

Online Appendix

Ability-Tracking, Instructional Time and Better Pedagogy: The Effect of Double-Dose Algebra on Student Achievement

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January 13, 2014

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**APPENDIX TABLE —
SUMMARY STATISTICS AND FIRST-STAGE REGRESSION RESULTS**

| Panel A: Summary Statistics by Cohort | | | | |
|---------------------------------------|-------------------|-------------------|-------------------|-------------------|
| | 2001 | 2002 | 2003 | 2004 |
| (A) Controls | | | | |
| Female | 0.531 | 0.533 | 0.540 | 0.538 |
| Black | 0.541 | 0.522 | 0.578 | 0.557 |
| Hispanic | 0.359 | 0.381 | 0.336 | 0.356 |
| Free price lunch | 0.765 | 0.766 | 0.807 | 0.808 |
| Reduced price lunch | 0.110 | 0.111 | 0.100 | 0.095 |
| 8th grade reading percentile | 45.44 (21.78) | 49.12 (21.13) | 48.36 (20.72) | 48.50 (20.87) |
| High school start age | 14.63 (0.473) | 14.63 (0.463) | 14.68 (0.495) | 14.68 (0.490) |
| Census block poverty measure | -0.015 (0.994) | -0.014 (0.997) | -0.009 (0.993) | -0.008 (0.985) |
| Census block SES measure | -0.011 (1.01) | -0.007 (1.01) | -0.015 (1.01) | -0.011 (1.00) |
| (B) Double-dose | | | | |
| Double-dose eligibility (low score) | 0.542 | 0.436 | 0.476 | 0.480 |
| Double-dosed | 0.000 | 0.000 | 0.439 | 0.426 |
| 8th grade math percentile | 48.28 (22.27) | 53.92 (21.93) | 51.24 (22.20) | 51.10 (22.47) |
| Freshman math courses | 0.965 (0.193) | 0.980 (0.154) | 1.393 (0.510) | 1.396 (0.510) |
| Mean peer skill | 46.93 (14.68) | 52.50 (14.89) | 50.09 (17.52) | 49.89 (17.34) |
| Standard deviation of mean peer | 17.71 (4.05) | 17.35 (4.21) | 14.45 (4.92) | 15.32 (4.52) |
| (C) Outcomes | | | | |
| Algebra GPA | 1.59 (1.21) | 1.68 (1.22) | 1.60 (1.22) | 1.62 (1.22) |
| Algebra, C or better | 0.369 | 0.406 | 0.378 | 0.385 |
| Geometry, C or better | 0.478 | 0.477 | 0.460 | 0.452 |
| Trigonometry, C or better | 0.302 | 0.316 | 0.301 | 0.317 |
| Math, test scores (z-score) | 0.153 (0.930) | 0.161 (0.918) | 0.157 (0.911) | 0.166 (0.923) |
| High school graduation | 0.528 | 0.527 | 0.489 | 0.525 |
| N | 14,246 | 14,125 | 15,869 | 16,257 |

| Panel B: Low-Score Eligibility as an Instrument for Double-Dose Algebra | |
|--|----------|
| Y=Double-Dose | 0.701*** |
| LowScore * Post | (0.023) |
| F-statistic | 900.64 |
| N | 60,497 |

Notes: Standard deviations for non-binary variables are shown in parentheses. Our data are linked to the 2000 U.S. Census at the block level corresponding with each student's home address. Indicators of students' socioeconomic status and concentration of poverty were derived from the census data about the economic conditions in students' residential block groups. Specifically, the socioeconomic status variable is based on the percentage

of employed persons 16 years (or older) who are managers and executives and the mean level of education among people over 18. The concentration of poverty variable is based on the percentage of males over 18 who are employed one or more weeks during the year and the percentage of families above the poverty line.

*** Significant at the 1 percent level.

Source: Authors' calculations from Chicago Public Schools High School Transcripts Data, 2001-04 student cohorts.