## Online Appendix for "Is Gifted Education a Bright Idea?"

****NOT FOR PUBLICATION***


Appendix Figure 2: Discontinuities Tests for Race \& Gender 7th Grade Sample



Appendix Figure 4: Discontinuities Tests for Prior Achievement
 Sample


Appendix Figure 6: Gifted Status by Distance to Boundary Based on 5th Grade Matrix Points Synthetic Teacher Scores





Appendix Figure 10: Distribution of Raw Reading in 7th Grade For Students with Distances Between -10 and 10


## Appendix Figure 11: Distribution of Raw Language Scores in

 7th Grade For Students with Distances Between -10 and 10



## Appendix Figure 14: Distribution of Raw Math in 7th Grade By Win or Lose Lottery



Appendix Figure 15: Distribution of Raw Reading in 7th Grade By Win or Lose Lottery



Graphs by winlottery

## Appendix Figure 17: Distribution of Raw Soc in 7th Grade By Win or Lose Lottery

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## Appendix Figure 18: Distribution of Raw Sci in 7th Grade By Win or Lose Lottery



Appendix Table 1 - Reduced-Form Estimates of Discontinuities in Pre-Existing (5th Grade) Student Characteristics

| A. Full 2007-08 Cohort |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Black <br> (1) | Hispanic (2) | Female <br> (3) | LEP <br> (4) | Gifted in 5th <br> Grade (5) | Special Education (6) | Free / Reduced-Price Lunch (7) | Stanford - <br> Math <br> (8) | Stanford Reading (9) |
| Above GT Cutoff | $\begin{gathered} 0.016 \\ (0.027) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.036 \\ (0.035) \end{gathered}$ | $\begin{gathered} -0.041 \\ (0.039) \end{gathered}$ | $\begin{gathered} 0.015 \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.045 \\ (0.033) \end{gathered}$ | $\begin{gathered} -0.068^{* * *} \\ (0.022) \end{gathered}$ | $\begin{gathered} 0.004 \\ (0.022) \end{gathered}$ |
| Observations | 3,445 | 3,445 | 3,445 | 3,438 | 3,445 | 3,445 | 3,445 | 3,416 | 3,418 |
|  | Stanford - <br> Language (10) | Stanford Social Studies $\qquad$ (11) | Stanford Science (12) | \# of <br> Disciplinary <br> Infractions <br> $(13)$ | Attendance <br> Rate (\%) <br> (14) | Any Missing Matrix Data (15) | Teacher Score (16) | Teacher Points (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.017 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.023 \\ (0.041) \end{gathered}$ | $\begin{gathered} 0.019 \\ (0.039) \end{gathered}$ | $\begin{gathered} 0.012 \\ (0.022) \end{gathered}$ | $\begin{gathered} -0.244 \\ (0.159) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.008) \end{gathered}$ | $\begin{gathered} 2.626 \\ (2.268) \end{gathered}$ | $\begin{gathered} 0.442 \\ (0.281) \end{gathered}$ |  |
| Observations | 3,415 | 3,415 | 3,416 | 3,445 | 3,445 | 3,445 | 3,427 | 3,427 |  |
| B. Full 2007-08 \& 2008-09 Cohorts |  |  |  |  |  |  |  |  |  |
|  | Black <br> (1) | Hispanic (2) | Female <br> (3) | LEP <br> (4) | Gifted in 5th Grade (5) | Special Education (6) | Free / <br> Reduced-Price <br> Lunch <br> (7) | Stanford - <br> Math <br> (8) | Stanford - <br> Reading <br> (9) |
| Above GT Cutoff | $\begin{gathered} 0.016 \\ (0.018) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.023) \end{gathered}$ | $\begin{aligned} & 0.050 * \\ & (0.026) \end{aligned}$ | $\begin{gathered} 0.037 \\ (0.024) \end{gathered}$ | $\begin{gathered} -0.024 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.020 \\ (0.022) \end{gathered}$ | $\begin{gathered} -0.042^{* * *} \\ (0.016) \end{gathered}$ | $\begin{gathered} -0.013 \\ (0.017) \end{gathered}$ |
| Observations | 6,849 | 6,849 | 6,849 | 6,842 | 6,849 | 6,849 | 6,849 | 6,773 | 6,778 |
|  | Stanford - <br> Language (10) | Stanford Social Studies $\qquad$ | Stanford Science (12) | \# of <br> Disciplinary <br> Infractions <br> $(13)$ | Attendance <br> Rate (\%) $(14)$ | Any Missing <br> Matrix Data (15) | Teacher Score (16) | Teacher Points (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.010 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.030) \end{gathered}$ | $\begin{aligned} & -0.029 \\ & (0.033) \end{aligned}$ | $\begin{gathered} 0.006 \\ (0.018) \end{gathered}$ | $\begin{gathered} -0.128 \\ (0.110) \end{gathered}$ | $\begin{gathered} -0.008 \\ (0.011) \end{gathered}$ | $\begin{gathered} 1.296 \\ (1.391) \end{gathered}$ | $\begin{gathered} 0.237 \\ (0.187) \end{gathered}$ |  |
| Observations | 6,774 | 6,769 | 6,770 | 6,849 | 6,849 | 6,849 | 6,538 | 6,831 |  |

C. 6th Grade Estimation Sample

|  | Black <br> (1) | Hispanic | Female <br> (3) | LEP <br> (4) | Gifted in 5th Grade (5) | Special <br> Education (6) | Free / <br> Reduced-Price <br> Lunch <br> (7) | Stanford - <br> Math <br> (8) | Stanford Reading (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Above GT Cutoff | $\begin{gathered} 0.010 \\ (0.020) \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.064^{* *} \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.039 \\ (0.026) \end{gathered}$ | $\begin{aligned} & -0.032 \\ & (0.029) \end{aligned}$ | $\begin{gathered} 0.005 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.028 \\ (0.025) \end{gathered}$ | $\begin{gathered} -0.048^{* * *} \\ (0.017) \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.020) \end{gathered}$ |
| Observations | 5,559 | 5,559 | 5,559 | 5,558 | 5,559 | 5,559 | 5,559 | 5,534 | 5,536 |
|  | Stanford - <br> Language (10) | Stanford Social Studies (11) | Stanford Science (12) | \# of Disciplinary Infractions (13) | Attendance <br> Rate (\%) <br> (14) | Any Missing Matrix Data (15) | Teacher Score $\qquad$ <br> (16) | Teacher <br> Points (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.000 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.037) \end{gathered}$ | $\begin{gathered} -0.045 \\ (0.038) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.023) \end{gathered}$ | $\begin{gathered} -0.236^{* *} \\ (0.114) \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.011) \end{gathered}$ | $\begin{gathered} 1.480 \\ (1.674) \end{gathered}$ | $\begin{gathered} 0.238 \\ (0.215) \end{gathered}$ |  |
| Observations | 5,534 | 5,531 | 5,531 | 5,559 | 5,559 | 5,559 | 5,337 | 5,556 |  |

Achievement measured in standard deviations of scale scores within grade and year. Disciplinary infractions is the number of infractions warranting a suspension or more severe punishment per year. Includes a linear smoother with a slope shift above the cutoff. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and $10 .^{*},{ }^{* *}$, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 5th grade school.

|  | A. Full 2007-08 Cohort |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Black <br> (1) | Hispanic | Female <br> (3) | LEP <br> (4) | Gifted in 5th Grade (5) | Special Education (6) | Free / <br> Reduced-Price <br> Lunch <br> (7) | Stanford - <br> Math <br> (8) | Stanford Reading (9) |
| Above GT Cutoff | $\begin{gathered} 0.016 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.037 \\ (0.033) \end{gathered}$ | $\begin{aligned} & -0.041 \\ & (0.035) \end{aligned}$ | $\begin{gathered} 0.015 \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.045 \\ (0.035) \end{gathered}$ | $\begin{gathered} -0.068^{* * *} \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.003 \\ (0.025) \end{gathered}$ |
| Observations | 3,449 | 3,449 | 3,445 | 3,442 | 3,445 | 3,445 | 3,445 | 3,420 | 3,422 |
|  | Stanford - <br> Language (10) | Stanford Social Studies (11) | Stanford Science (12) | \# of <br> Disciplinary <br> Infractions <br> (13) | Attendance <br> Rate (\%) <br> (14) | Any Missing Matrix Data (15) | Teacher Score <br> (16) | Teacher Points (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.016 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.044) \end{gathered}$ | $\begin{gathered} 0.018 \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.012 \\ (0.024) \end{gathered}$ | $\begin{gathered} -0.224 \\ (0.173) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.012) \end{gathered}$ | $\begin{gathered} 2.596 \\ (2.139) \end{gathered}$ | $\begin{gathered} 0.436 \\ (0.269) \end{gathered}$ |  |
| Observations | 3,419 | 3,419 | 3,420 | 3,449 | 3,449 | 3,449 | 3,431 | 3,431 |  |
|  |  |  |  | h Grade Estim | on Sample |  |  |  |  |
|  | Black (1) | Hispanic (2) | Female (3) | LEP <br> (4) | Gifted in 5th Grade (5) | Special Education (6) | Free / <br> Reduced-Price <br> Lunch <br> (7) | Stanford - <br> Math <br> (8) | Stanford Reading (9) |
| Above GT Cutoff | $\begin{gathered} -0.000 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.014 \\ (0.039) \end{gathered}$ | $\begin{gathered} 0.024 \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.039 \\ (0.038) \end{gathered}$ | $\begin{gathered} -0.050 \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.049 \\ (0.039) \end{gathered}$ | $\begin{gathered} -0.067 * * \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.028) \end{gathered}$ |
| Observations | 2,650 | 2,650 | 2,650 | 2,650 | 2,650 | 2,650 | 2,650 | 2,637 | 2,638 |
|  | Stanford - <br> Language (10) | Stanford Social Studies (11) | Stanford - <br> Science <br> (12) | $\qquad$ <br> \# of <br> Disciplinary Infractions (13) | Attendance <br> Rate (\%) <br> (14) | Any Missing Matrix Data (15) | Teacher Score $\qquad$ <br> (16) | Teacher <br> Points <br> (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.006 \\ (0.041) \end{gathered}$ | $\begin{gathered} 0.040 \\ (0.049) \end{gathered}$ | $\begin{gathered} 0.004 \\ (0.047) \end{gathered}$ | $\begin{gathered} -0.001 \\ (0.029) \end{gathered}$ | $\begin{gathered} -0.269 \\ (0.193) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.012) \end{gathered}$ | $\begin{gathered} 2.965 \\ (2.499) \end{gathered}$ | $\begin{gathered} 0.497 \\ (0.310) \end{gathered}$ |  |
| Observations | 2,636 | 2,636 | 2,637 | 2,650 | 2,650 | 2,650 | 2,648 | 2,648 |  |

C. Full 2007-08 and 2008-09 Cohorts

|  | Black <br> (1) | Hispanic (2) | Female (3) | LEP <br> (4) | Gifted in 5th Grade (5) | Special Education (6) | Free / <br> Reduced-Price <br> Lunch <br> (7) | Stanford - <br> Math <br> (8) | Stanford Reading (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Above GT Cutoff | $\begin{gathered} 0.016 \\ (0.020) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.025) \end{gathered}$ | $\begin{aligned} & 0.050 * \\ & (0.026) \end{aligned}$ | $\begin{gathered} 0.037 \\ (0.024) \end{gathered}$ | $\begin{gathered} -0.024 \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.020 \\ (0.025) \end{gathered}$ | $\begin{gathered} -0.042^{* *} \\ (0.017) \end{gathered}$ | $\begin{gathered} -0.013 \\ (0.018) \end{gathered}$ |
| Observations | 6,849 | 6,849 | 6,849 | 6,842 | 6,849 | 6,849 | 6,849 | 6,773 | 6,778 |
|  | Stanford - <br> Language (10) | Stanford Social Studies <br> (11) | Stanford Science (12) | \# of <br> Disciplinary <br> Infractions <br> $(13)$ | Attendance <br> Rate (\%) <br> (14) | Any Missing Matrix Data (15) | Teacher Score <br> (16) | Teacher Points (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.010 \\ (0.027) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.031) \end{gathered}$ | $\begin{gathered} -0.029 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.020) \end{gathered}$ | $\begin{gathered} -0.128 \\ (0.122) \end{gathered}$ | $\begin{gathered} -0.008 \\ (0.012) \end{gathered}$ | $\begin{gathered} 1.296 \\ (1.305) \end{gathered}$ | $\begin{gathered} 0.237 \\ (0.188) \end{gathered}$ |  |
| Observations | 6,774 | 6,769 | 6,770 | 6,849 | 6,849 | 6,849 | 6,538 | 6,831 |  |
| D. 6th Grade Estimation Sample |  |  |  |  |  |  |  |  |  |
|  | Black (1) | Hispanic (2) | Female | LEP <br> (4) | Gifted in 5th Grade (5) | Special Education (6) | Free / <br> Reduced-Price <br> Lunch <br> (7) | Stanford - <br> Math <br> (8) | Stanford Reading $\qquad$ (9) |
| Above GT Cutoff | $\begin{gathered} 0.010 \\ (0.022) \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.027) \end{gathered}$ | $\begin{gathered} 0.064^{* *} \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.039 \\ (0.026) \end{gathered}$ | $\begin{gathered} -0.032 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.028 \\ (0.028) \end{gathered}$ | $\begin{gathered} -0.048^{* *} \\ (0.019) \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.020) \end{gathered}$ |
| Observations | 5,559 | 5,559 | 5,559 | 5,558 | 5,559 | 5,559 | 5,559 | 5,534 | 5,536 |
|  | Stanford - <br> Language (10) | Stanford Social Studies <br> (11) | Stanford - <br> Science <br> (12) | \# of <br> Disciplinary <br> Infractions <br> $(13)$ | Attendance <br> Rate (\%) (14) | Any Missing <br> Matrix Data (15) | Teacher Score $\qquad$ (16) | Teacher Points (17) |  |
| Above GT Cutoff | $\begin{gathered} 0.000 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.034) \end{gathered}$ | $\begin{gathered} -0.045 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.022) \end{gathered}$ | $\begin{aligned} & -0.236^{*} \\ & (0.131) \end{aligned}$ | $\begin{gathered} -0.009 \\ (0.013) \end{gathered}$ | $\begin{gathered} 1.480 \\ (1.493) \end{gathered}$ | $\begin{gathered} 0.238 \\ (0.210) \end{gathered}$ |  |
| Observations | 5,534 | 5,531 | 5,531 | 5,559 | 5,559 | 5,559 | 5,337 | 5,556 |  |

Achievement measured in standard deviations of scale scores within grade and year. Disciplinary infractions is the number of infractions warranting a suspension or more severe punishment per year. Includes a linear smoother with a slope shift above the cutoff. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and $10 .^{*}, * *$, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 5th grade school.

Appendix Table 3 - Regression Discontinuity Estimates of Impact of Receiving G\&T Services - 6th Grade Outcomes

| Model | Dependent Variable | Stanford Achievement Test |  |  |  |  | Disciplinary Infractions(6) | Attendance <br> Rate (\%) <br> (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Math <br> (1) | Reading <br> (2) | Language <br> (3) | Social Studies <br> (4) | Science <br> (5) |  |  |
| A. Baseline |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{aligned} & -0.043 * \\ & (0.022) \end{aligned}$ | $\begin{gathered} -0.018 \\ (0.026) \end{gathered}$ | $\begin{gathered} -0.039 \\ (0.033) \end{gathered}$ | $\begin{gathered} -0.010 \\ (0.036) \end{gathered}$ | $\begin{gathered} -0.059 \\ (0.038) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.058) \end{gathered}$ | $\begin{gathered} -0.149 \\ (0.203) \end{gathered}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.442 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.443 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.441^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.441^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.440^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.444 * * * \\ (0.057) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{gathered} -0.096^{*} \\ (0.050) \end{gathered}$ | $\begin{gathered} -0.041 \\ (0.059) \end{gathered}$ | $\begin{gathered} -0.088 \\ (0.077) \end{gathered}$ | $\begin{gathered} -0.024 \\ (0.080) \end{gathered}$ | $\begin{gathered} -0.134 \\ (0.085) \end{gathered}$ | $\begin{gathered} 0.014 \\ (0.131) \end{gathered}$ | $\begin{aligned} & -0.335 \\ & (0.461) \end{aligned}$ |
| Observations |  | 5,495 | 5,494 | 5,495 | 5,492 | 5,489 | 5,563 | 5,561 |
| B. With Individual Controls |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{gathered} -0.008 \\ (0.016) \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.014) \end{gathered}$ | $\begin{gathered} -0.028 \\ (0.021) \end{gathered}$ | $\begin{gathered} 0.010 \\ (0.023) \end{gathered}$ | $\begin{gathered} -0.022 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.008 \\ (0.057) \end{gathered}$ | $\begin{gathered} -0.003 \\ (0.178) \end{gathered}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.453^{* * *} \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.449 * * * \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.446 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.449 * * * \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.452 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.453 * * * \\ (0.058) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{gathered} -0.018 \\ (0.035) \end{gathered}$ | $\begin{gathered} -0.006 \\ (0.030) \end{gathered}$ | $\begin{gathered} -0.063 \\ (0.049) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.052) \end{gathered}$ | $\begin{gathered} -0.049 \\ (0.067) \end{gathered}$ | $\begin{gathered} 0.019 \\ (0.125) \end{gathered}$ | $\begin{gathered} -0.006 \\ (0.392) \end{gathered}$ |
| Observations |  | 5,469 | 5,470 | 5,469 | 5,463 | 5,460 | 5,558 | 5,556 |
| C. Using Synthetic Matrix Scores |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{gathered} -0.024 \\ (0.018) \end{gathered}$ | $\begin{gathered} -0.031 \\ (0.020) \end{gathered}$ | $\begin{gathered} -0.044 \\ (0.029) \end{gathered}$ | $\begin{gathered} -0.013 \\ (0.027) \end{gathered}$ | $\begin{gathered} -0.050 * * \\ (0.023) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.066) \end{gathered}$ | $\begin{gathered} -0.073 \\ (0.178) \end{gathered}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.217 * * * \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.217 * * * \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.217 * * * \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.216^{* * *} \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.216^{* * *} \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.217 * * * \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.217 * * * \\ (0.040) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{gathered} -0.110 \\ (0.076) \end{gathered}$ | $\begin{gathered} -0.143 \\ (0.096) \end{gathered}$ | $\begin{gathered} -0.201 \\ (0.148) \end{gathered}$ | $\begin{gathered} -0.061 \\ (0.126) \end{gathered}$ | $\begin{gathered} -0.233^{* *} \\ (0.105) \end{gathered}$ | $\begin{gathered} 0.058 \\ (0.304) \end{gathered}$ | $\begin{gathered} -0.337 \\ (0.839) \end{gathered}$ |
| Observations |  | 5,461 | 5,460 | 5,461 | 5,458 | 5,455 | 5,528 | 5,526 |

Achievement measured in standard deviations of scale scores within grade and year. Disciplinary infractions is the number of infractions warranting a suspension or more severe punishment per year. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included in panel B. Synthetic matrix scores replace matrix scores for students where a teacher recommendation could be pivotal (e.g. total points w/o the recommendation is fewer than 10 away from the relevant cutoff) with the predicted value from a regression of total points on all components excluding the teacher points. All panels include a linear smoother with a slope shift above the cutoff. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and $10 .{ }^{*},{ }^{* *}$, and ${ }^{* * *}$ denote statistical significance at the $10 \%$, $5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 6th grade school.

Appendix Table 4 - Regression Discontinuity Estimates of Impact of Receiving G\&T Services on Students Exiting 5th Grade - Control for Lagged (5th Grade) Dependent Variable and Smoother Only

| Model | Dependent Variable | Stanford Achievement Test |  |  |  |  | Disciplinary Infractions(6) | Attendance Rate (\%) (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Math <br> (1) | Reading <br> (2) | Language (3) | Social Studies <br> (4) | Science (5) |  |  |
| (i) 7th Grade Outcomes |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{aligned} & -0.015 \\ & (0.022) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.020) \end{aligned}$ | $\begin{aligned} & -0.005 \\ & (0.036) \end{aligned}$ | $\begin{aligned} & -0.026 \\ & (0.033) \end{aligned}$ | $\begin{aligned} & -0.008 \\ & (0.048) \end{aligned}$ | $\begin{aligned} & -0.005 \\ & (0.116) \end{aligned}$ | $\begin{gathered} -0.469 * \\ (0.261) \end{gathered}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.457 * * * \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.442 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.437 * * * \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.442^{* * *} \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.436^{* * *} \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.439 * * * \\ (0.057) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{aligned} & -0.033 \\ & (0.049) \end{aligned}$ | $\begin{aligned} & -0.015 \\ & (0.044) \end{aligned}$ | $\begin{aligned} & -0.011 \\ & (0.080) \end{aligned}$ | $\begin{gathered} -0.060 \\ (0.076) \end{gathered}$ | $\begin{gathered} -0.018 \\ (0.108) \end{gathered}$ | $\begin{gathered} -0.011 \\ (0.266) \end{gathered}$ | $\begin{gathered} -1.067 \\ (0.647) \end{gathered}$ |
| Observations |  | 2,600 | 2,603 | 2,599 | 2,597 | 2,600 | 2,653 | 2,652 |
| (ii) 6th Grade Outcomes |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{aligned} & -0.011 \\ & (0.017) \end{aligned}$ | $\begin{gathered} -0.008 \\ (0.016) \end{gathered}$ | $\begin{aligned} & -0.035 \\ & (0.025) \end{aligned}$ | $\begin{aligned} & -0.013 \\ & (0.026) \end{aligned}$ | $\begin{gathered} -0.036 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.024 \\ (0.175) \end{gathered}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.448^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.440 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.437 * * * \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.443^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.057) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{aligned} & -0.024 \\ & (0.038) \end{aligned}$ | $\begin{gathered} -0.017 \\ (0.036) \end{gathered}$ | $\begin{aligned} & -0.080 \\ & (0.059) \end{aligned}$ | $\begin{gathered} -0.030 \\ (0.059) \end{gathered}$ | $\begin{gathered} -0.082 \\ (0.068) \end{gathered}$ | $\begin{gathered} 0.002 \\ (0.136) \end{gathered}$ | $\begin{gathered} 0.055 \\ (0.395) \end{gathered}$ |
| Observations |  | 5,472 | 5,473 | 5,472 | 5,466 | 5,463 | 5,563 | 5,561 |

Achievement measured in standard deviations of scale scores within grade and year. Disciplinary infractions is the number of infractions warranting a suspension or more severe punishment per year. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included in panel B. Both panels include a linear smoother with a slope shift above the cutoff. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and 10. *, **, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by school during outcome year.

Appendix Table 5 - Regression Discontinuity Estimates of Impact of Receiving G\&T Services on Students Exiting 5th Grade - Control for
Lagged (5th Grade) Dependent Variable, Student Characteristics, \& Middle-School FE

| Model | Dependent Variable | Stanford Achievement Test |  |  |  |  | Disciplinary Infractions(6) | Attendance <br> Rate (\%) <br> (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Math <br> (1) | Reading <br> (2) | Language (3) | Social Studies (4) | Science |  |  |
| (i) 7th Grade Outcomes |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{aligned} & -0.006 \\ & (0.017) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.019) \end{gathered}$ | $\begin{gathered} 0.019 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.004 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.010 \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.031 \\ (0.114) \end{gathered}$ | $\begin{aligned} & -0.477 * \\ & (0.250) \end{aligned}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.468 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.461^{* * *} \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.460 * * * \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.456^{* * *} \\ (0.058) \end{gathered}$ | $\begin{gathered} 0.460 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.457 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.459 * * * \\ (0.057) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{gathered} -0.014 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.041) \end{gathered}$ | $\begin{gathered} 0.041 \\ (0.065) \end{gathered}$ | $\begin{gathered} 0.009 \\ (0.065) \end{gathered}$ | $\begin{gathered} 0.023 \\ (0.112) \end{gathered}$ | $\begin{gathered} 0.067 \\ (0.249) \end{gathered}$ | $\begin{gathered} -1.039 * \\ (0.600) \end{gathered}$ |
| Observations |  | 2,597 | 2,600 | 2,596 | 2,594 | 2,597 | 2,650 | 2,649 |
| (ii) 6th Grade Outcomes |  |  |  |  |  |  |  |  |
| Reduced Form | Above GT Cutoff | $\begin{gathered} -0.005 \\ (0.013) \end{gathered}$ | $\begin{gathered} -0.002 \\ (0.013) \end{gathered}$ | $\begin{gathered} -0.019 \\ (0.021) \end{gathered}$ | $\begin{gathered} 0.009 \\ (0.022) \end{gathered}$ | $\begin{gathered} -0.018 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.040 \\ (0.058) \end{gathered}$ | $\begin{gathered} -0.045 \\ (0.180) \end{gathered}$ |
| 2SLS - 1st Stage | Above GT Cutoff | $\begin{gathered} 0.450 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.449 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.447 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.447 * * * \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.057) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.057) \end{gathered}$ |
| 2SLS - 2nd Stage | Enrolled in GT | $\begin{gathered} -0.011 \\ (0.029) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.029) \end{gathered}$ | $\begin{aligned} & -0.043 \\ & (0.049) \end{aligned}$ | $\begin{gathered} 0.019 \\ (0.051) \end{gathered}$ | $\begin{aligned} & -0.041 \\ & (0.065) \end{aligned}$ | $\begin{gathered} 0.090 \\ (0.127) \end{gathered}$ | $\begin{aligned} & -0.101 \\ & (0.399) \end{aligned}$ |
| Observations |  | 5,469 | 5,470 | 5,469 | 5,463 | 5,460 | 5,558 | 5,556 |

Achievement measured in standard deviations of scale scores within grade and year. Disciplinary infractions is the number of infractions warranting a suspension or more severe punishment per year. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included in panel B. Both panels include a linear smoother with a slope shift above the cutoff. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and 10. *, **, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by school during outcome year.

Appendix Table 6-2SLS Estimates of Impacts of G\&T Services on Peer Achievement
Synthetic Classrooms Within Teacher-Course Identifier-Grade Cell

|  | Peer Math Scores in Math Classes <br> (1) | Peer Reading Scores in Read/Eng Classes (2) | Peer Language Scores in Read/Eng Classes (3) | Peer Soc Scores in Soc Classes (4) | Peer Science Scores in Science Classes (5) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A. Two Years After Evaluation (7th Grade) |  |  |  |  |  |
| (i) Students Sorted by 5th Grade Achievement | $\begin{gathered} -0.000 \\ (0.140) \end{gathered}$ | $\begin{aligned} & 0.191^{*} \\ & (0.105) \end{aligned}$ | $\begin{aligned} & 0.198^{*} \\ & (0.102) \end{aligned}$ | $\begin{gathered} 0.243^{* *} \\ (0.115) \end{gathered}$ | $\begin{gathered} 0.219 \\ (0.145) \end{gathered}$ |
| Observations | 2,623 | 2,595 | 2,595 | 2,582 | 2,561 |
| (ii) Students Sorted Randomly | $\begin{gathered} 0.273 \\ (0.172) \end{gathered}$ | $\begin{aligned} & 0.264^{*} \\ & (0.151) \end{aligned}$ | $\begin{aligned} & 0.267 * \\ & (0.142) \end{aligned}$ | $\begin{aligned} & 0.299 * * \\ & (0.148) \end{aligned}$ | $\begin{aligned} & 0.287 * \\ & (0.144) \end{aligned}$ |
| Observations | 2,628 | 2,597 | 2,597 | 2,586 | 2,566 |
| B. One Year After Evaluation (6th Grade) |  |  |  |  |  |
| (i) Students Sorted by 5th Grade Achievement | $\begin{gathered} 0.254^{* *} \\ (0.111) \end{gathered}$ | $\begin{aligned} & 0.220^{* *} \\ & (0.086) \end{aligned}$ | $\begin{gathered} 0.241 * * * \\ (0.085) \end{gathered}$ | $\begin{gathered} 0.294^{* *} \\ (0.116) \end{gathered}$ | $\begin{aligned} & 0.246 * * \\ & (0.121) \end{aligned}$ |
| Observations | 5,427 | 5,468 | 5,468 | 5,354 | 5,317 |
| (ii) Students Sorted Randomly | $\begin{gathered} 0.471 * * * \\ (0.175) \end{gathered}$ | $\begin{gathered} 0.317^{* *} \\ (0.121) \end{gathered}$ | $\begin{gathered} 0.302 * * * \\ (0.111) \end{gathered}$ | $\begin{aligned} & 0.405^{* *} \\ & (0.159) \end{aligned}$ | $\begin{gathered} 0.410^{* * *} \\ (0.148) \end{gathered}$ |
| Observations | 5,430 | 5,469 | 5,469 | 5,358 | 5,319 |
| Model (i) sorts students in teacher-grade-course cells by their 5th grade achievement in that subject into synthetic classes of at most 35 students. Model (ii) randomizes students across the synthetic classes. If there are not enough students to fill a 35 student class then the students are distributed evenly across the classes. Achievement measured in standard deviations of scale scores within grade and year. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included in panel B. Both panels include a linear smoother with a slope shift above the cutoff. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between - 10 and $10 .{ }^{*}, * *$, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 7th grade school. |  |  |  |  |  |

Appendix Table 7 - Reduced Form \& First Stage Estimates of Impacts of G\&T Services in 7th Grade
Effects on Educational Environment and Student Choices

| Model | Dependent Variable | Peer Math Scores in Math Classes <br> (1) | Peer Reading Scores in Read/Eng Classes (2) | Peer Language Scores in Read/Eng Classes (3) | Peer Soc Scores in Soc Classes | Peer Science Scores in Science Classes (5) | \# of Core Regular (6) | \# of Core <br> Vanguard <br> Classes <br> (7) | Enrolled in Vanguard Math | Enrolled in Vanguard English (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reduced Form | Above GT <br> Cutoff | $\begin{aligned} & 0.158^{* *} \\ & (0.077) \end{aligned}$ | $\begin{aligned} & 0.130^{*} \\ & (0.073) \end{aligned}$ | $\begin{aligned} & 0.140^{* *} \\ & (0.067) \end{aligned}$ | $\begin{aligned} & 0.106^{*} \\ & (0.062) \end{aligned}$ | $\begin{aligned} & 0.123^{*} \\ & (0.068) \end{aligned}$ | $\begin{gathered} -0.007 \\ (0.122) \end{gathered}$ | $\begin{aligned} & 0.521^{*} \\ & (0.295) \end{aligned}$ | $\begin{aligned} & 0.143^{*} \\ & (0.075) \end{aligned}$ | $\begin{gathered} 0.109 \\ (0.079) \end{gathered}$ |
| $\begin{aligned} & \text { 2SLS - 1st } \\ & \text { Stage } \end{aligned}$ | Above GT <br> Cutoff | $\begin{gathered} 0.455^{* * *} \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.062) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.062) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.063) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.063) \end{gathered}$ | $\begin{gathered} 0.455^{* * *} \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.455^{* * *} \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.455 * * * \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.452^{* * *} \\ (0.062) \end{gathered}$ |
| Observations |  | 2,629 | 2,494 | 2,494 | 2,567 | 2,567 | 2,643 | 2,643 | 2,629 | 2,497 |
|  |  | Enrolled in Vanguard Social Science (10) | Enrolled in Vanguard Science <br> (11) | Attends Zoned School <br> (12) | Attends Non- <br> Zoned GT <br> Magnet <br> Campus <br> (13) | Attends Other Non-Zoned <br> (14) | Math Teacher Fixed Effect <br> (15) | Read/Eng Teacher Fixed Effect <br> (16) | Science Teacher Fixed Effect <br> (17) | Social Science Teacher Fixed Effect <br> (18) |
| Reduced Form | Above GT | $\begin{gathered} 0.127 \\ (0.078) \end{gathered}$ | $\begin{gathered} 0.127 \\ (0.078) \end{gathered}$ | $\begin{gathered} -0.022 \\ (0.048) \end{gathered}$ | $\begin{aligned} & 0.117^{* *} \\ & (0.046) \end{aligned}$ | $\begin{gathered} -0.095^{* *} \\ (0.047) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & 0.007 * \\ & (0.004) \end{aligned}$ | $\begin{gathered} 0.002 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.006) \end{gathered}$ |
| $\begin{aligned} & \text { 2SLS - 1st } \\ & \text { Stage } \end{aligned}$ | Above GT | $\begin{gathered} 0.451^{* * *} \\ (0.063) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.063) \end{gathered}$ | $\begin{gathered} 0.450^{* * *} \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.450 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.450^{* * *} \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.062) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.062) \end{gathered}$ | $\begin{gathered} 0.451^{* * *} \\ (0.062) \end{gathered}$ |
| Observations |  | 2,567 | 2,567 | 2,623 | 2,623 | 2,623 | 2,650 | 2,621 | 2,621 | 2,621 |

Achievement measured in standard deviations of scale scores within grade and year. Teacher fixed effects are estimates from a student-level regression of achievement on lagged achievement, peer lagged achievement, race, gender, special education, LEP, at-risk status, teacher fixed-effects and school fixed-effects. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included. Also includes a linear smoother with a slope shift above the cutoff. Peers are defined by teacher-course id-grade cells. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and 10 . *, **, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 7th grade school.

Appendix Table 8 - Regression Discontinuity Estimates of Impacts of G\&T Services in 6th Grade
Effects on Educational Environment and Student Choices

| Model | Dependent Variable | Peer Math Scores in Math Classes <br> (1) | Peer Reading Scores in Read/Eng Classes <br> (2) | Peer Language Scores in Read/Eng Classes (3) | Peer Soc Scores in Soc Classes <br> (4) | Peer Science Scores in Science Classes <br> (5) | \# of Core Regular Classes (6) | \# of Core <br> Vanguard Classes <br> (7) | Enrolled in Vanguard Math <br> (8) | Enrolled in Vanguard English |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reduced Form | Above GT Cutoff | $\begin{gathered} 0.210^{* * *} \\ (0.056) \end{gathered}$ | $\begin{gathered} 0.165 * * * \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.172 * * * \\ (0.050) \end{gathered}$ | $\begin{gathered} 0.204 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.190^{* * *} \\ (0.053) \end{gathered}$ | $\begin{gathered} -0.213^{* *} \\ (0.094) \end{gathered}$ | $\begin{gathered} 0.599 * * * \\ (0.219) \end{gathered}$ | $\begin{gathered} 0.164 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.146 * * \\ (0.062) \end{gathered}$ |
| $\begin{aligned} & \text { 2SLS - 1st } \\ & \text { Stage } \end{aligned}$ | Above GT Cutoff | $\begin{gathered} 0.459 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.444^{* * *} \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.448 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.445 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.457 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.457 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.459 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.445^{* * *} \\ (0.061) \end{gathered}$ |
| $\begin{aligned} & \text { 2SLS - 2nd } \\ & \text { Stage } \end{aligned}$ | Enrolled in GT | $\begin{gathered} 0.458 * * * \\ (0.131) \end{gathered}$ | $\begin{gathered} 0.372 * * * \\ (0.117) \end{gathered}$ | $\begin{gathered} 0.386 * * * \\ (0.114) \end{gathered}$ | $\begin{gathered} 0.457 * * * \\ (0.141) \end{gathered}$ | $\begin{gathered} 0.428 * * * \\ (0.130) \end{gathered}$ | $\begin{gathered} -0.466^{* *} \\ (0.214) \end{gathered}$ | $\begin{gathered} 1.312^{* *} \\ (0.500) \end{gathered}$ | $\begin{gathered} 0.357 * * * \\ (0.134) \end{gathered}$ | $\begin{gathered} 0.328 * * \\ (0.143) \end{gathered}$ |
| Observations |  | 5,434 | 5,136 | 5,136 | 5,301 | 5,323 | 5,506 | 5,506 | 5,434 | 5,140 |
|  |  | Enrolled in Vanguard Social Science $\qquad$ | Enrolled in Vanguard Science (11) | Attends Zoned School (12) | Attends NonZoned GT Magnet Campus (13) | Attends Other Non-Zoned (14) | Math Teacher Fixed Effect <br> (15) | Read/Eng Teacher Fixed Effect $\qquad$ (16) | Science <br> Teacher Fixed Effect <br> (17) | Social Science Teacher Fixed Effect (18) |
| Reduced Form | Above GT <br> Cutoff | $\begin{gathered} 0.147 * * * \\ (0.052) \end{gathered}$ | $\begin{gathered} 0.144^{* * *} \\ (0.053) \end{gathered}$ | $\begin{aligned} & -0.038 \\ & (0.039) \end{aligned}$ | $\begin{gathered} 0.104^{* *} \\ (0.049) \end{gathered}$ | $\begin{aligned} & -0.066 * \\ & (0.037) \end{aligned}$ | $\begin{gathered} 0.004 \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.003 \\ (0.007) \end{gathered}$ |
| $\begin{aligned} & \text { 2SLS - 1st } \\ & \text { Stage } \end{aligned}$ | Above GT Cutoff | $\begin{gathered} 0.448 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.445 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.450 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.450 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.450 * * * \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.458 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.456 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.445 * * * \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.455^{* * *} \\ (0.060) \end{gathered}$ |
| 2SLS - 2nd <br> Stage | Enrolled in GT | $\begin{gathered} 0.328 * * \\ (0.126) \end{gathered}$ | $\begin{gathered} 0.323^{* *} \\ (0.128) \end{gathered}$ | $\begin{aligned} & -0.084 \\ & (0.089) \end{aligned}$ | $\begin{aligned} & 0.230^{* *} \\ & (0.111) \end{aligned}$ | $\begin{aligned} & -0.146 * \\ & (0.078) \end{aligned}$ | $\begin{gathered} 0.008 \\ (0.024) \end{gathered}$ | $\begin{gathered} 0.014 \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.015) \end{gathered}$ |
| Observations |  | 5,301 | 5,323 | 5,512 | 5,512 | 5,512 | 5,387 | 5,476 | 5,323 | 5,370 |

Achievement measured in standard deviations of scale scores within grade and year. Teacher fixed effects are estimates from a student-level regression of achievement on lagged achievement, peer lagged achievement, race, gender, special education, LEP, at-risk status, teacher fixed-effects and school fixed-effects. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included. Also includes a linear smoother with a slope shift above the cutoff. Peers are defined by teacher-course id-grade cells. Sample is limited to students with Euclidean distances from qualifying via the GT qualification matrix of between -10 and $10 .^{*},{ }^{* *}$, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 6th grade school.

Appendix Table 9 - Balancing Tests for GT Magnet Lotteries - Covariates Measured in 5th Grade - 6th Grade Sample


Appendix Table 10 - Balancing Tests for Unweighted GT Magnet Lotteries - Covariates Measured in 5th Grade, No Clustering of Standard Errors, 7th Grade Sample

| Sample | Asian <br> (1) | Black <br> (2) | Hispanic <br> (3) | White <br> (4) | Econ Disadv <br> (5) | Female <br> (6) | Special Education (7) | At-Risk <br> (8) | LEP <br> (9) | Gifted <br> (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ex-Ante - Baseline Lottery | $\begin{gathered} -0.030 \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.030 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.041 \\ (0.038) \end{gathered}$ | $\begin{aligned} & -0.041 \\ & (0.047) \end{aligned}$ | $\begin{aligned} & -0.035 \\ & (0.044) \end{aligned}$ | $\begin{aligned} & -0.006 \\ & (0.049) \end{aligned}$ | $\begin{aligned} & -0.011 \\ & (0.016) \end{aligned}$ | $\begin{gathered} -0.019 \\ (0.020) \end{gathered}$ | $\begin{gathered} -0.033 \\ (0.025) \end{gathered}$ | $\begin{aligned} & -0.028 \\ & (0.034) \end{aligned}$ |
| Observations | 542 | 542 | 542 | 542 | 542 | 542 | 542 | 542 | 542 | 542 |
| Ex-Post - Estimation Sample | $\begin{gathered} -0.027 \\ (0.048) \end{gathered}$ | $\begin{gathered} 0.041 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.042 \\ (0.044) \end{gathered}$ | $\begin{gathered} -0.057 \\ (0.053) \end{gathered}$ | $\begin{gathered} -0.050 \\ (0.052) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.056) \end{aligned}$ | $\begin{aligned} & -0.009 \\ & (0.017) \end{aligned}$ | $\begin{gathered} -0.015 \\ (0.022) \end{gathered}$ | $\begin{gathered} -0.031 \\ (0.028) \end{gathered}$ | $\begin{aligned} & -0.024 \\ & (0.038) \end{aligned}$ |
| Observations | 437 | 437 | 437 | 437 | 437 | 437 | 437 | 437 | 437 | 437 |
|  |  |  | Stanford Achievement Test |  |  |  |  |  |  | Teacher Score (20) |
| Sample | GT Magnet (11) | Total Matrix <br> Points <br> (12) | $\begin{gathered} \text { Math } \\ (13) \end{gathered}$ | Reading (14) | $\begin{aligned} & \text { Language } \\ & (15) \end{aligned}$ | Social Studies (16) | Science <br> (17) | Attendance <br> Rate <br> (18) | Infractions (19) |  |
| Ex-Ante - Baseline Lottery | $\begin{gathered} 0.035 \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.243 \\ (1.368) \end{gathered}$ | $\begin{gathered} 0.027 \\ (0.085) \end{gathered}$ | $\begin{gathered} 0.073 \\ (0.078) \end{gathered}$ | $\begin{aligned} & -0.034 \\ & (0.083) \end{aligned}$ | $\begin{gathered} 0.053 \\ (0.085) \end{gathered}$ | $\begin{gathered} 0.010 \\ (0.085) \end{gathered}$ | $\begin{aligned} & -0.180 \\ & (0.222) \end{aligned}$ | $\begin{aligned} & -0.022 \\ & (0.020) \end{aligned}$ | $\begin{gathered} 0.029 \\ (1.635) \end{gathered}$ |
| Observations | 542 | 542 | 540 | 541 | 539 | 540 | 539 | 542 | 542 | 536 |
| Ex-Post - Estimation Sample | $\begin{gathered} 0.055 \\ (0.046) \end{gathered}$ | $\begin{gathered} 0.909 \\ (1.461) \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.083) \end{gathered}$ | $\begin{gathered} 0.100 \\ (0.086) \end{gathered}$ | $\begin{gathered} -0.059 \\ (0.090) \end{gathered}$ | $\begin{gathered} 0.063 \\ (0.092) \end{gathered}$ | $\begin{gathered} 0.090 \\ (0.094) \end{gathered}$ | $\begin{gathered} -0.064 \\ (0.233) \end{gathered}$ | $\begin{gathered} -0.022 \\ (0.024) \end{gathered}$ | $\begin{aligned} & -1.005 \\ & (1.760) \end{aligned}$ |
| Observations | 437 | 437 | 437 | 437 | 436 | 437 | 436 | 437 | 437 | 434 |

Achievement measured in standard deviations of scale scores within grade and year. Disciplinary infractions is the number of infractions warranting a suspension or more severe punishment per year. Lotteries for two schools were conducted in 2007-08 hence regresions include indicators for lottery fixed effects. Coefficients are for an indicator for whether the student won the lottery. Robust standard errors clustered by 5th grade school in parentheses. *, **, and *** denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively.

Appendix Table 11 - Probit of Attrition by 7th Grade in Lottery Sample Coefficients Are Marginal Effects at Sample Means

| Asian | $-0.101^{* *}$ | Stanford Reading | -0.048 |
| :--- | :---: | :--- | :---: |
|  | $(0.046)$ |  | $(0.031)$ |
| Hispanic | $-0.085^{*}$ | Stanford Language | 0.027 |
|  | $(0.046)$ |  | $(0.021)$ |
| White | -0.072 | Stanford Social Science | 0.025 |
|  | $(0.050)$ |  | $(0.023)$ |
| Disadvantaged | $-0.076^{*}$ | Stanford Science | 0.005 |
|  | $(0.046)$ |  | $(0.020)$ |
| Female | 0.046 | Attendance Rate | $-0.024^{* * *}$ |
|  | $(0.041)$ |  | $(0.009)$ |
| Special Education | 0.161 | Infractions | -0.085 |
|  | $(0.158)$ |  | $(0.136)$ |
| LEP | 0.118 | Matrix Pionts | 0.000 |
|  | $(0.180)$ |  | $(0.002)$ |
| At Risk | 0.079 | Final Grade | 0.005 |
|  | $(0.140)$ |  | $(0.007)$ |
| Gifted | -0.044 | Naglieri Score | 0.003 |
|  | $(0.054)$ |  | $(0.003)$ |
| In GT Magnet | -0.015 | Teacher Score | -0.000 |
|  | $(0.054)$ |  | $(0.001)$ |
| Stanford Math | 0.022 |  |  |
|  | $(0.033)$ |  |  |

Observations 479
Achievement measured in standard deviations of scale scores within grade and year. Standard errors clustered by 5th grade school in parentheses. *, **, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively.

Appendix Table 12 - Reduced Form Estimates of Effect of Attending a GT Magnet School Relative to a GT Neighborhood Program, 7th
Grade Sample

| Model | Stanford Achievement Test |  |  |  |  | Attendence <br> Rate (\%) <br> (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Math <br> (1) | Reading $\qquad$ <br> (2) | $\begin{gathered} \text { Language } \\ \text { (3) } \end{gathered}$ | Social Studies <br> (4) | Science <br> (5) |  |
| RF - Unweighted, Controls | $\begin{aligned} & -0.055 \\ & (0.066) \end{aligned}$ | $\begin{gathered} -0.032 \\ (0.059) \end{gathered}$ | $\begin{gathered} 0.079 \\ (0.047) \end{gathered}$ | $\begin{gathered} -0.018 \\ (0.054) \end{gathered}$ | $\begin{gathered} 0.115 \\ (0.072) \end{gathered}$ | $\begin{gathered} -0.237 \\ (0.229) \end{gathered}$ |
| Observations | 437 | 438 | 435 | 437 | 436 | 440 |
| RF- Weighted, Controls | $\begin{aligned} & -0.121 \\ & (0.100) \end{aligned}$ | $\begin{gathered} -0.010 \\ (0.093) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.062) \end{gathered}$ | $\begin{gathered} -0.019 \\ (0.074) \end{gathered}$ | $\begin{gathered} 0.151^{* *} \\ (0.071) \end{gathered}$ | $\begin{gathered} 0.202 \\ (0.815) \end{gathered}$ |
| Observations | 436 | 437 | 435 | 436 | 436 | 439 |

Lotteries for two schools were conducted in 2007-08 hence all regresions include indicators for lottery fixed effects. Coefficients are for an indicator for whether the student is enrolled in a GT magnet program in 7th grade. Robust standard errors clustered by 6th grade school in parentheses. Results without clustering are similar and provided in the online appendix. Weighted regressions are weighted by the inverse of the estimated probability of remaining in the data. See text for details. Controls include indicators during 5th grade for race, gender, special education, at-risk status, gifted, whether the student was enrolled in a GT magnet, and a lagged dependent variable. ${ }^{*},{ }^{* *}$, and ${ }^{* * *}$ denote statistical significance at the $10 \%, 5 \%$, and $1 \%$ levels, respectively.

| Model | Stanford Achievement Test |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Math | Reading | Language | Social Studies | Science | Attendence <br> Rate (\%) |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ |
| 2SLS - Unweighted, No Controls | $0.272^{* *}$ | -0.010 | 0.067 | 0.007 | 0.065 | $-1.074^{*}$ |
|  | $(0.126)$ | $(0.075)$ | $(0.155)$ | $(0.140)$ | $(0.074)$ | $(0.588)$ |
| Observations | 907 | 907 | 907 | 906 | 906 | 914 |
| 2SLS - Unweighted, Controls | 0.174 | $-0.115^{* *}$ | 0.056 | -0.068 | -0.003 | $-0.872^{*}$ |
|  | $(0.158)$ | $(0.047)$ | $(0.131)$ | $(0.110)$ | $(0.053)$ | $(0.465)$ |
| Observations | 906 | 906 | 904 | 904 | 904 | 914 |
| 2SLS - Weighted, No Controls | 0.076 | -0.012 | 0.245 | -0.077 | -0.016 | $-1.064^{* *}$ |
|  | $(0.182)$ | $(0.156)$ | $(0.251)$ | $(0.151)$ | $(0.180)$ | $(0.407)$ |
| Observations | 904 | 904 | 904 | 903 | 903 | 910 |
| 2SLS - Weighted, Controls | 0.229 | -0.036 | 0.287 | -0.012 | 0.042 | $-0.643^{* *}$ |
|  | $(0.175)$ | $(0.090)$ | $(0.179)$ | $(0.135)$ | $(0.131)$ | $(0.301)$ |
| Observations | 904 | 904 | 904 | 903 | 903 | 910 |
| Engberg, Epple, Imbrogno, Sieg, Zimmer | $0.333^{* * *}$ | -0.081 | 0.063 | -0.057 | -0.004 | - |
| (2011) Bounds - Upper Bound | $(0.107)$ | $(0.095)$ | $(0.111)$ | $(0.120)$ | $(0.127)$ | - |
| Observations | 908 | 908 | 907 | 906 | 906 | - |
| Engberg, Epple, Imbrogno, Sieg, Zimmer | 0.164 | $-0.250 * *$ | -0.103 | -0.166 | $-0.345^{*}$ | - |
| (2011) Bounds - Lower Bound | $(0.124)$ | $(0.118)$ | $(0.129)$ | $(0.138)$ | $(0.182)$ | - |
| Observations | 908 | 908 | 907 | 906 | 906 | - |

Achievement measured in standard deviations of scale scores within grade and year. Lotteries for two schools were conducted in 200708 and 2008-09, hence all regresions include indicators for lottery fixed effects. Coefficients are for an indicator for whether the student is enrolled in a GT magnet program in 6th grade. Robust standard errors clustered by 6th grade school in parentheses. Results without clustering are similar and provided in the online appendix. Controls include indicators during 5th grade for race, gender, special education, LEP, at-risk status, gifted, whether the student was enrolled in a GT magnet, and a lagged dependent variable. Weighted regressions are weighted by the inverse of the estimated probability of remaining in the data. See text for details. In order to avoid slow convergence due to a very small portion of the sample being in special education or LEP, we drop those controls from the bounding analysis. Additionally, we do not cluster the standard errors on the bounding analysis due to inability for the estimator to converge. Finally, we do not provide bounds for attendance due to poor performance with censored data. See paper for details.

Appendix Table 14- Specification Tests for Lottery Analysis


Achievement measured in standard deviations of scale scores within grade and year. Lotteries for two schools were conducted in 2007-08 and 2008-09, hence all regresions include indicators for lottery fixed effects. Coefficients are for an indicator for whether the student is enrolled in a GT magnet program in 6th grade or 7th grade. Robust standard errors clustered by 6th grade school (for 6th grade regressions) or 7th grade school (for 7th grade regressions) in parentheses. Weighted regressions are weighted by the inverse of the estimated probability of remaining in the data. See text for details. Controls include indicators during 5th grade for race, gender, special education, LEP, at-risk status, gifted, whether the student was enrolled in a GT magnet, and a lagged dependent variable.

Appendix Table 15 - Treatments from Attending a GT Magnet School Relative to a GT Neighborhood Program Synthetic Classroms Within Teacher-Course-Grade Cells

|  | Model | Mean Peer Achievement (Std Deviations) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Math in Math Class <br> (1) | Reading in English Class <br> (2) | Language in English Class (3) | Social Studies in Social Studies Class (4) | Science in Science Class (5) |
| (i) | A. Two Years After Evaluation (7th Grade) |  |  |  |  |  |
|  | 2SLS - Only Non- <br> Magnets Ability Sort | $\begin{gathered} 0.897 * * * \\ (0.243) \end{gathered}$ | $\begin{gathered} 0.815 * * * \\ (0.148) \end{gathered}$ | $\begin{gathered} 0.801^{* * *} \\ (0.111) \end{gathered}$ | $\begin{gathered} 0.805 * * * \\ (0.154) \end{gathered}$ | $\begin{gathered} 0.532 * * * \\ (0.157) \end{gathered}$ |
|  | Observations | 439 | 437 | 437 | 438 | 437 |
| (ii) | 2SLS - All Schools <br> Ability Sort | $\begin{gathered} 0.565 * * \\ (0.204) \end{gathered}$ | $\begin{gathered} 0.653 * * * \\ (0.142) \end{gathered}$ | $\begin{gathered} 0.694^{* * *} \\ (0.135) \end{gathered}$ | $\begin{gathered} 0.592 * * * \\ (0.154) \end{gathered}$ | $\begin{gathered} 0.525 * * * \\ (0.140) \end{gathered}$ |
|  | Observations | 439 | 437 | 437 | 438 | 437 |
| (iii) | 2SLS - Only Non- <br> Magnets Randomize | $\begin{gathered} 1.078 * * * \\ (0.202) \end{gathered}$ | $\begin{gathered} 0.865^{* * *} \\ (0.157) \end{gathered}$ | $\begin{gathered} 0.863 * * * \\ (0.113) \end{gathered}$ | $\begin{gathered} 0.981^{* * *} \\ (0.197) \end{gathered}$ | $\begin{gathered} 0.711^{* * *} \\ (0.186) \end{gathered}$ |
|  | Observations | 439 | 437 | 437 | 438 | 437 |
| (iv) | 2SLS - All Schools <br> Randomize | $\begin{gathered} 0.967 * * * \\ (0.233) \end{gathered}$ | $\begin{gathered} 0.857 * * * \\ (0.147) \end{gathered}$ | $\begin{gathered} 0.887 * * * \\ (0.126) \end{gathered}$ | $\begin{gathered} 1.036 * * * \\ (0.216) \end{gathered}$ | $\begin{gathered} 0.961^{* * *} \\ (0.212) \end{gathered}$ |
|  | Observations | 439 | 437 | 437 | 438 | 437 |
| B. One Year After Evaluation (6th Grade) |  |  |  |  |  |  |
| (i) | 2SLS - Only Non- <br> Magnets Ability Sort | $\begin{gathered} 0.631^{* * *} \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.518^{* * *} \\ (0.130) \end{gathered}$ | $\begin{gathered} 0.566 * * * \\ (0.151) \end{gathered}$ | $\begin{gathered} 0.554^{* * *} \\ (0.175) \end{gathered}$ | $\begin{gathered} 0.579 * * * \\ (0.141) \end{gathered}$ |
|  | Observations | 909 | 909 | 909 | 908 | 908 |
| (ii) | 2SLS - All Schools <br> Ability Sort | $\begin{gathered} 0.589 * * * \\ (0.141) \end{gathered}$ | $\begin{gathered} 0.496 * * * \\ (0.137) \end{gathered}$ | $\begin{gathered} 0.501^{* * *} \\ (0.134) \end{gathered}$ | $\begin{gathered} 0.528 * * * \\ (0.179) \end{gathered}$ | $\begin{gathered} 0.463 * * * \\ (0.130) \end{gathered}$ |
|  | Observations | 909 | 909 | 909 | 908 | 908 |
| (iii) | 2SLS - Only Non- <br> Magnets Randomize | $\begin{gathered} 0.857 * * * \\ (0.179) \end{gathered}$ | $\begin{gathered} 0.693 * * * \\ (0.133) \end{gathered}$ | $\begin{gathered} 0.691^{* * *} \\ (0.146) \end{gathered}$ | $\begin{gathered} 0.623 * * * \\ (0.168) \end{gathered}$ | $\begin{gathered} 0.769 * * * \\ (0.151) \end{gathered}$ |
|  | Observations | 909 | 909 | 909 | 908 | 908 |
| (iv) | 2SLS - All Schools <br> Randomize | $\begin{gathered} 1.161^{* * *} \\ (0.200) \end{gathered}$ | $\begin{gathered} 0.789 * * * \\ (0.170) \end{gathered}$ | $\begin{gathered} 0.699 * * * \\ (0.151) \end{gathered}$ | $\begin{gathered} 0.820 * * * \\ (0.189) \end{gathered}$ | $\begin{gathered} 0.876 * * * \\ (0.163) \end{gathered}$ |
|  | Observations | 909 | 909 | 909 | 908 | 908 |

Models (i) and (ii) sort students in teacher-grade-course cells by their 5th grade achievement in that subject into synthetic classes of at most 35 students. Models (iii) and (iv) randomizes students across the synthetic classes. If there are not enough students to fill a 35 student class then the students are distributed evenly across the classes. These are done only in non-magnets in (i) and (iii) and in all schools in (ii) and (iv). Achievement measured in standard deviations of scale scores within grade and year. Sample is limited to students who are observed in 5th grade, and noly enter one lottery in 6th grade. We also drop all students zoned to a school with a lottery. Regressions are weighted by the inverse of the estimated probability of remaining in the data. See text for details. Controls for race, gender, economic disadvantage, LEP, prior gifted status and lagged (5th grade) dependent varable included. *, **, and ${ }^{* * *}$ denote statistical significance at the $10 \%$, $5 \%$, and $1 \%$ levels, respectively. Standard errors are robust to heteroskedasticity and clustered by 7th grade school.

| Model | Mean Peer Achievement (Std Deviations |  |  |  |  |  | Teacher Fixed Effects |  |  | Course Grades |  |  |  |  | Course Rank (Percentiles) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Math in Math Class <br> (1) | Reading in English Class <br> (2) | Language in English Class <br> (3) | Social Studies in Social Studies Class <br> (4) | Science in Science Class <br> (5) | Math <br> (6) | English/ Reading | Social Studies <br> (8) | Science <br> (9) | Math <br> (10) | English <br> (11) | Reading <br> (12) | Social Studies (13) | Science <br> (14) | Math <br> (15) | English (16) | Reading (17) | Social Studies (18) | Science <br>  <br> $(19)$ |
| A. 7th Grade Outcomes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2SLS - Unweighted, No Controls | $\begin{aligned} & \text { 1.078*** } \\ & (0.14) \end{aligned}$ | $\begin{gathered} 0.664^{* * *} \\ (0.158) \end{gathered}$ | $\begin{gathered} 0.586 * * * \\ (0.123) \end{gathered}$ | $\begin{aligned} & 0.795 * * * \\ & (0.123 \end{aligned}$ | $\begin{aligned} & 0.528 * * * \\ & (0.127) \end{aligned}$ | $\begin{aligned} & 0.081 * * * \\ & (0.015) \end{aligned}$ | $\begin{aligned} & 0.033 * * \\ & (0.014) \end{aligned}$ | $\begin{aligned} & 0.031 * \\ & (0.018) \end{aligned}$ | $\begin{gathered} 0.018 \\ (0.014) \end{gathered}$ | $\begin{aligned} & -8.592 * * * \\ & (1.385) \end{aligned}$ | $\begin{gathered} -4.399 * * * \\ (1.413) \end{gathered}$ |  | $\underset{(1.342)}{-4.358 * * *}$ | $\underset{(1.226)}{-7.21 * *}$ | $\begin{gathered} -31.2 * * * \\ (3.2) \end{gathered}$ | $\begin{aligned} & -29.11^{* * *} \\ & (4.0) \end{aligned}$ | $\begin{gathered} 200.1^{* * *} \\ (196.0) \end{gathered}$ | $\underset{(5.2)}{-29.6 * *}$ | $\begin{gathered} -30.5^{* * *} \\ (4.6) \end{gathered}$ |
| Observations | 440 | 436 | 436 | 439 | 439 | 440 | 440 | 440 | 440 | 440 | 437 | - | 439 | 439 | 440 | 437 | 23 | 439 | 439 |
| 2SLS - Weighted, No Controls | $\begin{gathered} 1.284^{* * *} \\ (0.260) \end{gathered}$ | $\begin{aligned} & 0.889 * * * \\ & (0.286) \end{aligned}$ | $\begin{aligned} & 0.821 * * * \\ & (0.255) \end{aligned}$ | $\begin{aligned} & 1.101 * * * \\ & (0.311) \end{aligned}$ | $\begin{aligned} & 0.808 * * * \\ & (0.291) \end{aligned}$ | $\begin{aligned} & 0.083 * * * \\ & (0.019) \end{aligned}$ | $\begin{aligned} & 0.040 * * \\ & (0.016) \end{aligned}$ | $\begin{aligned} & 0.048^{*} \\ & (0.026) \end{aligned}$ | $\begin{gathered} 0.022 \\ (0.017) \end{gathered}$ | $\begin{aligned} & -7.911^{* * *} \\ & (2.544) \end{aligned}$ | $\begin{aligned} & -2.470 \\ & (2.955) \end{aligned}$ |  | $\begin{gathered} -5.423^{* *} \\ (2.551) \end{gathered}$ | $\begin{gathered} -8.770^{* * *} \\ (3.031) \end{gathered}$ | $\underset{(8.4)}{-33.6 * *}$ | $\begin{aligned} & -32 . * * * \\ & (11.4) \end{aligned}$ | $\begin{gathered} 86.7 * * * \\ (82.2) \end{gathered}$ | $\begin{gathered} -37.1 * * * \\ (9.6) \end{gathered}$ | $\begin{gathered} -44.3^{* * *} \\ (12.0) \end{gathered}$ |
| Observations | 439 | 435 | 435 | 438 | 438 | 439 | 439 | 439 | 439 | 439 | 436 | - | 438 | 438 | 439 | 436 | 23 | 438 | 438 |
| B. 6th Grade Outcomes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2SLS - Unweighted, No Controls | $\begin{gathered} 0.697 * * * \\ (0.133) \end{gathered}$ | $\begin{gathered} 0.526 * * * \\ (0.115) \end{gathered}$ | $\begin{gathered} 0.532 * * * \\ (0.117) \end{gathered}$ | $\begin{gathered} 0.503^{3 * *} \\ (0.096 \end{gathered}$ | $\begin{gathered} 0.551 * * * \\ (0.113) \end{gathered}$ | $\begin{aligned} & 0.082 * * * \\ & (0.022) \end{aligned}$ | $\begin{aligned} & 0.038^{2} \\ & (0.021) \end{aligned}$ | $\begin{gathered} 0.041 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.018 \\ (0.019) \end{gathered}$ | $\begin{aligned} & -2.251^{*} \\ & (1.183) \end{aligned}$ | $\begin{gathered} -2.142^{*} \\ (1.214) \end{gathered}$ | $\begin{gathered} -3.404 * * * \\ (0.876) \end{gathered}$ | $\begin{gathered} -1.812^{* *} \\ (0.869) \end{gathered}$ | $\begin{array}{r} -1.150 \\ (1.354) \end{array}$ | $\underset{(3.5)}{-19.4 * *}$ | $\underset{(2.7)}{-14.9^{* * *}}$ | $\underset{(2.7)}{-23.9 * *}$ | $\underset{(2.1)}{-18.5^{* * *}}$ | $\underset{(2.2)}{-17.6 * * *}$ |
| Observations | 913 | 910 | 910 | 911 | 911 | 913 | 913 | 911 | 912 | 913 | 911 | 860 | 912 | 910 | 913 | 911 | 860 | 912 | 910 |
| 2SLS - Unweighted, Controls | $\begin{aligned} & 0.687 * * * \\ & (0.126 \end{aligned}$ | $\begin{aligned} & 0.510^{* * *} \\ & (0.103) \end{aligned}$ | $\begin{gathered} 0.516^{* * *} \\ (0.106) \end{gathered}$ | $\begin{aligned} & 0.490 * * * \\ & (0.088) \end{aligned}$ | $\begin{gathered} 0.538 * * * \\ (0.104 \end{gathered}$ | $\begin{aligned} & 0.081 * * * \\ & (0.022) \end{aligned}$ | $\begin{aligned} & 0.036^{*} \\ & (0.020) \end{aligned}$ | $\begin{aligned} & 0.042 \\ & (0.029) \end{aligned}$ | $\begin{gathered} 0.016 \\ (0.019) \end{gathered}$ | $\begin{array}{r} -2.434 \\ (1.576) \end{array}$ | $\begin{aligned} & -2.167 \\ & (1.513) \end{aligned}$ | $\begin{gathered} -3.552^{* * *} \\ (1.236) \end{gathered}$ | $\begin{aligned} & -1.867 \\ & (1.156) \end{aligned}$ | $\begin{gathered} -1.237 \\ (1.705) \end{gathered}$ | $\begin{gathered} -20.0 * * * \\ (4.9) \end{gathered}$ | $\begin{gathered} -14.9^{* * *} \\ (3.7) \end{gathered}$ | $\begin{gathered} -24.5^{* * *} \\ (4.0) \end{gathered}$ | $\underset{(3.3)}{-18.5^{* * *}}$ | $\begin{gathered} -17.9 * * * \\ (3.0) \end{gathered}$ |
| Observations | 913 | 910 | 910 | 911 | 911 | 913 | 913 | 911 | 912 | 913 | 911 | 860 | 912 | 910 | 913 | 911 | 860 | 912 | 910 |
| 2SLS - Weighted, No Controls | $\begin{aligned} & 0.835 * * * \\ & (0.17) \end{aligned}$ | $\begin{gathered} 0.681^{* * *} \\ (0.182) \end{gathered}$ | $\underset{(0.176)}{0.654 * *}$ | $\begin{gathered} 0.649 * * * \\ (0.158) \end{gathered}$ | $\begin{gathered} 0.765 * * * \\ (0.170) \end{gathered}$ | $\underset{(0.032)}{0.106 * *}$ | $\begin{aligned} & 0.048^{* *} \\ & (0.022) \end{aligned}$ | $\begin{gathered} 0.056 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.018) \end{gathered}$ | $\begin{gathered} -10.968^{* * *} \\ (1.500) \end{gathered}$ | $\begin{gathered} -6.012 * * * \\ (1.739) \end{gathered}$ | $\begin{gathered} -8.303 * * * \\ (1.287) \end{gathered}$ | $\underset{(1.716)}{-7.38 * *}$ | $\underset{(1.963)}{-7.25 * *}$ | $\begin{gathered} -35.5 * * * \\ (5.9) \end{gathered}$ | $\begin{gathered} -31.3^{* * *} \\ (7.1) \end{gathered}$ | $\underset{(5.7)}{-41.0 * *}$ | $\begin{gathered} -36.2^{* * *} \\ (6.8) \end{gathered}$ | $\begin{gathered} -35.9 * * * \\ (7.7) \end{gathered}$ |
| Observations | 909 | 906 | 906 | 908 | 908 | 909 | 909 | 908 | 908 | 909 | 907 | 857 | 908 | 907 | 909 | 907 | 857 | 908 | 907 |
| 2SLS - Weighted, Controls | $\begin{aligned} & 0.841 * * * \\ & (0.156) \end{aligned}$ | $\begin{gathered} 0.664 * * \\ (0.136) \end{gathered}$ | $\begin{aligned} & 0.665 * * * \\ & (0.136) \end{aligned}$ | $\begin{aligned} & 0.643 * * * \\ & (0.135) \end{aligned}$ | $\begin{aligned} & 0.752 * * * \\ & (0.150) \end{aligned}$ | $\begin{gathered} 0.105^{* * *} \\ (0.035) \end{gathered}$ | $\begin{aligned} & 0.041^{*} \\ & (0.024) \end{aligned}$ | $\begin{gathered} 0.057 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.017) \end{gathered}$ | $\begin{aligned} & -4.911^{*} \\ & (2.604) \end{aligned}$ | $\begin{aligned} & -2.829 \\ & (2.492) \end{aligned}$ | $\underset{\substack{-5.638 * * \\(2.174)}}{ }$ | $\begin{aligned} & -3.224 \\ & (2.066) \end{aligned}$ | $\begin{aligned} & -3.585 \\ & (2.636) \end{aligned}$ | $\underset{(7.5)}{-25.7 * *}$ | $\begin{gathered} -22.4^{* * *} \\ (7.5) \end{gathered}$ | $\begin{gathered} -34.9^{* * *} \\ (8.2) \end{gathered}$ | $\begin{gathered} -25.3^{* * *} \\ (6.9) \end{gathered}$ | $\begin{gathered} -27.0^{* * *} \\ (7.8) \end{gathered}$ |
| Observations | 909 | 906 | 906 | 908 | 908 | 909 | 909 | 908 | 908 | 909 | 907 | 857 | 908 | 907 | 909 | 907 | 857 | 908 | 907 |

Appendix Table 17-2SLS Estimates of the Effect of Attending a GT Magnet School Relative to a GT Neighborhood Program, Subpopulations Weighted with Controls

| Subpopulation | Stanford Achievement Test |  |  |  |  | Attendence |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Math <br> (1) | Reading (2) | Language (3) | Social Studies <br> (4) | Science <br> (5) | Rate <br> (6) |
| Female | $\begin{aligned} & -0.171 \\ & (0.154) \end{aligned}$ | $\begin{gathered} 0.023 \\ (0.269) \end{gathered}$ | $\begin{gathered} -0.186 \\ (0.151) \end{gathered}$ | $\begin{gathered} 0.033 \\ (0.100) \end{gathered}$ | $\begin{gathered} 0.183 \\ (0.138) \end{gathered}$ | $\begin{gathered} -0.838^{* *} \\ (0.334) \end{gathered}$ |
| Observations | 229 | 229 | 229 | 229 | 229 | 231 |
| Male | $\begin{aligned} & -0.007 \\ & (0.175) \end{aligned}$ | $\begin{gathered} 0.025 \\ (0.156) \end{gathered}$ | $\begin{gathered} 0.237 \\ (0.248) \end{gathered}$ | $\begin{gathered} 0.044 \\ (0.172) \end{gathered}$ | $\begin{gathered} 0.258 \\ (0.208) \end{gathered}$ | $\begin{gathered} 2.198 \\ (2.752) \end{gathered}$ |
| Observations | 207 | 208 | 206 | 207 | 207 | 208 |
| White | $\begin{aligned} & -0.182 \\ & (0.123) \end{aligned}$ | $\begin{gathered} -0.171 \\ (0.128) \end{gathered}$ | $\begin{aligned} & 0.296^{*} \\ & (0.152) \end{aligned}$ | $\begin{gathered} -0.013 \\ (0.205) \end{gathered}$ | $\begin{aligned} & 0.347 * \\ & (0.159) \end{aligned}$ | $\begin{aligned} & -0.100 \\ & (0.449) \end{aligned}$ |
| Observations | 172 | 172 | 172 | 172 | 172 | 172 |
| Minority | $\begin{aligned} & -0.032 \\ & (0.192) \end{aligned}$ | $\begin{gathered} 0.103 \\ (0.165) \end{gathered}$ | $\begin{aligned} & -0.131 \\ & (0.163) \end{aligned}$ | $\begin{gathered} 0.067 \\ (0.095) \end{gathered}$ | $\begin{gathered} 0.200 \\ (0.155) \end{gathered}$ | $\begin{gathered} 0.788 \\ (2.016) \end{gathered}$ |
| Observations | 264 | 265 | 263 | 264 | 264 | 267 |
| Minority - Excluding Asians | $\begin{gathered} 0.063 \\ (0.220) \end{gathered}$ | $\begin{gathered} 0.356 \\ (0.210) \end{gathered}$ | $\begin{aligned} & -0.327 \\ & (0.238) \end{aligned}$ | $\begin{gathered} 0.072 \\ (0.136) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.116) \end{aligned}$ | $\begin{gathered} -0.634^{* *} \\ (0.245) \end{gathered}$ |
| Observations | 158 | 159 | 157 | 158 | 158 | 161 |
| Not Economically Disadvantaged | $\begin{gathered} -0.152 \\ (0.166) \end{gathered}$ | $\begin{aligned} & -0.053 \\ & (0.137) \end{aligned}$ | $\begin{gathered} 0.320^{* *} \\ (0.119) \end{gathered}$ | $\begin{gathered} -0.034 \\ (0.189) \end{gathered}$ | $\begin{gathered} 0.291 \\ (0.186) \end{gathered}$ | $\begin{gathered} -0.551 \\ (0.442) \end{gathered}$ |
| Observations | 307 | 308 | 307 | 307 | 307 | 309 |
| Economically Disadvantaged | $\begin{aligned} & -0.041 \\ & (0.217) \end{aligned}$ | $\begin{gathered} 0.124 \\ (0.233) \end{gathered}$ | $\begin{gathered} -0.230 \\ (0.178) \end{gathered}$ | $\begin{gathered} 0.065 \\ (0.093) \end{gathered}$ | $\begin{gathered} 0.245 \\ (0.183) \end{gathered}$ | $\begin{gathered} 0.915 \\ (2.027) \end{gathered}$ |
| Observations | 129 | 129 | 128 | 129 | 129 | 130 |
| Below Median Achievement of Lottery Participants | $\begin{gathered} 0.026 \\ (0.249) \end{gathered}$ | $\begin{aligned} & -0.217 \\ & (0.279) \end{aligned}$ | $\begin{gathered} -0.169 \\ (0.205) \end{gathered}$ | $\begin{aligned} & -0.123 \\ & (0.155) \end{aligned}$ | $\begin{gathered} 0.237 * * * \\ (0.056) \end{gathered}$ | - |
| Observations | 208 | 200 | 177 | 222 | 205 | - |
| Above Median Achievement of Lottery Participants | $\begin{gathered} -0.049 \\ (0.135) \end{gathered}$ | $\begin{gathered} 0.062 \\ (0.178) \end{gathered}$ | $\begin{aligned} & 0.290^{*} \\ & (0.151) \end{aligned}$ | $\begin{aligned} & -0.025 \\ & (0.194) \end{aligned}$ | $\begin{gathered} 0.340 \\ (0.240) \end{gathered}$ | - |
| Observations | 228 | 237 | 258 | 215 | 231 | - |
| Below 25th Percentile of Achievement for Lottery Participants | $\begin{aligned} & -0.042 \\ & (0.200) \end{aligned}$ | $\begin{gathered} -0.533^{* *} \\ (0.209) \end{gathered}$ | $\begin{gathered} 0.085 \\ (0.163) \end{gathered}$ | $\begin{gathered} -0.010 \\ (0.207) \end{gathered}$ | $\begin{gathered} 0.010 \\ (0.151) \end{gathered}$ | - |
| Observations | 97 | 112 | 93 | 98 | 88 | - |
| Above 75th Percentile of Achievement for Lottery Participants | $\begin{aligned} & -0.204 \\ & (0.176) \end{aligned}$ | $\begin{gathered} 0.306 \\ (0.358) \end{gathered}$ | $\begin{gathered} 0.477 \\ (0.282) \end{gathered}$ | $\begin{gathered} 0.183 \\ (0.341) \end{gathered}$ | $\begin{gathered} 0.614 \\ (0.436) \end{gathered}$ | - |
| Observations | 111 | 135 | 141 | 111 | 89 | - |

Achievement measured in standard deviations of scale scores within grade and year. Achievement percentiles are for fully baseline lottery sample using 5th grade achievment in same subject. Lotteries for two schools were conducted in 2007-08 hence all regresions include indicators for lottery fixed effects. Coefficients are for an indicator for whether the student is enrolled in a GT magnet program in 7th grade. Robust standard errors clustered by 7th grade school in parentheses. Results without clustering are similar and provided in the online appendix. Regressions are weighted by the inverse of the estimated probability of remaining in the data. See text for details. Controls include indicators during 5th grade for race, gender, special education, LEP, at-risk status, gifted, whether the student was enrolled in a GT magnet, and a lagged dependent variable. *, **, and ${ }^{* * *}$ denote statistical significance at the $10 \%$, $5 \%$, and $1 \%$ levels, respectively.

