## March 12, 2012

## A QUIRK OF THE TIER SYSTEM

Under the current admissions system for Chicago's Selective Enrollment High Schools and Academic Centers, it is much more difficult for a qualified Tier 4 student to land a spot than it is for a qualified Tier 1 student, for one simple reason - there are many more qualified Tier 4 students than Tier 1 students, yet each Tier gets the same allotment of Selective Enrollment and Academic Center seats.

CPS has divided the city into four Tiers, with each Tier representing one quarter of the schoolage population. CPS currently gives each Tier exactly one quarter of the seats (after the first 30\%, based on scores only, have been allotted). But one quarter of the school-age population is not the same as one quarter of the qualified school-age population.

To qualify to take the Selective Enrollment Exam as an $8^{\text {th }}$ grader - and be eligible to apply to a Selective Enrollment High School -- a student must score a minimum of stanine 5 (e.g., above 40\%) in both Reading and Math on his/her $7^{\text {th }}$ grade standardized test. Since far fewer Tier 1 students reach the $40^{\text {th }}$ percentile than their Tier 4 counterparts, the pool of qualified Tier 1 students is much smaller than the pool from Tier 4. And since both Tiers are allotted the same number of seats, a qualified applicant from Tier 1 faces far less competition than does a qualified Tier 4 student.

An analysis of CPS data reveals that the bottom of the $5^{\text {th }}$ stanine ( $40^{\text {th }}$ percentile) is virtually the same as the minimum ISAT score selected for "meets or exceeds" standards. According to CPS, approximately $56 \%$ of Tier $17^{\text {th }}$ graders were at or above the $5^{\text {th }}$ stanine and thus eligible to take the Selective Enrollment Entrance Exam, while approximately $81 \%$ of all Tier $47^{\text {th }}$ graders were qualified to take the Exam as shown in Figure 1.

Figure 1. Calculating "Qualified School-Age Students" by Tier (Selective Enrollment)

|  | Tier 1 | Tier 2 | Tier 3 | Tier 4 |
| :--- | :--- | :--- | :--- | :--- |
| \% of school-age students in each Tier | $24.5 \%$ | $25.3 \%$ | $25.0 \%$ | $25.1 \%$ |
| \% of Tier qualified to take the Exam | $56 \%$ | $62 \%$ | $70 \%$ | $81 \%$ |

To see how this affects the slots that are allocated across the Tiers, we then eliminated unqualified students from the population - since they cannot be applicants. We find that although $25 \%$ of the school-age population is in Tier 4, 30\% of all qualified students are in Tier 4. Similarly Tier 1
contains $25 \%$ of the school-age population, but $21 \%$ of qualified students. If each qualified student were to have an equal chance at a Selective Enrollment slot, then $21 \%$ of the slots ( $70 \%$ of the Tier slots multiplied by $30 \%$-- the percent of qualified students) should be allocated to Tier 4 students vs. the current $17.5 \%$ and only $14.7 \%$ ( $70 \%$ of the Tier slots multiplied by $21 \%$ ) vs. the current $17.5 \%$ should be allocated to Tier 1 students. This re-allocation would then provide each qualified applicant with an equal chance. These calculations are shown in Figure 2 below.

Figure 2. Admissions Based on Qualified Applicants (Selective Enrollment)

|  | Tier 1 | Tier 2 | Tier 3 | Tier 4 |
| :--- | :--- | :--- | :--- | :--- |
| \% of qualified school-age students in each Tier | $21 \%$ | $23 \%$ | $26 \%$ | $30 \%$ |
| \% of slots allocated to each Tier if each qualified <br> student gets an equal chance | $14.7 \%$ | $16.1 \%$ | $18.2 \%$ | $21 \%$ |
| current allocation system | $17.5 \%$ | $17.5 \%$ | $17.5 \%$ | $17.5 \%$ |
| change in allocation | $\mathbf{- 2 . 8 \%}$ | $-\mathbf{- 1 . 4 \%}$ | $\mathbf{+ . 7 \%}$ | $\mathbf{+ 3 . 5 \%}$ |

## Academic Center Admissions

Since it's harder to qualify to take the Academic Center Admissions Test, the results get more pronounced if one considers the Academic Center admissions process. Only a $6^{\text {th }}$ grader who scores a minimum of $70 \%$ on both Reading and Math on his/her $5^{\text {th }}$ grade standardized test can apply to an Academic Center. As shown in Figure 3 below, only $36 \%$ of Tier 1 students are qualified to apply to an Academic Center, while $64 \%$ of Tier 4 students are qualified.

If each qualified student were to have an equal chance at an Academic Center spot, then 23.8\% of the slots ( $70 \%$ of the Tier slots multiplied by $34 \%$-- the percent of qualified students) should be allocated to Tier 4 students vs. the current $17.5 \%$ and only $12.6 \%$ ( $70 \%$ of the Tier slots multiplied by $18 \%$ ) vs. the current $17.5 \%$ should be allocated to Tier 1 students.

Figure 3. "Qualified School-Aged Students" by Tier (Academic Center)

|  | Tier 1 | Tier 2 | Tier 3 | Tier 4 |
| :--- | :--- | :--- | :--- | :--- |
| \% of school-age students who are "qualified" | $36 \%$ | $\mathbf{4 1 \%}$ | $\mathbf{5 0 \%}$ | $\mathbf{6 4 \%}$ |
| \% of qualified school-age students by Tier | $18 \%$ | $22 \%$ | $26 \%$ | $34 \%$ |
| \% of slots allocated to each Tier if each qualified <br> student gets an equal chance | $12.6 \%$ | $15.4 \%$ | $18.2 \%$ | $23.8 \%$ |
| current allocation system | $17.5 \%$ | $17.5 \%$ | $17.5 \%$ | $17.5 \%$ |
| change in allocation | $-4.9 \%$ | $-\mathbf{- 2 . 1 \%}$ | $+.7 \%$ | $\mathbf{+ 6 . 3 \%}$ |

## Behind the Numbers (Academic Center Admissions)

We used the average ISAT performance (translated into a scaled score) provided by CPS for each Tier and assumed that the performance of each Tier's student population was normally distributed.

The mean math score of all CPS $5^{\text {th }}$ graders is 223 , with a standard deviation of 27 , so the $70^{\text {th }}$ percentile yields a score of 237 . So any $5^{\text {th }}$ grader must get a 237 to take the Academic Center Test. In Tier 1, the $56 \%$ ISAT score implies a mean score of 227 , meaning that only $36 \%$ qualified to take the Academic Center Test. In Tier 4, the ISAT mean score of $81 \%$ implies a Tier 4 mean score of 247 , which means that $64 \%$ are qualified.


Tier 1


Tier 3


231237
Tier 2


Tier 4

## Summary

Figures 4 and 5 below summarize what would happen if CPS were to provide each qualified student with an equal chance of getting selected for a Selective Enrollment High School and Academic Center respectively. Note that Tier 4 would receive $3.5 \%$ more spots in Selective Enrollment High Schools and $6.3 \%$ more Academic Center spots. At the same time Tier 1 would receive $2.8 \%$ fewer Selective Enrollment and 4.9\% fewer Academic Center spots.

Let's look at an example to see how this may affect a particular school. Suppose that Lane Tech has 1,000 total seats (although there are actually more), this would mean that Tier 4 students would receive $21 \%$ of these spaces for a total of 210 slots vs. the current 175 , which would provide Tier 4 students with an additional 35 spaces.

Figure 4. Percent of slots in each Tier if each qualified student gets an equal chance (Selective Enrollment High School)


Figure 5. Percent of slots in each Tier if each qualified student gets an equal chance (Academic Center)


This reality - that the size of the qualified applicant pool shrinks with Tier number - has been ignored since the Tier system was introduced. If CPS is committed to giving each qualified student an equal chance at a Selective Enrollment or Academic Center, the allocation of seats per Tier must be corrected.

## Background: About the Tier System

Thirty percent of the seats at any of the selective schools are awarded based on a student's academic performance in comparison with other students citywide. The remaining seventy percent of seats are awarded to students based on their test scores and grades in comparison with other students in their socio-economic Tier, with each Tier receiving $17.5 \%$ of the slots.

CPS has grouped each of the City of Chicago's 874 census tracts into four Tier Groups based on 6 socio-economic factors: median family income, percentage of owner occupied homes, percentage of
single family households, adult educational level, percentage of non-English speakers, and school quality. Census tracts deemed to have more favorable socio-economic factors are grouped into higher Tiers and tracts with less favorable ones are grouped into lower Tiers. Any student in the City of Chicago is grouped into a specific Tier based on his/her home address - and how the census tract that this address falls into has been rated by CPS.

## About SelectivePrep

SelectivePrep was founded by test prep veterans with over 25 years of test preparation experience - and extensive backgrounds in both classroom teaching and curriculum development. SelectivePrep offers the only classroom program that prepares students for both of the standardized tests needed to gain admission to a Selective Enrollment High School and Academic Center.

SelectivePrep knows what it takes to train and motivate students who are intent upon gaining admission to one of the nine Chicago Selective Enrollment High Schools or one of seven Academic Centers. SelectivePrep's programs provide a thorough and rigorous review of test content, so students can approach these competitive admissions processes with confidence.

For additional information and registration go to www.selectiveprep.com or call (312) 409-8411.

