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# Gender Gaps in the Early Grades: Questioning the Narrative that Schools are Poorly Suited to Young Boys

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A growing number of scholars and educational leaders have raised concerns that the mismatch between an increasingly academic focus in the early grades and boys' maturity at school entry is disadvantaging young boys in school. In this study, we use a unique dataset of ten million students to trace the development of math and reading gender gaps from kindergarten to fifth grade for nine cohorts of students. Prior to the COVID-19 pandemic, girls entered kindergarten with advantages in both subjects, but their initial advantage in math disappeared in recent years. Boys quickly surpassed girls in math during elementary school, a trend that has been stable over the past two decades. In contrast, girls maintained a steady advantage in reading from school entry through fifth grade. These findings suggest that while boys are not disadvantaged in early grades, gendered patterns of achievement persist and require targeted support. Educators should address boys' reading challenges and potential negative stereotypes facing girls in math to foster equitable learning environments for all students.

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# Gender Gaps in the Early Grades: Questioning the Narrative that Schools are Poorly Suited to Young Boys

Megan Kuhfeld & Peg Burchinal

## Abstract

A growing number of scholars and educational leaders have raised concerns that the mismatch between an increasingly academic focus in the early grades and boys' maturity at school entry is disadvantaging young boys in school. In this study, we use a unique dataset of ten million students to trace the development of math and reading gender gaps from kindergarten to fifth grade for nine cohorts of students. Prior to the COVID-19 pandemic, girls entered kindergarten with advantages in both subjects, but their initial advantage in math disappeared in recent years. Boys quickly surpassed girls in math during elementary school, a trend that has been stable over the past two decades. In contrast, girls maintained a steady advantage in reading from school entry through fifth grade. These findings suggest that while boys are not disadvantaged in early grades, gendered patterns of achievement persist and require targeted support. Educators should address boys' reading challenges and potential negative stereotypes facing girls in math to foster equitable learning environments for all students.

## Introduction

Much has been written in the last decade about the "educational crisis of boys" (Whitmire, 2011; Reeves, 2022a; Putnam & Reeves, 2025; Cain Miller, 2025). Girls are now reported to have an advantage across a wide range of educational indicators, including behavioral skills, grades, test scores, and college enrollment (DiPrete & Buchmann, 2013; Reardon et al., 2019; Reeves, 2025). Given that so many different indicators point to girls pulling ahead of boys in school, many have begun questioning whether schools are no longer well-adapted to boys' needs (Sarrouf, 2025; Heubeck, 2025a; 2025b). This perceived mismatch between boys' needs and school has been a particular source of concern in the youngest grades (Abrams, 2023; Davis, 2024; Cain Miller, 2024). Kindergarten and first grade are now more focused on academics and less on play compared to prior decades (Bassok et al., 2016; Le et al., 2019), which has raised concerns about boys' adjustment to kindergarten given that boys tend to mature later than girls (Sudry et al., 2024). One prominent scholar even recommended that all boys be held back one year so they can start school on a more even playing field (Reeves, 2022b).

Despite widespread concerns, there is surprisingly little evidence to support the idea that elementary schools are no longer well-adapted to boys and are accelerating girls' learning at the expense of boys in the early grades. The most recent nationally representative data on kindergarten test scores is the Early Childhood Longitudinal Survey, Kindergarten (ECLS-K) Cohort of 2010-11 (Tourangeau et al., 2015). These data show a small advantage for girls in reading (.07 standard deviations [SDs]) and small advantage for boys in math (.08 SDs) at school entry (Garcia, 2015). Additionally, teachers and parents consistently reported that girls have stronger noncognitive skills (e.g., self-control and behavior management) than boys (Garcia, 2015). In total, while there is evidence to support the idea that girls enter kindergarten with stronger reading and other school readiness skills (Kuhfeld et al., 2020; Cain Miller, 2025), we have little recent data on the size of gender gaps in academic skills at school entry and whether these gaps persist as students move through elementary school. Additionally, the timing of interruptions from the COVID-19 pandemic may have resulted in differential impacts on young boys and girls depending on their age at the pandemic onset (Nozadi et al., 2023; Copeland et al., 2024). Therefore, it is necessary to account for the timing of the pandemic when unpacking gender differences for recent cohorts of students.

In this paper, we examined the magnitude of gender gaps at school entry and how they widen or narrow across elementary school. We used data from nine recent kindergarten classes (students entering kindergarten in the 2016-17 school year through those entering kindergarten in the 2024-25 school year) and tracked these students through the end of fifth grade (or the latest grade observed for the most recent cohorts). Specifically, we compared average Measures of Academic Progress (MAP) Growth reading and math test scores for boys and girls from fall 2016 to spring 2025 using a nationally weighted[1] sample of 12 million students in approximately 22,000 schools.

## Finding 1. Girls Now Enter Kindergarten Ahead of Boys in Reading and Even With Boys in Math

We first examined the magnitude of gender gaps in math and reading at school entry for the kindergarten class of 2016-17 through the kindergarten class of 2024-25. The purple bars in left panels of Figure 1 show the standardized mean differences between boys and girls in math

[1] The MAP Growth sample is not a random sample of schools like the Early Childhood Longitudinal Surveys (ECLS), but our sample includes approximately 37% of public schools in the nation serving grades K-5. We use school-level weights to match the NWEA sample to the population of public schools (for more details on the sample and methods, see the appendices).

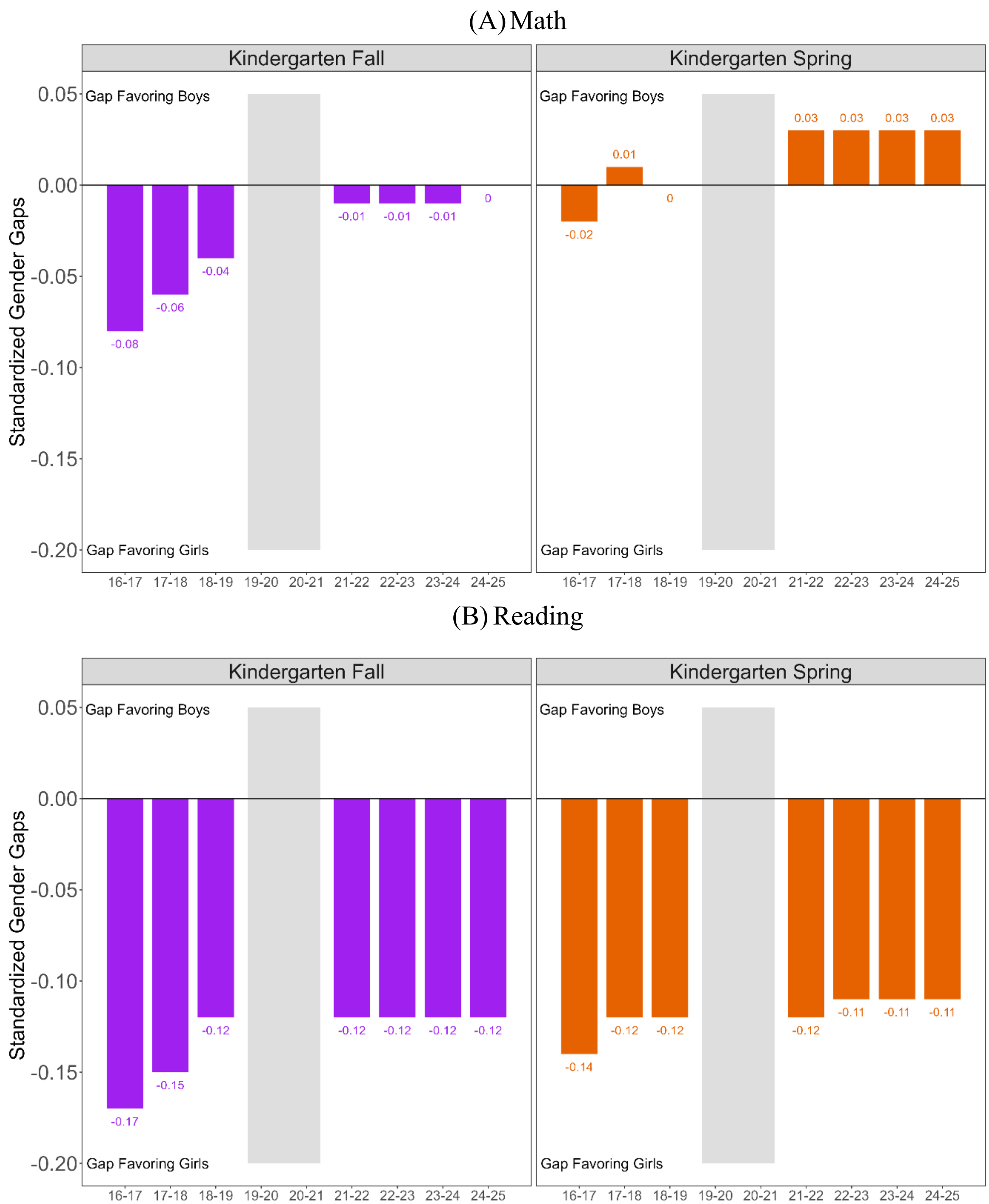
and reading in the fall of the kindergarten year based on the year each cohort entered kindergarten. Before the COVID pandemic, girls started kindergarten with an advantage over boys in both math and reading. However, girls' initial advantage in math disappeared over the course of the last nine years. In math, the gap (favoring girls) was -.08 SDs in fall 2016, but it had shrunk to zero by fall 2025. In reading, girls' advantage in fall of kindergarten decreased from .17 SDs in fall 2016 to .12 SDs in fall 2018 but remained steady since that point.

**Finding 2. Boys Pull Even or Ahead in Math by the End of Kindergarten**

We also explored whether gender gaps widened or narrowed over the course of the kindergarten year. The orange bars in the right panels show the gender gap in the spring of the kindergarten year for the same nine cohorts. In math, girls lost their initial advantage at school entry by the spring of kindergarten. That is to say, after just nine months of formal schooling, boys had already pulled even with or ahead of girls in math. In reading, the gaps favoring girls were maintained or narrowed very slightly during the kindergarten year.

**Figure 1**

*Gender Gaps in Kindergarten by the Year Students Entered School*




*Note.* *The year on the x-axis displays the school year in which students entered kindergarten. Kindergarten data were not available in spring 2020 or fall 2020 due to the COVID-19 pandemic. For more details on the sample used in these calculations, see the technical appendices.*

**Finding 3. Boys Pull Further Ahead of Girls in Math by the End of Elementary School**

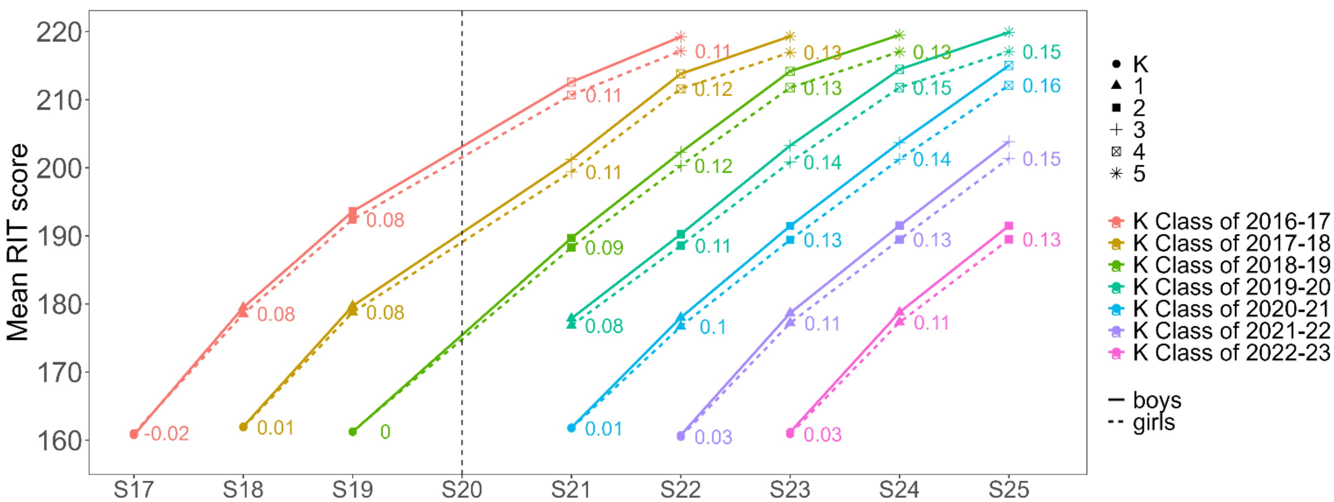
We followed each cohort across the elementary grades to see if gender gaps widened or narrowed as students move through elementary school. Figure 2 shows boys' (solid line) and girls' (dashed line) average test scores from kindergarten to 5$^{th}$ grade for each cohort over a nine-year span. In this figure, only spring scores are presented. In math, across all the years, boys went from roughly even with girls in the spring of kindergarten to being slightly ahead by spring of 1$^{st}$ grade (.08 SDs on average). Across cohorts, this advantage widened as students progressed through the grades. By the end of elementary school, boys scored an average of .13 SDs ahead of girls in math. Notably, these trends were consistent for students who entered school before and after the onset of the COVID-19 pandemic.

In reading, girls displayed a consistent advantage from school entry to the end of 5$^{th}$ grade. Girls started out between .11 to .14 SDs ahead of boys in kindergarten and ended 5$^{th}$ grade with the same sized advantage. In other words, girls' advantage in elementary school reading were fully formed prior to school entry and was maintained (but not increased) by exposure to schooling.

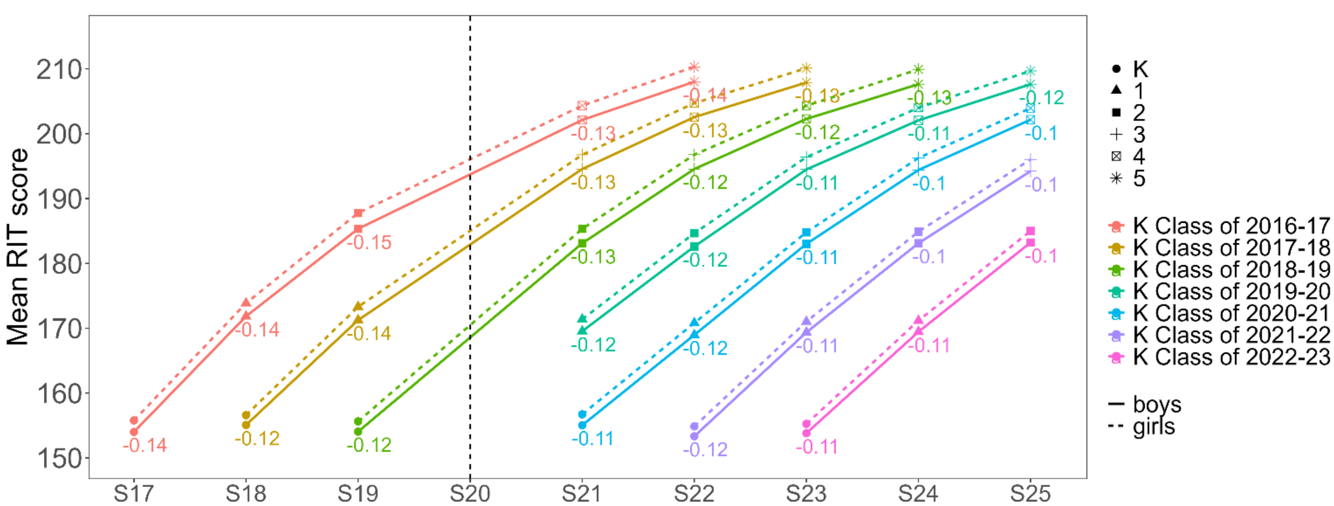
**Figure 2**

*Gender Gaps in Math and Reading in Grades K-5*

(A) Math




(B) Reading



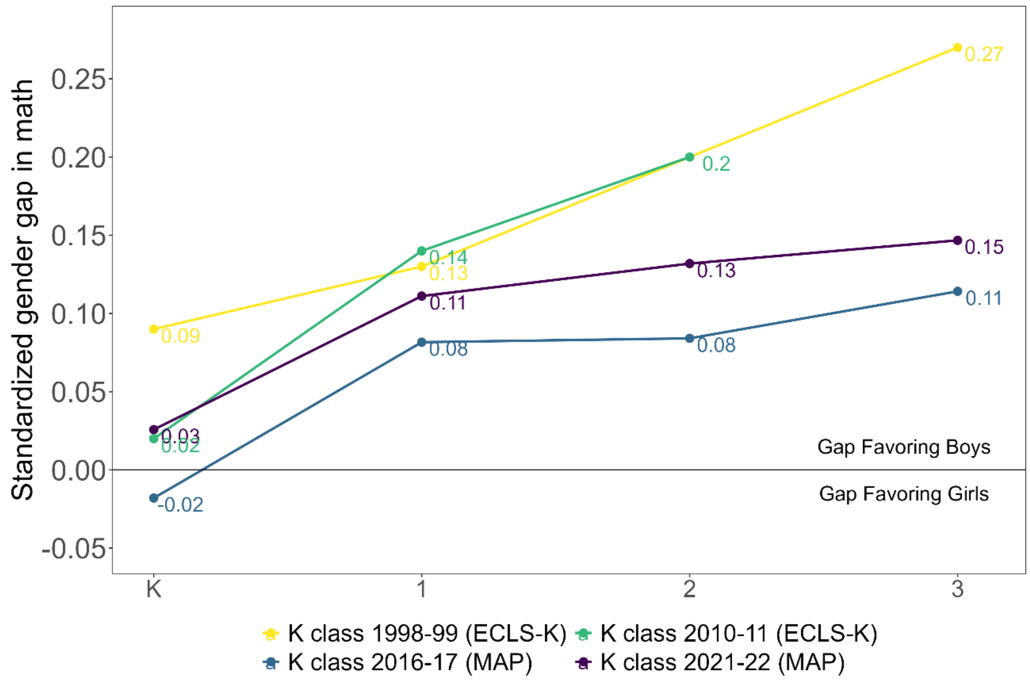

*Note. Average Rasch unIT (RIT) scores are presented for boys (solid line) and girls (dashed line) for kindergarten (round point) to 5th grade (asterisk) for nine kindergarten class cohorts. Standardized mean differences are shown next to each grade/term (with positive values indicating boys scoring above girls). The onset of the COVID-19 pandemic in spring 2020 (when testing did not occur) is noted with a vertical dashed line. For more details on the sample used in these calculations, see the technical appendices.*

**Finding 4. Boys' Advantage in Math Dates Back Over 20 Years**

Despite the recent concerns about how recent shifts in schooling are now disadvantaging boys, our math findings are consistent with findings reported in prior national kindergarten cohorts based (Cimpian et al., 2016). To examine the consistency of the math trends over time, we combined results from two cohorts from the ECLS-K (kindergarten classes of 1998-99 and 2010-11) and two cohorts from MAP Growth (kindergarten classes of 2016-17 and 2021-22). Figure 3 shows how the gender gap in math (reported in SDs units) grew from the spring of kindergarten to the spring of third grade for students who entered kindergarten over a 20-year span. In every cohort, boys' advantage in math increased as they move through school. Boys' overall test score advantage in math is smaller now than 20 years ago, but the fact that schools appear to advantage the development of boys' math skills over girls' math skills in elementary school is remarkably stable.

**Figure 3**

*Standardized Gender Gaps in Math from the Early Childhood Longitudinal Study, Kindergarten Classes (ECLS-K) and MAP Growth*




*Note.* *Gender gaps for the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K:1998)* and the *Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011) were reported by Cimpian et al. (2016). The gender gaps for the MAP Growth assessment are presented for the kindergarten class of 2016-17 and 2021-22. Standardized mean differences are scaled so that positive values reflect a gap favoring boys.*

## Discussion

Our analysis challenges the prevailing narrative that early elementary education is poorly suited to boys (Reeves, 2022). While girls enter kindergarten with stronger reading skills and, historically, a slight advantage in math, boys quickly catch up and ultimately surpass girls in math achievement by the end of elementary school. These trends have remained remarkably stable over the past two decades, even as early grade curricula have become more academically rigorous (Bassok et al., 2016) and U.S. schools weathered the COVID-19 pandemic.

Importantly, these patterns reveal that schooling plays a markedly different role across subjects. In reading, gaps favoring girls are largely “fully baked” at school entry and remain stable through elementary school, suggesting that schools neither exacerbate nor close these disparities. In contrast, math gaps emerge and widen during the school years, with boys consistently gaining ground and ultimately surpassing girls. This finding runs counter to claims that early schooling disadvantages boys; if anything, the structure of schooling appears to advantage boys’ math development (Downey et al., 2022).

Rather than framing the issue as a crisis for boys or girls, our findings suggest a more nuanced reality: boys and girls face distinct challenges in school that require tailored support. Boys likely need more support and role models to do well in reading (Eck et al., 2024; Reeves, 2022), while many girls face negative gender stereotypes and are perceived to have lower capacity (relative to equally performing boys) in math and science (Robinson-Cimpian et al., 2014; Cimpian et al., 2016; Miller et al., 2024). Recognizing and addressing these differences is essential to creating learning environments that support all students equitably.

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## Supplemental Materials – Description of Sample and Methodology

### Sample

The data for this study are from the NWEA anonymized longitudinal student achievement database. School districts use NWEA MAP® Growth™ assessments to monitor elementary and secondary students' reading and math growth, with assessments typically administered in the fall (usually between August and November), winter (usually December to March), and spring (late March through June). The NWEA data also include demographic information, including student race/ethnicity, gender, and age at assessment. An indicator of student-level socioeconomic status is not available.

In this study, we followed nine kindergarten classes (students entering kindergarten in the 2016-17 school year through those entering kindergarten in the 2024-25 school year) from the start of kindergarten to the end of fifth grade (or whichever grade students were in during the 2024-25 school year). Table 1 shows the cohort structure for the students in our study. Students were allowed to move in and out of the sample across grade levels. As a result, in some cohorts more students tested in later grade/terms than were observed at school entry.

In total, our sample consists of approximately 12 million students in grades K-5 in approximately 22 thousand public schools (38% of the 59 thousand public schools serving grades K-5) who took MAP Growth reading and math assessments between fall 2016 and spring 2025. Descriptive information for the students in our sample by subject and cohort is provided in Table 2. Overall, our sample was approximately 46% White, 16% Black, 22% Hispanic, and 5% Asian. Fifty-one percent of the students are male. The 2024-25 kindergarten class cohort is more diverse (higher percentage of Hispanic students and lower percentage of White students) relative to the 2016-17 cohort, reflecting national racial/ethnic trends in enrollment (National Center for Educational Statistics, 2024).

Descriptive information for the schools in our math and reading samples along with comparison information on the population of U.S. schools is provided in Table 3. Information about U.S. public schools was obtained from the 2023-24 Public Elementary/Secondary School Universe Survey data file. We define the population of interest as the set of U.S. operational (e.g., school status variable SY_STATUS does not indicate the school is closed or yet to be opened) public schools in the 50 states and District of Columbia serving students in grades K-5 (based on the GX_OFFERED variable equal to “Yes”). NCES school characteristics included in our comparison include total enrollment, percentage of students receiving free or reduced-price lunch (FRPL), and percentages of the students in the school who were Hispanic, Black, and White, and Asian, and urbanicity (City, Suburb, Town, and Rural).

Our overall sample of schools closely matches the national distribution of schools across various locales (urban, suburban, rural, and town), racial/ethnic distribution, and percentage of FRPL eligible students. However, there are fluctuations in the number of schools included in any given year. Therefore, we used school-level weights to ensure our sample of schools mirrors the overall population across the nine years of the study.

**School Weights**

To improve how well our sample represents the broader set of schools in the United States, we produced school-level weights in each year that matched the sample of schools that tested with MAP Growth to the full population of public schools in the United States serving each grade level. National school-level data for each school year were obtained from the Public Elementary/Secondary School Universe Survey (described above). Using six covariates provided by the CCD (total enrollment, percent FRPL, percent Black, percent Hispanic, percent Asian, and flags for city or rural locale), we produced entropy balancing (EB) weights that minimize the difference between the full population and our sample of schools along the set of covariate dimensions.

EB weighting is an entropy-maximizing approach to weighting that directly matches the sub-population of schools testing on MAP Growth to the national population of U.S. schools without making assumptions about the underlying propensity that a school uses MAP Growth (Hainmueller, 2012). The primary value of this approach is its effectiveness at minimizing the absolute standard difference between the sub-population and the national population on several dimensions, including school racial/ethnic breakdown, urbanicity, receipt of free or reduced priced lunch (FRPL). Minimizing the magnitude of the standard difference on a given dimension maximizes the extent to which the weighted MAP Growth schools are nationally representative along that dimension. In the full sample, this covariate balancing was undertaken such that weights optimized the matches between the first, second, and third moments of the covariate distributions. For additional details on the specifics of the EB method, please see Hainmueller (2012).

**Test Measure**

Student test scores from the NWEA MAP Growth reading and math assessments, called Rasch unIT (RIT) scores, were used in this study. MAP Growth is a computer adaptive test that precisely measures achievement even for students above or below grade level and is vertically scaled to allow for the estimation of gains across time. The MAP Growth assessments are typically administered three times a year (fall, winter, and spring) and are aligned to state content standards (NWEA, 2019). Test scores are reported on the RIT scale, which is a linear transformation of the logit scale units from the Rasch item response theory model. We also reported scores in standard deviation (SD) units, which are described in further detail in the following section.

**Methodology**

For each term/subject/grade, we calculated the weighted average test score and standard deviation for each gender group (reported in Tables 4 and 5). We then calculated the standardized mean differences between boys and girls in grade g in each year. For example, the standardized gap for students in grade *g* in fall 2019 is

$$\mathrm{ES}_{F19g} = \frac{\overline{\mathrm{RIT}}_{F19Bg} - \overline{\mathrm{RIT}}_{F19Gg}}{\sqrt{\frac{(\mathrm{N}_{19\mathrm{Bg}} - 1)\mathrm{SD}^2_{19Bg} + (\mathrm{N}_{19Gg} - 1)\mathrm{SD}^2_{19Gg}}{\mathrm{N}_{19Bg} + \mathrm{N}_{19\mathrm{Gg}} - 2}}},$$

where $\overline{\mathrm{RIT}}_{19\mathrm{B}g}$ is the average fall 2019 test score for boys in grade g, $\overline{\mathrm{RIT}}_{19\mathrm{G}g}$ is the average fall 2019 test score for girls in grade g, $\mathrm{SD}_{19\mathrm{B}g}$ and $\mathrm{SD}_{19\mathrm{G}g}$ are the corresponding SD estimates, and $\mathrm{N}_{19\mathrm{B}g}$ and $\mathrm{N}_{19\mathrm{Wg}}$ are the observed sample size in grade g in fall 2019 for boys and girls, respectively. The standardized achievement gaps between boys and girls for all cohorts/terms/grades are displayed in Table 4 (math) and Table 5 (reading).

**Sensitivity to Sample Inclusion Rules**

To understand how sensitivity our results were to our sample inclusion criteria, we also estimated our results under two additional conditions: (a) using schools observed in each year without any weights and (b) using a consistent sample of schools that tested across all nine years. Figures A1 and A2 shows the main paper Figure 1 & 2 (limited to three cohorts for parsimony) results across all three sample conditions. The school inclusion rules do not affect the primary findings detailed herein.

**Limitations**

There are several important limitations worth noting. First, while our sample is weighted to match the national population of schools serving grades K-5, it is not a random sample of schools or students. We observe that the sample closely matches the national population in terms of student demographics and urbanicity. Nonetheless, it is possible that our sample of schools varies from the national population on unobservable characteristics. Additionally, our data contains larger representation from some states and regions (particularly in the Midwest) compared to others. Given the uneven state representation, it is not possible to use these data to understand the role of state contexts in developing these gaps.

Second, MAP Growth testing was disrupted in the 2019-20 and 2020-21 school years. Many students tested remotely in fall 2020, which was likely not comparable to standard in-classroom testing conditions, and so we do not report those scores in this paper. Third, while we examine gender gaps over the course of six grade levels, we are not able to follow students through their entire schooling. However, recent analysis of 8th grade test scores shows that boys have regained an advantage in the middle school grades as well (Kuhfeld et al., 2025).

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**Table 1**

*Nine Kindergarten Cohorts Followed in the Study*

| | School year | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 |
| K | 1 | 2 | 3 | 4* | 5* | 6 | 7 | 8 | 9 |
| 1st | | 1 | 2 | 3* | 4* | 5 | 6 | 7 | 8 |
| 2nd | | | 1 | 2* | 3* | 4 | 5 | 6 | 7 |
| 3rd | | | | 1* | 2* | 3 | 4 | 5 | 6 |
| 4th | | | | | 1* | 2 | 3 | 4 | 5 |
| 5th | | | | | | 1 | 2 | 3 | 4 |

*Note.* * indicates that data were not available in some terms due to the COVID-19 pandemic. Students in cohort 1 (K class of 2016-17) were followed from kindergarten in fall 2016 to 5$^{th}$ grade in the spring of 2022. Students in cohort 9 (K class of 2024-25) were only observed in a single school year.

**Table 2**

*Student Demographic Characteristics by Subject, Grade, and Term*

| | | Counts | | | Race/ethnicity Percentages | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cohort | Subject | Students | Schools | Male | White | Black | Hispanic | Asian | AIAN | Multi-ethnic | Other Race |
| All | Math | 11,958,432 | 22,281 | 51.0% | 45.5% | 15.8% | 23.0% | 4.6% | 1.0% | 4.9% | 5.2% |
| All | Reading | 11,243,089 | 22,318 | 51.0% | 46.7% | 16.0% | 21.7% | 4.5% | 1.0% | 4.9% | 5.3% |
| K class of 2016-17 | Math | 1,681,725 | 18,784 | 51.1% | 48.3% | 16.4% | 20.1% | 4.3% | 1.1% | 4.2% | 5.7% |
| K class of 2017-18 | Math | 1,681,334 | 18,575 | 51.1% | 47.4% | 15.9% | 21.1% | 4.5% | 1.0% | 4.5% | 5.6% |
| K class of 2018-19 | Math | 1,640,239 | 17,993 | 51.0% | 46.6% | 15.6% | 22.0% | 4.6% | 1.0% | 4.8% | 5.5% |
| K class of 2019-20 | Math | 1,657,524 | 18,421 | 51.0% | 45.4% | 15.3% | 23.6% | 4.7% | 1.0% | 5.0% | 5.0% |
| K class of 2020-21 | Math | 1,497,309 | 16,826 | 50.9% | 44.5% | 15.4% | 24.4% | 4.7% | 1.0% | 5.2% | 4.9% |
| K class of 2021-22 | Math | 1,402,497 | 15,895 | 50.9% | 43.7% | 15.7% | 24.9% | 4.7% | 1.0% | 5.3% | 4.7% |
| K class of 2022-23 | Math | 1,153,576 | 13,862 | 50.9% | 42.7% | 16.0% | 25.5% | 4.7% | 1.0% | 5.3% | 4.8% |
| K class of 2023-24 | Math | 906,009 | 11,931 | 50.8% | 42.2% | 16.2% | 25.9% | 4.6% | 1.1% | 5.3% | 4.7% |
| K class of 2024-25 | Math | 610,784 | 8,998 | 50.6% | 40.5% | 16.3% | 27.2% | 4.7% | 1.2% | 5.4% | 4.7% |
| K class of 2016-17 | Reading | 1,643,671 | 18,522 | 51.1% | 49.0% | 16.6% | 19.2% | 4.2% | 1.1% | 4.2% | 5.8% |
| K class of 2017-18 | Reading | 1,643,797 | 18,359 | 51.1% | 48.2% | 16.0% | 20.1% | 4.4% | 1.0% | 4.5% | 5.7% |
| K class of 2018-19 | Reading | 1,592,440 | 17,628 | 51.0% | 47.4% | 15.8% | 21.0% | 4.6% | 1.0% | 4.8% | 5.5% |
| K class of 2019-20 | Reading | 1,606,705 | 18,151 | 51.0% | 46.3% | 15.6% | 22.4% | 4.7% | 1.0% | 5.0% | 5.0% |
| K class of 2020-21 | Reading | 1,441,844 | 16,621 | 50.9% | 45.6% | 15.6% | 23.0% | 4.7% | 1.0% | 5.2% | 4.9% |
| K class of 2021-22 | Reading | 1,318,123 | 15,437 | 50.9% | 45.1% | 15.8% | 23.3% | 4.6% | 1.0% | 5.3% | 4.8% |
| K class of 2022-23 | Reading | 1,011,235 | 12,691 | 50.9% | 44.4% | 16.0% | 23.6% | 4.6% | 1.0% | 5.2% | 5.1% |
| K class of 2023-24 | Reading | 748,987 | 10,373 | 50.8% | 43.9% | 16.5% | 23.9% | 4.5% | 1.1% | 5.4% | 4.8% |
| K class of 2024-25 | Reading | 494,688 | 7,660 | 50.6% | 42.2% | 16.7% | 25.0% | 4.6% | 1.2% | 5.5% | 4.8% |

*Note.* AIAN=American Indian or Alaska Native. The counts columns report the number of unique students and schools pooling across all grades and years observed per cohort. The rows where Cohort is labeled “All” pools together data from all nine cohorts.

**Table 3**

*Sample School Characteristics Relative to U.S. Population of Public Schools Serving Grades K-5*

| Sample | Number of Schools | Average School Enrollment | % FRPL | % White | % Black | % Hispanic | % Asian | City | Suburb | Rural | Town |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Population of Schools Serving K-5 | 59,283 | 439 | 0.56 | 0.47 | 0.15 | 0.27 | 0.04 | 0.30 | 0.32 | 0.28 | 0.10 |
| NWEA Sample: Math | 22,281 | 454 | 0.58 | 0.46 | 0.17 | 0.26 | 0.04 | 0.32 | 0.31 | 0.27 | 0.10 |
| NWEA Sample: Reading | 22,318 | 454 | 0.58 | 0.46 | 0.17 | 0.26 | 0.04 | 0.32 | 0.31 | 0.27 | 0.10 |

*Note:* FRPL=free or reduced priced lunch. The reported samples represent the set of schools that tested with MAP Growth in any of the nine years of the study. The sources of the variables are the Common Core of Data (CCD) collected by the National Center for Educational Statistics. The U.S. public school population comparison for each grade was determined by limiting to the schools that were operational in the 2023-24 school year and enrolled students in grades K-5.

**Table 4**

*Mean, Standard Deviations, and Sample Sizes for Math Test Scores by Grade and Subgroup*

| | | | | | | Boys | | | Girls | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Subject | Cohort | Year | Term | Grade | ES | N | M | SD | N | M | SD |
| Math | K Class of 2016-17 | 2017 | F16 | K | -0.08 | 201,038 | 142.35 | 11.71 | 189,256 | 143.25 | 10.78 |
| Math | K Class of 2016-17 | 2017 | S17 | K | -0.02 | 240,988 | 160.93 | 13.29 | 226,721 | 161.15 | 11.90 |
| Math | K Class of 2016-17 | 2018 | F17 | 1 | -0.01 | 312,299 | 162.51 | 13.29 | 296,985 | 162.63 | 11.70 |
| Math | K Class of 2016-17 | 2018 | S18 | 1 | 0.08 | 329,230 | 179.80 | 13.74 | 313,735 | 178.74 | 12.16 |
| Math | K Class of 2016-17 | 2019 | F18 | 2 | 0.04 | 382,034 | 177.18 | 15.70 | 365,744 | 176.61 | 13.76 |
| Math | K Class of 2016-17 | 2019 | S19 | 2 | 0.08 | 401,995 | 193.74 | 15.64 | 385,849 | 192.49 | 14.13 |
| Math | K Class of 2016-17 | 2020 | F19 | 3 | 0.08 | 413,678 | 190.81 | 15.42 | 396,391 | 189.64 | 13.51 |
| Math | K Class of 2016-17 | 2021 | S21 | 4 | 0.11 | 363,397 | 212.56 | 18.96 | 348,870 | 210.65 | 17.37 |
| Math | K Class of 2016-17 | 2022 | F21 | 5 | 0.11 | 436,869 | 209.38 | 17.71 | 419,307 | 207.48 | 15.96 |
| Math | K Class of 2016-17 | 2022 | S22 | 5 | 0.11 | 413,630 | 219.61 | 19.97 | 397,794 | 217.47 | 18.27 |
| Math | K Class of 2017-18 | 2018 | F17 | K | -0.06 | 225,736 | 142.56 | 11.63 | 213,156 | 143.20 | 10.72 |
| Math | K Class of 2017-18 | 2018 | S18 | K | 0.01 | 276,587 | 162.20 | 13.00 | 262,294 | 162.06 | 11.68 |
| Math | K Class of 2017-18 | 2019 | F18 | 1 | 0.00 | 321,372 | 162.56 | 13.19 | 306,654 | 162.57 | 11.56 |
| Math | K Class of 2017-18 | 2019 | S19 | 1 | 0.08 | 343,192 | 179.93 | 14.05 | 328,001 | 178.90 | 12.36 |
| Math | K Class of 2017-18 | 2020 | F19 | 2 | 0.05 | 398,681 | 177.41 | 15.94 | 381,706 | 176.63 | 14.01 |
| Math | K Class of 2017-18 | 2021 | S21 | 3 | 0.11 | 360,565 | 201.24 | 17.74 | 345,567 | 199.37 | 16.16 |
| Math | K Class of 2017-18 | 2022 | F21 | 4 | 0.10 | 436,402 | 201.25 | 18.03 | 418,888 | 199.46 | 16.37 |
| Math | K Class of 2017-18 | 2022 | S22 | 4 | 0.12 | 413,908 | 214.07 | 19.47 | 397,288 | 211.81 | 17.84 |
| Math | K Class of 2017-18 | 2023 | F22 | 5 | 0.12 | 429,804 | 210.70 | 18.27 | 412,074 | 208.56 | 16.51 |
| Math | K Class of 2017-18 | 2023 | S23 | 5 | 0.13 | 401,424 | 219.67 | 19.63 | 384,994 | 217.25 | 18.09 |
| Math | K Class of 2018-19 | 2019 | F18 | K | -0.04 | 243,380 | 142.32 | 11.78 | 232,394 | 142.72 | 10.61 |
| Math | K Class of 2018-19 | 2019 | S19 | K | 0.00 | 294,879 | 161.49 | 13.04 | 281,515 | 161.46 | 11.65 |
| Math | K Class of 2018-19 | 2020 | F19 | 1 | 0.01 | 332,389 | 162.78 | 13.47 | 318,837 | 162.66 | 11.65 |
| Math | K Class of 2018-19 | 2021 | S21 | 2 | 0.09 | 352,377 | 189.62 | 17.01 | 339,620 | 188.20 | 15.52 |
| Math | K Class of 2018-19 | 2022 | F21 | 3 | 0.09 | 434,632 | 187.49 | 16.60 | 417,611 | 186.10 | 14.72 |
| Math | K Class of 2018-19 | 2022 | S22 | 3 | 0.12 | 414,997 | 202.56 | 18.10 | 399,694 | 200.52 | 16.24 |
| Math | K Class of 2018-19 | 2023 | F22 | 4 | 0.11 | 433,116 | 202.72 | 18.38 | 416,922 | 200.80 | 16.60 |
| Math | K Class of 2018-19 | 2023 | S23 | 4 | 0.13 | 403,739 | 214.49 | 19.22 | 388,884 | 212.04 | 17.67 |
| Math | K Class of 2018-19 | 2024 | F23 | 5 | 0.14 | 392,087 | 210.21 | 17.91 | 376,904 | 207.86 | 16.17 |
| Math | K Class of 2018-19 | 2024 | S24 | 5 | 0.13 | 376,252 | 219.87 | 19.89 | 361,842 | 217.37 | 18.33 |
| Math | K Class of 2019-20 | 2020 | F19 | K | -0.03 | 249,324 | 142.83 | 12.15 | 238,383 | 143.14 | 10.97 |
| Math | K Class of 2019-20 | 2021 | S21 | 1 | 0.08 | 305,024 | 178.17 | 15.60 | 292,256 | 177.05 | 14.04 |
| Math | K Class of 2019-20 | 2022 | F21 | 2 | 0.07 | 417,499 | 174.47 | 16.95 | 401,357 | 173.29 | 15.04 |
| Math | K Class of 2019-20 | 2022 | S22 | 2 | 0.11 | 432,404 | 190.56 | 17.01 | 415,949 | 188.83 | 15.51 |
| Math | K Class of 2019-20 | 2023 | F22 | 3 | 0.11 | 431,495 | 188.60 | 16.76 | 414,130 | 186.79 | 14.89 |
| Math | K Class of 2019-20 | 2023 | S23 | 3 | 0.14 | 406,015 | 203.56 | 18.01 | 389,984 | 201.10 | 16.36 |
| Math | K Class of 2019-20 | 2024 | F23 | 4 | 0.13 | 395,237 | 202.01 | 17.87 | 378,971 | 199.71 | 16.21 |
| Math | K Class of 2019-20 | 2024 | S24 | 4 | 0.15 | 379,186 | 214.76 | 19.29 | 363,349 | 212.07 | 17.77 |
| Math | K Class of 2019-20 | 2025 | F24 | 5 | 0.16 | 387,137 | 209.81 | 17.86 | 371,381 | 207.02 | 16.11 |
| Math | K Class of 2019-20 | 2025 | S25 | 5 | 0.15 | 372,745 | 220.17 | 19.89 | 357,511 | 217.31 | 18.32 |
| Math | K Class of 2020-21 | 2021 | S21 | K | 0.01 | 257,727 | 162.22 | 15.14 | 247,075 | 162.06 | 13.67 |
| Math | K Class of 2020-21 | 2022 | F21 | 1 | 0.03 | 368,189 | 162.32 | 14.34 | 355,854 | 161.97 | 12.34 |
| Math | K Class of 2020-21 | 2022 | S22 | 1 | 0.10 | 386,746 | 178.44 | 15.04 | 373,468 | 177.03 | 13.05 |
| Math | K Class of 2020-21 | 2023 | F22 | 2 | 0.10 | 411,661 | 175.73 | 16.92 | 398,611 | 174.18 | 14.83 |
| Math | K Class of 2020-21 | 2023 | S23 | 2 | 0.13 | 422,919 | 191.73 | 16.72 | 409,770 | 189.66 | 15.17 |
| Math | K Class of 2020-21 | 2024 | F23 | 3 | 0.13 | 388,098 | 188.22 | 16.36 | 375,024 | 186.23 | 14.50 |
| Math | K Class of 2020-21 | 2024 | S24 | 3 | 0.14 | 375,202 | 204.02 | 17.95 | 363,141 | 201.55 | 16.13 |
| Math | K Class of 2020-21 | 2025 | F24 | 4 | 0.16 | 384,144 | 201.84 | 17.74 | 371,594 | 199.21 | 15.92 |
| Math | K Class of 2020-21 | 2025 | S25 | 4 | 0.16 | 371,409 | 215.29 | 19.20 | 359,817 | 212.34 | 17.60 |
| Math | K Class of 2021-22 | 2022 | F21 | K | -0.01 | 274,684 | 143.95 | 13.10 | 263,783 | 144.13 | 11.77 |
| Math | K Class of 2021-22 | 2022 | S22 | K | 0.03 | 338,478 | 161.18 | 13.78 | 324,940 | 160.85 | 12.05 |
| Math | K Class of 2021-22 | 2023 | F22 | 1 | 0.04 | 380,994 | 162.48 | 14.18 | 367,582 | 162.00 | 12.09 |
| Math | K Class of 2021-22 | 2023 | S23 | 1 | 0.11 | 395,566 | 179.09 | 15.01 | 381,927 | 177.53 | 13.00 |
| Math | K Class of 2021-22 | 2024 | F23 | 2 | 0.12 | 392,015 | 175.52 | 16.65 | 378,496 | 173.70 | 14.54 |
| Math | K Class of 2021-22 | 2024 | S24 | 2 | 0.13 | 405,928 | 191.77 | 16.67 | 392,457 | 189.67 | 15.09 |
| Math | K Class of 2021-22 | 2025 | F24 | 3 | 0.14 | 396,458 | 188.08 | 16.37 | 383,012 | 185.98 | 14.35 |
| Math | K Class of 2021-22 | 2025 | S25 | 3 | 0.15 | 386,638 | 204.15 | 17.98 | 374,440 | 201.65 | 15.99 |
| Math | K Class of 2022-23 | 2023 | F22 | K | -0.01 | 269,558 | 143.35 | 12.86 | 260,153 | 143.52 | 11.45 |
| Math | K Class of 2022-23 | 2023 | S23 | K | 0.03 | 324,538 | 161.63 | 13.88 | 312,497 | 161.23 | 12.07 |
| Math | K Class of 2022-23 | 2024 | F23 | 1 | 0.05 | 349,922 | 161.92 | 14.37 | 337,512 | 161.31 | 12.25 |
| Math | K Class of 2022-23 | 2024 | S24 | 1 | 0.11 | 366,379 | 179.32 | 15.36 | 354,142 | 177.72 | 13.28 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Math | K Class of 2022-23 | 2025 | F24 | 2 | 0.12 | 374,130 | 175.31 | 16.62 | 361,699 | 173.37 | 14.37 |
| Math | K Class of 2022-23 | 2025 | S25 | 2 | 0.13 | 391,592 | 191.76 | 16.61 | 379,157 | 189.72 | 14.95 |
| Math | K Class of 2023-24 | 2024 | F23 | K | -0.01 | 242,145 | 143.08 | 12.96 | 233,501 | 143.23 | 11.51 |
| Math | K Class of 2023-24 | 2024 | S24 | K | 0.03 | 295,873 | 162.00 | 14.03 | 285,735 | 161.55 | 12.21 |
| Math | K Class of 2023-24 | 2025 | F24 | 1 | 0.05 | 330,441 | 161.73 | 14.47 | 321,605 | 161.05 | 12.30 |
| Math | K Class of 2023-24 | 2025 | S25 | 1 | 0.11 | 347,839 | 179.48 | 15.33 | 338,799 | 177.95 | 13.19 |
| Math | K Class of 2024-25 | 2025 | F24 | K | 0.00 | 245,094 | 142.78 | 13.00 | 239,979 | 142.81 | 11.56 |
| Math | K Class of 2024-25 | 2025 | S25 | K | 0.03 | 288,646 | 162.22 | 13.98 | 281,712 | 161.76 | 12.18 |

*Note.* ES=effect size, N=number of unique students, M=mean RIT score, and SD=standard deviation. F16=fall 2016, whereas S17=spring 2017. The year column reports the spring of the school year.

**Table 5**

*Mean, Standard Deviations, and Sample Sizes for Reading Test Scores by Grade and Subgroup*

| | | | | | | Boys | | | Girls | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Subject | Cohort | Year | Term | Grade | ES | N | M | SD | N | M | SD |
| Reading | K Class of 2016-17 | 2017 | F16 | K | -0.17 | 189,383 | 137.62 | 10.11 | 177,898 | 139.35 | 9.73 |
| Reading | K Class of 2016-17 | 2017 | S17 | K | -0.14 | 229,132 | 154.12 | 13.14 | 215,364 | 155.90 | 12.59 |
| Reading | K Class of 2016-17 | 2018 | F17 | 1 | -0.16 | 294,619 | 155.58 | 13.42 | 279,803 | 157.63 | 12.85 |
| Reading | K Class of 2016-17 | 2018 | S18 | 1 | -0.14 | 311,269 | 171.91 | 14.59 | 295,980 | 173.94 | 13.92 |
| Reading | K Class of 2016-17 | 2019 | F18 | 2 | -0.15 | 369,520 | 171.79 | 16.20 | 353,341 | 174.20 | 15.86 |
| Reading | K Class of 2016-17 | 2019 | S19 | 2 | -0.15 | 394,617 | 185.35 | 16.37 | 377,902 | 187.79 | 15.62 |
| Reading | K Class of 2016-17 | 2020 | F19 | 3 | -0.17 | 404,833 | 186.01 | 17.20 | 387,515 | 188.82 | 16.41 |
| Reading | K Class of 2016-17 | 2021 | S21 | 4 | -0.13 | 348,991 | 202.02 | 17.69 | 334,695 | 204.24 | 16.23 |
| Reading | K Class of 2016-17 | 2022 | F21 | 5 | -0.15 | 422,044 | 202.38 | 17.50 | 405,195 | 204.84 | 15.97 |
| Reading | K Class of 2016-17 | 2022 | S22 | 5 | -0.14 | 397,581 | 208.23 | 17.41 | 382,129 | 210.51 | 15.72 |
| Reading | K Class of 2017-18 | 2018 | F17 | K | -0.15 | 215,052 | 138.12 | 9.97 | 202,440 | 139.59 | 9.58 |
| Reading | K Class of 2017-18 | 2018 | S18 | K | -0.12 | 263,612 | 155.13 | 12.90 | 248,657 | 156.65 | 12.44 |
| Reading | K Class of 2017-18 | 2019 | F18 | 1 | -0.15 | 303,356 | 155.34 | 13.55 | 289,033 | 157.34 | 12.94 |
| Reading | K Class of 2017-18 | 2019 | S19 | 1 | -0.14 | 326,118 | 171.26 | 14.85 | 311,073 | 173.29 | 14.17 |
| Reading | K Class of 2017-18 | 2020 | F19 | 2 | -0.15 | 377,965 | 171.63 | 16.41 | 361,280 | 174.04 | 16.03 |
| Reading | K Class of 2017-18 | 2021 | S21 | 3 | -0.13 | 352,593 | 194.48 | 17.96 | 337,720 | 196.66 | 16.88 |
| Reading | K Class of 2017-18 | 2022 | F21 | 4 | -0.14 | 419,883 | 194.97 | 17.85 | 403,062 | 197.45 | 16.67 |
| Reading | K Class of 2017-18 | 2022 | S22 | 4 | -0.13 | 397,479 | 202.71 | 17.64 | 381,496 | 204.83 | 16.23 |
| Reading | K Class of 2017-18 | 2023 | F22 | 5 | -0.15 | 414,633 | 202.49 | 17.87 | 397,837 | 204.98 | 16.38 |
| Reading | K Class of 2017-18 | 2023 | S23 | 5 | -0.13 | 387,305 | 208.09 | 17.65 | 371,460 | 210.28 | 16.05 |
| Reading | K Class of 2018-19 | 2019 | F18 | K | -0.12 | 233,402 | 137.24 | 9.58 | 222,543 | 138.38 | 9.13 |
| Reading | K Class of 2018-19 | 2019 | S19 | K | -0.12 | 286,035 | 154.15 | 12.92 | 273,074 | 155.71 | 12.39 |
| Reading | K Class of 2018-19 | 2020 | F19 | 1 | -0.15 | 307,541 | 155.35 | 13.49 | 294,910 | 157.30 | 12.87 |
| Reading | K Class of 2018-19 | 2021 | S21 | 2 | -0.13 | 333,054 | 183.09 | 17.70 | 320,613 | 185.29 | 17.04 |
| Reading | K Class of 2018-19 | 2022 | F21 | 3 | -0.14 | 415,455 | 184.11 | 18.23 | 399,289 | 186.64 | 17.68 |
| Reading | K Class of 2018-19 | 2022 | S22 | 3 | -0.12 | 401,114 | 194.70 | 18.06 | 385,957 | 196.89 | 17.05 |
| Reading | K Class of 2018-19 | 2023 | F22 | 4 | -0.14 | 417,544 | 194.89 | 18.15 | 401,962 | 197.37 | 17.11 |
| Reading | K Class of 2018-19 | 2023 | S23 | 4 | -0.12 | 389,447 | 202.44 | 17.99 | 374,941 | 204.47 | 16.71 |
| Reading | K Class of 2018-19 | 2024 | F23 | 5 | -0.14 | 376,280 | 202.37 | 18.00 | 361,742 | 204.86 | 16.63 |
| Reading | K Class of 2018-19 | 2024 | S24 | 5 | -0.13 | 362,574 | 207.83 | 18.06 | 348,533 | 210.10 | 16.57 |
| Reading | K Class of 2019-20 | 2020 | F19 | K | -0.12 | 232,876 | 137.64 | 9.73 | 221,818 | 138.80 | 9.22 |
| Reading | K Class of 2019-20 | 2021 | S21 | 1 | -0.12 | 280,376 | 169.81 | 16.19 | 268,833 | 171.63 | 15.35 |
| Reading | K Class of 2019-20 | 2022 | F21 | 2 | -0.11 | 376,447 | 169.37 | 17.33 | 362,308 | 171.28 | 17.16 |
| Reading | K Class of 2019-20 | 2022 | S22 | 2 | -0.12 | 394,552 | 182.78 | 17.57 | 379,354 | 184.82 | 17.12 |
| Reading | K Class of 2019-20 | 2023 | F22 | 3 | -0.12 | 410,640 | 183.83 | 18.16 | 394,509 | 186.04 | 17.82 |
| Reading | K Class of 2019-20 | 2023 | S23 | 3 | -0.11 | 392,383 | 194.66 | 18.23 | 377,021 | 196.55 | 17.42 |
| Reading | K Class of 2019-20 | 2024 | F23 | 4 | -0.13 | 378,691 | 194.77 | 18.14 | 363,329 | 197.10 | 17.30 |
| Reading | K Class of 2019-20 | 2024 | S24 | 4 | -0.11 | 365,289 | 202.24 | 18.26 | 350,258 | 204.18 | 17.10 |
| Reading | K Class of 2019-20 | 2025 | F24 | 5 | -0.13 | 375,401 | 202.11 | 18.26 | 360,008 | 204.32 | 17.08 |
| Reading | K Class of 2019-20 | 2025 | S25 | 5 | -0.12 | 364,130 | 207.86 | 18.18 | 349,172 | 209.89 | 16.76 |
| Reading | K Class of 2020-21 | 2021 | S21 | K | -0.11 | 237,147 | 155.40 | 15.25 | 227,092 | 157.09 | 14.55 |
| Reading | K Class of 2020-21 | 2022 | F21 | 1 | -0.14 | 319,822 | 154.58 | 14.32 | 308,541 | 156.57 | 13.56 |
| Reading | K Class of 2020-21 | 2022 | S22 | 1 | -0.12 | 339,060 | 169.33 | 15.82 | 327,019 | 171.16 | 14.97 |
| Reading | K Class of 2020-21 | 2023 | F22 | 2 | -0.10 | 371,384 | 169.54 | 17.04 | 359,136 | 171.32 | 16.84 |
| Reading | K Class of 2020-21 | 2023 | S23 | 2 | -0.11 | 389,235 | 183.17 | 17.32 | 376,562 | 184.97 | 16.86 |
| Reading | K Class of 2020-21 | 2024 | F23 | 3 | -0.13 | 361,441 | 183.84 | 17.82 | 348,866 | 186.06 | 17.54 |
| Reading | K Class of 2020-21 | 2024 | S24 | 3 | -0.10 | 356,083 | 194.59 | 18.22 | 343,962 | 196.44 | 17.43 |
| Reading | K Class of 2020-21 | 2025 | F24 | 4 | -0.12 | 372,828 | 194.66 | 18.07 | 360,811 | 196.79 | 17.31 |
| Reading | K Class of 2020-21 | 2025 | S25 | 4 | -0.10 | 361,060 | 202.40 | 18.22 | 349,725 | 204.17 | 17.02 |
| Reading | K Class of 2021-22 | 2022 | F21 | K | -0.12 | 234,019 | 138.18 | 10.41 | 224,540 | 139.41 | 9.92 |
| Reading | K Class of 2021-22 | 2022 | S22 | K | -0.12 | 293,047 | 153.66 | 13.53 | 281,185 | 155.18 | 12.73 |
| Reading | K Class of 2021-22 | 2023 | F22 | 1 | -0.13 | 325,865 | 154.68 | 14.11 | 314,210 | 156.46 | 13.24 |
| Reading | K Class of 2021-22 | 2023 | S23 | 1 | -0.11 | 341,755 | 169.72 | 15.67 | 329,714 | 171.37 | 14.80 |
| Reading | K Class of 2021-22 | 2024 | F23 | 2 | -0.10 | 345,545 | 169.82 | 16.72 | 333,557 | 171.50 | 16.57 |
| Reading | K Class of 2021-22 | 2024 | S24 | 2 | -0.10 | 362,003 | 183.26 | 17.30 | 349,613 | 185.04 | 16.87 |
| Reading | K Class of 2021-22 | 2025 | F24 | 3 | -0.12 | 374,391 | 183.91 | 17.69 | 361,919 | 186.00 | 17.44 |
| Reading | K Class of 2021-22 | 2025 | S25 | 3 | -0.10 | 373,249 | 194.55 | 18.17 | 361,509 | 196.35 | 17.32 |
| Reading | K Class of 2022-23 | 2023 | F22 | K | -0.12 | 225,997 | 137.66 | 10.12 | 218,190 | 138.81 | 9.49 |
| Reading | K Class of 2022-23 | 2023 | S23 | K | -0.11 | 273,616 | 154.17 | 13.43 | 263,548 | 155.57 | 12.60 |
| Reading | K Class of 2022-23 | 2024 | F23 | 1 | -0.13 | 283,237 | 154.85 | 14.24 | 273,719 | 156.64 | 13.32 |
| Reading | K Class of 2022-23 | 2024 | S24 | 1 | -0.11 | 302,994 | 169.87 | 15.98 | 293,222 | 171.58 | 15.04 |

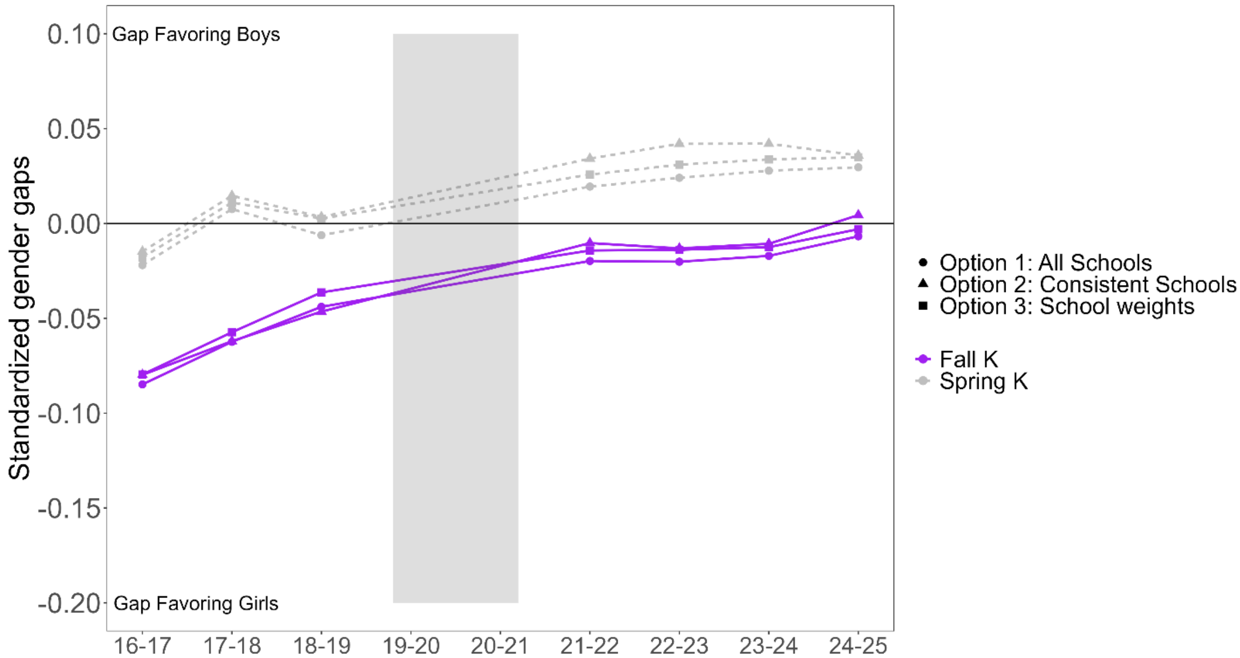
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Reading | K Class of 2022-23 | 2025 | F24 | 2 | -0.10 | 324,105 | 169.77 | 16.77 | 313,474 | 171.36 | 16.61 |
| Reading | K Class of 2022-23 | 2025 | S25 | 2 | -0.10 | 349,976 | 183.43 | 17.34 | 338,822 | 185.20 | 16.85 |
| Reading | K Class of 2023-24 | 2024 | F23 | K | -0.12 | 198,111 | 137.83 | 10.36 | 190,950 | 139.03 | 9.70 |
| Reading | K Class of 2023-24 | 2024 | S24 | K | -0.11 | 245,811 | 154.55 | 13.78 | 237,318 | 155.97 | 12.85 |
| Reading | K Class of 2023-24 | 2025 | F24 | 1 | -0.13 | 265,305 | 154.67 | 14.54 | 257,857 | 156.45 | 13.54 |
| Reading | K Class of 2023-24 | 2025 | S25 | 1 | -0.11 | 286,271 | 169.88 | 16.21 | 278,186 | 171.61 | 15.15 |
| Reading | K Class of 2024-25 | 2025 | F24 | K | -0.12 | 190,757 | 137.78 | 10.52 | 186,561 | 138.99 | 9.91 |
| Reading | K Class of 2024-25 | 2025 | S25 | K | -0.11 | 232,481 | 154.55 | 13.82 | 226,643 | 156.00 | 12.95 |

*Note.* ES=effect size, N=number of unique students, M=mean RIT score, and SD=standard deviation. F16=fall 2016, whereas S17=spring 2017. The year column reports the spring of the school year.

**Figure A1**

*Gender Gaps in Kindergarten by the Year Students Entered School (Comparing Across Sample Conditions)*

(C) Math




(D) Reading

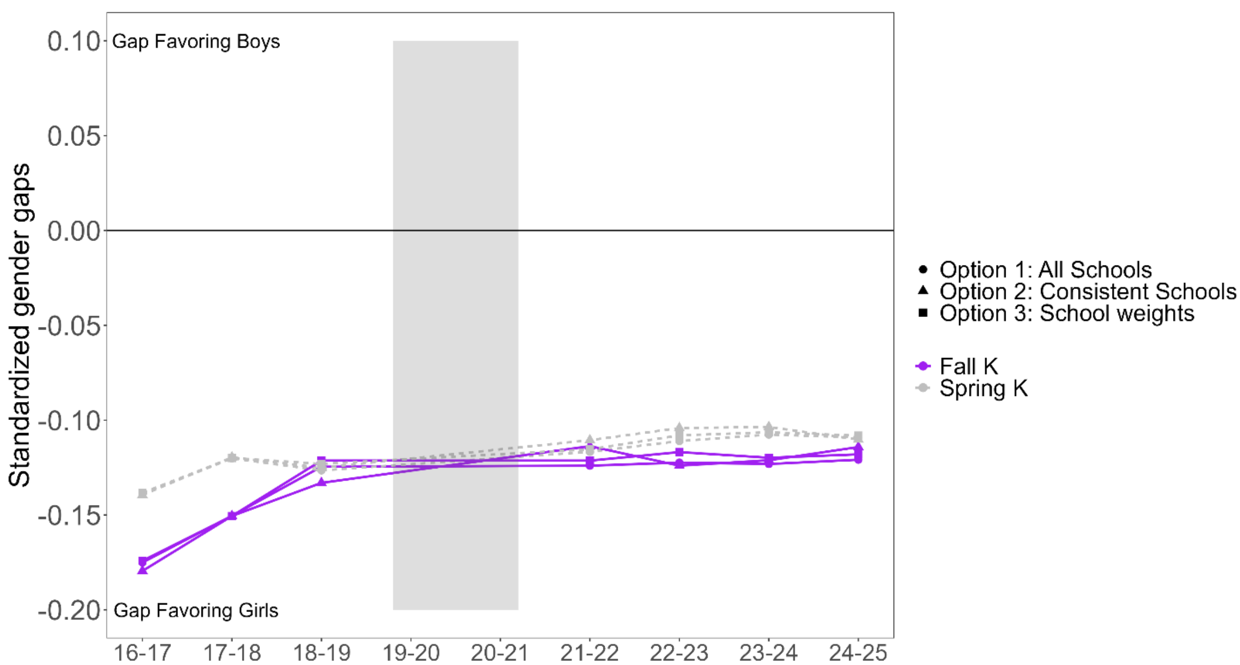
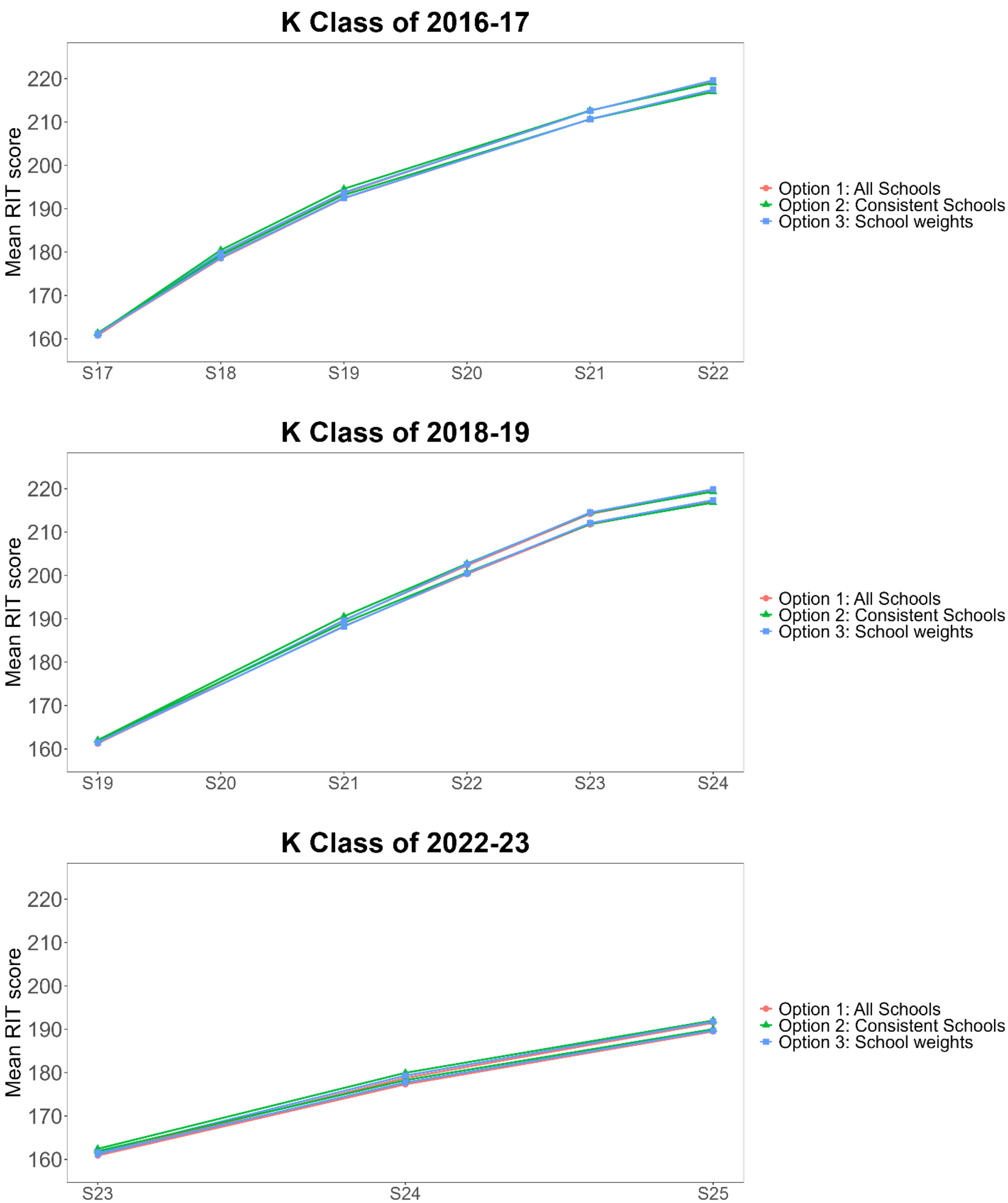


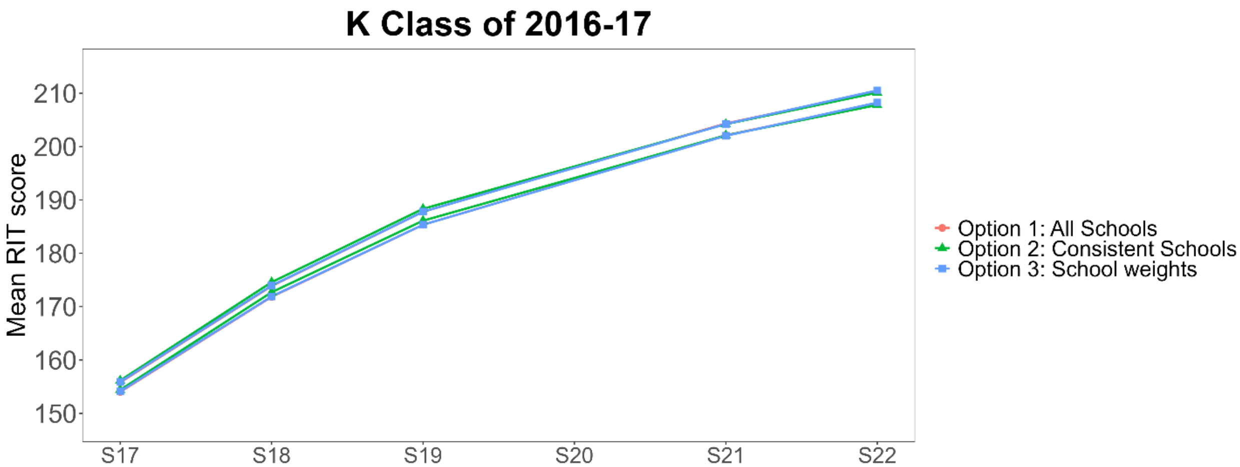
**Figure A2**

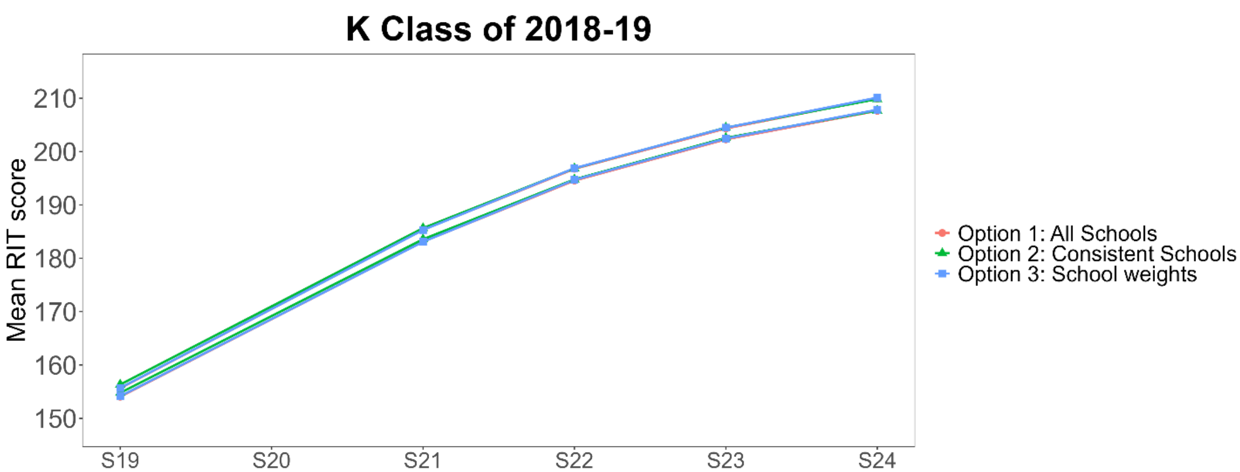
*Gender Gaps in Math and Reading in Grades K-5*

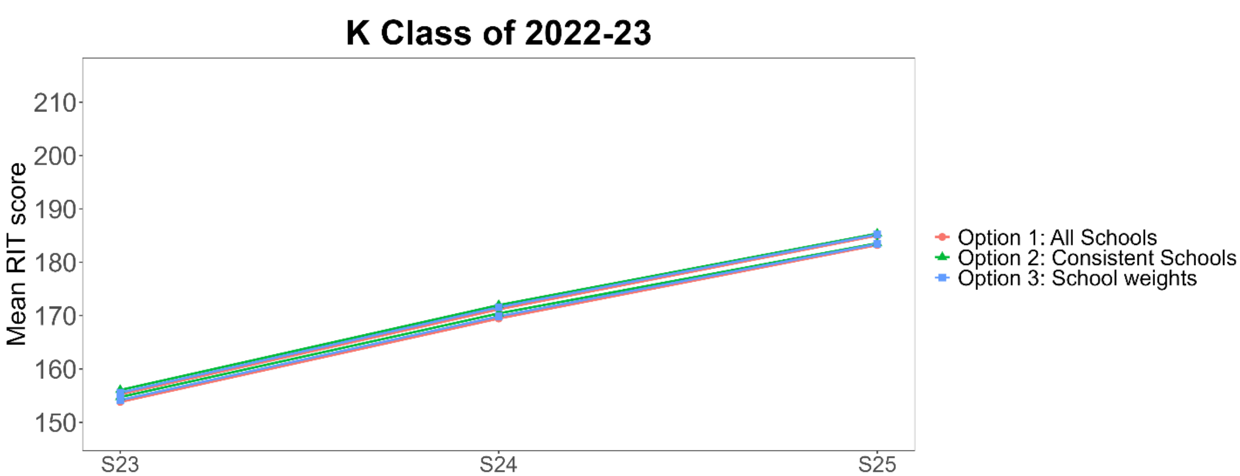
(C) Math



(D) Reading


K Class of 2016-17
Mean RIT score
210
200
190
180
170
160
150
S17
S18
S19
S20
S21
S22
Option 1: All Schools
Option 2: Consistent Schools
Option 3: School weights


K Class of 2018-19
Mean RIT score
210
200
190
180
170
160
150
S19
S20
S21
S22
S23
S24
Option 1: All Schools
Option 2: Consistent Schools
Option 3: School weights


K Class of 2022-23
Mean RIT score
210
200
190
180
170
160
150
S23
S24
S25
Option 1: All Schools
Option 2: Consistent Schools
Option 3: School weights