GoCPS: A First Look at Applications and Offers

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1. Introduction

Chicago Public Schools (CPS) offers many options when it comes to high school enrollment. In fact, about three of every four incoming ninth graders choose to attend a high school other than their assigned neighborhood school.[1] Despite this widespread engagement in school choice, the high school application process can be complicated. In an effort to simplify and streamline the process, the Chicago Board of Education voted on April 26, 2017 to adopt a common application across all high school choice programs for incoming ninth grade students with a single deadline and single best offer.[2] The district expected that this common application would make the process simpler, more transparent, and more equitable for students and families. Similar measures have been approved, and are in use, in a number of urban districts such as New York City, Denver, Camden, New Orleans, Washington D.C., and Newark.

The district's prior high school application system involved multiple applications, requirements, and deadlines. In the past, some applications were submitted to schools directly, while others were processed by the CPS Office of Access and Enrollment (OAE). At the same time, some students received multiple offers while others were placed on waiting lists until students holding offers decided whether and which to accept. Motivating factors for moving to a common application included trying to reduce the difficulties faced by students and families in navigating a complicated application system with multiple applications, requirements, and deadlines. In addition, the complexity of the prior system had the potential to generate inequities due to differential family and school resources to help students through the process. The system also created uncertainty for schools. Namely, many schools did not know how many students to expect in the fall making it difficult to plan for the beginning of the school year.

The choice program application and the selective enrollment high school (SEHS) application were both moved to a single online platform known as GoCPS.[3] This new application system eliminated the need to apply school-by-school and program-by-program. In addition, all

[1] See Barrow, Lisa, and Lauren Sartain. 2017. The Expansion of High School Choice in Chicago Public Schools, *Economic Perspectives*. 41(5).
https://www.chicagofed.org/~/media/publications/economic-perspectives/2017/ep2017-5-pdf.pdf

[2] CPS plans to use the term "choice" rather than "non-selective" high school program going forward. By choice high school programs we mean all of the traditional high school programs with the exception of the eleven selective enrollment high school programs.

[3] Many elementary school applications were also moved to the GoCPS platform.

high school programs had a common deadline for submissions and acceptances of offers. Importantly, the selection system lessened the problem of some students holding multiple offers to competitive programs while others remained on multiple waitlists with no offers. The district's high-profile SEHSs operated on this same platform in a parallel admission system with the same rules and requirements as in prior years. Because there were no major changes to SEHS application, this paper focuses on the choice program application.[4] In previous research, we provide more evidence on the selective enrollment admission process and the effects of attending a selective enrollment high school.[5]

This paper presents information about the implementation of GoCPS for students looking to enroll in ninth grade in the fall of 2018. We describe how the process is intended to work. We characterize the wide range of programs available to applicants, including a description of which programs applicants ranked most highly and how program rankings varied by type of student (e.g., low- versus high-achieving students, males versus females). The paper also includes a description of the programs that were in high demand, as well as those to which few students applied. After describing the applications and the selection process, we turn to validating whether or not the selection of students for programs worked as intended. In particular, when students were selected by lottery, did the lotteries appear to be fair in that students were selected randomly? Finally, we describe the offers generated from the selection process, including the number of applicants who were offered a seat at one of their most preferred programs. Main findings include the following:

- Most of the CPS eighth graders in 2017-18 (91 percent, or roughly 24,500 students) completed a high school application using the centralized system.[6] An additional 2,500 eighth graders from outside the district also submitted an application.
    - On average, students ranked 7.4 choice programs on their application, with African American students and students who live in lower-income

[4] Elementary school applications were also included on the GoCPS platform, but selection rules were unchanged, and we do not address elementary school applications in this paper.

[5] See https://consortium.uchicago.edu/publications/selective-enrollment-high-schools-chicago-admission-and-impacts for our previous research.

[6] Our numbers differ somewhat from those publicly reported by CPS primarily due to differences in when enrollment is measured. We define current CPS eighth graders as those actively enrolled in CPS as of October 2, 2017 whereas CPS measures enrollment using a file from March 2018.

neighborhoods typically listing more options.

- For the first time, centralized information about program demand for all choice programs is available. Fifty-one of the 273 choice programs (19 percent) had more than 10 times as many applications as seats available. Twenty-one programs (8 percent) had fewer applications than seats available.
    - Arts and Careers and Technical Education (CTE) programs, programs that admit students based on points, and programs located in schools that were highly rated on the district's accountability system, the School Quality Rating Policy (SQRP), were somewhat more likely to be in high demand.
    - General Education and Military programs, programs that base admissions on lotteries with minimum eligibility requirements, and programs that were located in schools with low SQRP ratings were more likely to be in low demand.
    - Information on program demand is incomplete at this point in time because all students are entitled to enroll in their neighborhood general education program even if they did not rank the program on their application. In addition, the few students who were enrolled in a program in eighth grade that also serves high school grades are eligible to continue in that program without having to apply. Therefore, we will have a more complete understanding about demand, particularly for neighborhood programs, after students enroll in the fall.
- Students were offered seats as described on the GoCPS website
    - In cases where admission to the program was determined by a lottery, both the assigned lottery number and whether or not a student was offered a seat were random (i.e., unrelated to student characteristics and how high an applicant listed the program on their application).
    - In cases where admission to a program was determined by an application score, students were admitted in order of application score. Namely, all students who were admitted to a given program had higher scores than students in the same priority group who were not admitted.

- Based on other research about these kinds of selection processes, the best strategy for the typical student is to rank the programs they most want to attend at the top of their application.[7]

- Almost all applicants from round 1 (93 percent) received an offer at a program they ranked on their application. For 51 percent, the offer was for their most-preferred program; 81 percent received an offer from one of their top three-ranked programs.

  - A small share of round 1 applicants (5.8 percent) received no offer from either a choice program or a SEHS program. Students who did not receive an offer tended to rank fewer programs. Of the applicants who did not receive a round 1 offer, 26 percent submitted an application in round 2.

- Of the roughly 4,300 applicants who participated in round 2, 85 percent received an offer at a program they ranked on their application. For 61 percent of round 2 applicants, the offer was for their highest ranked program; 82 percent of round 2 applicants received an offer from one of their top three-ranked programs.

  - Fewer than 300 round 2 applicants did not receive an offer in round 2 and had not accepted an offer in round 1; most (84 percent) were on at least one waitlist, and all are eligible to attend their neighborhood general education program.

- Roughly 20,000 seats remained unfilled in programs across the district.

  - Most (approximately 13,000) reflect excess capacity in CPS due to several years of declining enrollment which is not an artifact of GoCPS itself.

  - We expect approximately 7,000 students will enroll in their neighborhood general education program or continue in a school in which they were enrolled in eighth grade if the school also serves higher grade levels. Some of these will be applicants who effectively rejected their offer by actively declining or failing to respond. Others will not have participated in GoCPS at all. Information about

[7] See for example, Abdulkadiroğlu, Atila, Parag A. Pathak, and Alvin E. Roth. 2005. The New York City High School Match. *American Economic Review* 95(2): 364-367. DOI: 10.1257/000282805774670167.

open seats in the district will be more complete when students enroll in the fall.

- The GoCPS system has streamlined the application and offer system considerably. However, the various program requirements, priorities, and selection rules are still complicated, which may be challenging for families, schools, and the public to understand clearly.

As of the release of this paper, the GoCPS applicants have yet to enroll in high school. During the 2018-19 school year, we will study patterns in enrollment, including whether students enroll in the program where they accepted an offer; how many students enroll in programs at their neighborhood high school; how many programs have enrollments at, above, or below capacity; and how those enrollments compare to projections based on the offer acceptances. We also have more to learn about the accessibility of programs to different subpopulations of students. For example, we want to understand the role that the distance between students' homes and various school programs plays in students' program preferences. Finally, as these students progress through high school, we will study whether GoCPS influences student transfers and mobility, academic outcomes, and experiences in school.

2. CPS's Universal Enrollment System: GoCPS

A. Overview

The new CPS system is called GoCPS. GoCPS is an online platform that allows incoming ninth grade students to apply for all charter and district-run high schools and programs with a common application.[8] The system also covers many elementary schools, but this paper focuses on students applying to ninth grade. Students can also use this system to apply for selective enrollment high school programs. As in prior years, students who apply to SEHS programs rank up to six out of 11 options. Students who apply to other district-run and charter high school programs can rank up to 20 programs among the 273 different options offered for incoming ninth graders in round 1. Students are guaranteed a seat in the general education program at their neighborhood high school,

[8] Students can submit their application on paper instead, but CPS encouraged families to create online accounts and submit their application through this system.

even if it was not ranked on their application. However, CPS encouraged applicants to rank their neighborhood program if they were interested in attending it, and applicants' neighborhood program was among those they could accept when responding to their application offer even if they had not ranked the program on their application.

Because some schools can house multiple programs, in this paper we refer to students as applying to programs rather than schools. If schools do not house multiple programs, for example charter schools, we refer to that school as having a single program. In schools with multiple programs, students can apply to as many programs as are located in that school. Each of these programs counts toward the total number of options a student is allowed to rank even if they are all at the same school.

In addition to the common application, a new feature of the system is that students receive a single best offer from their choice program application. In addition, students may have these other options:

1. An offer from a selective enrollment high school program;
2. A guaranteed seat in their neighborhood high school program; and
3. A guaranteed seat at a continuing enrollment school where the student is currently enrolled (e.g., a school that serves students in grades 6-12 or 7-12).

A computerized selection process assigns students to the highest ranked program on their application for which they are eligible and for which there are available seats. Offers made to each program are driven by how many students the program can serve[9] and its pre-designated priorities, such as siblings or students living close to the school. When programs have more applicants than seats, applicants are selected by a lottery or application points, depending on the program. Some of the programs have academic eligibility requirements determined by students' scores on the NWEA MAP test, some programs require supplemental information, such as essays or letters of recommendation, and other programs require admission screenings, such as auditions. In addition, some programs admitting students based on points set minimum scores for eligibility.

For eighth graders entering high school in the fall of 2018, CPS had two rounds of

[9] The number of seats at each program is determined jointly by school principals and central office.

applications and offers. Students submitted their application on or before December 22, 2017 for the first round and received offers on March 30, 2018 (see Table 1 for a list of relevant dates). Eligible students were assigned to waitlists for programs that they ranked more highly than the offer they received. Students had until April 13 to accept or decline their offer. After students made first round decisions, CPS began to make offers from the waitlists as positions became available. Students were given 48 hours to respond to a waitlist offer. Students remained on waitlists for their higher-ranked programs even if they accepted an offer. Waitlists are ongoing and managed by central office rather than individual programs. Students will continue to get offers from waitlists until January 2019.

Students who moved to Chicago after the round 1 GoCPS deadline, did not participate in round 1, did not receive an offer in round 1, or preferred a round 2 program to their round 1 offer could participate in a second round of GoCPS applications. Only programs with remaining seats were available for applications in round 2 although CPS added four additional programs in round 2 that were not offered in round 1. All four programs were pre-engineering programs. [10] In addition, some programs lowered the minimum points cutoff for admission in round 2 in order to fill more seats. Finally, students still had the option of choosing their neighborhood high school program, even if they did not rank the program on their application.

As in round 1, students were offered, at most, one program to which they applied in round 2. If a student was made an offer in round 2, she had to forfeit her round 1 offer. However, round 2 offers had no effect on students' round 1 waitlists. At the end of round 2, students remaining on waitlists continue to be contacted as seats become available. After July 1, 2018 students could begin to apply to transfer to a different school.

B. Program description

As noted above, students were able to rank up to 20 out of more than 270 programs in 125 schools open to ninth-grade students for the fall of 2018.[11] These included:

- 91 Career and Technical Education (CTE) programs (18% of seats);

[10] The new programs are housed at Curie, Foreman, Mather, and Solorio High Schools.
[11] There are 132 high schools in CPS, 7 of which house only a SEHS program. Five schools house a SEHS program in addition to other program types.

- 85 General Education programs (51% of seats);
- 30 Arts programs (3% of seats);
- 24 International Baccalaureate (IB) programs (10% of seats);
- 21 Other programs (8% of seats);
- 13 Science, Technology, Engineering, and Math (STEM) programs (7% of seats); and
- 9 Military or JROTC programs (3% of seats).[12]

See Appendix Table 1 for a list of program names by type. The share of seats for each type of program are shown in parentheses in the list above. In total there are roughly 37,000 seats available, substantially more than the number of applicants for fall 2018 or the number of ninth graders enrolled as of the 20th day of the 2017-18 school year.[13] In 2017-18, there were about 27,500 ninth graders enrolled at the beginning of the school year (source: publicly available CPS 20th-day membership files). Figure 1 shows the distribution of seats across programs. Some programs are quite small, such as Dyett Arts HS band program, while others are quite a bit larger such as the Morgan Park HS general education program. In round 2, 197 programs were accepting applications with a similar distribution of seats by program type.

We also classify programs by the type of school in which the program is housed—Charter, Neighborhood, or Other citywide. We classify a program as being housed in a neighborhood school if any program in the school is considered a neighborhood program. For example, Curie HS offers 13 programs, some of which are arts programs, some CTE, one IB, but it also offers a general education program that is open only to students who live in the attendance area. As a result we classify all programs at Curie HS as being offered at a neighborhood school. Other citywide schools include programs housed in Selective Enrollment High Schools and other schools without attendance area programs, such as magnet schools and military academies. See Appendix Table 2 for a list of programs by school type.

[12] Most Charter school programs fall into the general education category. While no Charter program can have eligibility requirements, there are two Charter International Baccalaureate programs, several STEM programs, an arts program, and one program that falls into our other category.

[13] The number of seats that a program will offer is generally somewhat higher than the target program capacity in order to account for students accepting other options such as a selective enrollment offer, a neighborhood program, or something outside of CPS. Based on information we received from CPS, there are roughly 40,100 seats to offer students in round 1 while the target capacity of these programs is 37,300. In round 2, there are roughly 18,600 seats available for offers.

- 165 programs in neighborhood high schools (55% of seats)
- 46 programs in charter high schools (26% of seats)
- 62 programs in other citywide high schools (20% of seats)

The round 2 distribution of seats across school types was quite similar.

C. Eligibility requirements and priority groups.

Among the most complicated pieces of the high school application process are the program eligibility requirements and priority groups. The distinction between eligibility requirements and priority groups can be subtle:

- Program eligibility requirements could include meeting minimum test scores, where applicants' test scores must be above a set threshold, or attending a program's mandatory information session.
- Priority groups could include having a sibling already enrolled at a program at the school or living in close proximity to the school.

Not meeting an eligibility requirement means that an applicant is not considered for admission, whereas priority groups establish the order of admission for students. While the applications were centralized under a single system, to a large extent, the eligibility requirements and priority groups were not harmonized across programs. That is, principals still had autonomy over setting programmatic requirements. There are some programs that have consistent requirements across schools. For example, charter schools are not allowed to have any eligibility requirements in terms of prior academic achievement. However, as in many programs, charter schools do have priority groups (e.g., the applicant has a sibling who is already attending a program at the school) that determine the order in which the lotteries are run.

1. Eligibility requirements

Programs with eligibility requirements set minimums on one or more academic indicators—NWEA test scores, 7th grade core GPA, 7th grade attendance rates—sometimes in addition to requiring applicants to meet several other requirements such as attending an information session, submitting a portfolio of work, auditioning, participating in an interview, submitting an essay, and/or submitting recommendation letters. Programs that use points on an

application score to determine who is admitted to a program—including the IB programs—may also set a minimum application score for admission. Just over one-half of the programs that admit students based on points (excluding SEHSs) set a minimum cutoff score for admission.

We provide examples of eligibility requirements for different types of programs, though we note that the examples are not exhaustive.

Examples of Eligibility Requirements

Program	**Eligibility Requirements**
General education programs	No eligibility requirements for students living in the attendance area boundary, though there may be minimum requirements for students living outside the boundary
Charter school programs	No eligibility requirements
CTE programs (admission by CTE lottery)	No eligibility requirements
IB programs	Students must have a minimum 7th grade core GPA of 2.5 and attend an information session. In addition, general education and 504 plan students are required to have a minimum percentile of 24 on both the reading and math NWEA MAP tests in 7th grade while students with Individualized Education Plans (IEPs) and English Learner (EL) students are required to a have a minimum combined percentile of 48 in reading and math on the NWEA MAP.[14]
Military academy programs	Students must have a minimum combined NWEA MAP percentile of 48, attend an information session at which students sign a commitment agreement, take an assessment and write a brief essay.

[14] Students with 504 plans and IEPs both require accommodations. IEP students require individualized support from school staff, such as special education teachers or aides. Students with 504 plans require accommodations based on a medical diagnosis, such as extended testing time.

Defining whether an individual student is eligible for a particular program is quite complex. Based on conversations with GoCPS and OAE personnel, we understand that principals were allowed to maintain or set eligibility and selection requirements for each of their programs, many of which existed prior to the adoption of GoCPS. As a result, we were not able to perfectly replicate eligibility flags for each program on a student's application. In some cases, this was due to programs waiving some of the published eligibility requirements such as attending an information session because otherwise they would have been unable to fill seats. In other cases, with the data available to us, we simply had difficulty identifying which students were eligible for certain programs.

2. Selection and priority groups

Students are selected for programs under three different systems—Lottery, CTE Lottery, and Points. (See Appendix Table 3 for a list of program names by admissions type.) These selection types are described in more detail in Section 7 Validating the Selection Process. Within each selection type, programs may also have priority groups that determine the order in which students are selected for the program. Examples of priority groups include the following:

- Siblings of current students,
- Children of staff members (limited to two students per general education program),
- Students living within the high school attendance area,
- Students living within another proximity boundary,
- Student's neighborhood socioeconomic status (SES) tier,[15] and
- Students attending particular elementary schools.

All charter programs prioritize siblings of current students, some have grades below ninth grade and so continuing enrollment students are guaranteed a seat, and others prioritize students enrolling from elementary programs in the same charter network. In addition, a few charter programs have geographic overlay boundaries and prioritize students enrolling from these areas. Priority groups for CTE lottery programs are based on NWEA MAP percentile groups (scoring

[15] For the purpose of admission to magnet and SEHS programs, CPS considers a student's neighborhood's socioeconomic status divided into four tiers. The tier is a proxy for a student's own family economic circumstances based on the Census tract of the student's home address. Tier 1 Census tracts are relatively lower SES neighborhoods, while Tier 4 Census tracts are relatively higher SES neighborhoods.

above the 24th percentile in both reading and math, or not) and living inside or outside the high school attendance area. Other programs that use lotteries for admission use a variety of different priority groups in different orders. For example, the priority group ordering for the Von Steuben HS Science program is sibling, staff preference, proximity, and then tier while the priority group ordering for the Back of the Yards HS Dual Language program is sibling, students currently enrolled in a CPS elementary schools with a World Language or Dual Language program, and then general (as in any applicant who does not fall into another priority group).

Finally, IB programs that select students based on points may also have some priority groups. Several give priority to students enrolled in a particular elementary school middle years IB program. For example, Amundsen HS IB program gives priority to students enrolled in the middle years IB program at McPherson Elementary School, and Curie HS IB program gives priority to students enrolled in the middle years IB program at Edwards Elementary School. Eight of the 22 IB programs have elementary "feeder" programs like this. Attendance area students are also prioritized at IB programs by being given an additional 50 points for their application score to the IB program located in their neighborhood high school.

D. Selection process

The computerized selection process that determines which students are selected for each program has to take into account each program's admissions process, priority preferences, the order in which the students ranked programs on their applications, and the number of available seats in the program. When there are more students applying for a program than seats available, the computerized selection process uses all of these factors combined with a set of rules known as deferred acceptance to determine which students get assigned to which programs. The computerized selection process assigns lottery numbers to all applicants to programs that use a lottery selection. Applicants receive a different lottery number for each lottery program to which they apply. When applicants do not meet eligibility requirements for a particular program, they are not considered in the selection process for that program.

The process works iteratively as follows:

Step 1: Each student is temporarily placed in their top-ranked program. For programs that admit students based on a lottery, students are ordered by priority group and then by lottery number

within priority group. For programs that admit students based on an application score, students are ordered by priority group (if applicable) then from highest to lowest application score within priority group. If there are more seats than students for a particular program, all eligible students are temporarily assigned to that program. When there are fewer seats than students, students at the top of the ordering get temporarily assigned to the program up to the number of seats available. All other eligible students do not get assigned to the program.

Step 2: Each student who does not get assigned to a program in the previous step is placed temporarily in their second ranked program if they have a second program on their application list. In each program, the students temporarily placed from the prior round and the new students are considered together and ordered as described in Step 1. Those at the top of the ordering are tentatively assigned to the program. Any remaining students do not get assigned to the program.

This process continues in this manner until all applicants have been assigned to a program or all ranked programs have been considered for the students who remain unassigned. These unassigned students remain unassigned after the final round of placement. Any student who is not assigned to their top-ranked program is put on an ordered waitlist within priority group at any program for which they are eligible and that they ranked higher than the program they were offered. Students are not placed on waitlists for any program they ranked below the one they were offered.

For every program to which a student applied, the GoCPS system assigned one of four responses:

- Offered, which indicates that the applicant received an offer from that program;
- Higher Rank Offered, which indicates that the applicant was eligible for the program but not considered for the program because they received an offer from a higher-ranked program on their application;
- Waitlist, which indicates that the applicant was placed on a waitlist for the program; or
- Not Eligible, which indicates that the applicant did not meet an eligibility requirement or minimum cutoff score for that program.

Students may have been assigned to “Waitlist” for multiple programs, but they should have

received a response of "Offered" for only one program.

This type of selection process has been applied in many different settings, not just school assignments. Probably the best-known use is for the assignment of medical residents to hospitals. This process is used in many different settings because of its desirable properties. The process is a stable assignment because no student loses a seat at a (preferred) program to a student who is ordered below them at that program in terms of priority group and lottery number or points. The other desirable property is that the best option for students is to rank programs in their true preference ordering; there is no need for applicants to engage in strategic behavior in considering how to rank programs.[16]

3. Data Description

The CPS OAE provided us with a number of different datasets in order to evaluate the selection process for students entering high school in fall 2018. These included data generated by GoCPS, such as student identifiers and basic demographic information, as well as applications, responses from the selection process, students' acceptance or rejection of offers, and detailed program information.

A. High School Program Data

CPS provided a program data file, which contains a comprehensive list of all high school options to which a student entering ninth grade could apply. These data include the program code, program name, admission type, program type, program group, grades served, an indicator for whether it is a SEHS program, and the school identification code. There are also indicators for whether the program has geographic entitlement and whether it is accepting students from outside of the attendance area. For programs with eligibility requirements, there are data on what those minimums are, and for points programs with minimum score cutoffs there is a variable denoting that. Finally, we also received a program capacity number that corresponds with the ideal number

[16] This property relies on students being allowed to order all of the available programs. In fact, GoCPS only allows students to rank up to 20 programs. Most students are only interested in attending a smaller set of programs as evidenced by more than 90 percent of students ranking fewer than 20 programs. As a result, we do not think this constraint on the number of programs an applicant can list is problematic.

of students for the program as well as a capacity number that corresponds to the number of students who will be admitted. This second number tries to account for the fact that many students who apply to a SEHS program will also apply and be admitted to a choice program.

B. Applicant Data

CPS also provided basic information about applicants, including unique applicant GoCPS identification numbers, as well as a CPS student identification number that allows us to link students to other CPS administrative data. The applicant data include gender, English Learner (EL) status, Individualized Education Plan (IEP) status, current elementary school, neighborhood SES (i.e., tier), and a number of academic achievement indicators (grades, test score percentiles, and attendance).

C. Application Data

The application data include applications for all types of programs, although we do not focus on the SEHS applications. The application data includes an application identifier for each program ranked, the program code, program name, and preference ranking. These data also include information on whether applicants are eligible for certain priority groups (e.g., Do they have a sibling currently enrolled at the high school? Do they live in the school's attendance area?). In addition, we have application scores for each program a student applies to that admits students based on points. Also, included, for most applicants (around 98 percent), are the program or programs the applicant is entitled to attend (e.g. their neighborhood HS program or a continuing enrollment program), even if they do not rank the program on their application.

D. Selection Data

The selection data include the offer outcome for every program an applicant ranks. That is, we can see if a student was (1) offered a seat at the program, (2) waitlisted at the program, (3) ineligible for the program, or (4) not considered for a program because they were offered a seat at a program they ranked more highly ("higher rank offered"). The data include information about the program waitlist, such as the student's priority group and waitlist number, as well as the original lottery number for each program with lottery-based admission. Information about the student's priority group for admission is also available.

E. Student Response Data

The student response file includes information on how students responded to their program offer. The data indicate if the student (1) accepted the offer, (2) accepted an offer elsewhere, (3) declined the offer, or (4) did not respond. Because we also receive data on student responses to SEHS program offers, we can divide the accepted-an-offer-elsewhere category into accepted an offer to a SEHS program or accepted an offer to yet another program, such as continuing enrollment in their current program or choosing to enroll in their neighborhood general education program for which they are guaranteed admission.[17]

F. CPS Administrative Data

CPS Masterfile data provide enrollment data for all active students in the fall of 2017 (as of October 2, 2017) in addition to data on students who were previously enrolled in CPS.[18] These data include information on student demographics (race/ethnicity, gender), free/reduced-price lunch status, English language learner status, special education status, and the school code for their current school. The primary information we use from this dataset is whether or not an applicant is currently enrolled in a CPS school. We also use the race and ethnicity information from this file; most other demographic characteristics come from the GoCPS data.

4. Engagement with GoCPS

Nearly, 27,000 students applied to attend a CPS high school for ninth grade in fall 2018 (See Table 2). Ninety-one percent of applicants (the 24,358 applicants in columns (3) and (4)) were currently enrolled in CPS for eighth grade while the remaining applicants were from private schools or otherwise enrolled outside of the district (2,450 applicants in columns (5) and (6)). Roughly 9 percent of current CPS 8th grade students (2,431 students in column (2)) did not submit

[17] When responding to program offers, students were also given the opportunity to accept any program for which they had guaranteed enrollment even if they had not ranked the program on their application. We do not have explicit information on which guaranteed program a student accepted, but because most students only have one guaranteed option we can generally identify the accepted program.

[18] When CPS calculated statistics about applicants, they used an enrollment file generated in March 2018. Because of this difference there may be small discrepancies in the numbers publicly reported by CPS and the numbers that we report in this paper.

an application for eighth grade in the first round of GoCPS, although 5 percent of those (126 out of the 2431 students) ultimately applied in the second round. Further, roughly 4 percent of applicants only submitted applications for SEHSs (635 current CPS students and 570 outside applicants); we drop these students from our analysis because we are focused on the new single, best offer system that affects all programs outside of the SEHS programs.

As shown in Table 2, CPS students who did not submit an application to any program (column 2) are somewhat less likely to be eligible for free- or reduced-price school lunch (FRPL) than all applicants (column 1) and are somewhat more likely to be white. They are also much more likely to have an IEP and have a lower average grade point average (GPA) in core subjects.[19] Applicants who only submit applications for SEHSs (columns 3 and 5) tend to be from higher SES neighborhoods as indicated by the CPS neighborhood tier ranking and are less likely to be FRPL eligible. They are more likely to be female, have higher average core GPA, and have higher national percentile ranking scores on the NWEA math test. Among the current CPS students, students who only apply to SEHSs are also more likely to be white or Asian/other and less likely to be Latino or African American.[20]

Comparing current CPS students who apply to at least one program subject to the new selection system (column (4)) to applicants from outside CPS who apply to at least one program subject to the new selection system (column (6)), students from outside CPS are coming from higher SES neighborhoods, are less likely to be FRPL eligible, are more likely to be female, and have higher GPAs in core courses. Overall, however, these applicants from outside CPS make up fewer than 8 percent of all applicants to programs subject to the new system.

5. Application Characteristics

In this section, we describe the applications received—how many programs students

[19] Eighty-one percent of CPS students with an IEP applied compared with 92 percent of CPS students without an IEP. Nearly one-third of the CPS students with IEPs who did not submit a GoCPS application were eligible to enroll in more specialized programs where students are placed by the CPS Office of Diverse Learner Supports directly rather than open enrollment through GoCPS.

[20] Many applicants did not report race and ethnicity on their GoCPS application, so we rely on CPS masterfile data for this information. For students not in the CPS masterfile, we used what was available from GoCPS.

ranked (up to 20) and what kinds of programs students were interested in attending. We also describe the programs that were in highest demand, as well as the types of programs that were less popular among applicants. We look at different patterns in applications by different student characteristics, such as low- versus high-performing students, students living in various neighborhood contexts, and students of different racial/ethnic backgrounds. Specifically, we find the following:

- The GoCPS application allows students to rank up to 20 programs, although about one-half of students ranked between 1 and 6 programs. African American students and students who live in lower SES neighborhoods ranked more programs, on average.
- Within program and school type, there were popular programs and less popular programs. For instance, there were programs at neighborhood schools that were in high demand, whereas other programs at neighborhood schools had few applicants. However, no charter school programs, arts programs, IB programs, or STEM programs had fewer applications than seats.
- The types of programs most commonly ranked differed with student background characteristics. For example, charter school programs were popular options among African American students, students with low test scores, and students with individualized education plans, whereas charter school programs were less popular among high-performing students, students from tier 4 neighborhoods, and white students.
- All student groups disproportionately ranked programs in schools with high accountability ratings. However, students living in the lowest SES neighborhoods in the city were more likely to rank a low-performing high school at the top of their application.

A. The Number of Programs Ranked by Applicants

Students were allowed to rank up to 20 choice programs on their application. Figure 2 presents the share of applicants by the number of programs ranked. Nearly 10 percent of applicants ranked only one choice program while 6 percent ranked a full 20 programs. More typically, students ranked fewer than 10 programs on their application. It is noteworthy that few students ranked a full set of 20 programs. This finding indicates that for most students, there are fewer than 20 programs that they would prefer to their "outside" option, e.g., their neighborhood school

program, a private or suburban program, or a SEHS program.

The number of programs ranked on the application varies by student characteristics as shown in the panels in Figure 3. To read these figures, for example, look at the boxplot for female applicants in the top left panel of the figure. The line in the middle of the box indicates the number of programs the student at the 50th percentile ranks, so the typical female applicant ranked 6 programs. The bottom of the box indicates the number of applications at the 25th percentile of the distribution, which is 3 in the case of female students, meaning that one-quarter of female students ranked 3 or fewer programs on their application. The top of the box is the number of applications at the 75th percentile (11 programs ranked), meaning that three-quarters of female students ranked 11 or fewer programs on their applications. The top and bottom lines represent the minimum and maximum number of programs ranked, excluding outliers. In the case of applicant gender, the distribution of number of programs ranked is very similar for female and male applicants.

There are some, however, notable differences for other student subgroups. With applications by different racial/ethnic groups, white students ranked fewer programs than other students. The median white applicant ranked only 3 programs, whereas the median African American applicant ranked 8, the median Latino applicant ranked 6, and the median Asian/other applicant ranked 4. There are also differences by prior achievement, with students who have higher incoming test scores ranking fewer programs than students with lower incoming test scores. Students in lower SES neighborhoods (tier 1) ranked more programs than students living in higher SES neighborhoods (tier 4)—8 programs ranked compared to 3 for the applicant at the 50th percentile of each group, respectively. Applicants from outside of CPS also ranked fewer options than did current CPS students. These differences may be related to the number of other options available to certain groups of students, including their preference for their neighborhood program (which they were not required to rank), private school or suburban options, or their beliefs about the probability of getting into a SEHS program.

B. Characteristics of Programs in Low and High Demand

With nearly 300 programs to choose from, patterns emerged in terms of more and less popular programs. In Figure 4, we show how many students applied to each program, as well as whether the student ranked the program first (shown in purple), second or third (green), or fourth

or higher (yellow). The height of each bar represents the total number of applicants who ranked the program at any level on their application. There is a lot of variation in terms of program demand, with some programs yielding applications in the 1000s and others with fewer than 100 applications.

Table 3 provides statistics on which programs have high and low demand based on the applications submitted in round 1. All 273 programs are divided in groups based on the total number of applications relative to target program size.[21] Column 1 in table 3 contains programs receiving fewer total applications than seats available. Even if all applicants ranking these programs did so as their number one choice, these programs would be at least somewhat undersubscribed. The second column shows programs with 1 to 5 applications per seat; most programs are in this category. The next column focuses on programs with 5 to 10 applications per seat, and the last column shows the programs with the highest demand, those receiving more than 10 applications per seat. We characterize programs by school type, program type, admission selection type, and the SQRP level of the school.[22] Each row of the table displays the shares of programs within that characterization falling into each demand category. Overall 7.7 percent of programs (21 programs) are in the lowest-demand category, 44.7 percent of programs receive 1 to 5 applications per seat, 28.9 percent of programs receive 5 to 10 applications per seat, and 18.7 percent of programs (51 programs) receive more than 10 applications per seat.

Eleven percent of the programs housed in neighborhood schools receive fewer applications than seats, while no charter school programs received fewer applications than seats. At the other end, one-third of the programs located in schools we classified as other citywide high schools are in highest demand, 16 percent of programs in neighborhood schools and 9 percent of charter school programs are also in this highest demand category. One thing to keep in mind when considering program demand is that students are not required to apply to their own neighborhood program, so

[21] We consider all applications when defining program popularity, regardless of whether students are actually eligible for the programs.

[22] The CPS School Quality Rating Policy is the District's policy for measuring annual school performance. There are five ratings based on a range of indicators that include student test scores, student academic growth, closing of achievement gaps, school culture and climate, attendance, graduation, and preparation for post-graduation success. Accountability ratings are assigned to a school, not to its individual programs. According to CPS, SQRP Ratings of Levels 1+, 1, and 2+ are in "Good Standing." Level 2 schools are receiving "Provisional Support" from the district, and Level 3 schools are receiving "Intensive Support" that may include school turnaround or closure. Only one school has a SQRP Rating of Level 3.

total application counts may somewhat understate the true demand for neighborhood programs.

None of the Arts, IB or STEM programs were in the lowest demand category (column 1), with almost one-quarter of the military programs getting less than one application per seat. However, almost a quarter of the military programs were very popular receiving more than 10 applications per seat. Many of the Arts and CTE programs were also in the highest demand group. One should keep in mind, however, that small programs like the highly specialized arts programs may generate few numbers of total applications but have relatively high numbers of applications in comparison to the small number of seats available.

In terms of selection systems, 21 percent of programs using lotteries with minimums were in low demand, yet none of the programs using points received less than one application per seat. Meanwhile, close to one-quarter of the programs that select students with a CTE lottery or a points system were in the highest demand category. Finally, programs in schools with a SQRP ranking of Level 1+ or 1 were more likely to be in highest demand than schools with lower SQRP ratings. (See Appendix Table 4 for a listing of programs by SQRP rating levels.)

C. Applicant Preferences by Student Characteristics

Figures 6-9 show the distribution of top-ranked programs overall and for different student subgroups, e.g., male and female students. Each of these figures provides the percent of seats available according to different program characteristics (such as whether a program is at a charter school). This allows for comparisons of the seats available to the seats that are in high demand. We note, however, that one has to be careful in interpreting these comparisons because the number of seats available across the district exceeds the number of applicants by more than 10,000 seats.

Figure 6 shows top-ranked programs by school type—neighborhood (includes any program located at a school with an attendance area boundary), charter, or other citywide (includes any non-charter school without an attendance area boundary). See Appendix Table 2 for a list of schools by school type. Most seats available are located in what we defined as neighborhood schools (55 percent) with 25 percent at charter schools and 20 percent at other citywide schools (see top bar in Figure 6). Across all applicants, 41 percent ranked a program at a neighborhood school as their top choice, 22 percent ranked a program at a charter school first, and 37 percent ranked a program at another citywide school first (see second bar in Figure 6). The remaining bars

show breakdowns for specific student groups in order to see where there are similarities or differences. One contrast is between high- and low-performing students; low-performing students are nearly three times as likely as high-performing students to list a charter school as their top-ranked program.

Figure 7 provides this same breakdown, but by program type. Note that here most charter school programs are general education programs. About one-half (48 percent) of the seats available are in general education programs, although only 34 percent of students list a general education program as their top choice. CTE and IB programs are more popular relative to the number of seats available. Seventeen percent of seats are in CTE programs while 24 percent of students rank a CTE program first. Similarly, 12 percent of seats are in IB programs while 15 percent of students rank an IB program first. IB programs are most popular among high-performing students, students living in tier 4 (higher-SES) neighborhoods, and white or Asian/other students. CTE programs are more popular among low-performing students, students from economically and racially isolated elementary schools, African American students, and male students (to name a few groups).[23]

Figure 8 shows program demand by the program's admission type—lottery without minimums, points programs where students are offered seats according to an application score, lottery with minimum score requirements, and CTE lottery programs. Here, 57 percent of seats available are through lotteries without minimums, followed by 20 percent of seats in points programs. Relative to seats available, points programs are in high demand with 37 percent of all applicants preferring a program with points-based admissions. Students most likely to rank a program that admits students via a lottery without minimum requirements first include special education students (61 percent), English language learners (64 percent), and low-performing students (69 percent). This is perhaps not surprising since many programs with eligibility requirements have NWEA MAP minimum percentiles of 24 or higher (or a combined percentile of 48 or higher) and, as such, would not be options available to most low-performing students.

Finally, Figure 9 shows the breakdown of top-ranked programs by school SQRP rating, where Level 1+ is the highest accountability rating a school can receive. Among all applicants, 76

[23] Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group.

percent (roughly 19,500 applicants) ranked a program in a Level 1+ or Level 1 school as their top choice; whereas 41 percent of program seats (roughly 15,000) are in Level 1+ and Level 1 schools. Nearly one-third available seats (about 12,000 seats) are at low-rated Level 2 or 3 schools with only 7 percent of applicants (1,800 students) listing one of those as their top choice. The remaining 27 percent of program seats (roughly 10,000) are located in schools rated Level 2+ which are top-ranked by 17 percent of students. Low-performing students, African American students, and special education students are more likely than other subgroups to rank a program at a low-rated school at the top of their application. We have not yet explored the extent to which this may reflect differential access to programs either due to eligibility requirements or geographic location. These differences in rankings will have implications for different patterns we may see in offers and ultimately enrollment.

6. Validation of the Selection Process

Next, we address validation of the selection process. In other words, did the assignment of applicants to programs work as intended, e.g. were lottery numbers randomly assigned and were offers within priority group unrelated to applicant characteristics when admissions was by lottery? We find the following:

- Assignment of lottery numbers and selection for programs with lotteries appears to have worked as intended.
    - Student characteristics, including demographics and prior academic achievement, and the order in which students rank a program on their application are unrelated to how high or low their lottery number is.
        - This means that African American students, for example, were not assigned higher (or lower) lottery numbers than Latino students.
        - Further, a student who ranked a program high on their application did not, on average, have a higher or lower lottery number than a student who ranked the same program lower on their application.
    - Student characteristics and program rankings are also unrelated to whether or not a student receives an offer at programs where there are more

applications than seats available.

- This means that, within priority groups, an African American student had an equal chance of being admitted to a lottery-based program as a Latino student.
- Further, conditional on being part of a program lottery, whether or not a student ranked a program at the top or near the bottom of their application had no relationship with receiving an offer.

- In programs that use application scores (i.e., test scores, audition scores) to determine admissions, students are offered seats in order of application score as we would expect.
  - Among students who apply to points-based selection programs, no admitted student has a lower application score than a non-admitted student within their priority group.

A. Types of Program Selection Processes

We investigate the selection of applicants for programs with three different types of admissions regimes:

1. Lotteries. Assignment to these programs are random. These programs may have priority admissions for applicants whose siblings already attend the school, applicants who live within a certain geographic area, etc. Take an example of a program that admits siblings before any other applicants. If there are more siblings than program capacity, siblings are admitted randomly via a lottery. If there are fewer siblings than program capacity, all sibling applicants are admitted and non-sibling students are admitted via a lottery. If, regardless of priority group, there are fewer applicants than seats available, all applicants are admitted and there is no random component. Across lottery programs, student characteristics like race/ethnicity, gender, and neighborhood SES should not be related to the applicant's lottery number or whether or not the applicant receives an offer. Further, how an applicant ranks a program on his/her application should not affect a student's lottery number or probability of receiving an offer.

a. Lotteries with minimums. Admission to these programs generally works in the same way as the lottery programs described in subsection 1. However, these programs may have some minimum admission requirements (e.g., NWEA test scores above a given percentile, GPA above a given point total). Any applicant who meets these requirements is eligible for program admission, and the lottery proceeds as previously described. Among all eligible students, student characteristics, including academic performance in elementary school, and the order in which an applicant lists the program should be independent of the assigned lottery number and probability of receiving an offer.

2. CTE lotteries. Some Career & Technical Education (CTE) programs have more complicated priority group preferences. Within priority group, seats are assigned via a lottery. In these cases, seats are assigned in this way:
    a. 30% for applicants living in the program's geographic proximity
        i. First seats offered to students who meet minimum test score requirements
        ii. If there are remaining seats, they are offered to students who do not meet minimums
    b. 70% for applicants who live outside the geographic proximity area, as well as any proximity applicants who did not receive a seat in the proximity lottery
        i. First seats offered to non-proximity students who meet minimum test score requirements
        ii. Then seats offered to proximity students who meet minimum test score requirements
        iii. Then seats offered to non-proximity students who do not meet minimum test score requirements
        iv. Remaining seats offered to proximity students who do not meet minimum test score requirements

3. Application score. These programs admit students according to an application score, which can be comprised of test scores, GPA, or attendance. Some programs require auditions, portfolio submissions, interviews, or recommendation letters. Applicants are admitted in order of application score until the program is at capacity or until the predetermined

minimum score for admission is reached. As with the lottery programs, points programs can have priority groups. Examples of points programs include International Baccalaureate and fine arts programs. Within each program and priority group, no student offered a seat should have a lower score than a student who did not receive an offer.

B. Strategy for Validating the Selection Process

We take a statistical approach to validating whether the assignment mechanism worked as intended. For programs that base admissions on lotteries, this means testing that lottery numbers and whether students are admitted to a program are statistically unrelated to characteristics of students and how they ranked programs on their application. We do so in a regression framework as described in more detail in the Technical Appendix.

For each program that used a lottery of any type to determine admissions, we test for statistical relationships between student lottery numbers, student characteristics, how students ranked a program, and priority group. Because we are testing a large number of variables, we expect to find that roughly 5 percent of the relationships are statistically significant simply by chance when we use a 5 percent level of significance as our benchmark. Specifically, when we look at the significance levels (measured by p-values) for all of the tests of significance, we expect that 95 percent will be greater than or equal to 0.05 and 5 percent will be less than 0.05. Indeed, this is what we find. Within each group of variable type—student characteristics, program rank, and priority group—roughly 95 percent of the p-values are greater than or equal to 0.05 and 5 percent are less than or equal to 0.05. See the technical appendix and Appendix figures A1 – A4 for more detail.

For lottery programs with more eligible applicants than seats available, we also check to see if student characteristics and how a student ranks a program are related to whether or not a student receives an offer. Unlike with lottery numbers, we expect that priority groups should be related to whether or not a student receives an offer since the priority groups determine the order in which groups of students should be admitted. As expected, we find that roughly 95 percent of the p-values on tests of statistical significance are greater than or equal to 0.05 for student characteristics and program rank. In contrast, we find that p-values for tests of statistical

significance of priority groups are greater than or equal to 0.05 only 55 percent of the time. This is as expected because priority groups should help explain whether a student receives an offer.[24]

Finally, we turn to programs where students are admitted in the order of their application score. The components of an applicant's score vary from program to program. One example is Curie's International Baccalaureate program, where the application score is based on performance on the seventh-grade NWEA and seventh-grade GPA. Applicants who live within Curie's attendance area receive an additional 50 points on their application score. Offers are made starting with the applicant with the highest score until there are no more seats available.

For applicants to the relevant programs (and within priority group), we simply compare the scores of the students who receive an offer to the scores of the students who did not receive an offer. There should be no programs with applicants offered seats who had lower scores than applicants who were not offered a seat. Indeed, this is what we find in our analysis of admissions to these programs.

7. Description of Offers and Acceptances

Using the selection process described in this paper, students received offers to programs depending on preferences, priorities, qualifications, and program capacity. In this section, we describe the offer rate for all applicants, as well as for different subgroups of students. We also report how students responded to their offers. We provide some information about Round 2, including the characteristics of the students who participated in the second round of the selection process. Finally, we discuss the extent to which programs have waitlists, as well as those programs that still have seats available. The main findings from this section include the following:

- In round 1, 93 percent of applicants received an offer at a choice program they ranked on their application. White students, Asian/other students, and students living in high-SES (tier 4) neighborhoods were less likely to receive an offer than other student groups. This is in part because students in these groups were more likely to apply to programs that were in the highest demand (i.e., those that received more than 10 applications per available

[24] The predictive power of priority groups is not higher because not all programs have multiple priority groups.

seat). This may also be due to the fact that these groups of students typically ranked fewer programs.

    - Six percent of applicants received no offer in round 1, and only 26 percent of those chose to submit a round 2 application.
    - Sixteen percent of round 1 applicants were offered a seat at both a choice program and a SEHS program.

- About 60 percent of students who received a choice program offer in round 1 accepted that offer. An additional 23 percent of students accepted an offer elsewhere—at a selective enrollment program, their neighborhood school program, or another program to which they had guaranteed admission. The remaining 18 percent of students who received a choice offer either declined any offer (5 percent) or did not respond to their offer (13 percent).
- High-performing students were the most likely to accept a program offer—46 percent accepted their choice program offer and 43 percent accepted an offer to another CPS program. Conversely, low-performing students were the most likely to reject any offers (24 percent) either through declining the offer (5 percent) or not responding (19 percent).
- About 4,300 applicants participated in round 2 of GoCPS.
    - Ninety-two percent of round 2 applicants had also participated in round 1, and more than 80 percent had received an offer in round 1.

A. Offer Rates

When GoCPS selections were announced, students received one of four responses for each program to which they applied—Offered, Waitlisted, Higher Rank Offered, or Not Eligible. For the selective enrollment high school programs students either received an offer or they did not. For Table 4, we create indicators of whether a student gets an offer, is waitlisted for any program, or is not eligible for any program. We also create an indicator for whether a student is selected for a SEHS program. We present means of these indicators in the top panel of Table 4 for all applicants (column 1), those who are selected for their top-ranked choice program (column 2), one of the choice programs in their top three (column 3), any of the choice programs to which they applied (column 4), those who were selected for both a choice program and a SEHS program (column 5), and those who are not selected for either a choice or SEHS program (column 6).

As shown at the top of column (1), applicants ranked an average of 7.7 choice programs, and 93 percent were selected for one choice program to which they applied. On average, 40 percent of applicants were waitlisted for at least one program, and 48 percent of applicants were ineligible for at least one program that they ranked. Applying online prevents applicants from ranking programs for which they do not meet the minimum eligibility requirements (e.g. NWEA percentiles or GPA are too low). However, applicants may later be ineligible for a program because they did not complete one of the screening requirements such as attending an information session or participating in an audition or not scoring high enough on a portfolio submission. Additionally, students were not eligible to receive offers from a choice program housed in a SEHS if they were admitted to the SEHS program. For example, a student admitted to Jones HS Selective Enrollment program was not eligible to be admitted to Jones HS Pre-Law program.[25]

Sixteen percent of all applicants to choice high school programs were selected for a SEHS program, and 15 percent submitted an application for round 2. Fifty-one percent of applicants were selected for their number one ranked program (bottom of column 2), and 81 percent were selected for a program they ranked in their top three (bottom of column 3). In spite of being selected for programs that they ranked highly, nearly 11 percent of those who were offered their top-ranked program applied for a program in round 2, and 13 percent of those who were selected for one of their top-three programs submitted a round 2 application. Fifteen percent of applicants received an offer for a choice high school program as well as a SEHS program (column 5).[26] Finally, less than 6 percent of applicants were selected for no program (column 6). Eighty-two percent of applicants receiving no offer were on at least one waitlist, and 26 percent submitted a round 2 application. Notably, students who were not selected for any program applied to many fewer choice programs on average—2.6 programs ranked compared to an average of 8.1 programs ranked among students who were selected for a program (column 4).

Overall, 93 percent of applicants are current CPS students, and students who were selected for a choice program are just as likely to be current CPS students. Those who received no offer and those selected for both a choice and a SEHS program are somewhat less likely to be current

[25] Seven programs fell into this category—Hancock Pre Law, Hancock Pre-Engineering, Jones Pre-Law, Jones Pre-Engineering, South Shore IB, South Shore Medical and Health, and Westinghouse Career Academy.
[26] About 1 percent of applicants to choice programs received an offer from a SEHS program but did not receive an offer from a choice program.

CPS students. With regard to other demographic characteristics shown in the table, columns (2) through (4) look relatively similar to the characteristics of all applicants. These characteristics are most different for the students who are selected for both a choice and a SEHS program and those who are selected for no program. Both groups are more likely to come from higher SES neighborhoods as defined by neighborhood tier ranking. Compared with applicants overall, applicants selected for both a SEHS and choice program are less likely to be Latino or African American, more likely to be white or Asian/other, and more likely to be female. Those selected for both a SEHS and choice program are also less likely to have an IEP or be classified as an English Learner. Not surprisingly, they also have higher math NWEA MAP percentiles and higher GPAs. Those who receive no offers are less likely to be African American and more likely to be white or Asian/other, less likely to be female, and are somewhat less likely to have an IEP or EL designation.

Figure 10 presents the percentage of students receiving an offer at various ranks as well as no offer, for various subgroups of students. Nearly 52 percent of high performing students receive an offer from their top ranked program, and an additional 30 percent receive an offer from their second or third-ranked program. Ten percent are selected for a program ranked 4 to 20, and the remainder receive no offer. This pattern is fairly stable across student subgroups with some notable exceptions. Latino students (47 percent) and Asian/other race students (48 percent) are somewhat less likely to receive an offer from their top-ranked program than African American students (56 percent) or white students (55 percent). In part this can be explained by the fact that Latino and Asian/other race students were more likely to rank programs first that are in the highest demand category (those receiving more than 10 applications per seat) than African American students (not shown in the tables). The same reasoning cannot help explain why white students were relatively more likely to be offered a seat at their top ranked program. Perhaps white students were more likely to rank highly programs for which they receive some priority preference due to a factor like geographic proximity. In future work, we will explore the relationship between student application preferences and program characteristics in more detail.

Tier 4 applicants and those who are white or Asian/other/missing are less likely to receive an offer for a choice program. This may in part reflect differences in the number of programs to which they apply. For example, students living in tier 4 neighborhoods rank an average of 7.3

programs while students living in tier 1 neighborhoods rank an average of 11.7 programs. Whether this reflects that tier 4 students are willing to attend fewer programs or whether they are more willing to attend their neighborhood general education program to which they do not have to apply is an open question.

B. Student Acceptance Rates

In Figure 11 and Table 5 we show how students responded to their offer of a seat at a choice program. Overall, 59 percent of applicants accepted that offer (column 2 of Table 5). Eleven percent accepted an offer from a SEHS program. Twelve percent accepted an offer elsewhere—their neighborhood program or another program to which they had guaranteed admission—and the remaining 18 percent effectively rejected their offer either by actively declining their offer or not responding. Applicants who are selected for their top-ranked program are only somewhat more likely to accept the offer—65 percent accept their choice offer, 12 percent accept a SEHS offer, and 8 percent accept an offer elsewhere. Sixteen percent reject the offer or do not respond. Finally, among applicants who receive both a choice and a SEHS offer, 23 percent accept the choice offer while 70 percent accept the SEHS offer. Roughly 5 percent decline both offers.

In Figure 12 we look at how response rates differ by student characteristics. High-performing students—those scoring at the 75th percentile or above on the NWEA MAP math test—are the most likely to accept a school offer in the first round. Forty-six percent accept the single best offer from their choice program applications, 43 percent accept an offer for another CPS program, and 11 percent reject or fail to respond to their offer. Low-performing students—those scoring below the 25th percentile on the NWEA MAP math test—are the least likely to accept a first-round offer, but they are more likely to accept their first-round, single-best, choice program offer than high-performing students. Sixty-one percent select this first-round program offer; 16 percent accept an offer elsewhere; and the remaining 24 percent reject or do not respond to their offer.

C. Share of Seats Filled

By April 13, 2018, students were required to accept or decline offers received in Round 1. We count up the number of accepted offers by program and then calculate the ratio of offers accepted to the target program size to get a sense of which programs filled and which did not.

Figure 13 displays this measure of seats filled for every program available in round one ordered by the share of seats filled. If all applicants received and accepted an offer in Round 1 (excluding SEHS programs), 69 percent of all seats in the district would be filled, meaning there is a fair amount of excess capacity in the district. Twenty-one programs filled 90 percent or more of their program seats with only 12 programs filling every seat. 169 programs were less than one-half filled by this measure. Seven programs filled 0 seats by this date, either because no students were selected for the program or because those who were offered seats declined the offer.

One must be cautious when interpreting these numbers. Because students are always entitled to attend their neighborhood program without applying, many seats in neighborhood HS programs may ultimately be filled after students enroll in the fall. Indeed, the majority (68 percent) of the programs that were less than one-half filled at the end of round 1 are located in neighborhood high schools. At the same time, CPS has faced several years of declining enrollment so there is excess capacity overall at the high school level. We will not have a complete picture of program demand and excess capacity until after students enroll in the fall of 2018.

D. GoCPS Round 2

The round 2 application period opened on April 30, 2018 with 197 programs available to applicants. Roughly one-half of seats available were for General Education Programs, 21 percent were for CTE programs (including the 4 programs not offered in round 1), and 10 percent were for IB programs. Sixty percent of the seats were housed in neighborhood schools, 22 percent in charter schools, and the remainder in other citywide schools.

Figure 14 is similar to Figure 4 in displaying applications by rank for each program offered in round 2. Overall the total number of applications is significantly smaller than the number of applications in round 1 although the most popular programs in terms of total application counts still received more than 400 applications.

Fewer than 5,000 students submitted a GoCPS application for at least one choice program available in round 2. Ninety percent of these applicants had also applied in round 1. Forty-one percent of round 2 applicants had accepted an offer in round 1, and thus would have to forfeit that seat if selected for a program in round 2. Compared with applicants in round 1, the round 2 applicants are more likely to be from lower-SES neighborhoods (tier 1 and tier 2), more likely to

be African American, and more likely to be female. They also have somewhat lower NWEA MAP math percentile scores and somewhat lower 7th grade GPA.

Eighty-five percent of round 2 applicants are offered a seat, most often at one of their top-three ranked programs. Forty percent of these applicants were holding a seat from round 1 thus opening up roughly 1500 seats to offer to students on waitlists from round 1. Nearly 15 percent of round 2 applicants were offered no seat in round 2. Relative to the round 2 applicants overall, students without any round 2 offers are more likely to be from higher-SES (tier 3 and tier 4) neighborhoods, more likely to be Latino, and have higher average NWEA MAP math percentiles and higher GPAs. Fifty percent of these applicants had accepted a round 1 offer leaving a little over 300 students with the general education program at their neighborhood high school as their option as of mid-May 2018.[27] However, as shown in Figure 15, there are still many programs with open seats. Each bar in Figure 15 represents a program that was open for round 2 applications, and the total height of the bar represents the number of seats that were available for that program. The portion of the bar shaded in purple represents the share of those seats that were offered to students. Very few programs accepting applications for round 2 selected as many students as seats available in round 2. As a result, over one-half of the round 2 programs have more than 80 percent of their available seats remaining open.

We also present statistics on students' responses to their round 2 choice program offers in Table 6. Acceptance rates are somewhat higher in round 2. Seventy percent of applicants in round 2 who were offered their top-ranked program accepted the offer. At the same time nearly 25 percent declined the offer actively (2 percent) or by not responding (23 percent). The acceptance rate drops to 65 percent among applicants offered one of their top-three ranked programs.

8. Discussion

In 2017, the CPS Board of Education adopted GoCPS which provided a single platform for nearly all elementary and high school program applications and centralized information on programs and requirements. For incoming ninth grade students in the fall of 2018, it also created

[27] A few applicants may also to be eligible to continue in a program in which they are already enrolled.

a single best offer model for all choice high school programs. Implementation of GoCPS seems to have been largely successful based on information available at the end of the second round of ninth-grade applications. Nearly all applicants were selected for at least one program that they indicated an interest in attending, and most applicants were offered a seat at one of their most-preferred programs. However, more work is needed to understand whether, and to what extent, students are limited in terms of having access to the types of programs they desire to attend. For example, we think it is important to explore if differences in preferences by student subgroups, as indicated by differences in program ranking, reflect differences in geographic proximity to desirable programs. Further, we need to evaluate where students enroll in the fall and if this new selection system is related to reductions in student mobility and improvements in other student outcomes. In summary,

- GoCPS is an improvement over the former decentralized application system. Students complete all high school applications on a single platform, and the information that applicants need about programs and requirements is in a centralized location. However, program priority groups and eligibility requirements are still quite complicated. Future research could examine which aspects of GoCPS students liked and which areas they thought could be improved.
- Because some programs have minimum achievement requirements, students with lower test scores have fewer options available to them. For example, 25 percent of the seats in the district are at a program that requires a minimum NWEA MAP math percentile score of 24 or higher or math and reading combined above 48 (for general education and 504 students). While most students meet this requirement, 8 percent of applicants have NWEA MAP math percentiles below 24. Related to this point, students with high levels of achievement are more likely to receive an offer at a selective enrollment high school in addition to their choice program offer. While minimum program requirements are not new, there still may be equity issues to consider when it comes to differential access to programs by prior achievement levels.
- Running the SEHS program application and choice program application as parallel systems creates a challenge in thinking about how many seats to offer. For example, if many applicants to the Morgan Park IB program also receive offers from SEHS programs, the IB program may have to make twice as many offers to end up with its desired number of

students. If the applications were combined so that students had to rank SEHS programs along with the other programs and students received only one offer, there would be less need to adjust the number of offers to hit an ideal program size.

- For the first time, there is centralized information about the programs and schools that are in high and low demand. An important question is: How will CPS use this information to inform its portfolio approach to school choice, especially since the district has so many excess high school seats relative to student enrollment?
    - Programs with low numbers of applications relative to their size should probably be evaluated further in order to understand the reasons for low demand. These programs may need to market themselves better and invest in outreach to students. However, low demand may also reflect low levels of interest among applicants for these programs.
    - Because students always have the option of enrolling in their neighborhood school program even if they do not rank this option on their application, the information regarding demand for these neighborhood programs is only partially available at this time. Further, this means that neighborhood high schools still face some uncertainty regarding their fall enrollment. We will be able to say more about demand for neighborhood programs after students enroll in the fall.
- Students clearly prefer schools with high accountability ratings. However, there are some students whose most preferred programs are located in schools with low accountability ratings—those students tend to be lower-performing, from low-SES neighborhoods, African American, and/or students with IEPs. In future work we hope to explore how locations of schools with low and high SQRP ratings may inform student rankings of programs.

Tables and Figures

Table 1. Relevant dates for the GoCPS system for ninth graders in 2018-19

Round 1 Applications	
Opened	October 10, 2017
Deadline	December 22, 2017
Round 1 Offers	
Offers Posted	March 30, 2018
Accept/Decline Deadline	April 13, 2018
Waitlist Opens	April 18, 2018
Waitlist Accept/Decline	48 hours after offer posted
Round 2 Applications	
Opened	April 30,2018
Deadline	May 6, 2018
Round 2 Offers	
Offers Posted	June 1, 2018
Accept/Decline Deadline	June 8, 2018
Waitlist Opens	June 13, 2018
Waitlist Accept/Decline	48 hours after offer posted

Table 2. Applicant Characteristics

	All applicants	Current CPS 8th grade students			Other 8th grade applicants	
		No application	Only SEHS applications	Application for at least one choice program	Only SEHS applications	Application for at least one choice program
	(1)	(2)	(3)	(4)	(5)	(6)
Applying to a SEHS program (%)	61.5	0	100	59.3	100	65.2
Total number of programs ranked	9.8	0	3.7	10.3	3.8	7.6
Selective programs ranked	2.4	0	3.7	2.3	3.8	2.5
Choice programs ranked	7.4	0	0.0	8.0	0.0	5.0
Submitted an application in round 2 (%)	14.9	5.2	11.0	15.7	4.4	9.6
Neighborhood Tier (%)						
Tier 1	27.4	Missing	11.7	28.8	9.6	20.0
Tier 2	27.7	Missing	18.4	28.9	13.5	20.9
Tier 3	25.9	Missing	30.6	25.7	23.5	28.3
Tier 4	19.0	Missing	39.4	16.6	53.3	30.9
Free or Reduced-Price Lunch eligible (%)	84.7	79.3	48.4	85.9	54.5[a]	78.4[a]
Race/ethnicity (%)						
Latino	46.4	44.0	30.0	49.8	10.4	19.9
African American	34.6	34.8	28.7	36.1	11.4	25.0
White	8.8	14.8	26.6	8.5	9.1	6.9
Asian/other/missing	10.2	6.4	14.8	5.6	69.1[b]	48.2[b]
Female (%)	50.7	43.3	56.9	50.3	53.3	52.7
IEP (%)	14.4	33.3	5.5	15.7	1.8	5.2
ELL (%)	9.1	Missing	1.6	10.1	0.0	2.6
Math NWEA percentile	54.1	Missing	82.1	52.2	83.1	60.8
Average core GPA	2.8	2.5	3.5	2.7	3.7	3.3
Number of students	26,808	2,431	635	23,723	570	1,880

Notes: [a] Free/Reduced price lunch is missing for 72 percent of other 8th grade applicants. Those students are not included in the percentage of other 8th grade students who are eligible for free/reduced price lunch. [b]Race/ethnicity is missing for more than 40 percent of other 8th grade applicants. Tiers 1 through 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner. Core GPA reflects a student's grade point average in math, reading, science, and social studies.

Table 3. Characterizing programs based on the ratio of applications to seats

	Programs with fewer than 1 application per seat (Lowest Demand)	Programs that are over-subscribed, 1 to 5 applications per seat	Programs that are over-subscribed, 5 to 10 applications per seat	Programs with more than 10 applications per seat (Highest Demand)
	(1)	(2)	(3)	(4)
Count of programs	21	122	79	51
Share of programs (Row %)	7.7	44.7	28.9	18.7
School Type (Row %)				
Charter	0.0	60.9	30.4	8.7
Neighborhood	10.9	44.9	27.9	16.4
Other Citywide	4.8	32.3	30.7	32.3
Program Type (Row %)				
Arts	0.0	43.3	30.0	26.7
CTE	2.2	41.8	28.6	27.5
General Education	16.5	50.6	22.4	10.6
IB	0.0	37.5	50.0	12.5
Military	22.2	22.2	33.3	22.2
STEM	0.0	53.9	30.8	15.4
Other	14.3	47.6	28.6	9.5
Admissions Type (Row %)				
CTE Lottery	3.6	51.8	17.9	26.8
Lottery with minimums	21.2	42.4	27.3	9.1
Lottery without minimums	12.5	49.0	26.0	12.5
Points	0.0	36.4	39.8	23.9
SQRP level of school (Row %)				
Level 1+	0.0	20.7	41.4	37.9
Level 1	6.0	32.0	32.0	30.0
Level 2+	8.3	44.4	27.8	19.4
Level 2 or 3	12.9	66.7	20.4	0.0

Notes: See Appendix Tables 1-3 for listings of programs by school type, program type, admissions type, and SQRP ranking of school.

Table 4. Applicants Characteristics by Offer Rank

	All applicants	Offered first-ranked program	Offered seat at top 3 ranked program	Offered any seat	Offered a choice & SEHS seat	Offered no seat
	(1)	(2)	(3)	(4)	(5)	(6)
Number of choice programs ranked	7.7	7.2	7.7	8.1	7.5	2.6
Choice application results:						
Offered	93.1%	100.0%	100.0%	100.0%	100.0%	0.0%
Waitlisted	40.0%	0.0%	28.0%	37.0%	31.4%	82.0%
Not Eligible	48.0%	36.0%	44.0%	48.0%	49.2%	50.0%
SEHS offer	16.2%	17.0%	16.7%	16.2%	100.0%	0.0%
Submit a round 2 application	15.2%	10.9%	13.2%	14.6%	3.5%	26.1%
Current CPS	92.6%	92.8%	93.1%	93.5%	89.1%	81.7%
Neighborhood Tier						
Tier 1	28.2%	28.5%	28.8%	29.0%	21.5%	16.2%
Tier 2	28.3%	27.3%	28.4%	28.6%	23.2%	24.8%
Tier 3	25.9%	25.1%	25.3%	25.6%	26.5%	29.7%
Tier 4	17.7%	19.0%	17.4%	16.8%	28.8%	29.3%
Race/ethnicity						
Latino	47.6%	43.9%	46.1%	47.7%	39.5%	47.8%
African American	35.3%	38.9%	37.4%	36.2%	24.0%	22.6%
White	8.4%	9.0%	8.3%	7.8%	17.0%	14.8%
Asian/other/missing	8.8%	8.3%	8.2%	8.2%	19.5%	14.7%
Female	50.5%	50.5%	50.6%	50.7%	58.7%	47.2%
IEP	14.9%	16.1%	15.2%	15.0%	4.2%	13.9%
ELL	9.5%	9.3%	9.5%	9.7%	0.5%	8.2%
Math NWEA percentile	52.8	51.8	52.4	52.3	87.0	53.4
Average core GPA	2.8	2.8	2.8	2.8	3.8	2.8
Number of students	25,603	13,085	20,703	23,838	3,848	1,478
Percent of applicants	100%	51.1%	80.9%	93.1%	15.0%	5.8%

Notes: Not shown are characteristics for the nearly 300 applicants who received a SEHS program offer but did not receive a choice program offer. Tiers 1 through 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner. Core GPA reflects a student's grade point average in math, reading, science, and social studies.

Table 5. Applicant Responses to Round 1 Selection Offers

	All applicants	Offered any seat	Offered seat at top 3 choice	Offered first-ranked choice	Offered a choice & SEHS seat	Offered no seat
	(1)	(2)	(3)	(4)	(5)	(6)
Choice offer response, round 1						
Accept	55.1%	59.2%	61.1%	64.5%	22.6%	NA
Accept SEHS offer	11.4%	11.3%	11.6%	11.5%	69.8%	NA
Accept offer elsewhere	11.0%	11.8%	10.1%	7.7%	2.4%	NA
Decline	4.8%	5.2%	4.7%	3.9%	3.0%	NA
No response	11.7%	12.5%	12.5%	12.4%	2.2%	NA
SEHS offer response						
Accept SEHS offer	11.4%	11.3%	11.6%	11.5%	69.8%	NA
Accept offer elsewhere	3.8%	4.0%	4.2%	4.5%	24.7%	NA
Decline	0.6%	0.5%	0.6%	0.6%	3.3%	NA
No response	0.4%	0.4%	0.3%	0.3%	2.2%	NA
Submit round 2 application	15.2%	14.6%	13.2%	10.9%	3.5%	26.1%
Current CPS (%)	92.7%	93.5%	93.1%	92.8%	89.1%	81.7%
Neighborhood Tier (%)						
Tier 1	28.2%	29.0%	28.8%	28.5%	21.5%	16.2%
Tier 2	28.3%	28.6%	28.4%	27.3%	23.2%	24.8%
Tier 3	25.9%	25.6%	25.3%	25.1%	26.5%	29.7%
Tier 4	17.7%	16.8%	17.4%	19.0%	28.8%	29.3%
Race/ethnicity (%)						
Latino	47.6%	47.7%	46.1%	43.9%	39.5%	47.8%
African American	35.3%	36.2%	37.4%	38.9%	24.0%	22.6%
White	8.4%	7.9%	8.3%	9.0%	17.0%	14.8%
Asian/other/missing	8.8%	8.2%	8.2%	8.3%	19.5%	14.7%
Female (%)	50.5%	50.7%	50.7%	50.5%	58.7%	47.2%
IEP (%)	14.9%	15.0%	15.2%	16.1%	4.2%	13.9%
ELL (%)	9.5%	9.7%	9.5%	9.3%	0.5%	8.2%
Math NWEA percentile	52.8	52.3	52.4	51.8	87.0	53.4
Average core GPA	2.8	2.7	2.8	2.7	3.8	2.8
Number of students	25,603	23,838	20,703	13,805	3,848	1,478
Percent of applicants	100%	93.1%	80.9%	51.1%	15.0%	5.8%

Notes: Not shown are characteristics for the nearly 300 applicants who received a SEHS program offer but did not receive a choice program offer. Tiers 1 through 4 refer to the CPS

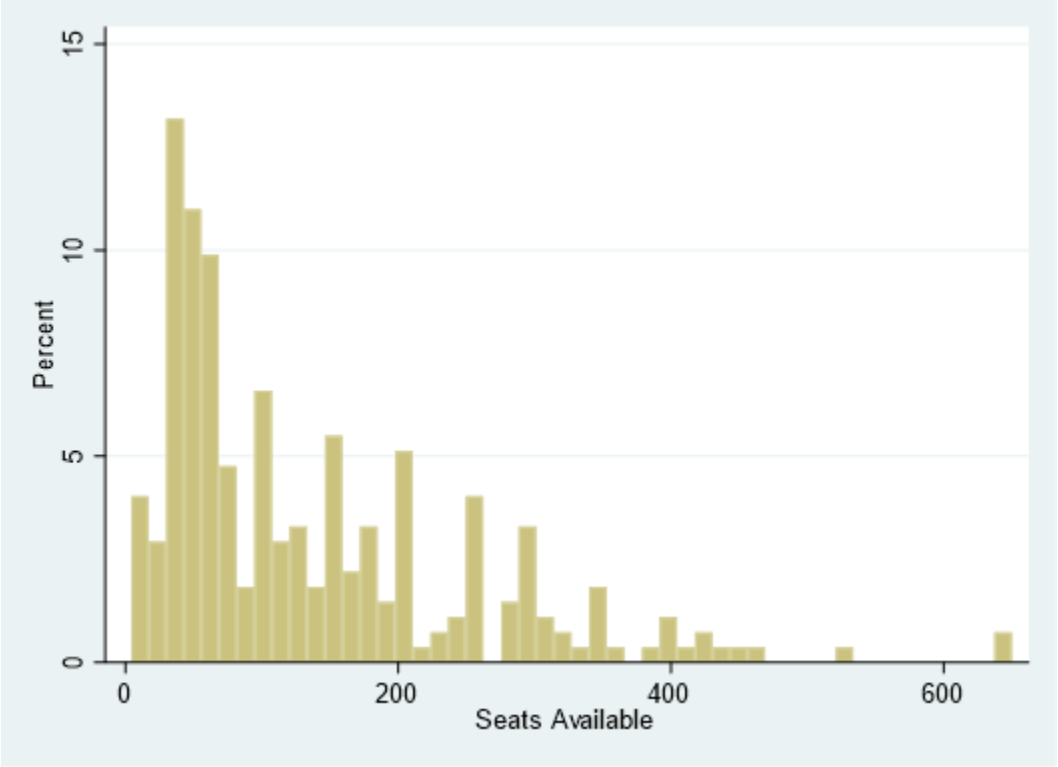
neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner. Core GPA reflects a student's grade point average in math, reading, science, and social studies.

Table 6. Applicant Characteristics and Responses to Round 2 Selection Offers

	All applicants	Offered first-ranked choice	Offered seat at top 3 choice	Offered any seat	Offered no seat
	(1)	(2)	(3)	(4)	(5)
Number of programs ranked	4.7	4.9	5.2	5.3	1.6
Choice application response, round 2					
Offered	85.1%	100.0%	100.0%	100.0%	0%
Waitlisted	17.8%	0%	12.0%	13.8%	40.5%
Not Eligible	45.4%	27.6%	38.6%	40.8%	71.7%
Choice offer response, round 2					
Accept	54.7%	69.9%	65.0%	64.3%	NA
Accept offer elsewhere[a]	6.6%	5.3%	7.7%	7.7%	NA
Decline	2.4%	2.2%	2.8%	2.8%	NA
No response	21.4%	22.6%	24.5%	25.2%	NA
Round 1 participation and outcomes					
Applied in Round 1	92.3%	90.9%	91.6%	91.6%	95.8%
Offered choice	80.5%	81.6%	80.9%	80.7%	79.7%
Offered selective	3.7%	3.6%	3.6%	3.5%	4.4%
Accepted in Round 1	41.1%	40.0%	39.7%	39.5%	50.1%
Accepted SEHS in Round 1	1.2%	0.9%	1.0%	1.0%	2.0%
Current CPS (%)	93.1%	92.9%	93.0%	93.0%	93.6%
Neighborhood Tier (%)					
Tier 1	33.5%	36.9%	35.7%	35.3%	23.5%
Tier 2	30.5%	30.1%	30.4%	30.8%	29.3%
Tier 3	26.1%	24.5%	24.9%	24.9%	33.0%
Tier 4	9.8%	8.5%	9.1%	9.1%	14.2%
Race/ethnicity (%)					
Latino	41.7%	33.9%	37.5%	38.3%	61.5%
African American	49.1%	58.4%	54.4%	53.6%	23.0%
White	3.3%	2.8%	2.9%	2.9%	5.8%
Asian/other/missing	5.9%	5.0%	5.2%	5.3%	9.7%
Female (%)	53.9%	53.7%	54.4%	54.6%	50.0%
IEP (%)	13.0%	14.3%	13.1%	13.1%	12.1%
ELL (%)					
Math NWEA percentile	48.7	46.6	47.7	47.7	53.7
Average core GPA	2.6	2.5	2.5	2.6	2.8
Number of students	4,285	2,605	3,511	3,646	639
Percent of applicants	100%	60.8%	81.9%	85.1%	14.9%

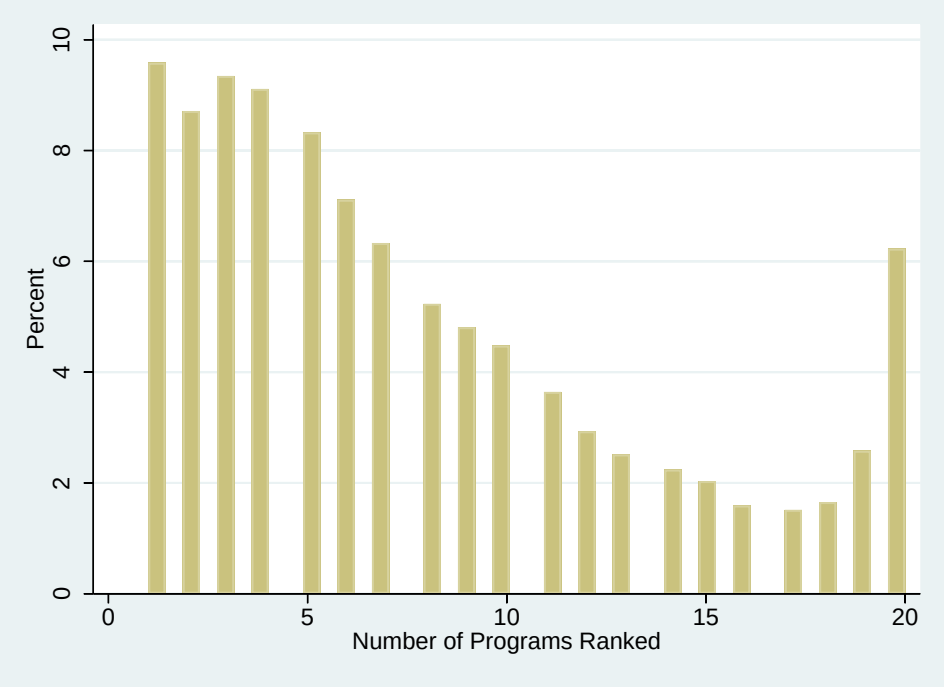
Notes: [a] Includes both students who accepted an offer from a round 2 SEHS program (if applied and offered) and students who accepted a program to which they did not have to submit an application, e.g. their neighborhood general education program. Tiers 1 through 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner. Core GPA reflects a student's grade point average in math, reading, science, and social studies.

Figure 1. Distribution of Seats by Program



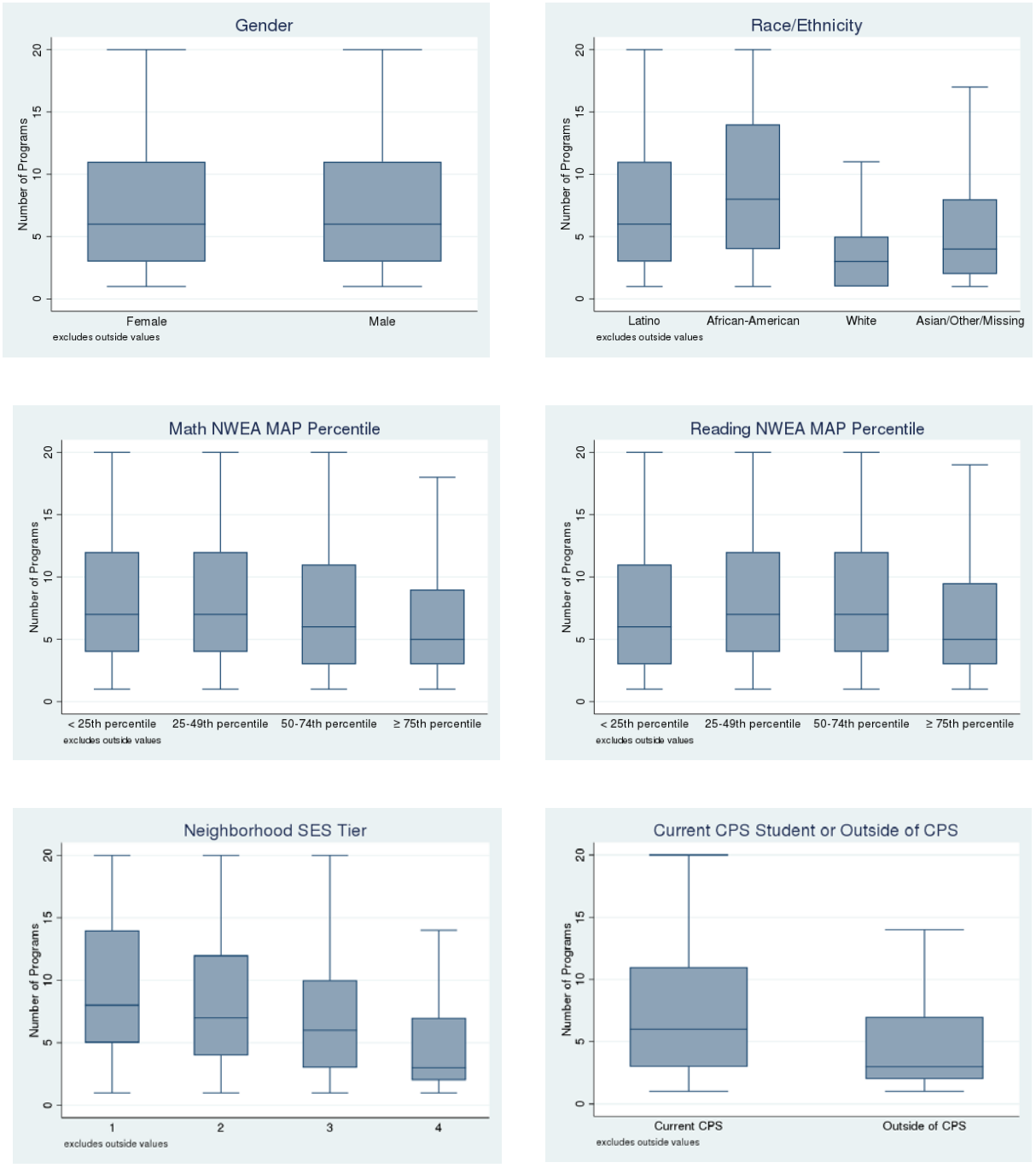
Notes: Programs represented do not include selective enrollment high school programs. N=273 programs.

Figure 2. Distribution of the number of programs ranked



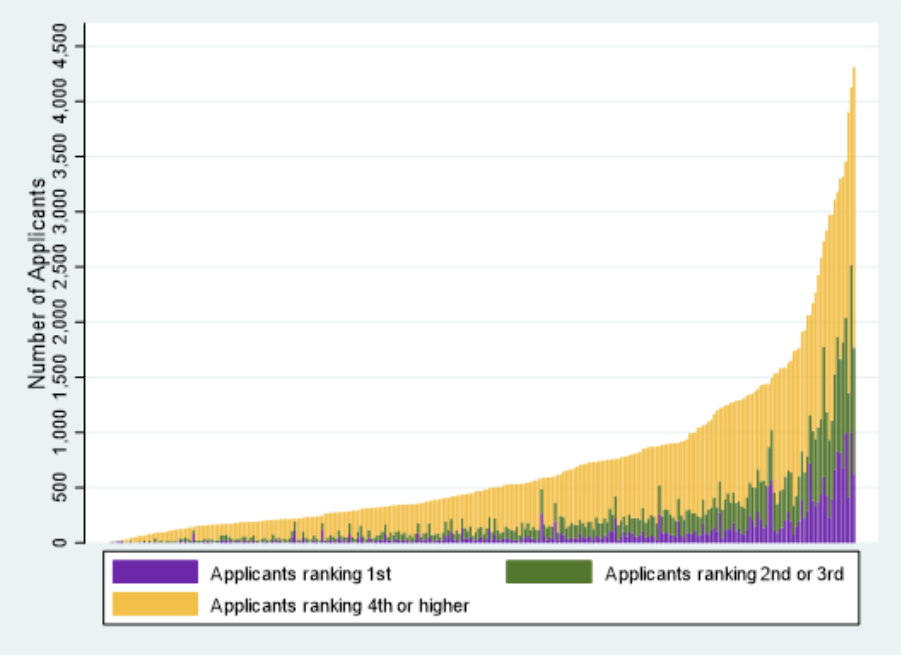
Notes: Ranking counts do not include applications for selective enrollment high school programs.

Figure 3. Distributions of the number of programs ranked by student subgroup



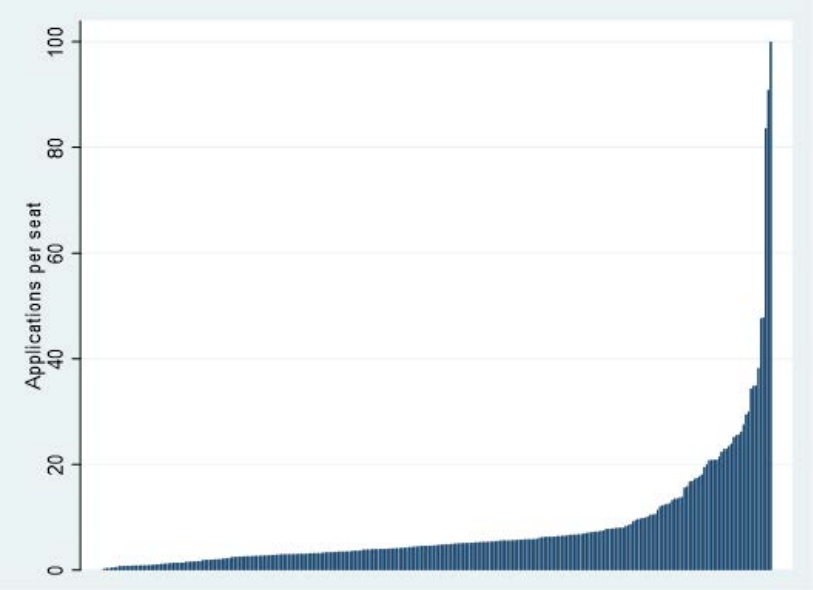
Notes: Tiers 1 through 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts.

Figure 4. Total number of applications for each program



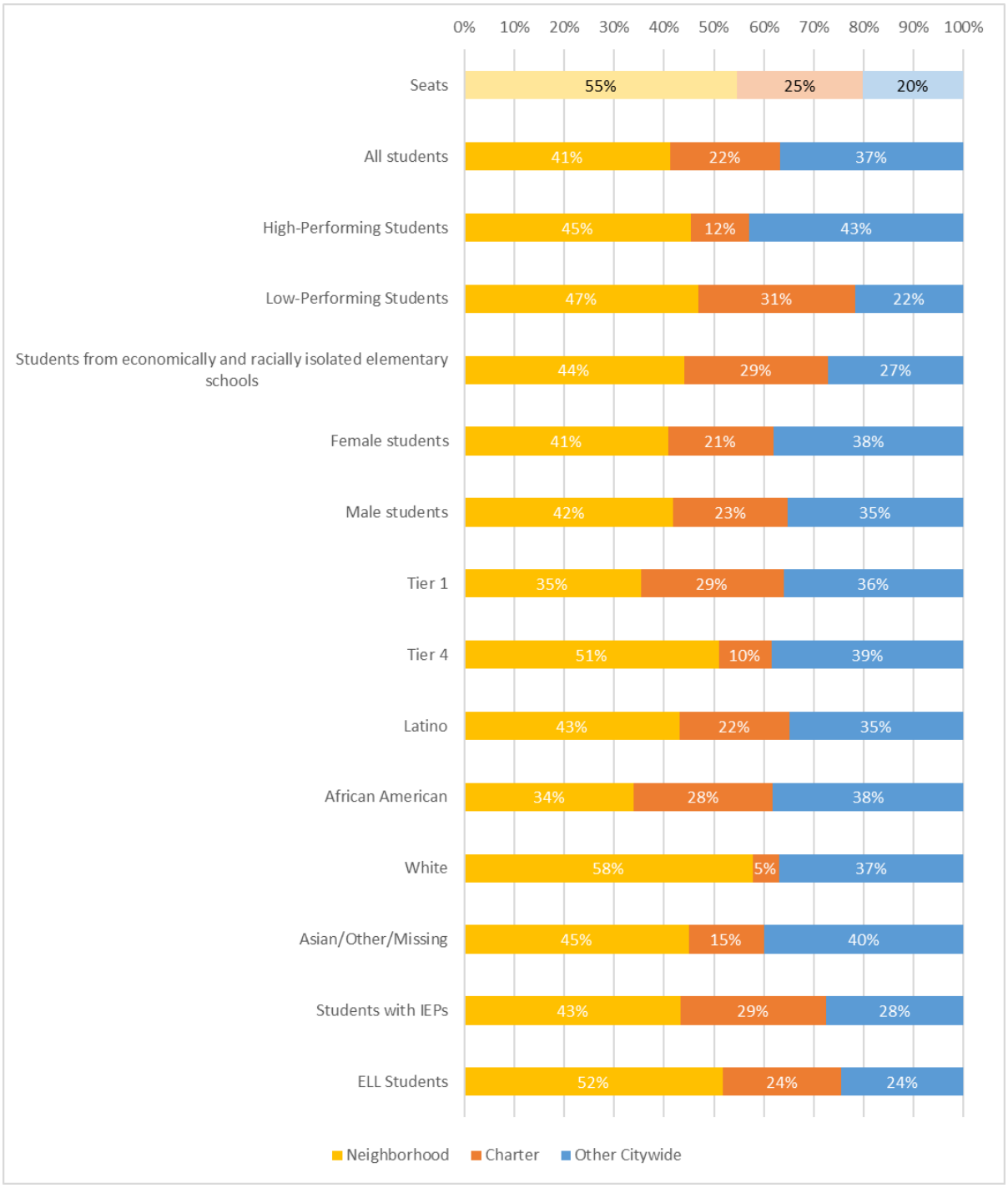
Notes: Each bar represents a program to which students could apply. The total height of each bar is the total number of students who ranked the program on their application. Portion of height shaded in purple represents the number of applicants ranking the program number 1; portion of height shaded in green represents the number of applicants ranking a program second or third; portion shaded in yellow represents applicants ranking a program fourth or higher. Selective enrollment high school programs are excluded.

Figure 5. Ratio of Applications to Number of Seats by Program



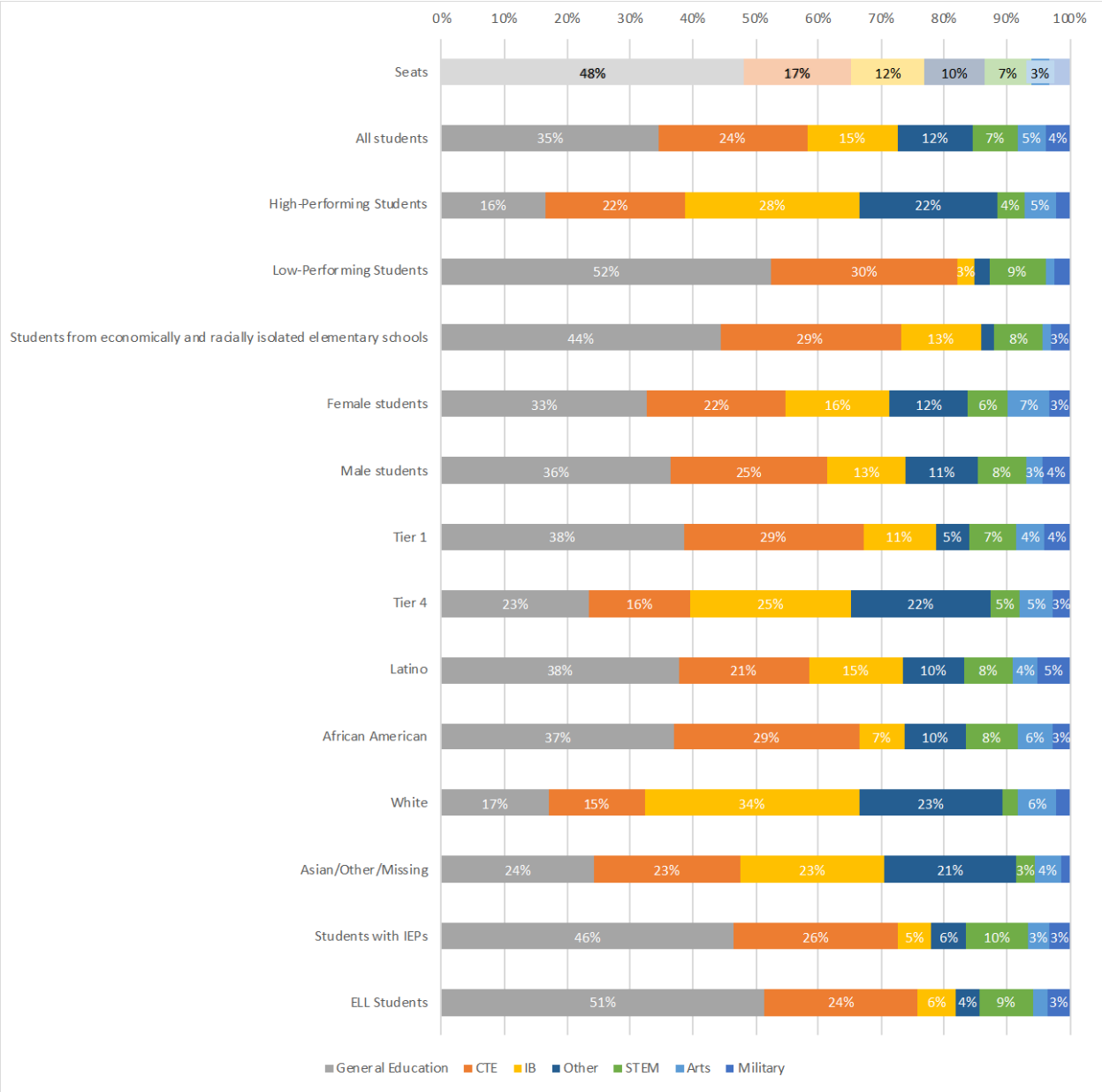
Notes: Each bar represents a program to which students can apply. The height of each bar is the number of students who listed the program at any rank on their application divided by the target program size. One program with very few seats received more than 100 applications per seat available. This ratio was capped at 100 for the purposes of this figure. Selective enrollment high school programs are excluded.

Figure 6. Students' Top-Ranked Program by School Type: Overall and by Student Subgroups



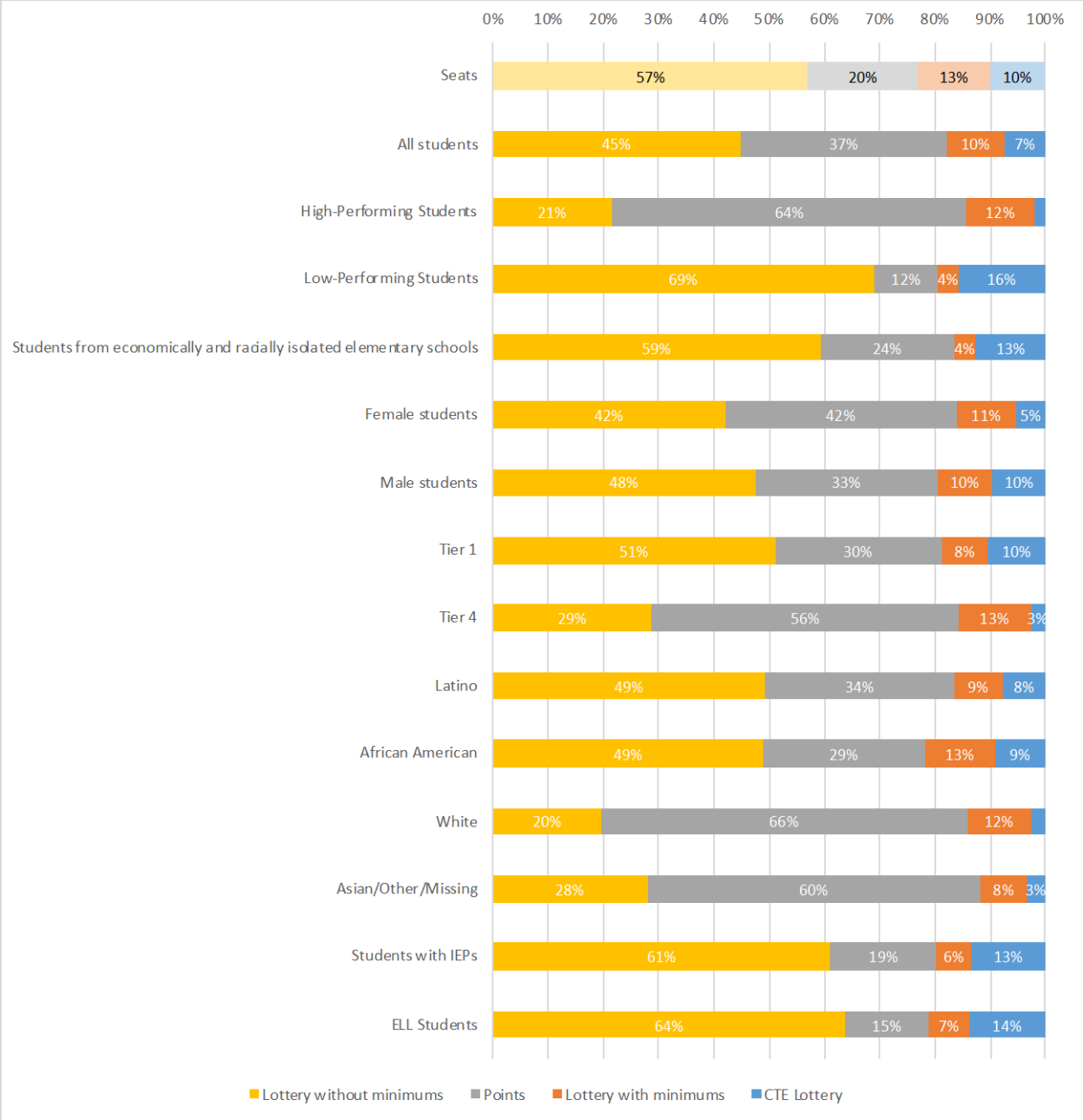
Notes: Seats represents the share of seats allocated for programs in each category. High-performing students are those at or above the 75th national percentile of NWEA. Low-performing students are those below the 25th national percentile of NWEA. Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group. Tiers 1 and 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner.

Figure 7. Students' Top-Ranked Program by Program Type: Overall and by Student Subgroups



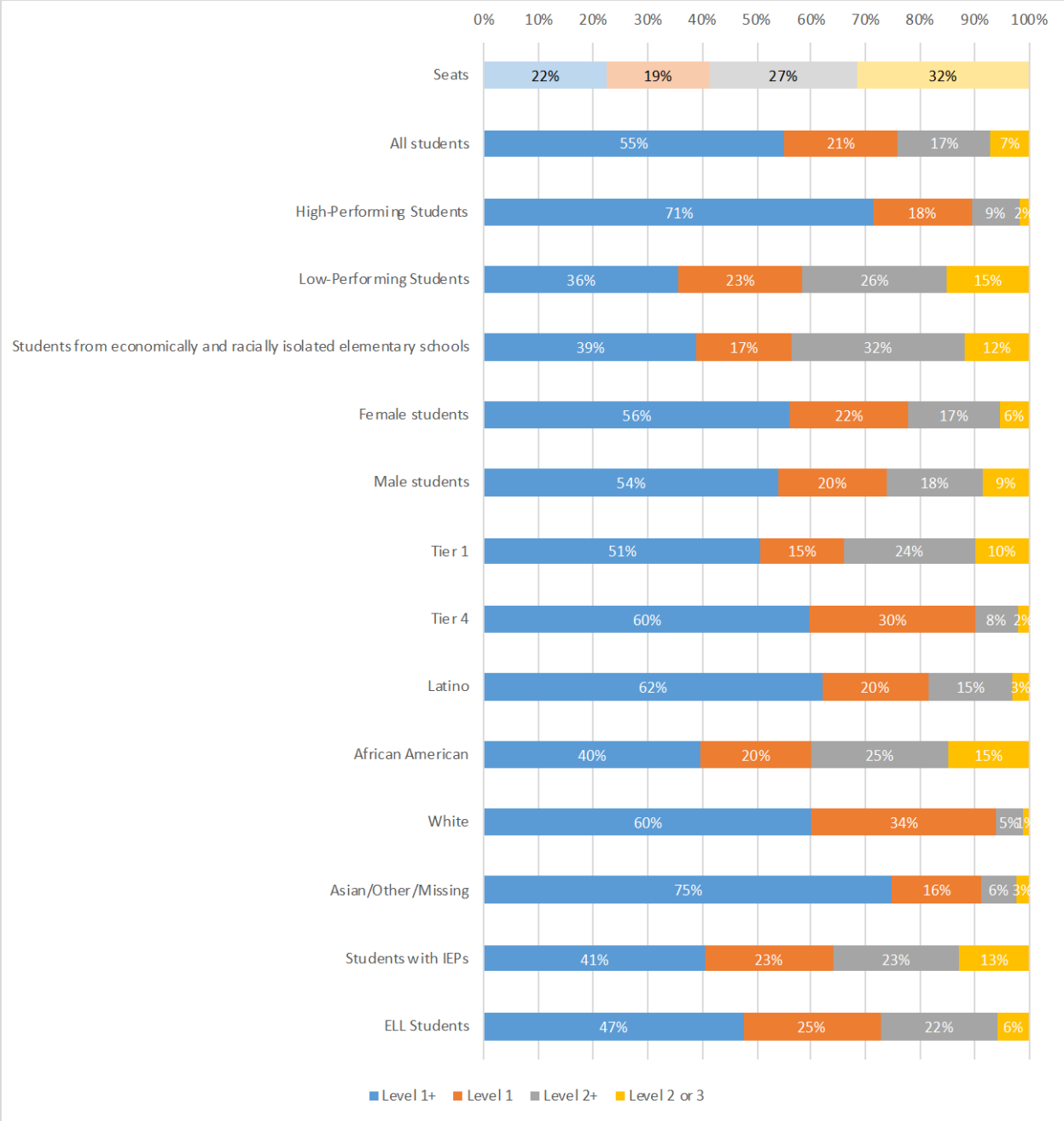
Notes: Seats represents the share of seats allocated for programs in each category. High-performing students are those at or above the 75th national percentile of NWEA. Low-performing students are those below the 25th national percentile of NWEA. Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group. Tiers 1 and 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner. Note that most charter schools are coded as General Education for this figure. Data labels not applied for values < 3%.

Figure 8. Students' Top-Ranked Program by Admission Type: Overall and by Student Subgroups



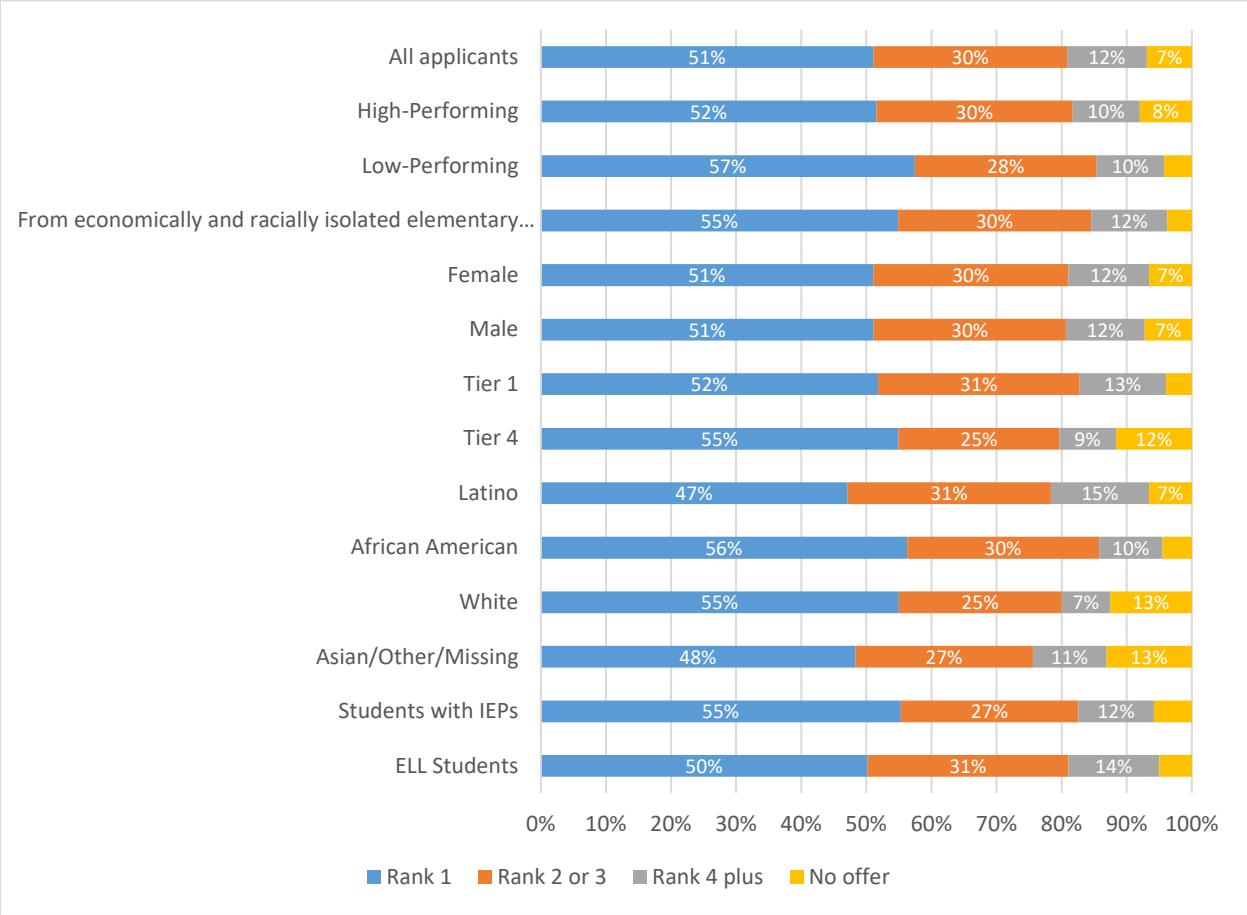
Notes: Seats represents the share of seats allocated for programs in each category. High-performing students are those at or above the 75th national percentile of NWEA. Low-performing students are those below the 25th national percentile of NWEA. Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group. Tiers 1 and 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner.

Figure 9. Students' Top-Ranked Program by School's SQRP Rating: Overall and by student subgroups



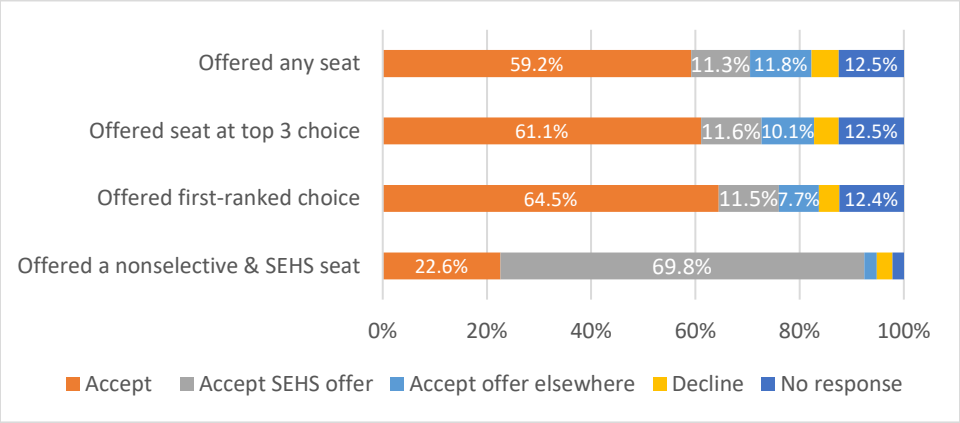
Notes: Seats represents the share of seats allocated for programs in each category. High-performing students are those at or above the 75th national percentile of NWEA. Low-performing students are those below the 25th national percentile of NWEA. Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group. Tiers 1 and 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. School Quality Rating Policy (SQRP) categories are from the 2017-18 school year, with Level 1+ being the highest-rated schools and Level 3 being the lowest-rated schools. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner.

Figure 10. Rank of Program Offered: Overall and by Student Subgroups



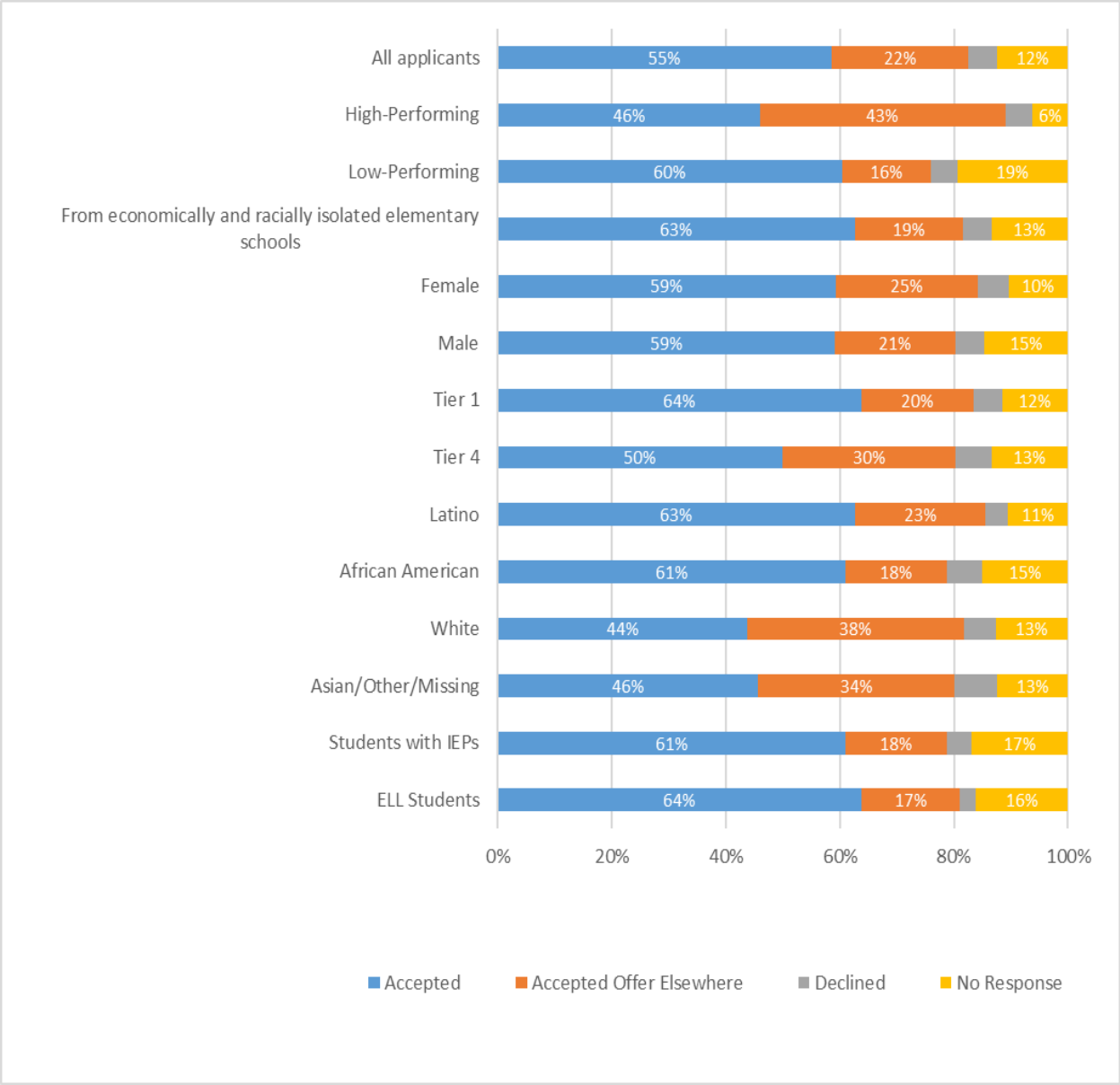
Notes: High-performing students are those at or above the 75th national percentile of NWEA. Low-performing students are those below the 25th national percentile of NWEA. Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group. Tiers 1 and 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner.

Figure 11. Student Responses to Choice Program Offered



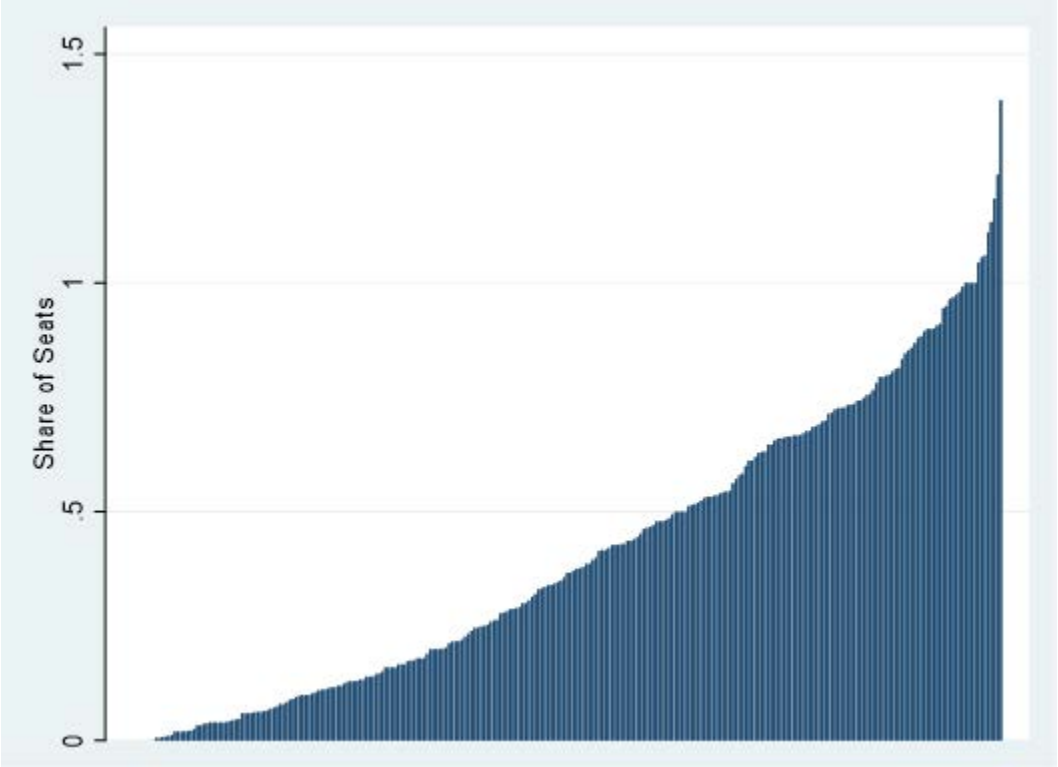
Notes: 23,834 students were offered a choice seat of any rank; 20,703 were offered a seat at one of their top 3 ranked programs; 13,805 were offered a seat at their top-ranked program; and 3,848 were offered both a choice seat and a SEHS seat.

Figure 12. Student Responses to Choice Program Offered:
Overall and by Student Subgroups



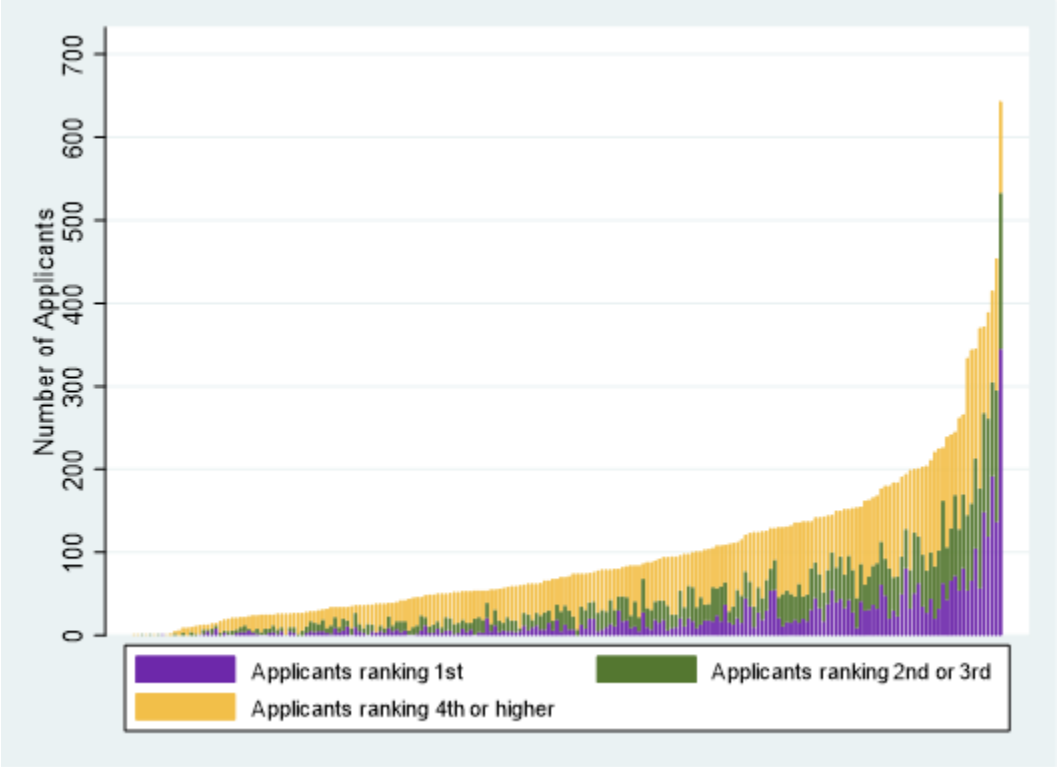
Notes: High-performing students are those at or above the 75th national percentile of NWEA MAP math. Low-performing students are those below the 25th national percentile of NWEA MAP math. Elementary schools are defined as economically and racially isolated if greater than 75 percent of the student body qualifies for free/reduced-price lunch and greater than 75 percent of the student body is from a single racial/ethnic group. Tiers 1 and 4 refer to the CPS neighborhood SES categories with tier 1 being the least advantaged Census tracts and tier 4 being the most advantaged Census tracts. IEP indicates that a student has an Individualized Education Program in place. ELL indicates that a student is an English Language Learner.

Figure 13. Share of Program Seats Filled at the End of Round 1



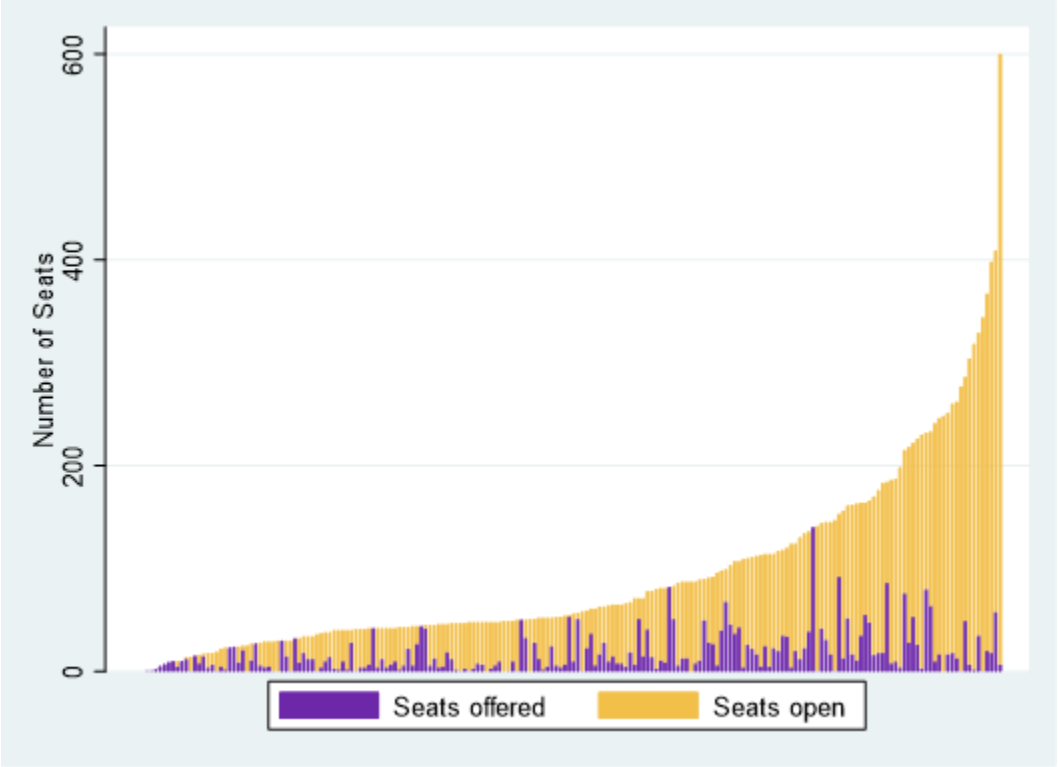
Notes: Each bar represents a program to which students can apply. The height of each bar is the share of target capacity seats that are filled as of the April 13, 2018 deadline for offer responses. Selective enrollment high schools are excluded.

Figure 14. Total Number of Applications by Each Program: Round 2



Notes: Each bar represents a program to which students can apply in round 2. The height of each bar is the total number of students who listed the program anywhere on their round 2 application. Selective enrollment high schools are excluded.

Figure 15. Offered and Open Seats After Round 2 Offers



Notes: Each bar represents a program to which students can apply in round 2. The height of each bar is the total number of available seats for round 2. The share of seats that were offered to students at the end of round 2 are shaded in purple. The remaining area represents the number of open seats remaining after offers were issued. Selective enrollment high schools are excluded.

Appendix Table 1. List of Programs by Program Type

General Education Programs

ACERO - SOTO HS - General Ed
ALCOTT HS - General Ed
AMUNDSEN HS - General Ed Grow
ASPIRA - BUSINESS & FINANCE HS -
ASPIRA - EARLY COLLEGE HS -
AUSTIN CCA HS - General Ed
BACK OF THE YARDS HS - General Ed
BOGAN HS - General Ed
BOWEN HS - General Ed
CATALYST - MARIA - General Ed
CHICAGO ACADEMY HS - General Ed
CHICAGO COLLEGIATE - General Ed
CHICAGO MATH & SCIENCE HS -
CHICAGO VIRTUAL - General Ed
CHICAGO VOCATIONAL HS - General
CICS - ELLISON HS - General Ed
CICS - LONGWOOD - General Ed
CICS - NORTHTOWN HS - General Ed
CLEMENTE HS - General Ed
COLLINS HS - General Ed
CURIE HS - General Ed
DOUGLASS HS - General Ed
DYETT ARTS HS - General Ed
EPIC HS - General Ed
FARRAGUT HS - General Ed
FENGER HS - General Ed
FOREMAN HS - General Ed
FOUNDATIONS - General Ed
GAGE PARK HS - General Ed
HARLAN HS - General Ed
HIRSCH HS - General Ed
HUBBARD HS - General Ed
HYDE PARK HS - General Ed
INSTITUTO - HEALTH - General Ed
INTRINSIC HS - General Ed
JUAREZ HS - General Ed
JULIAN HS - General Ed
KELLY HS - General Ed
KELVYN PARK HS - General Ed
KENNEDY HS - General Ed
KENWOOD HS - General Ed
LVLHS SOCIAL JUSTICE HS - General
LVLHS WORLD LANGUAGE HS -
MANLEY HS - General Ed
MARSHALL HS - General Ed
MATHER HS - General Ed
MORGAN PARK HS - General Ed
NOBLE - ACADEMY HS - General Ed
NOBLE - BAKER HS - General Ed
NOBLE - BULLS HS - General Ed
NOBLE - BUTLER HS - General Ed
NOBLE - COMER - General Ed
NOBLE - DRW HS - General Ed
NOBLE - GOLDER HS - General Ed
NOBLE - JOHNSON HS - General Ed
NOBLE - MANSUETO HS - General Ed
NOBLE - MUCHIN HS - General Ed
NOBLE - NOBLE HS - General Ed
NOBLE - RAUNER HS - General Ed
NOBLE - UIC HS - General Ed
NORTH LAWNDALE - CHRISTIANA HS -
NORTH LAWNDALE - COLLINS HS -
NORTH-GRAND HS - General Ed
ORR HS - General Ed
PERSPECTIVES - JOSLIN HS - General Ed
PERSPECTIVES - LEADERSHIP HS -
PHILLIPS HS - General Ed
RICHARDS HS - General Ed
ROOSEVELT HS - General Ed
SCHURZ HS - General Ed
SENN HS - General Ed
SOLORIO HS - General Ed
STEINMETZ HS - General Ed
SULLIVAN HS - General Ed
TAFT HS - General Ed
TILDEN HS - General Ed
U OF C - WOODLAWN HS - General Ed
UPLIFT HS - General Ed
Urban Prep Academy for Young Men - Bronzeville - General Ed
Urban Prep Academy for Young Men - Englewood - General Ed
Urban Prep Charter Academy for Young Men - West - General Ed
WASHINGTON HS - General Ed
WELLS HS - General Ed
WILLIAMS HS - General Ed

General Education Programs, cont.

YOUNG WOMENS HS - General Ed

Military Programs

AIR FORCE HS - Service Learning Academy
CARVER MILITARY HS - Service Learning
CHICAGO MILITARY HS at Bronzeville - Service
FARRAGUT HS - JROTC
MARINE LEADERSHIP AT AMES HS - Service
PHOENIX MILITARY HS - Service Learning
RICKOVER MILITARY HS - Service Learning
STEINMETZ HS - JROTC
TAFT HS - NJROTC

STEM Programs

ACERO - GARCIA HS - STEM
CHICAGO TECH HS - STEM
CICS - CHICAGOQUEST HS - STEM
CLARK HS - Early College STEM
CORLISS HS - Early College STEM
GOODE HS - Early College STEM
LAKE VIEW HS - Early College STEM
LAKE VIEW HS - STEM Grow Community
LVLHS INFINITY HS - STEM
NOBLE - ITW SPEER HS - STEM
NOBLE - ROWE CLARK HS - STEM
PERSPECTIVES - MATH & SCI HS - STEM
PERSPECTIVES - TECH HS - STEM

Arts Programs

ACERO - DE LA CRUZ - Fine & Performing Arts
ChiArts HS - Creative Writing
ChiArts HS - Dance
ChiArts HS - Music - Instrumental
ChiArts HS - Music - Instrumental - Brass &
ChiArts HS - Music - Instrumental - Guitar
ChiArts HS - Music - Instrumental - Percussion
ChiArts HS - Music - Instrumental - Piano
ChiArts HS - Music - Instrumental - Strings
ChiArts HS - Music - Vocal
ChiArts HS - Musical Theatre
ChiArts HS - Theatre
ChiArts HS - Visual Arts
CURIE HS - Dance
CURIE HS - Music
CURIE HS - Visual Arts
DISNEY II HS - Fine Arts & Technology
DYETT ARTS HS - Band
DYETT ARTS HS - Choir
DYETT ARTS HS - Dance
DYETT ARTS HS - Theater
DYETT ARTS HS - Visual Arts
LINCOLN PARK HS - Drama
LINCOLN PARK HS - Music - Instrumental
LINCOLN PARK HS - Music - Vocal
LVLHS MULTICULTURAL HS - Fine & Performing Arts
SENN HS - Dance
SENN HS - Music
SENN HS - Theatre
SENN HS - Visual Arts

IB Programs

AMUNDSEN HS - IB
BACK OF THE YARDS HS - IB
BOGAN HS - IB
BRONZEVILLE HS - IB
CLEMENTE HS - IB
CURIE HS - IB
FARRAGUT HS - IB
HUBBARD HS - IB
HYDE PARK HS - IB
JUAREZ HS - IB
KELLY HS - IB
KENNEDY HS - IB
LINCOLN PARK HS - IB
MORGAN PARK HS - IB
NOBLE - HANSBERRY HS - IB
NOBLE - PRITZKER HS - IB
OGDEN HS - IB
PROSSER HS - IB
SCHURZ HS - IB
SENN HS - IB
SOUTH SHORE INTL HS - IB
STEINMETZ HS - IB
TAFT HS - IB
WASHINGTON HS - IB

CTE

ALCOTT HS - Pre-Engineering
AMUNDSEN HS - Game Programming & Web
AUSTIN CCA HS - Manufacturing
AUSTIN CCA HS - Pre-Engineering
BOGAN HS - Accounting
BOGAN HS - Entrepreneurship
BOWEN HS - Manufacturing
BOWEN HS - Pre-Engineering
CHICAGO VOCATIONAL HS - Agricultural
CHICAGO VOCATIONAL HS - Carpentry
CHICAGO VOCATIONAL HS - Cosmetology
CHICAGO VOCATIONAL HS - Culinary Arts
CHICAGO VOCATIONAL HS - Diesel
CHICAGO VOCATIONAL HS - Early College
CHICAGO VOCATIONAL HS - Medical
CLEMENTE HS - Allied Health
CLEMENTE HS - Broadcast Technology
CLEMENTE HS - Culinary Arts
COLLINS HS - Game Programming
CURIE HS - Accounting
CURIE HS - Architecture
CURIE HS - Automotive Technology
CURIE HS - Broadcast Technology
CURIE HS - Culinary Arts
CURIE HS - Digital Media
CURIE HS - Early Childhood & Teaching
CURIE HS - Game Programming & Web Design
DUNBAR HS - Allied Health
DUNBAR HS - Career Academy
DUNBAR HS - Chicago Builds
DYETT ARTS HS - Digital Media
FARRAGUT HS - Pre-Law
FENGER HS - Carpentry
FENGER HS - Culinary Arts
FOREMAN HS - Digital Media
FOREMAN HS - Web Design
HANCOCK HS - Pre-Engineering
HANCOCK HS - Pre-Law
HARLAN HS - Digital Media
HYDE PARK HS - Broadcast Technology
HYDE PARK HS - Digital Media
JONES HS - Pre-Engineering
JONES HS - Pre-Law
JUAREZ HS - Architecture
JUAREZ HS - Automotive Technology
JUAREZ HS - Culinary Arts
JUAREZ HS - Game Programming & Web
JUAREZ HS - Medical & Health Careers
JULIAN HS - Allied Health
JULIAN HS - Broadcast Technology
JULIAN HS - Digital Media
JULIAN HS - Entrepreneurship
JULIAN HS - Game Programming
KELLY HS - Digital Media
MANLEY HS - Culinary Arts
MARSHALL HS - Agricultural Sciences
MARSHALL HS - Culinary Arts
MATHER HS - Game Programming & Web
MATHER HS - Pre-Law
NORTH-GRAND HS - Allied Health
NORTH-GRAND HS - Culinary Arts
NORTH-GRAND HS - Pre-Engineering
PHILLIPS HS - Digital Media
PROSSER HS - Career Academy
RABY HS - Broadcast Technology
RABY HS - Culinary Arts
RABY HS - Entrepreneurship
RABY HS - Pre-Law
RICHARDS HS - Accounting
RICHARDS HS - Culinary Arts
ROOSEVELT HS - Cisco Networking
ROOSEVELT HS - Culinary Arts
ROOSEVELT HS - Early Childhood
ROOSEVELT HS - Game Programming
ROOSEVELT HS - Medical & Health Careers
SCHURZ HS - Accounting & Entrepreneurship
SCHURZ HS - Allied Health
SCHURZ HS - Automotive Technology
SCHURZ HS - Digital Media
SCHURZ HS - Pre-Engineering
SIMEON HS - Career Academy
SOUTH SHORE INTL HS - Medical & Health
STEINMETZ HS - Digital Media
SULLIVAN HS - Accounting
SULLIVAN HS - Medical & Health Careers
TILDEN HS - Culinary Arts
UPLIFT HS - Teaching
WELLS HS - Game Programming
WELLS HS - Pre-Law
WESTINGHOUSE HS - Career Academy
WILLIAMS HS - Medical & Health Careers

Other Programs

BACK OF THE YARDS HS - Dual Language
BRONZEVILLE HS - Honors
CHICAGO ACADEMY HS - Scholars
CHICAGO AGRICULTURE HS - Agricultural Sciences
COLLINS HS - Scholars
CRANE MEDICAL HS - Health Sciences
CURIE HS - Pre-Engineering
FENGER HS - Honors
FOREMAN HS - Pre-Engineering
HARLAN HS - Pre-Engineering
HUBBARD HS - University Scholars
KELLY HS - AVID
KENWOOD HS - Honors
KENWOOD HS - Magent
LEGAL PREP HS - Law & Public Safety
LINCOLN PARK HS - Honors/Double Honors
MATHER HS - Pre-Engineering
MORGAN PARK HS - World Language and International Studies
SCHURZ HS - AVID
SCHURZ HS - Dual Language
SOLORIO HS - Double Honors/Scholars
SOLORIO HS - Pre-Engineering
SPRY HS - Three-Year; Year-Round High School
VON STEUBEN HS - Scholars
VON STEUBEN HS - Science

Appendix Table 2. Programs by High School Type – Charter, Neighborhood, or Other Citywide

Charter Schools

ACERO - DE LA CRUZ - Fine & Performing Arts
ACERO - GARCIA HS - STEM
ACERO - SOTO HS - General Ed
ASPIRA - BUSINESS & FINANCE HS - General
ASPIRA - EARLY COLLEGE HS - General Ed
CATALYST - MARIA - General Ed
CHICAGO COLLEGIATE - General Ed
CHICAGO MATH & SCIENCE HS - General Ed
CHICAGO VIRTUAL - General Ed
CICS - CHICAGOQUEST HS - STEM
CICS - ELLISON HS - General Ed
CICS - LONGWOOD - General Ed
CICS - NORTHTOWN HS - General Ed
EPIC HS - General Ed
FOUNDATIONS - General Ed
INSTITUTO - HEALTH - General Ed
INTRINSIC HS - General Ed
LEGAL PREP HS - Law & Public Safety
NOBLE - ACADEMY HS - General Ed
NOBLE - BAKER HS - General Ed
NOBLE - BULLS HS - General Ed
NOBLE - BUTLER HS - General Ed
NOBLE - COMER - General Ed
NOBLE - DRW HS - General Ed
NOBLE - GOLDER HS - General Ed
NOBLE - HANSBERRY HS - International
NOBLE - ITW SPEER HS - STEM
NOBLE - JOHNSON HS - General Ed
NOBLE - MANSUETO HS - General Ed
NOBLE - MUCHIN HS - General Ed
NOBLE - NOBLE HS - General Ed
NOBLE - PRITZKER HS - International
NOBLE - RAUNER HS - General Ed
NOBLE - ROWE CLARK HS - STEM
NOBLE - UIC HS - General Ed
NORTH LAWNDALE - CHRISTIANA HS -
NORTH LAWNDALE - COLLINS HS - General Ed
PERSPECTIVES - JOSLIN HS - General Ed
PERSPECTIVES - LEADERSHIP HS - General Ed
PERSPECTIVES - MATH & SCI HS - STEM
PERSPECTIVES - TECH HS - STEM
U OF C - WOODLAWN HS - General Ed
Urban Prep Academy for Young Men - Bronzeville - General Ed
Urban Prep Academy for Young Men - Englewood - General Ed
Urban Prep Charter Academy for Young Men West - General Ed
YOUNG WOMENS HS - General Ed

Neighborhood Schools

AMUNDSEN HS - Game Programming & Web
AMUNDSEN HS - General Ed Grow Community
AMUNDSEN HS - International Baccalaureate
AUSTIN CCA HS - General Ed
AUSTIN CCA HS - Manufacturing
AUSTIN CCA HS - Pre-Engineering
BOGAN HS - Accounting
BOGAN HS - Entrepreneurship
BOGAN HS - General Ed
BOGAN HS - International Baccalaureate
BOWEN HS - General Ed
BOWEN HS - Manufacturing
BOWEN HS - Pre-Engineering
CHICAGO VOCATIONAL HS - Agricultural
CHICAGO VOCATIONAL HS - Carpentry
CHICAGO VOCATIONAL HS - Cosmetology
CHICAGO VOCATIONAL HS - Culinary Arts
CHICAGO VOCATIONAL HS - Diesel
CHICAGO VOCATIONAL HS - Early College
CHICAGO VOCATIONAL HS - General Ed
CHICAGO VOCATIONAL HS - Medical
CLEMENTE HS - Allied Health
CLEMENTE HS - Broadcast Technology
CLEMENTE HS - Culinary Arts
CLEMENTE HS - General Ed
CLEMENTE HS - International Baccalaureate
CORLISS HS - Early College STEM
CURIE HS - Accounting
CURIE HS - Architecture
CURIE HS - Automotive Technology
CURIE HS - Broadcast Technology
CURIE HS - Culinary Arts
CURIE HS - Dance
CURIE HS - Digital Media
CURIE HS - Early Childhood & Teaching
CURIE HS - Game Programming & Web Design
CURIE HS - General Ed
CURIE HS - International Baccalaureate
CURIE HS - Music
CURIE HS - Visual Arts
DYETT ARTS HS - Band
DYETT ARTS HS - Choir
DYETT ARTS HS - Dance
DYETT ARTS HS - Digital Media
DYETT ARTS HS - General Ed
DYETT ARTS HS - Theater
DYETT ARTS HS - Visual Arts
FARRAGUT HS - General Ed
FARRAGUT HS - International Baccalaureate
FARRAGUT HS - JROTC
FARRAGUT HS - Pre-Law
FENGER HS - Carpentry
FENGER HS - Culinary Arts
FENGER HS - General Ed
FENGER HS - Honors
FOREMAN HS - Digital Media
FOREMAN HS - General Ed
FOREMAN HS - Web Design
GAGE PARK HS - General Ed
HARLAN HS - Digital Media
HARLAN HS - General Ed
HARLAN HS - Pre-Engineering
HIRSCH HS - General Ed
HUBBARD HS - General Ed
HUBBARD HS - International Baccalaureate
HUBBARD HS - University Scholars
HYDE PARK HS - Broadcast Technology
HYDE PARK HS - Digital Media
HYDE PARK HS - General Ed
HYDE PARK HS - International Baccalaureate
JUAREZ HS - Architecture
JUAREZ HS - Automotive Technology
JUAREZ HS - Culinary Arts
JUAREZ HS - Game Programming & Web
JUAREZ HS - General Ed
JUAREZ HS - International Baccalaureate
JUAREZ HS - Medical & Health Careers
JULIAN HS - Allied Health
JULIAN HS - Broadcast Technology
JULIAN HS - Digital Media
JULIAN HS - Entrepreneurship
JULIAN HS - Game Programming
JULIAN HS - General Ed
KELLY HS - AVID
KELLY HS - Digital Media
KELLY HS - General Ed
KELLY HS - International Baccalaureate
KELVYN PARK HS - General Ed

Neighborhood Schools, cont.

KENNEDY HS - General Ed
KENNEDY HS - International Baccalaureate
KENWOOD HS - General Ed
KENWOOD HS - Honors
KENWOOD HS - Magnet
LAKE VIEW HS - Early College STEM
LAKE VIEW HS - STEM Grow Community
LINCOLN PARK HS - Drama
LINCOLN PARK HS - Honors/Double Honors
LINCOLN PARK HS - International Baccalaureate
LINCOLN PARK HS - Music - Instrumental
LINCOLN PARK HS - Music - Vocal
LVLHS INFINITY HS - STEM
LVLHS MULTICULTURAL HS - Fine & Performing
LVLHS SOCIAL JUSTICE HS - General Ed
LVLHS WORLD LANGUAGE HS - General Ed
MANLEY HS - Culinary Arts
MANLEY HS - General Ed
MARSHALL HS - Agricultural Sciences
MARSHALL HS - Culinary Arts
MARSHALL HS - General Ed
MATHER HS - Game Programming & Web Design
MATHER HS - General Ed
MATHER HS - Pre-Law
MORGAN PARK HS - General Ed
MORGAN PARK HS - International Baccalaureate
MORGAN PARK HS - World Language and
NORTH-GRAND HS - Allied Health
NORTH-GRAND HS - Culinary Arts
NORTH-GRAND HS - General Ed
NORTH-GRAND HS - Pre-Engineering
ORR HS - General Ed
PHILLIPS HS - Digital Media
PHILLIPS HS - General Ed
RICHARDS HS - Accounting
RICHARDS HS - Culinary Arts
RICHARDS HS - General Ed
ROOSEVELT HS - Cisco Networking
ROOSEVELT HS - Culinary Arts
ROOSEVELT HS - Early Childhood
ROOSEVELT HS - Game Programming
ROOSEVELT HS - General Ed
ROOSEVELT HS - Medical & Health Careers
SCHURZ HS - Accounting &
SCHURZ HS - Allied Health
SCHURZ HS - Automotive Technology
SCHURZ HS - AVID
SCHURZ HS - Digital Media
SCHURZ HS - Dual Language
SCHURZ HS - General Ed
SCHURZ HS - International Baccalaureate
SCHURZ HS - Pre-Engineering
SENN HS - Dance
SENN HS - General Ed
SENN HS - International Baccalaureate
SENN HS - Music
SENN HS - Theatre
SENN HS - Visual Arts
SOLORIO HS - Double Honors/Scholars
SOLORIO HS - General Ed
STEINMETZ HS - Digital Media
STEINMETZ HS - General Ed
STEINMETZ HS - International
STEINMETZ HS - JROTC
SULLIVAN HS - Accounting
SULLIVAN HS - General Ed
SULLIVAN HS - Medical & Health Careers
TAFT HS - General Ed
TAFT HS - International Baccalaureate
TAFT HS - NJROTC
TILDEN HS - Culinary Arts
TILDEN HS - General Ed
WASHINGTON HS - General Ed
WASHINGTON HS - International
WELLS HS - Game Programming
WELLS HS - General Ed
WELLS HS - Pre-Law

Second round additions

CURIE HS - Pre-Engineering
FOREMAN HS - Pre-Engineering
MATHER HS - Pre-Engineering
SOLORIO HS - Pre-Engineering

Points

AIR FORCE HS - Service Learning Academy
ALCOTT HS - Pre-Engineering
AMUNDSEN HS - International Baccalaureate
AUSTIN CCA HS - Pre-Engineering
BACK OF THE YARDS HS - IB
BOGAN HS - International Baccalaureate
BOWEN HS - Pre-Engineering
BRONZEVILLE HS - International Baccalaureate
CARVER MILITARY HS - Service Learning Academy
ChiArts HS - Creative Writing
ChiArts HS - Dance
ChiArts HS - Music - Instrumental
ChiArts HS - Music – Instrument. - Brass & Woodwinds
ChiArts HS - Music - Instrumental - Guitar
ChiArts HS - Music - Instrumental - Percussion
ChiArts HS - Music - Instrumental - Piano
ChiArts HS - Music - Instrumental - Strings
ChiArts HS - Music - Vocal
ChiArts HS - Musical Theatre
ChiArts HS - Theatre
ChiArts HS - Visual Arts
CHICAGO MILITARY HS at Bronzeville - Service Le
CHICAGO VOCATIONAL HS - Medical Assisting
CLEMENTE HS - Allied Health
CLEMENTE HS - International Baccalaureate
CURIE HS - Dance
CURIE HS - International Baccalaureate
CURIE HS - Music
CURIE HS - Pre-Engineering
CURIE HS - Visual Arts
DUNBAR HS - Allied Health
DYETT ARTS HS - Band
DYETT ARTS HS - Choir
DYETT ARTS HS - Dance
DYETT ARTS HS - General Ed
DYETT ARTS HS - Theater
DYETT ARTS HS - Visual Arts
FARRAGUT HS - International Baccalaureate
FARRAGUT HS - Pre-Law
FOREMAN HS - Pre-Engineering
HANCOCK HS - Pre-Engineering
HANCOCK HS - Pre-Law
HUBBARD HS - International Baccalaureate
HUBBARD HS - University Scholars
HYDE PARK HS - International Baccalaureate
JONES HS - Pre-Engineering
JONES HS - Pre-Law
JUAREZ HS - International Baccalaureate
JUAREZ HS - Medical & Health Careers
JULIAN HS - Allied Health
KELLY HS - AVID
KELLY HS - International Baccalaureate
KELVYN PARK HS - General Ed
KENNEDY HS - International Baccalaureate
LINCOLN PARK HS - Drama
LINCOLN PARK HS - Honors/Double Honors
LINCOLN PARK HS - International Baccalaureate
LINCOLN PARK HS - Music - Instrumental
LINCOLN PARK HS - Music - Vocal
MARINE LEADERSHIP AT AMES HS - Service L
MATHER HS - Pre-Engineering
MATHER HS - Pre-Law
MORGAN PARK HS - International Baccalaureate
NORTH-GRAND HS - Allied Health
NORTH-GRAND HS - Pre-Engineering
OGDEN HS - International Baccalaureate
PHOENIX MILITARY HS - Service Learning Acad
PROSSER HS - International Baccalaureate
RABY HS - Pre-Law
RICKOVER MILITARY HS - Service Learning Aca
ROOSEVELT HS - Cisco Networking
ROOSEVELT HS - Medical & Health Careers
SCHURZ HS - Allied Health
SCHURZ HS - International Baccalaureate
SCHURZ HS - Pre-Engineering
SENN HS - Dance
SENN HS - International Baccalaureate
SENN HS - Music
SENN HS - Theatre
SENN HS - Visual Arts
SIMEON HS - Career Academy
SOLORIO HS - Pre-Engineering
SOUTH SHORE INTL HS IB
SOUTH SHORE INTL HS - Medical & Health Car.

Points, cont.

STEINMETZ HS - International Baccalaureate
SULLIVAN HS - Medical & Health Careers
TAFT HS - International Baccalaureate
TAFT HS - NJROTC
VON STEUBEN HS - Scholars
WASHINGTON HS - International Baccalaureate
WELLS HS - Pre-Law
WILLIAMS HS - Medical & Health Careers

Lottery with minimum qualification requirements

BACK OF THE YARDS HS - Dual Language
BOGAN HS - General Ed
BRONZEVILLE HS - Honors
CHICAGO ACADEMY HS - Scholars
CHICAGO AGRICULTURE HS - Agricultural Sciences
CLARK HS - Early College STEM
CLEMENTE HS - General Ed
COLLINS HS - General Ed
COLLINS HS - Scholars
CRANE MEDICAL HS - Health Sciences
DISNEY II HS - Fine Arts & Technology
DYETT ARTS HS - Digital Media
FARRAGUT HS - JROTC
FENGER HS - Honors
HARLAN HS - General Ed
HARLAN HS - Pre-Engineering
KENWOOD HS - Honors
KENWOOD HS - Magent
LAKE VIEW HS - Early College STEM
LVLHS MULTICULTURAL HS - Fine & Performing Arts
LVLHS WORLD LANGUAGE HS - General Ed
MORGAN PARK HS - World Language and International Studies
NORTH-GRAND HS - General Ed
PHILLIPS HS - General Ed
SCHURZ HS - AVID
SCHURZ HS - Dual Language
SOLORIO HS - Double Honors/Scholars
STEINMETZ HS - General Ed
STEINMETZ HS - JROTC
VON STEUBEN HS - Science
WELLS HS - General Ed
WESTINGHOUSE HS - Career Academy
WILLIAMS HS - General Ed

Lottery without minimum qualification requirements

ACERO - DE LA CRUZ - Fine & Perf. Arts
ACERO - GARCIA HS - STEM
ACERO - SOTO HS - General Ed
ALCOTT HS - General Ed
AMUNDSEN HS - General Ed Grow Comm.
ASPIRA - BUSINESS & FINANCE HS – Gen.
ASPIRA - EARLY COLLEGE HS - General Ed
AUSTIN CCA HS - General Ed
BACK OF THE YARDS HS - General Ed
BOGAN HS - Accounting
BOGAN HS - Entrepreneurship
BOWEN HS - General Ed
CATALYST - MARIA - General Ed
CHICAGO ACADEMY HS - General Ed
CHICAGO COLLEGIATE - General Ed
CHICAGO MATH & SCIENCE HS – Gen. Ed
CHICAGO TECH HS - STEM
CHICAGO VIRTUAL - General Ed
CHICAGO VOCATIONAL HS - General Ed
CICS - CHICAGOQUEST HS - STEM
CICS - ELLISON HS - General Ed
CICS - LONGWOOD - General Ed
CICS - NORTHTOWN HS - General Ed
COLLINS HS - Game Programming
CORLISS HS - Early College STEM
CURIE HS - General Ed
DOUGLASS HS - General Ed
DUNBAR HS - Career Academy
DUNBAR HS - Chicago Builds
EPIC HS - General Ed
FARRAGUT HS - General Ed
FENGER HS - General Ed
FOREMAN HS - General Ed
FOUNDATIONS - General Ed
GAGE PARK HS - General Ed
GOODE HS - Early College STEM
HIRSCH HS - General Ed
HUBBARD HS - General Ed
HYDE PARK HS - General Ed
INSTITUTO - HEALTH - General Ed
INTRINSIC HS - General Ed
JUAREZ HS - General Ed
JULIAN HS - General Ed
KELLY HS - General Ed
KENNEDY HS - General Ed
KENWOOD HS - General Ed
LAKE VIEW HS - STEM Grow Community
LEGAL PREP HS - Law & Public Safety
LVLHS INFINITY HS - STEM
LVLHS SOCIAL JUSTICE HS - General Ed
MANLEY HS - General Ed
MARSHALL HS - General Ed
MATHER HS - General Ed
MORGAN PARK HS - General Ed
NOBLE - ACADEMY HS - General Ed
NOBLE - BAKER HS - General Ed
NOBLE - BULLS HS - General Ed
NOBLE - BUTLER HS - General Ed
NOBLE - COMER - General Ed
NOBLE - DRW HS - General Ed
NOBLE - GOLDER HS - General Ed
NOBLE - HANSBERRY HS - IB
NOBLE - ITW SPEER HS - STEM
NOBLE - JOHNSON HS - General Ed
NOBLE - MANSUETO HS - General Ed
NOBLE - MUCHIN HS - General Ed
NOBLE - NOBLE HS - General Ed
NOBLE - PRITZKER HS - International Baccalaureate
NOBLE - RAUNER HS - General Ed
NOBLE - ROWE CLARK HS - STEM
NOBLE - UIC HS - General Ed
NORTH LAWNDALE - CHRISTIANA HS – Gen. Ed
NORTH LAWNDALE - COLLINS HS - General Ed
ORR HS - General Ed
PERSPECTIVES - JOSLIN HS - General Ed
PERSPECTIVES - LEADERSHIP HS - General Ed
PERSPECTIVES - MATH & SCI HS - STEM
PERSPECTIVES - TECH HS - STEM
PROSSER HS - Career Academy
RICHARDS HS - General Ed
ROOSEVELT HS - General Ed
SCHURZ HS - General Ed
SENN HS - General Ed
SOLORIO HS - General Ed
SPRY HS - Three-Year; Year-Round High School
STEINMETZ HS - Digital Media

Appendix Table 3. Programs by Admissions Type

CTE Lottery

AMUNDSEN HS - Game Programming & Web Design
AUSTIN CCA HS - Manufacturing
BOWEN HS - Manufacturing
CHICAGO VOCATIONAL HS - Agricultural Sciences
CHICAGO VOCATIONAL HS - Carpentry
CHICAGO VOCATIONAL HS - Cosmetology
CHICAGO VOCATIONAL HS - Culinary Arts
CHICAGO VOCATIONAL HS - Diesel Technology
CHICAGO VOCATIONAL HS - Early College STEM
CLEMENTE HS - Broadcast Technology
CLEMENTE HS - Culinary Arts
CURIE HS - Accounting
CURIE HS - Architecture
CURIE HS - Automotive Technology
CURIE HS - Broadcast Technology
CURIE HS - Culinary Arts
CURIE HS - Digital Media
CURIE HS - Early Childhood & Teaching
CURIE HS - Game Programming & Web Design
FENGER HS - Carpentry
FENGER HS - Culinary Arts
FOREMAN HS - Digital Media
FOREMAN HS - Web Design
HARLAN HS - Digital Media
HYDE PARK HS - Broadcast Technology
HYDE PARK HS - Digital Media
JUAREZ HS - Architecture
JUAREZ HS - Automotive Technology
JUAREZ HS - Culinary Arts
JUAREZ HS - Game Programming & Web Design
JULIAN HS - Broadcast Technology
JULIAN HS - Digital Media
JULIAN HS - Entrepreneurship
JULIAN HS - Game Programming
KELLY HS - Digital Media
MANLEY HS - Culinary Arts
MARSHALL HS - Agricultural Sciences
MARSHALL HS - Culinary Arts
MATHER HS - Game Programming & Web Design
NORTH-GRAND HS - Culinary Arts
PHILLIPS HS - Digital Media
RABY HS - Broadcast Technology
RABY HS - Culinary Arts
RABY HS - Entrepreneurship
RICHARDS HS - Accounting
RICHARDS HS - Culinary Arts
ROOSEVELT HS - Culinary Arts
ROOSEVELT HS - Early Childhood
ROOSEVELT HS - Game Programming
SCHURZ HS - Accounting & Entrepreneurship
SCHURZ HS - Automotive Technology
SCHURZ HS - Digital Media
SULLIVAN HS - Accounting
TILDEN HS - Culinary Arts
UPLIFT HS - Teaching
WELLS HS - Game Programming

Appendix Table 4. Programs by High School SQRP Rating

SQRP Level 1+

ACERO - GARCIA HS - STEM
AMUNDSEN HS - Game Programming & Web Des.
AMUNDSEN HS - General Ed Grow Community
AMUNDSEN HS - International Baccalaureate
BACK OF THE YARDS HS - Dual Language
BACK OF THE YARDS HS - General Ed
BACK OF THE YARDS HS - IB
CARVER MILITARY HS - Service Learning Acad.
ChiArts HS - Creative Writing
ChiArts HS - Dance
ChiArts HS - Music - Instrumental
ChiArts HS - Music - Instrumental - Brass & Wood.
ChiArts HS - Music - Instrumental - Guitar
ChiArts HS - Music - Instrumental - Percussion
ChiArts HS - Music - Instrumental - Piano
ChiArts HS - Music - Instrumental - Strings
ChiArts HS - Music - Vocal
ChiArts HS - Musical Theatre
ChiArts HS - Theatre
ChiArts HS - Visual Arts
CHICAGO AGRICULTURE HS - Agricultural Sci.
CHICAGO MATH & SCIENCE HS - General Ed
CICS - NORTHTOWN HS - General Ed
DISNEY II HS - Fine Arts & Technology
HANCOCK HS - Pre-Engineering
HANCOCK HS - Pre-Law
INTRINSIC HS - General Ed
JONES HS - Pre-Engineering
JONES HS - Pre-Law
KENWOOD HS - General Ed
KENWOOD HS - Honors
KENWOOD HS - Magnet
LINCOLN PARK HS - Drama
LINCOLN PARK HS - Honors/Double Honors
LINCOLN PARK HS - International Baccalaureate
LINCOLN PARK HS - Music - Instrumental
LINCOLN PARK HS - Music - Vocal
LVLHS INFINITY HS - STEM
LVLHS WORLD LANGUAGE HS - General Ed
NOBLE - ACADEMY HS - General Ed
NOBLE - BULLS HS - General Ed
NOBLE - GOLDER HS - General Ed
NOBLE - ITW SPEER HS - STEM
NOBLE - MANSUETO HS - General Ed
NOBLE - MUCHIN HS - General Ed
NOBLE - NOBLE HS - General Ed
NOBLE - PRITZKER HS - IB
NOBLE - RAUNER HS - General Ed
NOBLE - UIC HS - General Ed
OGDEN HS - International Baccalaureate
PHOENIX MILITARY HS - Service Learning Acad
PROSSER HS - Career Academy
PROSSER HS - International Baccalaureate
SOLORIO HS - Double Honors/Scholars
SOLORIO HS - General Ed
SOLORIO HS - Pre-Engineering
VON STEUBEN HS - Scholars
VON STEUBEN HS - Science
WESTINGHOUSE HS - Career Academy

SQRP Level 1

ACERO - DE LA CRUZ - Fine & Performing Arts
ALCOTT HS - General Ed
ALCOTT HS - Pre-Engineering
ASPIRA - BUSINESS & FINANCE HS - General Ed
CATALYST - MARIA - General Ed
CHICAGO ACADEMY HS - General Ed
CHICAGO ACADEMY HS - Scholars
CHICAGO MILITARY HS at Bronzeville - Service
CRANE MEDICAL HS - Health Sciences
DYETT ARTS HS - Band
DYETT ARTS HS - Choir
DYETT ARTS HS - Dance
DYETT ARTS HS - Digital Media
DYETT ARTS HS - General Ed
DYETT ARTS HS - Theater
DYETT ARTS HS - Visual Arts
EPIC HS - General Ed
GOODE HS - Early College STEM
HUBBARD HS - General Ed
HUBBARD HS - International Baccalaureate
HUBBARD HS - University Scholars
INSTITUTO - HEALTH - General Ed
LAKE VIEW HS - Early College STEM
LAKE VIEW HS - STEM Grow Community
MARINE LEADERSHIP AT AMES HS - Service
MATHER HS - Game Programming & Web Design
MATHER HS - General Ed
MATHER HS - Pre-Engineering
MATHER HS - Pre-Law
NOBLE - HANSBERRY HS - International Baccalaureate
NORTH-GRAND HS - Allied Health
NORTH-GRAND HS - Culinary Arts
NORTH-GRAND HS - General Ed
NORTH-GRAND HS - Pre-Engineering
PERSPECTIVES - TECH HS - STEM
RICKOVER MILITARY HS - Service Learning
SENN HS - Dance
SENN HS - General Ed
SENN HS - International Baccalaureate
SENN HS - Music
SENN HS - Theatre
SENN HS - Visual Arts
SIMEON HS - Career Academy
SOUTH SHORE INTL HS - IB
SOUTH SHORE INTL HS - Medical & Health Careers
TAFT HS - General Ed
TAFT HS - International Baccalaureate
TAFT HS - NJROTC
U OF C - WOODLAWN HS - General Ed
WASHINGTON HS - General Ed
WASHINGTON HS - IB

SQRP Level 2+

ACERO - SOTO HS - General Ed
AIR FORCE HS - Service Learning Academy
ASPIRA - EARLY COLLEGE HS - General Ed
CHICAGO TECH HS - STEM
CICS - CHICAGOQUEST HS - STEM
CICS - LONGWOOD - General Ed
CLARK HS - Early College STEM
CURIE HS - Accounting
CURIE HS - Architecture
CURIE HS - Automotive Technology
CURIE HS - Broadcast Technology
CURIE HS - Culinary Arts
CURIE HS - Dance
CURIE HS - Digital Media
CURIE HS - Early Childhood & Teaching
CURIE HS - Game Programming & Web Design
CURIE HS - General Ed
CURIE HS - International Baccalaureate
CURIE HS - Music
CURIE HS - Pre-Engineering
CURIE HS - Visual Arts
FARRAGUT HS - General Ed
FARRAGUT HS - International Baccalaureate
FARRAGUT HS - JROTC
FARRAGUT HS - Pre-Law
FOUNDATIONS - General Ed
GAGE PARK HS - General Ed
HYDE PARK HS - Broadcast Technology
HYDE PARK HS - Digital Media
HYDE PARK HS - General Ed
HYDE PARK HS - International Baccalaureate
JUAREZ HS - Architecture
JUAREZ HS - Automotive Technology
JUAREZ HS - Culinary Arts
JUAREZ HS - Game Programming & Web Design
JUAREZ HS - General Ed
JUAREZ HS - International Baccalaureate
JUAREZ HS - Medical & Health Careers
KELLY HS - AVID
KELLY HS - Digital Media
KELLY HS - General Ed
KELLY HS - International Baccalaureate
KENNEDY HS - General Ed
KENNEDY HS - International Baccalaureate
LEGAL PREP HS - Law & Public Safety
LVLHS MULTICULTURAL HS - Fine & Perf. Arts
LVLHS SOCIAL JUSTICE HS - General Ed
MORGAN PARK HS - General Ed
MORGAN PARK HS - International Baccalaureate
MORGAN PARK HS - World Language and Int.
NOBLE - BAKER HS - General Ed
NOBLE - BUTLER HS - General Ed
NOBLE - COMER - General Ed
NOBLE - DRW HS - General Ed
NOBLE - JOHNSON HS - General Ed
NOBLE - ROWE CLARK HS - STEM
PERSPECTIVES - JOSLIN HS - General Ed
PERSPECTIVES - LEADERSHIP HS - General Ed
PERSPECTIVES - MATH & SCI HS - STEM
SPRY HS - Three-Year; Year-Round High School
STEINMETZ HS - Digital Media
STEINMETZ HS - General Ed
STEINMETZ HS - International Baccalaureate
STEINMETZ HS - JROTC
SULLIVAN HS - Accounting
SULLIVAN HS - General Ed
SULLIVAN HS - Medical & Health Careers
WELLS HS - Game Programming
WELLS HS - General Ed
WELLS HS - Pre-Law
WILLIAMS HS - General Ed
WILLIAMS HS - Medical & Health Careers
YOUNG WOMENS HS - General Ed

SQRP Level 2 or 3

AUSTIN CCA HS - General Ed
AUSTIN CCA HS - Manufacturing
AUSTIN CCA HS - Pre-Engineering
BOGAN HS - Accounting
BOGAN HS - Entrepreneurship
BOGAN HS - General Ed
BOGAN HS - International Baccalaureate
BOWEN HS - General Ed
BOWEN HS - Manufacturing
BOWEN HS - Pre-Engineering
BRONZEVILLE HS - Honors
BRONZEVILLE HS - International Baccalaureate
CHICAGO COLLEGIATE - General Ed
CHICAGO VIRTUAL - General Ed
CHICAGO VOCATIONAL HS - Agricultural Sciences
CHICAGO VOCATIONAL HS - Carpentry
CHICAGO VOCATIONAL HS - Cosmetology
CHICAGO VOCATIONAL HS - Culinary Arts
CHICAGO VOCATIONAL HS - Diesel Technology
CHICAGO VOCATIONAL HS - Early College STEM
CHICAGO VOCATIONAL HS - General Ed
CHICAGO VOCATIONAL HS - Medical Assisting
CICS - ELLISON HS - General Ed
CLEMENTE HS - Allied Health
CLEMENTE HS - Broadcast Technology
CLEMENTE HS - Culinary Arts
CLEMENTE HS - General Ed
CLEMENTE HS - International Baccalaureate
COLLINS HS - Game Programming
COLLINS HS - General Ed
COLLINS HS - Scholars
CORLISS HS - Early College STEM
DOUGLASS HS - General Ed
DUNBAR HS - Allied Health
DUNBAR HS - Career Academy
DUNBAR HS - Chicago Builds
FENGER HS - Carpentry
FENGER HS - Culinary Arts
FENGER HS - General Ed
FENGER HS - Honors
FOREMAN HS - Digital Media
FOREMAN HS - General Ed
FOREMAN HS - Pre-Engineering
FOREMAN HS - Web Design
HARLAN HS - Digital Media
HARLAN HS - General Ed
HARLAN HS - Pre-Engineering
HIRSCH HS - General Ed
JULIAN HS - Allied Health
JULIAN HS - Broadcast Technology
JULIAN HS - Digital Media
JULIAN HS - Entrepreneurship
JULIAN HS - Game Programming
JULIAN HS - General Ed
KELVYN PARK HS - General Ed
MANLEY HS - Culinary Arts
MANLEY HS - General Ed
MARSHALL HS - Agricultural Sciences
MARSHALL HS - Culinary Arts
MARSHALL HS - General Ed
NORTH LAWNDALE - CHRISTIANA HS - Gen Ed
NORTH LAWNDALE - COLLINS HS - Gen Ed
ORR HS - General Ed
PHILLIPS HS - Digital Media
PHILLIPS HS - General Ed
RABY HS - Broadcast Technology
RABY HS - Culinary Arts
RABY HS - Entrepreneurship
RABY HS - Pre-Law
RICHARDS HS - Accounting
RICHARDS HS - Culinary Arts
RICHARDS HS - General Ed
ROOSEVELT HS - Cisco Networking
ROOSEVELT HS - Culinary Arts
ROOSEVELT HS - Early Childhood
ROOSEVELT HS - Game Programming
ROOSEVELT HS - General Ed
ROOSEVELT HS - Medical & Health Careers
SCHURZ HS - Accounting & Entrepreneurship
SCHURZ HS - Allied Health
SCHURZ HS - Automotive Technology
SCHURZ HS - AVID
SCHURZ HS - Digital Media

SQRP Level 2 or 3, cont.

SCHURZ HS - Dual Language
SCHURZ HS - General Ed
SCHURZ HS - International Baccalaureate
SCHURZ HS - Pre-Engineering
TILDEN HS - Culinary Arts
TILDEN HS - General Ed
UPLIFT HS - General Ed
UPLIFT HS - Teaching
Urban Prep Academy for Young Men - Bronzeville - General Ed
Urban Prep Academy for Young Men - Englewood - General Ed
Urban Prep Charter Academy for Young Men - West - General Ed

Technical Appendix: Validating the Assignment Mechanism

A. Checking Offers from Lottery Programs

All lottery programs. When there are more applications to a program than program capacity, admission to lottery programs within a given priority group should be random. Further, even for programs with fewer applications than capacity, the applicant's assigned lottery number should be random. A student is assigned a lottery number for each program he/she lists on his/her application, as long as the program is a lottery-based program. To check whether or not assignment of lottery number and seat offers are independent of student characteristics, we estimate the following equation for each program *p* that has lottery-based admission:

$$(1)\quad lotterynumber_{ip} = \beta_0 + X_i'\beta_1 + rank_{ip}'\theta + priority_{ip}'\delta + \varepsilon_{ip},$$

where $lotterynumber_{ip}$ is applicant *i*'s lottery number for program *p*. Student characteristics are captured by the vector X_i. These include indicator variables for race/ethnicity, gender, CPS neighborhood SES tier, free/reduced-price lunch status, special education status, quartiles of NWEA scores in math and reading, attendance rate (< 90%, 90-95%, > 95%), GPA bins (< 2.5, 2.5-3.0, 3.0-3.5, > 3.5), and enrollment in a CPS school in grade 8. The vector $rank_{ip}$ consists of indicator variables for the order on the application where the student listed the program (i.e., listed the program first, second, third). The vector $priority_{ip}$ includes indicator variables for whether or not an applicant is in a program's priority group (i.e., sibling, geographic entitlement). Finally, there is a random error term denoted ε_{ip}. For each lottery program, we do not include students who were offered a seat at a program that they ranked higher on their application because these students are not included in the lottery. Further, for lottery programs with minimum eligibility requirements, we restrict analysis to students who are eligible for admission.

Because the lottery number is assigned at random, it should not be related to student characteristics, the order in which the student ranks the program, and the priority group(s) to which an applicant belongs. That means that the estimates of the βs, θs, and δs should not be significantly different than 0, except by chance. For example, African American students, Latino students, white students, and Asian/other/missing students should all have the same odds of getting a high or low lottery number. Because of the number of statistical tests we are conducting across a number of variables and a number of programs, we expect that some of the tests will be significantly different

from 0 by chance. Specifically, about 5 percent of the time when we use a 5 percent level of significance. In fact, that is exactly what we see. We note, however, that different coefficient estimates are statistically different from zero across lotteries.

Figure A1 shows the distributions of the p-values for the tests of statistical significance for each group of variables in the regression—student characteristics, rank on application, and priority level. We find that these variable types are unrelated to the applicant's lottery number to the extent that we would expect (about 95 percent of the time with a p-value of .05). Specifically:

- Student characteristics are unrelated to the assigned lottery number in 95.6 percent of the cases we tested, which is as we would expect given that student characteristics are not considered in the lottery process.
- How a student ranks the program on his/her application is unrelated to the assigned lottery number in 97.6 percent of the cases we tested.
- A student's priority group was unrelated to the assigned lottery number in 94.2 percent of the cases we tested.

Again, we expect these variables to be unrelated to the assigned lottery number about 95 percent of the time, so this is evidence that the assigned lottery number seems to be random and is unrelated to characteristics we observe about the student and the student's preferences over programs. Statistically, it appears that the lottery numbers were assigned as expected: randomly.

Lottery programs with more applicants than capacity. When there are fewer applicants than seats available, all eligible applicants receive an offer. However, when there are more applicants than seats available, not all applicants will receive an offer. As with the lottery number, who receives an offer should be random. Among applicants in a program at the same priority level, all students should have the same chance of being made an offer, regardless of their characteristics. To test this, we perform a similar exercise to that described in the previous section, estimating equation (2):

$$(2)\ offer_{ip} = \beta_0 + X_i'\beta_1 + rank_{ip}'\theta + priority_{ip}'\delta + \varepsilon_{ip},$$

where the variables are as described for equation (1). The outcome, $offer_{ip}$, in this case equals 1 if

applicant *i* received an offer at program *p* and 0 otherwise. Here, as some programs have priority groups that determine the order of admission, we expect there to be some relationship between $priority_{ip}$ and whether or not a student receives an offer. But the student characteristics and a program's ranking on a student's application should not predict whether or not a student receives an offer, except by chance or about 5 percent of the time.

Figure A2 has the same interpretation as the previous figures. Again, we find that for the most part these variables are unrelated to the applicant's likelihood of receiving an offer as expected. Specifically:

- Student characteristics are unrelated to the probability of receiving an offer in 93.8 percent of the cases we tested.
- How a student ranks the program on his/her application is unrelated to the probability of receiving an offer in 96.1 percent of the cases we tested.
- As we would expect, a student's priority group has a stronger relationship with a student's likelihood of receiving an offer. In 45.2 percent of the cases we tested, there was a relationship between the priority group and the receipt of an offer. This number is not higher because not all programs have multiple priority groups.

B. Checking Offers from CTE Lottery Programs

To test if CTE lottery programs worked as intended, we follow a similar process as with the regular lottery programs. Here, though, we include priority groups according to the rules laid out for the CTE lottery (described above). We begin by predicting the applicant's lottery number, assigned for each CTE program he/she lists on the application. We then look at the likelihood of receiving an offer for CTE programs that are oversubscribed.

Figure A3 shows the distributions of the p-values of the variables in the CTE lottery number regression—student characteristics, rank on application, and CTE priority level. We find that these variables are unrelated to the applicant's lottery number to the extent that we would expect. Specifically, we find:

- Student characteristics are unrelated to the assigned CTE lottery number in 94.4 percent of the cases we tested.

- How a student ranks the CTE program on his/her application is unrelated to the assigned lottery number in 96.4 percent of the cases we tested.
- A student's priority group is unrelated to the assigned lottery number in 95.8 percent of the cases we tested.

As with the regular lottery programs, we expect these variables to be unrelated to the assigned CTE lottery number about 95 percent of the time, so this is evidence that the assigned CTE lottery number seems to be random and is unrelated to characteristics we observe about the student and the student's preferences over programs.

We now turn to validating the offers made at CTE lottery programs. This analysis includes only CTE lottery programs with more applicants than seats available (N=15 CTE lottery programs). Figure A4 has the same interpretation as the previous figures. Again, we find that for the most part these variables are unrelated to the applicant's likelihood of receiving an offer at a CTE program as expected. Specifically:

- Student characteristics are unrelated to the probability of receiving an offer in 95.4 percent of the cases we tested.
- How a student ranks the program on his/her application is unrelated to the assigned lottery number in 95.3 percent of the cases we tested.
- As we would expect, a student's priority group has a stronger relationship with a student's likelihood of receiving an offer. In 75.6 percent of the cases we tested, there was a relationship between the priority group and the receipt of a CTE program offer.

C. Checking Offers from Programs Using Points-based Admissions

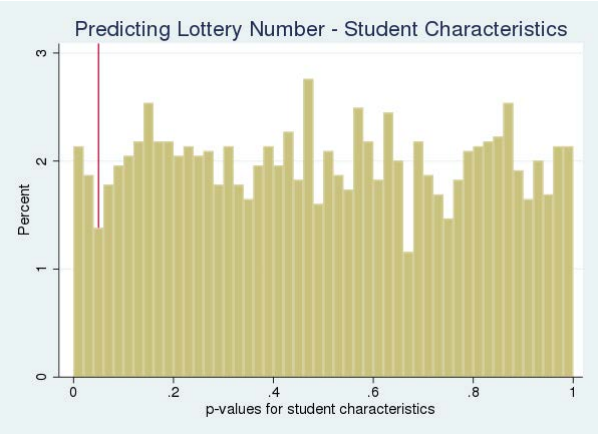
To test if the offers at rank programs were made in the order that we would expect, we removed applicants who were already offered a seat at a program that they preferred (i.e., a program ranked higher on their application). We also removed applicants who were ineligible because they did not meet minimum score requirements or did not complete the program's application components. We further limit the analysis to rank programs with more eligible applicants than seats available; for programs with fewer applicants than seats available, every

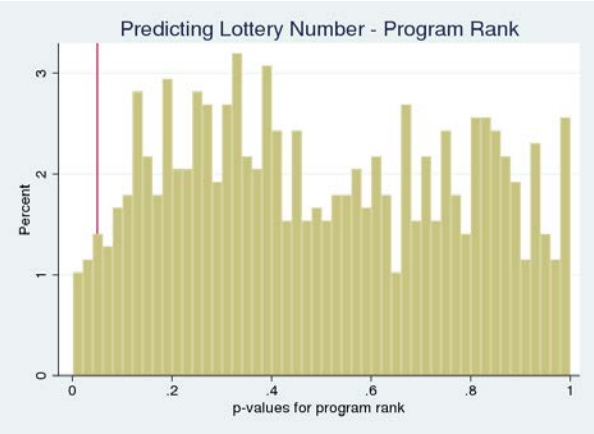
student received an offer.

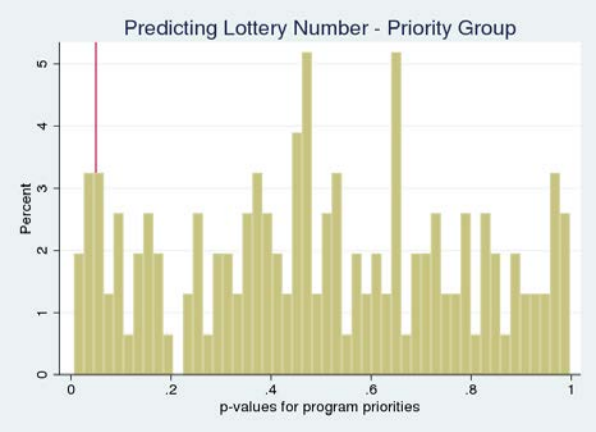
For applicants to the relevant programs (and within priority group), we simply compare the scores of the students who receive an offer to the scores of the students who did not receive an offer. There should be no programs with applicants offered seats who had lower scores than applicants who were not offered a seat. For admitted students to a program and within a priority group, we take the minimum score of all admitted students. We then subtract each applicant's score from the minimum (i.e., the cutoff score). All offered students should have positive values of that adjusted score, while all non-offered students should have negative values of the adjusted score. The only exception is in the case of ties, where both offered and non-offered students can have a score of 0. The distribution of the adjusted scores are shown in Figure A5.

The evidence presented in Figure A5 suggests that admission to rank programs is working as expected. Applicants who did not receive an offer scored below all applicants who received offers within program and priority group.

Figure A1. Predicting an applicant's lottery number with student characteristics, how a student ranks a program, and student's priority group

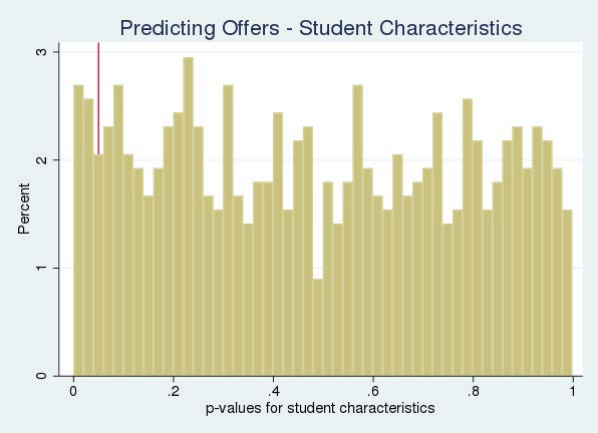


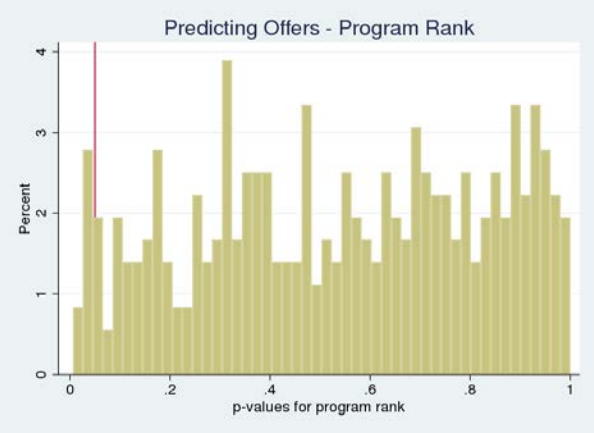


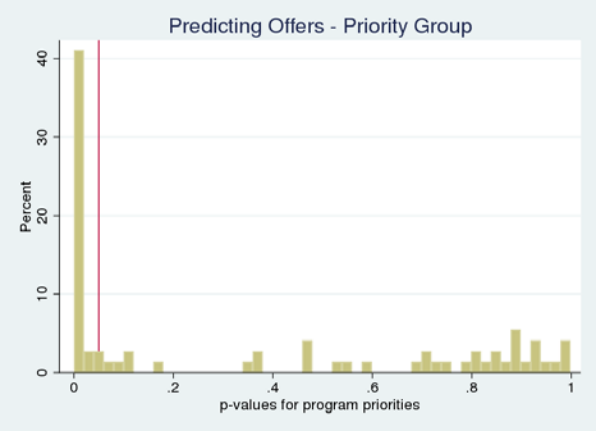


Notes. Student characteristics include race/ethnicity, gender, CPS neighborhood SES tier, free/reduced-price lunch status, special education status, math achievement, reading achievement, GPA, and attendance rate. Student characteristics should not affect a student's lottery number. If random, significance levels should be lower than 0.05 for about 5 percent of the tests. For student characteristics, there were 2,246 covariate tests; 99 tests had p-values < 0.05, or 4.4 percent of the tests. Rank corresponds with how an applicant ranked the program on his/her application (i.e., first, second, third). Rank should not affect a student's lottery number. For rank, there were 781 program rank tests; 19 tests had p-values < 0.05, or 2.4 percent of the tests. Priority group corresponds with how a student's application is prioritized based on the school's preferences. For example, siblings get preference in most programs. Priority group should not affect a student's lottery number. For priority group, there were 154 priority group tests; 9 tests had p-values < 0.05, or 5.8 percent of the tests. These figures include applications for 128 lottery programs (with and without minimums). Red line is drawn at x=0.05.

Figure A2. For oversubscribed programs, predicting an applicant's likelihood of receiving an offer with student characteristics, how a student ranks a program, and student's priority group

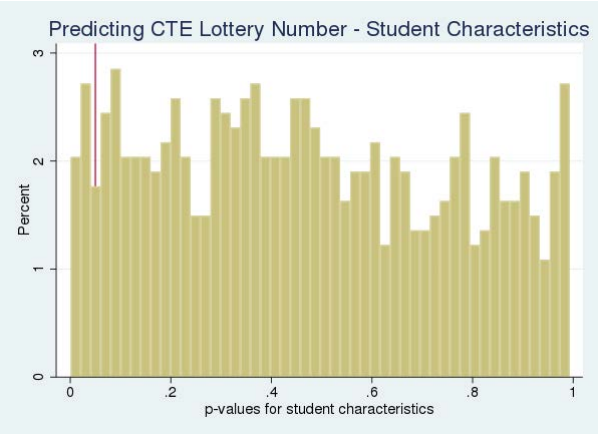


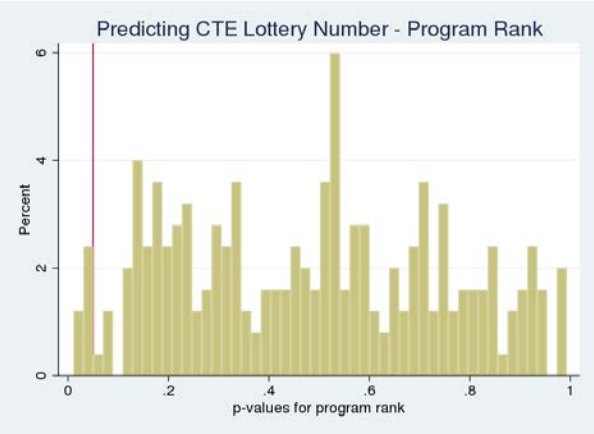


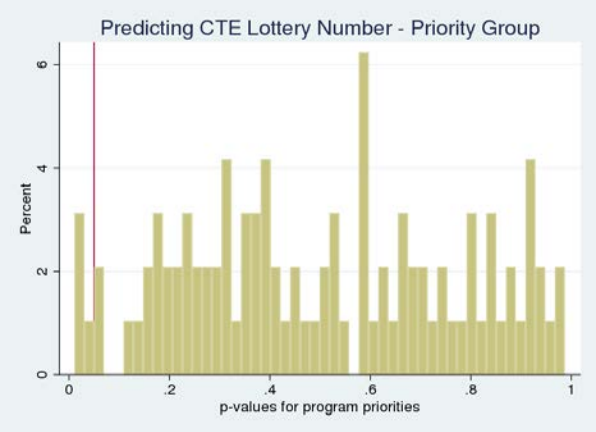


Notes. Analysis is restricted to lottery programs with waitlists (i.e., there were more eligible applicants than seats available at the program). Student characteristics include race/ethnicity, gender, CPS neighborhood SES tier, free/reduced-price lunch status, special education status, math achievement, reading achievement, GPA, and attendance rate. Student characteristics should not affect a student's likelihood of receiving an offer. For student characteristics, there were 779 covariate tests; 48 tests had p-values < 0.05, or 6.2 percent of the tests. Rank corresponds with how an applicant ranked the program on his/her application (i.e., first, second, third). Rank should not affect a student's likelihood of receiving an offer. For rank, there were 359 program rank tests; 14 tests had p-values < 0.05, or 3.9 percent of the tests. Priority group corresponds with how a student's application is prioritized based on the school's preferences. For example, siblings get preference in most programs. Priority group should have some relationship with whether or not a student receives an offer. Students in higher priority groups should be more likely to receive an offer. For priority group, there were 73 priority group tests; 33 tests had p-values < 0.05, or 42.5 percent of the tests. These figures include applications for 38 oversubscribed lottery programs (with and without minimums). Red line is drawn at x=0.05.

Figure A3. Predicting an applicant's CTE lottery number with student characteristics, how a student ranks a program, and student's priority group

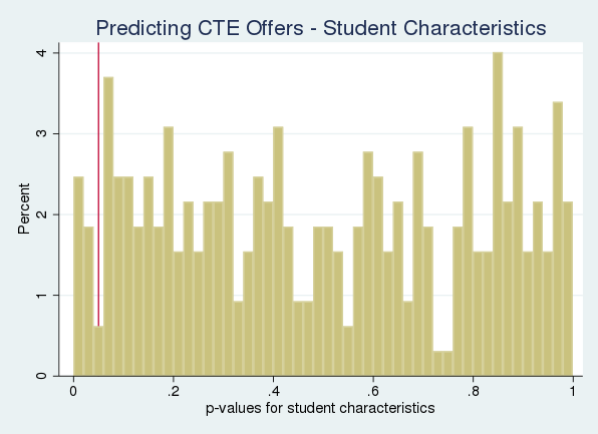


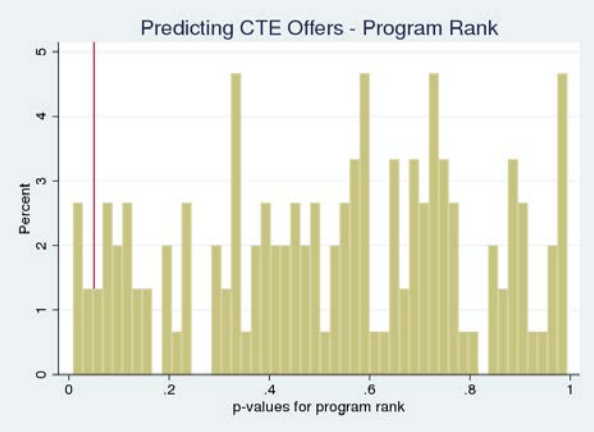


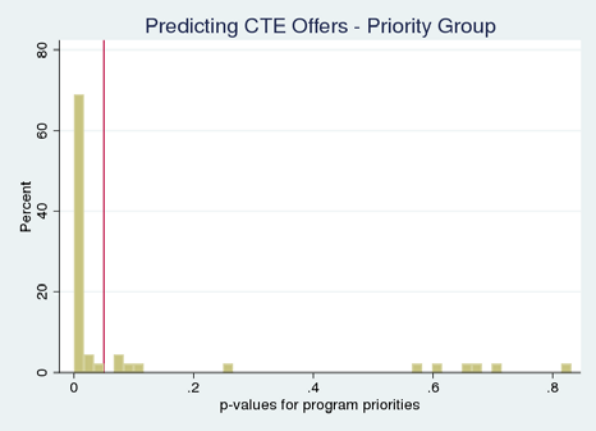


Notes. Student characteristics include race/ethnicity, gender, CPS neighborhood SES tier, free/reduced-price lunch status, special education status, math achievement, reading achievement, GPA, and attendance rate. Student characteristics should not affect a student's CTE lottery number. For student characteristics, there were 736 covariate tests; 41 tests had p-values < 0.05, or 5.6 percent of the tests. Rank corresponds with how an applicant ranked the program on his/her application (i.e., first, second, third). Rank should not affect a student's CTE lottery number. For rank, there were 250 program rank tests; 9 tests had p-values < 0.05, or 3.6 percent of the tests. Priority group corresponds with how a student's application is prioritized based on the school's preferences. For example, siblings get preference in most programs. Priority group should not affect a student's CTE lottery number. For priority group, there were 96 priority group tests; 4 tests had p-values < 0.05, or 4.2 percent of the tests. These figures include applications for 56 CTE lottery programs. Red line is drawn at x=0.05.

Figure A4. For oversubscribed CTE programs, predicting an applicant's likelihood of receiving a CTE offer with student characteristics, how a student ranks a program, and student's priority group



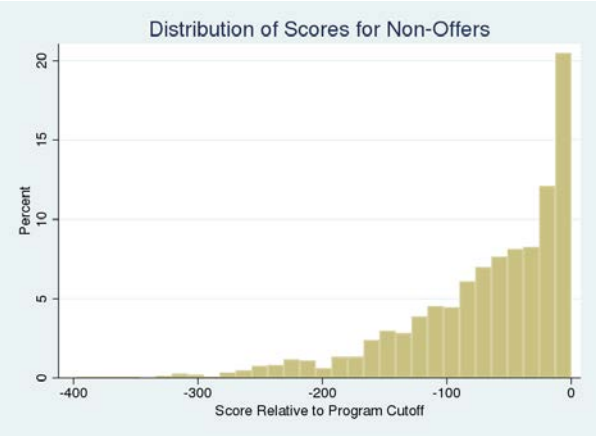




Notes. Analysis is restricted to CTE lottery programs with waitlists (i.e., there were more eligible applicants than seats available at the program). Student characteristics include race/ethnicity, gender, CPS neighborhood SES tier, free/reduced-price lunch status, special education status, math achievement, reading achievement, GPA, and attendance rate. Student characteristics should not affect a student's likelihood of receiving a CTE offer. For student characteristics, there were 324 covariate tests; 15 tests had p-values < 0.05, or 4.6 percent of the tests. Rank corresponds with how an applicant ranked the program on his/her application (i.e., first, second, third). Rank should not affect a student's likelihood of receiving a CTE offer. For rank, there were 150 program rank tests; 7 tests had p-values < 0.05, or 4.7 percent of the tests. Priority group corresponds with how a student's application is prioritized based on the school's preferences. For example, siblings get preference in most programs. Priority group should have some relationship with whether or not a student receives a CTE offer. Students in higher priority groups should be more likely to receive a CTE offer. For priority group, there were 45 priority group tests; 34 tests had p-values < 0.05, or 75.6 percent of the tests. These figures include applications for 15 oversubscribed CTE lottery programs (with and without minimums). Red line is drawn at x=0.05.

Figure A5. Distribution of application scores relative to the program cutoff

A. Applicants who did not receive offer



B. Applicants who received offers

Notes. Application scores are centered around the relevant cutoff score for each program and each priority group. Students with a centered application score of 0 received an offer at the program for the priority group.