B
5	A
6	9
7	8
8	7
9	6
A	5
B	4
C	3
D	2
E	1
F	0